

XIX. *Journal of a Voyage to The East Indies, in the Ship Grenville,*

Communicated by the

EXPLANATION OF THE COLUMNS.

1st, **T**HE *date*^(a).

2d, The *height* of the *thermometer*, according to FAHRENHEIT'S scale. therm^{om}eter belonged to Mr. RUSSELL, and hung in the open air in the balcony.

3d, including four columns, contains the *register* of the *marine barometers* which, as well as the thermometers, were made by NAIRNE and BLUNT: those marked R and D are quicksilver, of the kind usually made by them. That marked S is composed of quicksilver, and of a lighter fluid, for the purpose of making the alteration visible, which is a very great convenience at sea; a quicksilver thermometer being it for the sake of correcting its height, the heat by which is set down in the marked Th. next to that marked S.

4th, The *weather* and *winds* in four lines; 1st line from noon to 6 P.M.; 2d, 6 P.M. to midnight; 3d, from midnight to 6 A.M.; 4th, from 6 A.M. to noon.

In the column of *weather*, f. denotes *fair*; sq. *squally*; c. *cloudy*; h. *bazy*; r. *rain*; r. *rain*; fr. *small rain*; dr. r. *drizzling rain*; sh. *showers*; th. *thunder*; l. *lightning*.

It is proper to remark, that the *winds* are set down according to the *compass*, with allowance for the *Variation*.

5th in 2, The *difference* between the daily alteration of *latitude* by *account* and *observation*; N. denoting that the *observation* was to the *Northward* of the *account*; S. was to the *Southward*^(b).

(a) Here, for want of room, the day of the month only is expressed; but in the original journal the days of the of the Moon, are also inserted.

(b) Next to these columns in the original journal are the following, which are left out here only for want of room. Correct course, lee-way variation &c. allowed, and the different courses reduced to one straight course.

Distance on that straight course.

Difference of latitude by account,

Difference of latitude by observation,

The departure,

The difference of longitude by account,

The difference of longitude by the time-keeper,

} in minutes of a degree.

ville, Captain Burnet Abercrombie, in the Year 1775. By Alexander Dalrymple, Esq.
by the Honourable Henry Cavendish, F. R. S.

Read January 29, 1778.

scale. This
ony.

meters, all of
those marked
s compounded
erations more
being fixed to
the column

1st, from

r. rain; hr.
ning.

, without any

unt and obser-
nt; S. that it

s of the week, and

of room:
b.

6th in 2, The *difference* between the daily alteration of *longitude* *time-keeper*; W. denoting that the *longitude* by the *time-keeper* was *account*; E. that it was to the *Eastward*.

The result of those differences indicates the daily effect of error in the course failed, or distance run by log, would make the c from what it really was.

7th, The *longitude* from Greenwich, in seven columns.

1st, The *longitude* by *account*.

2d, The *longitude* by the *time-keeper*, which was made by his late improvements.

3d, The *difference* between the *longitudes* deduced from *obs* and from the *time-keeper uncorrected*; E. denoting the time East of c; w. denoting time-keeper to West of c. This *keeper* not to be liable to any sudden changes in its rate of precision with which the observations of the Moon may be instances of weather and of the ship's motion considered.

4th, The *longitude* by *observations* of the Moon's distance from adjusted, by the log, to the noon nearest the time of observation.

5th, The number of *sights* or *distances* observed.

6th, The *object* whose *distance* from the Moon was observed;
* the Star; S. Spica Virginis; R. Regulus; A. Aldebaran;
F. Fomalhaut; An. Antares.

7th, The *extreme difference* between the *highest* and *lowest* observations of a degree; when the *seconds* amount to more than above is taken, otherwise the next minute below.

8th, The *latitude* in two columns:

1st, The *latitude* by *account*, carried on from the *land*, in the *longitude* by *account*.

* D d d 2

ple, Esq. F. R. S.

longitude by the account and
per was to the Westward of

et of current; however an
the current appear different

de by ARNOLD, but without

om *observations* of the *Moon*
the time-keeper to be to the

This, admitting the *time-*
rate of going, indicates the
may be relied on, all circum-
d.

ince from the Sun or Stars,
observation.

erved; o denoting the Sun;
aran; At. Atair; P. Pollux;

vest observation; expressed in
re than 30, the next minute

, in the same manner as the

2d, The latitude by *observation*; and where the *latitude* could not be had by *observation*, it is deduced by *account* from the *last observation*, in which case is included within [].

9th, The *correct longitude* from Greenwich deduced from the *time-keeper* corrected by the *sight* of *lands*, whereof the *longitudes* are known, and by *observations* of the *Moon* taking a *mean* of the several observations of the *Moon* made within a short period of time. The *error* of the *time-keeper*, between the *longitude corrected* by *sight* of *observations* of the *Moon*, is supposed to have arisen by the *time-keeper* having altered its rate of going *uniformly* between these observations; and the *intermediate longitude* determined by the *time-keeper* on this supposition. Where no observations of the *Moon* were made, it is deduced by the account from the *last observation* of the *time-keeper* is then included within [].

10th, The *magnetical observations* of the *variation* and *dip*, in seven columns.

1st, } The varia- { azimuth, } * *before*, denoting the observation to have taken place
2d, } tion by { amplitude, } the *morning*; * *after*, denoting the observation to have been in the *evening*. The *variation* was observed by the officers with the *compasses* belonging to the ship.

3d, The *dip* with the *face* of the *instrument* to the East.

4th, Ditto, ditto, ditto, West.

5th, The *mean dip* of the foregoing observations.

6th, The *mean corrected*, or what is *supposed* to be the *true dip*.

7th, The *circumstances* under which the *observations* of the *dip* were made.

12th, The *miles* run by *log*.

The *dip* was observed with a *dipping-needle* belonging to the hon. Mr. CAVENTISH, made by SISSON.

The following *remarks* on the *dipping-needle* and *observations* are by Mr. CAVENTISH.

The ends of the axis of the dipping-needle are made conical, and turn in conical pieces of bell-metal, in the manner of Mr. LORIMER'S needle, described in Phil. Trans. vol. 40. p. 79. The dip was constantly observed both with the face of the instrument to the East and to the West, and the poles were changed twice during the voyage, in order to see whether the needle continued well balanced. The use of this method of observing the dip is explained in Phil. Trans. vol. LXVI. p. 396.

Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMPLE.

had by obser-
which case it is

eper corrected

of the Moon,

period of each

bt of land or

ing altered its

longitudes are

s of the time

he time, and

nns.

have been in

bservation to

cers with the

ade.

CAVENDISH,

AVENDISH.

conical holes

anf. vol. LXV.

nt to the East

order to see

observing is

The mean dip corrected is what is supposed to be the *true dip*.
correction is as follows.

By the observations on July 12th, when the poles were changed, the marked end of the needle was too heavy, so as to make that end too low at that place; and therefore, if we suppose that the force of the magnetism is strong in all parts of the earth, the error produced thereby in other observations is $\frac{1}{16}$ ths of a degree as the cosine of the dip to the radius. The observations of the poles were changed at Suez, agree well enough with this supposition. In all the observations the marked end of the needle pointed to the North. All that part of the voyage subsequent to July 12th is corrected by

$$\left. \begin{array}{l} \frac{1}{8} \\ \frac{5}{8} \\ \frac{6}{8} \\ \frac{7}{8} \end{array} \right\} \begin{array}{l} \text{of a degree from the mean dip,} \\ \text{when the mean dip is between} \end{array} \left\{ \begin{array}{ll} 63^{\circ} \text{ and } 52^{\circ} \\ 52 & 43 \\ 43 & 30 \\ 30 & 0 \end{array} \right\} \begin{array}{l} \text{North, and at} \\ \text{the dip is} \end{array}$$

But as before the needle left London, changing the poles was found to make a difference in the dip, the correction in the preceding part of the voyage is great, *videlicet*;

$$\left. \begin{array}{l} \frac{1}{8} \\ \frac{2}{8} \\ \frac{3}{8} \\ \frac{4}{8} \\ \frac{5}{8} \\ \frac{6}{8} \\ \frac{7}{8} \end{array} \right\} \begin{array}{l} \text{of a degree is subtracted from the mean} \\ \text{dip, when that dip is between} \end{array} \left\{ \begin{array}{l} 70^{\circ} \\ 62 \\ 52 \\ 43 \\ 35 \\ 30 \\ 25 \end{array} \right.$$

The dip was observed on board the *Grenville* at Deptford, after having been in that part of the ship in which the observations were usually made, and was found to be more than 5' from that observed with the same needle in a pretty large room about five miles distant; so that the observations on board the *Grenville* were much influenced by the iron-work of the ship.

MPLX.

tip. The foundation of this

changed, it appears, that the
 t end point $\frac{1}{16}$ ths of a degree
 orce of magnetism is equally
 in other places should be to
 observations also made when
 supposition: therefore, as in
 the North, the mean dip in
 d by subtracting

and adding as much when
 e dip is as much South.

was found to make very little
 the voyage is made not so

| | | |
|---|-------------|----|
| 1 | 70° and 62° | |
| | 62 | 52 |
| | 52 | 43 |
| | 43 | 35 |
| | 35 | 30 |
| | 30 | 25 |
| | 25 | 0 |

after her return, in the same
 and was found not to differ
 etty large garden in London,
 ne Grenville seem to be not

A Journal

Journal of a Voyage to The East-Indies, in the Ship Gre

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. | | D.L. | A. | Longitude from | |
|------|-----|------------------|----------|-----|----------|---|------|------|------|----|----------------|-------|
| | | R. | S. | Th. | D. | | A.O. | T.K. | | | A. | TK. |
| | | In. Dec. | In. Dec. | ° | In. Dec. | | N | S | W | E | ° W | ° W |
| Apr. | ° | In. Dec. | In. Dec. | ° | In. Dec. | f. h. f. SE. ESE. S by E. E by S. ESE. SE. | | | | | | |
| 28 | | | | | | f. h. SE. V. W. S. WSW. SW by W. SW. WSW. V. C. V. WSW. | | | | | | |
| 29 | | | | | | { h. r. SW by S. WSW. W. } | | | | | | |
| 30 | | | 30.2½ | 55 | | { h. WNW. NW by W. } | 6 | | 7 | | 6.19 | 6.12 |
| | | | | | | { h. r. WNW. C. NNW. } | | | | | | |
| | | | | | | { r. f. NNW. NW by N. NW. } | | | | | | |
| May | | | | | | { f. NW by N. NW by W. WNW. } | | | | | | |
| 1 | 59 | | 30.4½ | 61 | | { f. NW by W. NW. } | 11 | | 14 | | 6.40 | 6.19 |
| | | | | | | { f. WNW. W by N. } | | | | | | |
| | | | | | | { f. W. WSW. W by S. } | | | | | | |
| 2 | 57 | | | 56 | | { h. fr. WSW. SW by W. } | | | | | | |
| | | | | | | { hr. r. SW by S. SW. W by S. } | 9 | 33 | | | 7.22 | 7.34 |
| | | | | | | { r. h. fr. W. WNW. } | | | | | | |
| | | | | | | { h. r. f. h. NW by W. WNW. NW by W. } | | | | | | |
| 3 | 54¾ | | 30.0½ | 54 | | { c. NW by N. C. } | | | | | | |
| | | | | | | { c. C. } | | | | | 7.29 | |
| | | | | | | { c. C. E. } | | | | | | |
| | | | | | | { c. h. E. E by N. } | | | | | | |
| 4 | 56½ | | 30.0¾ | 56¼ | | { h. ENE. } | 31 | 9 | | | | |
| | | | | | | { h. ENE. } | | | | | | |
| | | | | | | { h. c. ENE. V. } | | | | | 7.57 | 8.18 |
| | | | | | | { c. NE. V. C. } | | | | | | |
| 5 | 57½ | | 30.0 | 57½ | | { h. C. W by S. } | | | | | | |
| | | | | | | { c. h. W. WSW. SW. } | 13 | | 7 | | 7.13 | 7.27 |
| | | | | | | { h. r. SW. WSW. } | | | | | | |
| | | | | | | { h. fr. c. W by S. WSW. NE by N. } | | | | | | |
| 6 | 55¾ | | 30.2 | 55½ | | { h. N. NNE. } | | | | | | |
| | | | | | | { h. NNE. NE. ENE. } | | | | | | |
| | | | | | | { h. c. ENE. ESE. E by N. } | 19 | | 12 | | 8.36 | 8.38 |
| | | | | | | { c. f. E by N. E by S. } | | | | | | |
| 7 | 57 | | 30.2¼ | 56½ | | { f. ESE. } | | | | | | |
| | | | | | | { f. E. } | 21 | 4 | | | 10.13 | 10.19 |
| | | | | | | { f. E. } | | | | | | |
| | | | | | | { f. E. E by N. ENE. } | | | | | | |
| 8 | 61¼ | | 30.2¾ | 60¾ | | { h. NE by E. NNE. } | | | | | | |
| | | | | | | { h. NNE. } | 39 | 13 | | | 10.22 | 10.43 |
| | | | | | | { h. NNE. } | | | | | | |
| | | | | | | { h. NNE. NE. } | | | | | | |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMPLE.

| Latitude from Greenwich | | | S. | O. | E. | Latitude | | Cor. Long. | Magnetical | | | | | | ML. | N. I. | | |
|-------------------------|--------------|----------------|-------|----------------|--------|----------|--------|---------------|--------------|--------------|--------------|---------------------------|---------------------|---------------------------------------|-----|-------------|------|--|
| TK. | D. D T.K. | D | | | | A. | | | O. | | Variation. | | Dip | | | | | |
| | | | | | | ° N' | ° N' | | ° W' | ° W' | ' W° | Face | | MD. | | | C.D. | |
| | | | | | | | | | | | | E. | W. | | | | | |
| ° W' | W' | ° W' | ° N' | ° N' | ° W' | ° W' | ' W° | ° | ° | ° | ° | | | | | | | |
| | | | | 49.43 49.50 | 5.35 | | | 72.4 72.4 | 73.6 73.7 | 73.1 73.1 | 73.1 73.1 | | Between Lizard P | | | | | |
| 6.12 | | | 49.25 | 49.19 | 6.12 | | | 73. | 74. | 73.4 | 73.4 | Great swell. | 37 | { At 1 l allo Nby N I and | | | | |
| 6.19 | | | 48.42 | 48.25 | 6.19 | | | 72. | 73.4 | 72.6 | 72.6 | | 51 | Light bre | | | | |
| 7.34 | | | 48.51 | 48.43 | 7.34 | | | 72.4 | 73. | 72.6 | 72.6 | Great swell. | 47 | Major pa | | | | |
| | | | 48.34 | [48.26] | [7.41] | | | 72. | 72.4 | 72.2 | 72.2 | | 18 | Mostly ca | | | | |
| 8.18 | | | 47.51 | 47.20 | 8.18 | | | 71.4 | 72.6 | 72.1 | 72.1 | Very steady. | 48 | Light bre | | | | |
| 7.27 | | | 46.56 | 46.12 | 7.27 | | | 71. | 72.4 | 71.6 | 71.6 | Great motion. | 68 | { First p war war | | | | |
| 8.38 | | | 45.58 | 44.55 | 8.38 | | 18.42* | 71. | 72. | 71.4 | 71.4 | { Good deal of motion. | 83 | Mostly li | | | | |
| 10.19 | | | 44.14 | 42.50 | 10.19 | | | 69.6 | 71. | 70.3 | 70.3 | Very steady. | 126 | An incre | | | | |
| 10.43 | 3 14 | 10.40 10.29 | 4 | 27 46 | 10.43 | 41.52 | 40. 9 | | | 68.4 | 69.2 | 68.7 | 68.6 | Ditto. | 142 | First part, | | |
| | | | | | | | | | | | | | | | 620 | | | |

N. B. Log-line 51 feet to 29'' $\frac{1}{2}$.

Between Ram-head and the Lizard.

Lizard Point $E\frac{1}{2}N = ENE\frac{1}{2}N$. 7 or 8 leagues off shore.

{ At 1 P.M. the Lizard Point bore by compass $E\frac{1}{2}N$. Variation allowed $ENE\frac{1}{2}N$ 7 leagues. The Land's End N by $E = N$ by W. Take a departure from the Lizard in $49^{\circ} 57' 30''$ N lat. Long. $5^{\circ} 15' W$. First and middle part, lights airs and calm. Latter, pleasant breezes. Great swell from W.

Light breezes; great swell from Westward.

Major part light breezes; great swell from Westward.

Mostly calm. A very large swell from Westward.

Light breezes and a great swell.

{ First part, calm. Middle, an increasing breeze from Westward, with rain. Latter, a fine breeze from the Northward.

Mostly light breezes, with a swell from NW.

An increasing gale from the Eastward.

First part, fresh gales. Latter, moderate.

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. | | | Longitude from | | |
|------|-----|------------------|--------------------|------------------|--------------------|---|--------------|------------|------|----------------|------------------|-------|
| | | R. | S. | Th. | D. | | D.L. A.O. | D.L. A. | T.K. | A. | T.K. | |
| | | | | | | | | | | | | N |
| May | 9 | 67 | 30.1 $\frac{1}{4}$ | 67 | | <div><div>f. NNE.</div><div>f. h. NNE.</div><div>h. NNE. E by S.</div><div>h. E by S. V.</div></div> | | 11 | | 13 | 10.34 | 10.42 |
| | 10 | 68 | 30.0 $\frac{1}{2}$ | 67 $\frac{1}{4}$ | | <div><div>h. ENE. NE. V.</div><div>h. V. N by E.</div><div>h. N. V.</div><div>h. V. SE by E. ESE. SE.</div></div> | | 4 | 19 | | 11.7 | 11.34 |
| | 11 | | | | | <div><div>f. SE by S. C.</div><div>f. C. ENE. E.</div><div>f. h. E. NE by E. C.</div><div>h. V. C.</div></div> | | 10 | 9 | | 11.28 | 12.4 |
| | 12 | 67 $\frac{1}{2}$ | 30.3 $\frac{3}{4}$ | 67 $\frac{1}{2}$ | | <div><div>h. NW by W. WNW. NW.</div><div>h. c. NW by W.</div><div>f. h. V. NW by W.</div><div>h. NW by W. C. W by N. W.</div></div> | | 16 | 4 | | 11.52 | 12.24 |
| | 13 | 66 $\frac{1}{4}$ | 30.1 | 66 | 30.1 | <div><div>f. W by S. WNW.</div><div>f. h. WNW. NW by W. NW.</div><div>h. NW. NW by N.</div><div>c. NNE. N.</div></div> | | 21 | 9 | | 12.35 | 13.16 |
| | 14 | 65 | 30.2 $\frac{1}{2}$ | 65 $\frac{1}{4}$ | 30.2 $\frac{1}{2}$ | <div><div>f. q. h. NE by N.</div><div>h. NNE. N.</div><div>f. q. c. N.</div><div>c. N. NNE.</div></div> | | 20 | 8 | | 15.0 | 15.33 |
| | 15 | 67 $\frac{3}{4}$ | 30.2 | 67 $\frac{1}{2}$ | | <div><div>h. NNE.</div><div>f. c. NNE. NE by N.</div><div>f. q. c. NE by N. NE. W by N.</div><div>c. WNW. C. W.</div></div> | | 25 | 14 | | 15.59 | 16.46 |
| | 16 | 65 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | 65 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | <div><div>c. W.</div><div>c. W. V. NE by E.</div><div>c. NE by E. E by N.</div><div>h. E by N.</div></div> | 2 | | | 7 | 16.50 [16.50] | 16.41 |
| | 17 | 67 $\frac{1}{2}$ | 30.1 $\frac{3}{4}$ | 67 $\frac{1}{4}$ | | <div><div>h. NE.</div><div>h. c. NE by E.</div><div>c. E by N. E by S.</div><div>c. E by N. ESE.</div></div> | | 18 | 2 | | 17.3 | 16.50 |

By acct
from Ma-
deira in
[16.50]

Ship Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE

| Latitude from Greenwich | | | | | | Latitude | | Cor. Long. | Magnetical | | | | | ML. | | | |
|-------------------------|---------------|-------|----|----|----|----------|---------|---------------|------------|----------|-------------------|---------|----------|------|---|------|--|
| T.K. | D. of T.K. | ° | S. | O. | E. | A. | O. | | Variation | | Dip | | | | | MD. | C.D. |
| ° ' W | ° ' E | ° ' W | | | | ° ' N | ° ' N | ° ' W | ° ' Az. | ° ' Amp. | ° ' Face E. W. | ° ' MD. | ° ' C.D. | | | | |
| 10.42 | 13 | 10.55 | 3 | 0 | 36 | 40.17 | 38.24 | 10.42 | 18.0* | 17.43* | 67.6 | 69. | 68.3 | 68.2 | Very steady. | 96 | Decreasing |
| 11.34 | | | | | | 39.26 | 37.33 | 11.34 | 20 38* | 18.36* | 67.2 | 68.4 | 67.7 | 67.6 | { Good deal of motion. | 55 | { Most sup a h |
| 12.4 | | | | | | 39. 3 | 37.0 | 12. 4 | 20. 9* | 19 57* | 66.6 | 67.6 | 67.2 | 67.1 | Ship yawing. | 29 | { Light lows noon Sout visible if sh |
| 12.24 | | | | | | 38.28 | 36. 9 | 12.24 | | | 65.6 | 67.2 | 66.4 | 66.3 | { Ditto, needle very steady. | 41 | { Light vessel cruiz they |
| 13.16 | | | | | | 37.46 | 35. 6 | 13.16 | 20.17* | 20.38* | 66. | 67. | 66.4 | 66.3 | { Ditto, needle very unsteady, bad observation. | 62 | { An in there thro |
| 15.33 | | | | | | 36.36 | 33.30 | 15.33 | 19.28* | 19.16* | 64.6 | 65.6 | 65.2 | 65.1 | } Very steady. | 138 | { Fresh from |
| 16.46 | | | | | | 35.50 | [32.24] | 16.46 | | | 64.2 | 65.6 | 65. | 64.7 | | 84 | { In F SEAF 10' i ALC 1776 and 16th down and 1 accou |
| 16.41 | | | | | | 31.18 | 31.20 | 16.41 | | | 63.2 | 64.6 | 64. | 63.7 | | 67 | { First p fmoor |
| 16.50 | | | | | | 29 57 | 29.41 | 16.50 | | | 62.2 | 63.6 | 63. | 62.7 | | 81 | These 24 |
| | | | | | | | | | | | | | | | | 1273 | |

LRYPLE.

Decreasing breezes. Changed log-line 48 feet to 29 $\frac{1}{2}$.

Most part light airs. Several small land birds; two of them, supposed nightingales came on board, very tired; also saw a hawk.

Light airs of wind Easterly, with calms. Some swallows and other land birds, who seem very tired. In the afternoon, during the calm, when the ship's head was to the Southwestward, there was, for a little time, a counter current visible; it made like a wake on the ship's larboard beam, as if she was going broadside foremoft.

Light airs of wind throughout. P.M. saw two three-masted vessels with latine sails; they were supposed to be Barbary cruisers, but did not come near enough to let us know what they were. Some swallows about the ship.

An increasing breeze from the Northward. In the morning there were many petrels in the ship's wake: they continued throughout the day.

Fresh breezes, with some squalls. At noon saw Porto Santo from the mast-head, W by S. per compass.

In *Funchal* road. Major SEARS informed us, that Mr. SEARL, in consequence of our request, tried the therm. for 10' in a cool cellar, and found it 68°. N. B. Captain ALCOCK informed me, he observed the therm. on May 14, 1776, at 6 A.M. at *Funchal* 68°, and in the cellar 61°: and Mr. SEARL wrote to Mr. CAVENDISH, that on the 16th of May the therm. which stood at 69°, was carried down at 1 P.M. to a cellar, where it remained till 4 o'clock, and then was found to be at 62°, so that Major SEARS's account was probably erroneous.

First part, light airs. Middle and latter, pleasant breezes and smooth weather; several boats came off from *Funchal*.

These 24 hours pleasant breeze from Eastward.

Journal of a Voyage to The East-Indies, in the Ship Gro

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. | | | | Longitude from | | |
|------|------------------|--------------------|--------------------|------------------|--------------------|--|------|---|------|---|----------------|-------|-------|
| | | R. | | S. | | | A.O. | | T.K. | | A. | TK. | |
| | | In. Dec. | In. Dec. | Th. | D. | | N | S | W | E | | | |
| May | o | In. Dec. | In. Dec. | o | In. Dec. | | | | | | | o / | o / |
| 18 | 69 | 30.2 | 30.1 $\frac{3}{4}$ | 68 $\frac{1}{2}$ | 30.2 | { h. ENE. h. ENE. E. h. E. ENE. h. E. ENE. } | 15 | | 10 | | | W | W |
| 19 | 68 | 30.2 $\frac{1}{2}$ | 30.2 $\frac{1}{4}$ | 67 $\frac{3}{4}$ | 30.2 $\frac{1}{4}$ | { h. E by N. h. NE by N. h. c. N by W. C. N by W. NNE. c. f. NNE. } | 6 | | 1 | | | 17.17 | 16.55 |
| 20 | 68 | 30.1 $\frac{1}{4}$ | 30.1 $\frac{1}{2}$ | 68 | 30.1 $\frac{1}{4}$ | { c. NNE. NE. c. NE. N by E. NE by N. N by E. c. N by E. NNE. c. NNE. } | 24 | | 3 | | | 17.42 | 17.17 |
| 21 | 68 $\frac{1}{4}$ | 30.1 $\frac{1}{4}$ | 30.1 | 68 | 30.1 | { f. c. NE by N. N by E. c. N by E. N by W. c. f. N by W. N by E. f. N by E. NNE. } | 1 | | 4 | | | 18.18 | 17.57 |
| 22 | 70 | 30.1 $\frac{1}{2}$ | 30.1 $\frac{1}{4}$ | 70 $\frac{1}{4}$ | 30.1 $\frac{1}{2}$ | { f. N. f. c. N. NNE. c. NNE. c. NNE. NE by N. NE. } | 18 | | | | | 18.49 | 18.28 |
| 23 | 68 | 30.2 | 30.1 $\frac{3}{4}$ | 68 | 30.2 | { f. NE. NE by N. f. NE by N. f. NE by N. f. NE by N. NE. } | | | 1 | | | 19.28 | 19.6 |
| 24 | 68 $\frac{1}{4}$ | 30.1 | 30.0 $\frac{1}{2}$ | 68 $\frac{1}{4}$ | 30.0 $\frac{3}{4}$ | { f. NE. NE by N. f. NE by N. f. c. NE by N. c. h. NE by N. } | 14 | | 8 | | | 19.21 | 19.7 |
| 25 | 71 $\frac{3}{4}$ | 30.0 | 29.9 $\frac{1}{2}$ | 72 | 29.9 $\frac{1}{4}$ | { h. N by E. h. N by E. h. N by E. h. NNE. } | 1 | | 4 | | | 18.33 | 18.23 |
| 26 | 76 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 30.0 | 76 $\frac{1}{2}$ | 30.0 | { h. NE by N. h. V. WNW. NW. h. NW. V. NNE. h. c. NNE. E by S. ESE. } | 8 | | 2 | | | 18.37 | 18.25 |

| Latitude from Greenwich | | | | | | | Magnetical | | | | | | | | | T.S. |
|-------------------------|-------------|----------------|--------|--------|----------|-----------|------------|---------------|------------------|------------------|--------|--------|--------|----------------|------|------------------------------------|
| TK. | D.D T.K. | D | S. | O. | E. D. | Latitude | | Cor. Long. | Variation. | | Dip | | | | ML. | taken thermi mini |
| | | | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | |
| ' ° W | ' W | ' W | | | | ' ° N' | ' N | ' W | ' ° W | ' ° | ' ° | ' ° | ' ° | | | |
| 16.46 | | | | | | 29. 4 | 28.33 | 16.46 | *18.23 | | 61.2 | 62.6 | 62. | 61.6 | 1273 | { Light rif S |
| 16.55 | | | | | | 27.53 | 27.16 | 16.55 | 16.53* *16.39 | 17. 6* | 60.2 | 61.2 | 60.6 | 60.4 | 74 | |
| 17.17 | | | | | | 26.46 | 25.45 | 17.20 | 16.37* 15.42* | 16.17* 15.42* | 59.2 | 60.2 | 59.6 | 59.4 | 70 | { Light in th |
| 17.57 | 57 | 18.54 | 4 | ⊙ | 29 | 25. 5 | 24. 3 | 18. 3 | | 15 36* | 58.2 | 59.2 | 58.6 | 58.4 | 106 | { Pleafa found trills |
| 18.28 | 66 | 19.34 | 3 | ⊙ | 28 | 23.43 | 22.25 | 18.37 | 15.13* *13. 9 | *15. 2 | 56.4 | 57.4 | 57. | 56.6 | 87 | { Light N.B. time left recte |
| 19.6 | 41 65 | 19.47 20.11 | 4 3 | ⊙ ⊙ | 47 71 | 21.54 | [20.36] | 19.18 | 14.35* *13. 9 | *13. 7 | 54. | 55.2 | 54.5 | 54.3 | 115 | { In th found weat |
| 19.7 | 79 | 20.26 | 3 | ⊙ | 37 | 19.21 | 17.49 | 19.22 | 13.56* 13.55* | 51. | 52.4 | 51.6 | 51.3 | Much motion. | 153 | { These water |
| 18.23 | | | | | | 17. 1 | 15.28 | 18.41 | 13.18* 12.32* | 48.6 | 49.4 | 49.1 | 48.6 | { Very steady. | 150 | { Fresh rema the r the w |
| 18.25 | | | | | | 16. 3 | 14.22 | 18.46 | | 46.4 | 48. | 47.2 | 46.7 | | 59 | { Light Ther a ve a fa cover veral |
| | | | | | | | | | | | | | | | 2140 | |

T.S. denotes the temperature of the sea-water taken up in a bucket about noon, and the thermometer immersed in this bucket for some minutes.

3

13 { Light breezes and smooth water. At noon, Peak of Tenerife S 50° E.

4 { Pleasant breezes from the Eastward. At noon, Peak of Tenerife (variation allowed) bore N 24° 30' E, which bearing, and the difference of latitude places it 27' to the Eastward of our situation at noon, when in 16° 55' long. by time-keeper, and consequently by time k. 16 28 is the longitude of Peak of Tenerife, only 4' less than PÉREUILLE makes it; but, by the observations of the Moon, on the 21st and following days, it appears, the ship was 10' farther West than the time-keeper represented, which difference arose since the 9th of May, if the Lunar observations were to be relied on.

0 { Light breezes and smooth water throughout. Several pettrills in the wake.

16 { Pleasant trade. In Captain EKEBERG's chart there being soundings laid down not far to the Eastward of our situation, sounded at 8 P.M. but had no ground 40 fath. Several pettrills in the wake of ship.

17 { Light breezes with smooth water throughout. Many pettrills. N.B. There was apparently an error in this day's long. by time-keeper. The succeeding days diff. long. was as much less as this day's was more than account. I have here corrected it as conformable to the Lunar observations. T.S. 69°.

5 { In the evening, the water appeared of a muddy green, like soundings; but did not found. An increasing trade with fair weather, the water continuing of same colour. T.S. 69°.

13 { These 24 hours a fresh trade, and mostly fair weather, the water remaining the same as before. T.S. 68½°.

0 { Fresh trade and hazy weather. In the afternoon the sea remarkably confused, breaking different ways. Sounded in the morning, but had no ground 40 fath. In the morning the water appeared blue again. T.S. 71°.

9 { Light breezes chiefly. In the night, no ground 70 fath. There were many blubbers in the ship's wake, which made a very luminous appearance: they seemed in shape like a sausage about 8 or 9 inches long. In the day, sea was covered with Portuguese men of war, of which took up several; also some pilot-fish and skip-jacks. T.S. 74°.

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D. L. A. O. T. K. | | | | Longitude from | |
|------|------------------|--------------------|--------------------|------------------|--------------------|--|-------------------|---|-------|----|----------------|----------------|
| | | R. | S. | Th. | D. | | D. L. | | A. O. | | A. | T. K. |
| | | In. Dec. | In. Dec. | ° | In. Dec. | | N | S | W | E | | |
| May | ° | In. Dec. | In. Dec. | ° | In. Dec. | h. SE by E. h. c. V. E by N. c. h. E by N. V. h. V. NNW. NE. | ' | ' | ' | ' | ° ' W 18.18 | ° ' W 18. 2 |
| 27 | 76 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 30.0 | 76 | 30.0 | f. NNE. N. f. N. NW by N. f. h. NW by N. h. NW by N. NNW. | 7 | | | 4 | 17.26 | 17. 7 |
| 28 | 78 $\frac{1}{2}$ | 30.0 | 30.0 | 78 $\frac{1}{2}$ | 30.0 | h. W. h. C. SW. SW by W. h. SW by W. C. S. V. h. SW. SW by W. ESE. ENE. | | | 2 | 8 | 17.16 | 16.49 |
| 29 | 80 | 30.1 | 30.1 $\frac{1}{4}$ | 80 | 30.1 | h. ENE. NE. V. W by S. h. SW by W. C. h. C. W. C. h. NW by N. NNW. N by W. | | | 2 | 3 | 17. 9 | 16.39 |
| 30 | 77 $\frac{1}{2}$ | 30.0 $\frac{3}{4}$ | 30.0 $\frac{3}{4}$ | 77 | 30.0 $\frac{3}{4}$ | f. NNW. f. fq. hr. NW. NW by W. E. fq. hr. c. h. E. C. ENE. E by S. h. f. NE. | | | | | 17. 4 | 16.44 |
| 31 | 80 | 30.0 $\frac{1}{2}$ | 30.0 | 80 | 30.0 | f. NNE. N. NNW. f. SW by W. W. f. c. h. V. C. h. c. fq. h. NW. SE by E. SE. | 1 | | 10 | | 16.51 | 16.11 |
| June | | | | | | h. SE. W. h. W. C. W. h. W. C. WNW. W by N h. W by N. | | | 10 | | 16.25 | 15.45 |
| 1 | 82 $\frac{1}{2}$ | 30.1 | 30.1 | 82 $\frac{1}{2}$ | 30.1 | h. NW. L. to E. fq. r. c. NW. NW by N. E. V. c. L. to E. V. S by W. V. E by S. ESE. h. f. E by S. E. ESE. | | | 8 | 6 | 16. 6 | 15.20 |
| 2 | 82 $\frac{1}{2}$ | 30.0 $\frac{3}{4}$ | 30.0 $\frac{3}{4}$ | 82 $\frac{1}{2}$ | 30.0 $\frac{3}{4}$ | f. SE. SSE. SE by S. SSE. S by E. c. L. all round, fq. SSE. S by E. S by W. fq. SSW. C. fq. c. C. NNW. | | | 10 | 10 | 16. 2 | 15. 6 |
| 3 | 82 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | 81 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | | | | | | | |
| 4 | 81 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 80 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | | | | | | | |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMP

| Longitude from Greenwich | | | S. | O. | E. | Latitude | | Cor. Long. | Magnetical | | | | | | ML. | | |
|--------------------------|-----------|-------------|-------|-------|-------|----------|-------|------------|------------|--------|-------|-------|------|--------------|------------------------------|-------|--|
| T.K. | D. (T.K.) | C | | | | A. | O. | | Variation | | Dip | | | | | | |
| | | | | | | | | | Az. | Amp. | Face | | MD. | C.D. | | | |
| ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | ° ' " | ° ' " | ° ' " |
| W | E | W | | | | N | N | W | W | W | W | | | | | 2140 | { Light the n some makin appear |
| 18. 2 | | | | | | 15.32 | 13.48 | 18.26 | | 46. | 46.4 | 46.2 | 45.7 | | | 46 | |
| 17. 7 | | | | | | 14.28 | 12.45 | 17.34 | 13. 0* | 44.4 | 45. | 44.6 | 44.3 | Very steady. | | 82 | { Light Eastw in the 32 fa noon, |
| 16.49 | | | | | | 13.57 | 12.12 | 17.19 | 12.37* | 12.44* | 43.6 | 44. | 43.7 | 43.4 | | 37 | |
| 16.39 | | | | | | 13.26 | 11.43 | 17.12 | 12.36* | 42.6 | 43.4 | 43.1 | 42.6 | Very steady. | | 32 | { Light a midni lumin ing li birds. like th |
| 16.44 | | | | | | 12.22 | 10.40 | 17.20 | 12.24* | 12.42* | 41.6 | 42.4 | 42.1 | 41.5 | | 69 | |
| 16.11 | | | | | | 11.40 | 10. 8 | 16.50 | 13. 7* | 12.46* | 41. | 42. | 41.4 | 41. | Very unsteady. | 53 | Major p |
| 15.45 | | | | | | 11.14 | 9.59 | 16.26 | 12.35* | 12.31* | 40.4 | 41.2 | 40.7 | 40.3 | { Not very good observation. | 39 | { First ar middle fath. fath. c |
| 15.20 | 35 62 | 15 55 16.22 | 3 3 | 0 0 | 3 20 | 10.38 | 9.15 | 16.09 | 12.48* | 12.55* | 38.6 | 39.6 | 39.2 | 38.6 | Very steady. | 45 | { Major dozen to 35 |
| 15. 6 | | | | | | 10.23 | 9.10 | 15.58 | | | 38.4 | 39.2 | 38.7 | 38.3 | | 34 | { The fir The la the ck and a above, it. In noon |
| | | | | | | | | | | | | | | | 2577 | | |

LYMPLE.

{ Light airs of wind, variable, with very damp weather. In the night, no ground 40 fath. Many fish about the ship; some under the quarter, darting through the water, and making streaks of light in various directions, had a fine appearance. T.S. 75°.

{ Light breezes throughout. In the night, lightning to the Eastward. Many luminous blubbers and fish about the ship in the night. Passed several turtle. Had ground at 11 A.M. 32 fath. coarse sand, with black specks and shells. At noon, 30 fath. coarse sand and flat coral. T.S. 75½°.

{ First and latter, light breezes. Middle, calm. Great many fish about the ship, and in the morning vast flocks of birds. Soundings, sand of various kinds from 28 to 17½ fath. at 8 A.M.; at 9 A.M. 21 fath. blue mud; and at 11 A.M. no ground 35 fath. T.S. 77°.

{ Light airs and calm. At 5 P.M. 56 fath. green mud. At midnight, 45 fath. blue mud. In the night, the water very luminous when put in motion, and many shoals of fish looking like breakers. A.M. a turtle passed; vast flocks of sea birds. At noon, the sea covered with Portuguese men of war, like the ground with leaves in Oct. 23 f. blue mud. T.S. 76½°.

{ Most part pleasant land and sea breezes. At midnight, a hard squall from the land: it was preceded by great deal of lightning over the land, and long threatening before the squall came off. It rose in a dark black cloud, with a white streak like a bow under it, and below this very dark. It came off very hard, and raised the spray of the sea in a foam. P.M. Soundings, 25 to 21 fath. sand. A.M. No ground 60 and 40 fath. T.S. 80°.

{ Major part, light breezes. P.M. No ground 40 to 80 fath.

{ First and latter parts, pleasant breezes from Westward. The middle, calm, with hot sultry weather. At midnight, 80 fath. coarse black sand, with bits of coral. At noon, 26 fath. coarse brown sand. T. S. 81°.

{ Major part, light airs. Many sharks about the ship; above a dozen in sight at once; caught one. P.M. Soundings 27 to 35 fath. At noon, no ground 88 fath. T.S. 80½°.

{ The first part, light breezes of wind from the Southward. The latter, mostly calm, with hot weather. In the evening, the clouds very remarkable; some appearing like dirty wool, and apparently very near all round the horizon; the sky above, in many places, a fine pink, and blueish grey beneath it. In the morning, many grampusses about the ship. At noon, ground 60 fath. T. S. 83¼°.

Journal of a Voyage to The East-Indies, in the Ship G

| 1755 | Th. | Marine Barometer, | | | | Weather and Winds. | D.L. | | Longitude from | A. | TK. | | |
|------|------------------|--------------------|--------------------|------------------|--------------------|---|------|---|----------------|-------|-------|---|---|
| | | R. | S. | Th. | D. | | N | S | | | | W | E |
| | | | | | | | | | | | | | |
| June | | In. Dec. | In. Dec. | ° | In. Dec | | | | | | | | |
| 5 | 30 $\frac{3}{4}$ | 30.0 $\frac{3}{4}$ | 30.0 $\frac{1}{2}$ | 80 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | <div><div>h. c. C. W by S.</div><div>c. L. all rd. r. W by S. WSW. V. NNW.</div><div>r. h. sq. and hr. sq. r. NNW. SE by E. E by S. V.</div><div>h. V. S by E. SSE.</div></div> | 10 | | 20 | 15.43 | 14.28 | | |
| 6 | 83 | 30.0 $\frac{3}{4}$ | 30.0 $\frac{3}{4}$ | 83 | 30.0 $\frac{3}{4}$ | <div><div>f. C. V.</div><div>f. L. to Eastw. SW by W.</div><div>h. sq. r. L. all rd. r. c. E by S. SE. E. E by N.</div><div>c. f. E by N. C. SSE. S by E.</div></div> | 11 | | 8 | 15.41 | 14.34 | | |
| 7 | 82 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | 30.1 $\frac{1}{4}$ | 82 $\frac{1}{4}$ | 30.1 $\frac{1}{4}$ | <div><div>h. SE by S. S by E. C.</div><div>h. c. V. SSE. SE by S.</div><div>c. sq. S by W. V. C.</div><div>sq. c. C. S by E. SSE. S.</div></div> | 11 | | 19 | 15.41 | 14.53 | | |
| 8 | 83 | 30.1 $\frac{1}{4}$ | 30.1 $\frac{1}{4}$ | 83 | 30.1 $\frac{1}{4}$ | <div><div>c. hr. and L. to s.w. S. C. V. SW.</div><div>sq. c. sq. SW. SW by W. SW.</div><div>c. C.</div><div>c. f. C.</div></div> | 23 | | 12 | 15.22 | 14.22 | | |
| 9 | 84 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 84 | 30.0 $\frac{1}{2}$ | <div><div>h. C.</div><div>h. L. to westw. C.</div><div>h. c. C. W by S.</div><div>c. W by S.</div></div> | 3 | | 3 | 15.18 | 14.14 | | |
| 10 | 81 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 80 $\frac{3}{4}$ | 30.0 | <div><div>f. c. sq. r. W. NNE.</div><div>sq. r. c. NNE. V. C.</div><div>c. L. to E^d. hr. C. V. C. ENE.</div><div>r. c. ENE. V. SW by W.</div></div> | 3 | | 19 | 15.0 | 14.15 | | |
| 11 | 77 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 76 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | <div><div>c. sq. r. SW. SW by S.</div><div>c. f. c. sq. r. SW.</div><div>sq. r. SSW. SW. WSW.</div><div>hr. r. WSW. V.</div></div> | 30 | | 24 | 14.19 | | | |
| 12 | 82 | 30.0 $\frac{3}{4}$ | 30.0 $\frac{3}{4}$ | 82 | 30.0 $\frac{3}{4}$ | <div><div>hr. V. SW.</div><div>fr. r. c. SW. SW by S. SSW.</div><div>c. r. SSW. C. V.</div><div>c. C. V.</div></div> | | | | 14.4 | 12.55 | | |
| 13 | 81 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 81 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | <div><div>c. WNW. NW.</div><div>c. L. to westw. NW.</div><div>c. NW. NW by N.</div><div>c. th. L. to SW. V. NNE.</div></div> | | | 2 | 13.50 | 12.39 | | |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMPLE

| ude from Greenwich | | | | | | Latitude | | Cor. Long. | Variation | | Magnetical | | | | ML. | |
|--------------------|------------|-------|----|----|----------|----------|--------|---------------|-----------|--------|--------------|--------------|------|------|--|------|
| TK. | D. T.K. | D | S. | C. | E. D. | A. | O. | | Az. | Amp | Dip | | | | | |
| | | | | | | | | | | | Face | | MD. | C.D. | | |
| | | | | | | | | | | E. | W. | | | | | |
| ° / | ° / | ° / | | | | ° / | ° / | ° / | ° / | ° / | ° | ° | ° | ° | | |
| W | E | W | | | | N. | N. | W | W | W | | | | | | |
| 14.28 | | | | | | 9.43 | 8.40 | 15.43 | | | 38.2 | 38.4 | 38.3 | 37.7 | 2577 | |
| 14.34 | | | | | | 9.12 | 8.20 | 15.53 | *13.33 | | 36.6 | 37.2 | 37. | 36.4 | 48 { Mostly l deal of board fi Englan A.M. f pool to no grou | |
| 14.53 | | | | | | 8.56 | 8.15 | 16.16 | | 12.28* | 36.6 | 37.6 | 37.2 | 36.6 | 38 { Mostly l wind ca nute or thunder 82°. | |
| 14.22 | | | | | | 8.33 | 8.15 | 15.49 | | | 36.6 | 37.6 | 37.2 | 36.6 | 31 Light airs c | |
| 14.14 | | | | | | 8.29 | 8. 8 | 15.46 | | | 36.4 | 37.6 | 37.1 | 36.5 | 30 { First, li calm, mast by a pretty the top fore-top | |
| 14.15 | 53 | 15.8 | 5 | *S | 48 | 8. 1 | 7.43 | 15.51 | | | 35.6 | 36.6 | 36.2 | 35.6 | 6 { Mostly c up main | |
| | | | | | | 7. 9 | [7.14] | [14.53] | | | 34.6 | 35.6 | 36.2 | 35.6 | 35 { First, fai ble, with | |
| 12.55 | 58 | 13.53 | 3 | *S | 39 | 6.53 | 7. 5 | 14.39 | | | 35.2 | 35.4 | 35.3 | 34.7 | 64 { Cloudy at Southw. | |
| 12.39 | 115 | 14.34 | 3 | *S | 15 | 6.25 | 6.37 | 14.27 | 13.18* | | 32.4 32.6 | 33.4 32.6 | 32.6 | 32.1 | 22 { Calm and very lar the harp | |
| | | | | | | | | | | | | | | | 31 { Light airs no groun | 2882 |

Mostly light breezes. Past 2 P.M. a hard squall, with great deal of thunder, lightning, and rain. P.M. a boat came on board from the Polly, a whaling vessel, from Boston in New England; the vessel was hull down when they came aboard. A.M. spoke with the Mary, Captain JONES, from Liverpool to Sierra Leon. P.M. 40 to 36 fath. coarse sand. A.M. no ground 55 fath. T.S. $83^{\circ}\frac{1}{2}$.

Mostly light airs and calms. At midnight, a violent gust of wind came off: its violence did not continue above a minute or two; but brought much rain, and was attended with thunder and lightning. A.M. no ground 88 fath. T.S. 82° .

Light airs chiefly: a long swell from the SW. T.S. $82^{\circ}\frac{1}{2}$.

First, light airs. Middle, fresh breezes and squally. Latter, calm. At midnight, carried away the main and fore-top-mast by the badness of the rigging. Had, for some hours, a pretty fresh SW wind; but not enough to have endangered the top-masts had the rigging been good. At 11 got fore-top-mast up. T.S. 83° .

Mostly calm, with swell from Southward. At 9 A.M. got up main-top-mast. T.S. 82° .

First, fair. Middle, squally, with hard rain. Latter, variable, with calms. T.S. $81^{\circ}\frac{1}{2}$.

Cloudy and rainy, with a gentle breeze: great swell from Southw. T.S. 81° .

Calm and cloudy: great long swell from Southward. A.M. a very large shark was struck with the harpoon; but it broke the harpoon, and got off. Many fish and birds. T.S. 82° .

Light airs and cloudy through. Many fish and birds. P.M. no ground 70 fath. A.M. hooked a shark. T.S. $81^{\circ}\frac{1}{2}$.

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | D.L. A. | T.K. | Longitude from | |
|------|------------------|--------------------|--------------------|------------------|--------------------|---|--------------|------------|-------|----------------|------|
| | | R. | S. | Th. | D. | | | | | A. | T.K. |
| | | In. Dec. | In. Dec. | ° | In. Dec. | | | | | | |
| June | ° | | | | | | | | | | |
| 14 | 82 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 82 $\frac{1}{4}$ | 30.0 | <div><div>c. V. C.</div><div>c. SW by S. SSW.</div><div>c. SSW. SW.</div><div>hr. c. r. c. C. V. S by E.</div></div> | 15 | 4 | 13.20 | 12.14 | |
| 15 | 83 | 30.0 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 82 $\frac{3}{4}$ | 30.0 | <div><div>h. S by W. S. SSW.</div><div>h. f. SSW.</div><div>c. r. c. SSW. SW. V.</div><div>c. T. to s.e. V. SW by W. SSW. SW.</div></div> | 15 | 7 | 12.39 | 11.26 | |
| 16 | 82 | 30.0 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 82 | 30.0 | <div><div>c. fr. fq. r. SW. V. S by W.</div><div>fq. L. to n.e. S by W. V. C. SW. SW by S.</div><div>c. SW by S. C.</div><div>c. r. c. V. C. V.</div></div> | 5 | | 12.27 | | |
| 17 | 79 $\frac{1}{2}$ | 30.0 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 78 $\frac{1}{2}$ | 30.0 $\frac{1}{4}$ | <div><div>fq. r. V. S by W.</div><div>fq. r. c. V. SSW.</div><div>c. r. c. SSW. S. SW.</div><div>c. hr. c. SW by W. WSW. SW by W.</div></div> | 7 | 24 | 11.58 | 10.21 | |
| 18 | 80 $\frac{1}{2}$ | 30.0 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 80 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | <div><div>c. SW by W. SW. C. W by N.</div><div>fq. c. W by N. W by S. V. C.</div><div>c. C. NE.</div><div>c. NE. ENE.</div></div> | 7 | 5 | 11.44 | 10.2 | |
| 19 | 80 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 80 | 30.0 $\frac{1}{2}$ | <div><div>h. NNE. C. V.</div><div>L. to n^d. c. V. WSW.</div><div>c. WSW. W by S. V.</div><div>c. fr. c. V. C. SW by S.</div></div> | 5 | 1 | 11.29 | 9.46 | |
| 20 | 82 | 30.0 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 81 | 30.0 $\frac{1}{4}$ | <div><div>c. SW by S. SSW. SW by S.</div><div>c. L. fq. r. c. SW by S. SSW. SW by S. SW. SSW.</div><div>c. SSW. V. S by W.</div><div>c. r. S by E. C. SE by S. V.</div></div> | 16 | 5 | 10.52 | 9.4 | |
| 21 | 79 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 79 | 30.0 $\frac{1}{2}$ | <div><div>c. S by E. S. SSW.</div><div>c. L. from n. to s.e. fq. r. SSW. SW by S. SSE. S.</div><div>r. hr. S.</div><div>hr. c. r. S by E. C.</div></div> | 13 | 3 | 10.31 | 8.46 | |
| 22 | 80 $\frac{3}{4}$ | 30.0 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 80 $\frac{1}{2}$ | 30.0 $\frac{1}{4}$ | <div><div>hr. C. SSW. V. C.</div><div>hr. C. ESE. V.</div><div>hr. fq. hr. V. SSE. V.</div><div>fq. r. V.</div></div> | | 13 | 10.50 | 8.52 | |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMP

| Latitude from Greenwich | | | | | | | | | Magnetical | | | | | | | |
|-------------------------|--------------|-------|----|----|----|----------|--------|---------------|------------------|--------|------|------|------|------|------|--|
| T.K. | D.C. T.K. | C. | S. | O. | D. | Latitude | | Cor. Long. | Variation | | Dip | | | | ML. | |
| | | | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | |
| | | | | | | | | | | | E. | W. | | | | |
| W | E | W | | | | N | N | W | W | W | | | | | | |
| 12.14 | 120 | 14.14 | 3 | 48 | | 6.5 | 6.32 | 14.6 | | 13.28* | 32.6 | 33.6 | 33.2 | 32.5 | 2882 | |
| | | | | | | | | | | | | | | | 37 | |
| 11.26 | | | | | | 5.32 | 6.14 | 13.18 | | 13.32* | 32. | 32.4 | 32.2 | 31.5 | 54 | |
| | | | | | | 5.18 | 6.5 | [12.59] | | | 31.6 | 32. | 31.7 | 31.2 | 19 | |
| 10.21 | | | | | | 4.55 | 5.49 | 12.13 | | | 30. | 30.6 | 30.3 | 29.6 | 43 | |
| 10.2 | | | | | | 4.36 | 5.23 | 11.54 | | | 29.2 | 30. | 29.5 | 28.7 | 24 | |
| 9.46 | | | | | | 4.15 | 5.7 | 11.38 | 13.30* | 13.50* | 28.6 | 29.6 | 29.2 | 28.4 | 26 | |
| 9.4 | | | | | | 3.49 | 4.57 | 10.56 | 14.23* *14.43 | 14.41* | 28.6 | 29.6 | 29.2 | 28.4 | 46 | |
| 8.46 | | | | | | 3.45 | [4.54] | 10.38 | 14.40* | | 28.4 | 29.4 | 29. | 28.2 | 44 | |
| 8.52 | | | | | | 3.19 | 4.39 | 10.44 | | | 27.6 | 28.4 | 28.1 | 27.3 | 35 | |
| | | | | | | | | | | | | | | | 3210 | |

In the
from
more
the b
with
groov
pearl

Light bre

PM. ma
sharks.

First pa
ter, li
land to
thick

Pleasant
variabl

Light ai
the mo
any sq

Mosly
error o
allowa
First an
heavy
In the
leagues
rock or
of the
The N
and the
a hill,
that of

At Sur
distanc
Variab

LRYPLE.

2 { In the night, many fish. A.M. struck an albacore; it has from the back fin to the tail nine little yellow fins, and nine more such from the belly fin to the tail. Besides the fin on the back, it has another fin, composed of a thin membrane, with sharp prickly ribs; this fin it can strike, having a groove to receive it, so that there remains no projection or appearance of it. Light airs. No ground 65 to 70 fath. T.S. 81°.

{ Light breezes, with a swell from the Southward. T.S. 82°.

{ PM. many fish; but swimming very deep. A.M. caught three sharks. Most part light airs and calm with rain. T.S. 81°.

{ First part, squally, with rain and wind Southerly. The latter, light airs S.W. cloudy and rain. A.M. appearance of land to Eastward under the clouds, but very obscure, being thick and hazy weather. T.S. 81°.

{ Pleasant weather. A.M. some dolphins. Light airs of wind, variable with calms. T.S. 81°.

{ Light airs, with lightning and some thunder in the night. In the morning, it looked very black, but was not attended with any squall. T.S. 81°.

{ Mostly light breezes and cloudy, with rain. I ascribe the error of this day's log partly to the course having made no allowance for lee-way. T.S. 82°.

{ First and middle parts, light breezes, with some squalls, and heavy rain. The latter, calm, with cloudy weather and rain. In the morning, at 8 P.M. saw the land, bearing E by S 7 leagues. Sounded 46 fath. mud; but there was the mark of rock on the arming of the lead. At 10 A.M. the extremes of the land from N by E $\frac{1}{2}$ E to E distance about 7 leagues. The N extreme I suppose is *Puna Baixas* near *Sefos* river, and the Southern extreme supposed about *Baca*: There was a hill, visible inland, to the left, which was supposed to be that of *Baffa*. T.S. 81°.

{ At Sun-set, the extremes N $\frac{1}{2}$ E to E $\frac{1}{2}$ S (per compass) distance off shore about 6 leagues. 43 fath. blue mud. Variable winds, with very much hard rain. T.S. 81°.

Journal of a Voyage to The East-Indies, in the Ship G.

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. | | | Longitude from | |
|------|------------------|--------------------|--------------------|------------------|--------------------|---|--------------|--------------|----|-------------------|------------------|
| | | R. | S. | Th. | D. | | D.L. A.O. | D.L. T.K. | A. | TK. | |
| | | | | | | | | | | | N |
| June | ° | In.Dec. | In.Dec. | ° | In.Dec. | | | | | | |
| 23 | 82 | 30.0 | 29.9 $\frac{3}{4}$ | 81 $\frac{3}{4}$ | 30.0 | { r. c. SSE. S. S by W. c. fq. S by W. S. S by E. r. c. S by E. SSE. c. h. S. S by W. S. } | 12 | 1 | | ° / W 11.13 | ° / W 9.16 |
| 24 | 80 $\frac{1}{2}$ | 30.0 | 29.9 $\frac{3}{4}$ | 80 | 29.9 $\frac{3}{4}$ | { h. fq. r. S. S by W. SSW. fq. r. c. S by W. c. fq. c. S by W. c. fq. r. S by W. S. } | 3 | 3 | | 11.42 | 9.48 |
| 25 | 77 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 76 $\frac{1}{2}$ | 30.0 | { h. c. S. S by W. SSW. c. SSW. c. SSW. c. r. SSW. V. C. W by S. } | 21 | | 52 | 11.16 | |
| 26 | 80 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{4}$ | 80 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | { hr. c. fq. V. SSW. fq. r. SW by S. r. SW by S. S by W. SSW. r. c. S by W. } | | | | 10. 2 | 7.40 |
| 27 | 80 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 80 $\frac{1}{4}$ | 30.0 $\frac{1}{2}$ | { c. fq. SSW. SW by S. SSW. c. fq. SSW. S by W. fq. c. S by W. S. c. S. S by W. S. } | 24 | 44 | | 10. 6 | 7. 0 |
| 28 | 80 $\frac{1}{2}$ | 30.0 $\frac{3}{4}$ | 30.0 $\frac{1}{4}$ | 80 $\frac{1}{4}$ | 30.0 $\frac{3}{4}$ | { h. S. S by E. h. fq. f. c. S by E. fq. c. S. c. f. S. S by E. } | 13 | 2 | | 11.10 | 8. 2 |
| 29 | 79 $\frac{1}{2}$ | 30.1 | 30.1 | 79 | 30.1 | { c. S. S by E. S. c. S by E. c. f. S by E. S. f. S by E. } | 20 | 39 | | 12.18 | 9.48 |
| 30 | 78 $\frac{1}{2}$ | 30.2 | 30.1 $\frac{1}{2}$ | 78 $\frac{1}{2}$ | 30.1 | { f. S by E. f. c. S by E. c. f. S by E. f. S by E. S. } | 1 | 77 | | 13.21 | 12.8 |
| July | | | | | | | | | | | |
| 1 | 77 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | 76 $\frac{3}{4}$ | 30.1 | { c. S. c. S. c. S by E. S. c. f. S. S by E. S. } | 21 | 76 | | 12.35 | 12.38 |
| 2 | 78 $\frac{1}{2}$ | 30.1 $\frac{1}{4}$ | 30.1 | 78 | 30.1 | { h. S by E. S. S by E. h. c. S by E. SSE. S by E. c. S. c. S. S by E. S. } | 14 | 62 | | 13.33 | 14.38 |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMPLE

| Longitude from Greenwich | | | S. | O. | D. | Magnetical | | | | | | | | ML. | | |
|--------------------------|--------------|---|----|----|----|------------|--------|---------------|------------------|--------|------|------|------|------|---|---|
| TK. | D.D. T.K. | D | | | | Latitude | | Cor. Long. | Variation. | | Dip | | | | | |
| | | | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | |
| | | | | | | ° N' | ° N | ° W | ° W | ° | ° | ° | ° | | | |
| W 9.16 | | W | | | | 3. 0 | 4.32 | 11. 6 | W | W | 28. | 28.4 | 28.2 | 27.4 | } Very unsteady. | 3210 54 Moderate. |
| 9.48 | | | | | | 2.53 | 4.28 | 11.37 | | | 28.4 | 29.4 | 29. | 28.2 | | 73 { Most part T.S. 8. |
| | | | | | | 2.35 | [4.21] | [11.11] | | | 27.4 | 27.6 | 27.5 | 26.7 | } Pretty steady. | 58 { Most part furgeon jolly boat find him one glass 50 fath |
| 7.40 | | | | | | 2.23 | 4.16 | 9.26 | | | 26.4 | 27.4 | 27. | 26.2 | | 58 A fresh breeze |
| 7. 0 | | | | | | 2.13 | 3.42 | 8.45 | | | 25.4 | 26. | 25.6 | 25. | } Mostly making supposed spoke T.S. 8. | 73 { |
| 8. 2 | | | | | | 1.34 | 2.50 | 9.45 | 14.42* *14.11 | | 24.4 | 25.2 | 24.7 | 24. | | 76 { Fresh breeze T.S. 8. |
| 9.48 | | | | | | 1. 0 | 1.56 | 11.29 | 14.37* *13.44 | 14.25* | 23.6 | 24.4 | 24.1 | 23.2 | Very unsteady. | 79 Fresh breeze |
| 12.8 | | | | | | 0.14 | 1.11 | 13.48 | 13. 6* *12. 7 | | 23.6 | 24.4 | 24.1 | 23.2 | Pretty steady. | 78 { Fresh breeze Some 1 man of |
| 12.38 | | | | | | 0.16 | 1.34 | 14.17 | 13.17* | | 24.6 | 24.4 | 24.5 | 23.6 | | 66 Major part |
| 14.38 | | | | | | S 0.22 | 1.10 | 16.16 | 12.41* | 12.47* | 24.6 | 25.4 | 25.1 | 24.2 | } N.B. going to Westward en- creases dip. | 70 Pleasant breeze |
| | | | | | | | | | | | | | | | | 3895 |

Moderate breezes. T.S. 81° .

{ Most part a fresh gale from Southward, with squalls and rain.
T.S. 81° .

{ Most part fresh breezes. At 8 P.M. Richard Jones, the surgeon's lad, fell over-board. Hove the ship to, and sent jolly boat and yawl in search of him; but they could not find him. No observation for latitude or time, not having one glimpse of the Sun all the forenoon. P.M. no ground 50 fath. T.S. $80^{\circ}\frac{1}{2}$.

A fresh breeze with much rain. P.M. no ground 70 fath. T.S. $80^{\circ}\frac{1}{2}$.

{ Mostly fresh breezes. At 2 P.M. from mast-head land, making like islands, was seen bearing E by N = ENEAN, supposed Cape Palmas. P.M. no ground 70 fath. At 8 P.M. spoke with a French ship from *Haïre* to the coast of *Angola*. T.S. 80° .

{ Fresh breeze throughout, and a large Southerly swell.
T.S. $80^{\circ}\frac{1}{4}$.

Fresh breeze throughout. P.M. cloudy. A.M. fair. T.S. $79^{\circ}\frac{1}{2}$.

{ Fresh breezes with fair weather. P.M. many porpoises. Some bottle noses, and vast flocks of flying fish. A.M. a man of war bird. T.S. $76^{\circ}\frac{1}{4}$.

Major part moderate and cloudy. T.S. 78° .

Pleasant breeze, with fair weather and smooth water. T.S. 76° .

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. | | D.L. | Longitude from C | | | | | |
|------|------------------|--------------------|--------------------|------------------|--------------------|--|------|------|------|------------------|-----------|-----------|---|---|---|
| | | R. | S. | Th. | D. | | A.O. | T.K. | | A. | T.K. | D.T. | | | |
| | | | | | | | | | | | | | N | S | W |
| July | ° | In.Dec. | In.Dec. | ° | In.Dec. | | | | | | | | | | |
| 3 | 79 | 30.0 $\frac{3}{4}$ | 30.0 $\frac{3}{4}$ | 79 | 30.0 $\frac{1}{2}$ | <div><div>h. S. S by E. S.</div><div>h. S by E. SSE. S by E. S. S by E.</div><div>h. fq. c. S by E.</div><div>c. S by E. SSE. S by E. SSE.</div></div> | | 3 | 35 | | ° W 14.56 | ° W 16.36 | E | | |
| 4 | 77 $\frac{1}{2}$ | 30.1 | 30.0 $\frac{1}{4}$ | 77 | 30.0 $\frac{1}{2}$ | <div><div>h. SSE. SE by S. SE. SE by S.</div><div>h. SE by S. SE.</div><div>h. f. c. SE by S.</div><div>c. f. SE.</div></div> | | 14 | 30 | | ° 15.44 | ° 17.55 | | | |
| 5 | 78 $\frac{1}{2}$ | 30.1 $\frac{1}{4}$ | 30.1 $\frac{1}{4}$ | 78 $\frac{1}{2}$ | 30.1 | <div><div>h. SE. SE by E. ESE.</div><div>h. f. ESE.</div><div>f. c. f. ESE. SE by E.</div><div>f. SE by S. SE.</div></div> | 2 | | 15 | | ° 16.4 | ° 18.30 | 9 | | |
| 6 | 79 $\frac{3}{4}$ | 30.1 | 30.0 $\frac{3}{4}$ | 79 $\frac{3}{4}$ | 30.0 $\frac{1}{2}$ | <div><div>f. SE by E. SE.</div><div>f. c. SE by E. SE.</div><div>c. fq. r. c. SE. SE by E. SE by S.</div><div>c. fq. r. SE by S.</div></div> | 12 | | 29 | | ° 16.49 | ° 19.44 | | | |
| 7 | 80 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{3}{4}$ | 80 | 30.0 $\frac{1}{2}$ | <div><div>c. SE. SE by S. SE.</div><div>c. f. SE. SE by E. SE.</div><div>f. c. SE by E.</div><div>c. fq. SE by E.</div></div> | | 14 | 8 | | ° 17.39 | ° 20.42 | | | |
| 8 | 79 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 79 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | <div><div>fq. r. fq. SE by E. SE.</div><div>fq. c. SE.</div><div>c. SE.</div><div>c. fq. r. h. f. SE. SE by E.</div></div> | | 14 | 5 | | ° 18.42 | ° 21.40 | | | |
| 9 | 79 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | 30.1 $\frac{1}{4}$ | 79 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | <div><div>f. fq. ESE. SE by E. SE.</div><div>fq. f. SE.</div><div>fq. c. SE. SE by E.</div><div>c. SE by E. SE.</div></div> | 3 | | 14 | | ° 19.45 | ° 22.29 | | | |
| 10 | 77 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | 30.1 $\frac{1}{4}$ | 77 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | <div><div>f. SE. SE by E.</div><div>c. fq. SE. SE by E.</div><div>fq. SE by E. ESE. SE.</div></div> | 5 | | 21 | | ° 20.37 | ° 23.0 | | | |
| 11 | 77 | 30.2 $\frac{3}{4}$ | 30.2 $\frac{1}{2}$ | 76 $\frac{3}{4}$ | 30.2 $\frac{1}{2}$ | <div><div>h. fq. r. c. SE. SE by E.</div><div>c. fq. SE. SE by E. SE.</div><div>fq. c. SE. SE by E.</div><div>c. f. SE by E. SE.</div></div> | | | 8 | | ° 21.42 | ° 23.57 | | | |
| 12 | 76 $\frac{1}{2}$ | 30.3 | 30.2 $\frac{3}{4}$ | 76 $\frac{1}{2}$ | 30.2 $\frac{1}{4}$ | <div><div>h. SE.</div><div>h. f. SE. SE by E.</div><div>f. c. SE by E.</div><div>c. fq. SE. SE by E.</div></div> | 1 | | 4 | | ° 22.29 | ° 24.40 | | | |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMPLE

| Distance from Greenwich | | | S. | O. | D. | Latitude | | Cor. Long. | Variation | | North Dip | | | | ML. | |
|-------------------------|-----------|-------|----|----|----|----------|-----------|------------|-----------------|-------|------------|------|------|------|--|--|
| T.K. | D. & T.K. | C | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | |
| | | | | | | | | | | | E. | W. | | | | |
| ° W | ° E | ° W | | | | ° S | ° N | ° W | ° W | ° W | ° | ° | ° | ° | | |
| 6.36 | | | | | | 1. 6 | 0.17 | 18.13 | 11.37* | | 24.2 | 24.6 | 24.4 | 23.5 | 3895 | |
| 7.55 | | | | | | 2.13 | S 1. 8 | 19.29 | 10.31* *9. 0 | *8.40 | 22.2 | 22.6 | 22.4 | 21.5 | 97 { Fresh breeze. | |
| 8.30 | 93 | 20. 3 | 4 | 0 | 26 | 3.28 | | 20. 3 | 8.59* *8.32 | 8.59* | 19.6 | 20.6 | 20.2 | 19.3 | 86 { Pleasant trade | |
| 9.44 | | | | | | 4.56 | | 21.20 | 8.37* | 8.54* | 19.2 | 20.2 | 19.6 | 18.7 | 80 { Night, sea breezes, v | |
| 0.42 | | | | | | 6.22 | | 22.20 | 7.52* | 7.49* | 15.4 | 16.2 | 15.7 | 15. | 99 { A.M. great very close rain. F. | |
| 1.40 | | | | | | 8. 1 | | 23.20 | *6.26 | *6.33 | 11. | 12.6 | 11.7 | 11. | 101 { Great swell cloudy. | |
| 2.29 | | | | | | 9.45 | | 24.11 | | | 7.2 | 8.4 | 7.7 | 7. | 118 { Pretty steady, though great swell; touched the screws, and found the same. | |
| 3. 0 | | | | | | 11.33 | | 24.44 | 5.44* | 5.32* | 3.6 | 5.0 | 4.3 | 3.4 | 119 { Ditto. Ditto | |
| 3.57 | | | | | | 13. 7 | | 25.43 | *4. 0 | | 2.2 | 2.4 | 2.3 | 1.4 | 120 { Ditto. Saw T.S. 77? | |
| 4.40 | | | | | | 14.48 | | 26.28 | 4.15* | 4.20* | 1.4 | 1.2 | 1.3 | 2.2 | 114 { Major part swell. P. Towards r | |
| | | | | | | | | | | | South Dip. | | | | 111 { Pleasant trade bird, suppleman of w. | |
| | | | | | | | | | | | | | | | 4942 | |

YMPLE.

esh breeze throughout. T.S. 76°.

pleasant trade wind, with a Southerly swell. T.S. 76°½.

Night, sea luminous supposed blubber. Major part, pleasant breezes, with a swell from SE. T.S. 76°½.

A.M. great swell. In the forenoon, hard rain, small drops, but very close. First part, fresh trade; latter, squally and some rain. T.S. 77°½.

Great swell. The barometers very unsteady. Fresh gales and cloudy. T.S. 78°½.

to. Ditto Strong gales and squally. T.S. 78°.

to. Fresh gales throughout. T.S. 78°.

Ditto. Saw a petrel. Fresh gales from SE. with a large swell. T.S. 77°.

Major part fresh gales and squally, with a great confused swell. P.M. a weather gall. A.M. Swell much abated. Towards noon, moderate and fair. T.S. 75°.

Pleasant trade wind. Swell very much abated. A.M. saw a bird, supposed to be a shearwater. Mr. ROBERTS saw a man of war bird. T.S. 75°½.

Journal of a Voyage to The East-Indies, in the Ship C

| 1775 | Th. | Marine Barometer, | | | | Weather and Winds. | D.L. | | D.L. | A. | Longitude from | |
|------|------------------|--------------------|--------------------|------------------|--------------------|--|------|------|------|----|----------------|-------|
| | | R. | S. | Th. | D. | | A.O. | T.K. | | | A. | TK. |
| | | In.Dec. | In.Dec. | ° | In.Dec. | | N | S | W | E | | |
| July | | | | | | | | | | | | |
| 13 | 76 | 30.2 $\frac{3}{4}$ | 30.2 $\frac{1}{2}$ | 76 | 30.2 $\frac{1}{2}$ | <div><div>h. fq. r. SE by E. SE by S. SE by E.</div><div>fq. r. c. E by S. SE.</div><div>c. SE. SE by S. SSE.</div><div>c. SE by S. S by E. SSE.</div></div> | 2 | | 6 | | W | W |
| 14 | 76 | 30.3 $\frac{1}{4}$ | 30.3 | 76 | 30.2 $\frac{1}{2}$ | <div><div>t. fq. SE by S. SE.</div><div>fq. f. SE by E. SE by S.</div><div>c. fq. c. SE by S. SE.</div><div>c. f. SE. SE by E. SE.</div></div> | 3 | | 9 | | 24.27 | 26.53 |
| 15 | 76 $\frac{1}{4}$ | 30.2 $\frac{1}{2}$ | 30.2 $\frac{1}{2}$ | 76 $\frac{1}{2}$ | 30.2 $\frac{1}{4}$ | <div><div>f. c. fq. SE. SE by S. SE.</div><div>c. r. c. fq. r. SE by E. SE by S. SSE. V.</div><div>fq. r. c. SE.</div><div>c. h. SE by E.</div></div> | | | | I | 25.20 | 27.45 |
| 16 | 74 $\frac{1}{2}$ | 30.3 $\frac{1}{2}$ | 30.3 | 74 $\frac{1}{2}$ | 30.2 $\frac{3}{4}$ | <div><div>c. SE. SE by E.</div><div>c. SE by E. ESE.</div><div>c. E by S. SE by E. E by S. SE by E.</div><div>c. SE. ESE.</div></div> | | I | I | | 25.42 | 28. 8 |
| 17 | 73 | 30.4 | 30.3 $\frac{1}{4}$ | 73 | 30.3 $\frac{1}{2}$ | <div><div>c. SE by E. V. SSE. V. ESE.</div><div>c. fr. fq. SE by E. V. SE.</div><div>fq. fr. SE by E. V.</div><div>fq. fr. c. fq. SE. E by S. ESE.</div></div> | 2 | | 5 | | 26. 2 | 28.33 |
| 18 | 75 $\frac{1}{2}$ | 30.4 | 30.3 $\frac{1}{2}$ | 75 $\frac{1}{2}$ | 30.3 $\frac{1}{2}$ | <div><div>f. SE by E. SE.</div><div>f. c. SE by E.</div><div>c. SE by E. SE.</div><div>c. f. SE. E by S. ESE. E by S.</div></div> | 8 | | 4 | | 26.29 | 29. 4 |
| 19 | 73 $\frac{1}{2}$ | 30.4 | 30.3 | 73 $\frac{1}{2}$ | 30.3 | <div><div>c. fq. c. ENE.</div><div>fr. fq. V. ESE.</div><div>r. fq. r. f. fq. r. V. C. NE. V.</div><div>fq. r. c. f. C. N. V. N.</div></div> | | | | | 26:12 | 28.47 |

Ship Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE

| Longitude from Greenwich | | | | | Latitude | | Cor. Long. | Magnetical | | | | | | ML. | | |
|--------------------------|------------|----------------|----|-----|----------|-------|---------------|------------|----------------|----------------|------|------|------|------|--|------|
| TK. | D. T.K. | D | S. | O. | E. | A. | | O. | Variation | | Dip | | | | | |
| | | | | | | | | | Az. | Amp. | Face | | MD. | | | C.D. |
| | | | | | | | | | | E. | W | | | | | |
| 0 | / | / | 0 | / | | 0 | / | 0 | / | 0 | 0 | 0 | 0 | 4942 | First part fair. perfect fore fore Change rious t | |
| W | E | W | | | | S. | S. | W | W | | | | | 111 | | |
| 25.47 | | | | | | 16.17 | 15.33 | 27.37 | *2.43 | *2.42 | 3.4 | 3.4 | 3.4 | 3.4 | | |
| 26.53 | | | | | | 17.46 | 16.59 | 28.45 | 1.48* *1.45 | 1.36* *1.49 | 5.2 | 5.4 | 5.3 | 6.2 | 104 Constant tr | |
| 27.45 | | | | | | 18.58 | 18.11 | 29.39 | *1.21 | | 7.4 | 8. | 7.6 | 8.5 | 88 First part, | |
| 28. 8 | | | | | | 19.47 | 19. 1 | 30. 4 | 0.42* | | 9.2 | 9.6 | 9.4 | 10.3 | 54 { A.M. far called. abated. | |
| 28.33 | 105 | 30.18 | 3 | At. | 31 | 20.47 | 19.59 | 30 31 | | | 11. | 11.2 | 11.1 | 12. | 69 { P.M. to curved nidada noon, breezes water. to lye i | |
| 29. 4 | 138 120 | 31.22 31. 4 | 3 | 0 | 11 23 | 22. 9 | 21.29 | 31.15 | E 0.20* | E 0.13* | 13. | 13. | 13. | 13.7 | 87 { Its longi Mean di and r Long. 8 By Dr. i | |
| 28.47 | 145 | 31.12 | 3 | 0 | 15 | 22.48 | 22. 8 | 30 59 | 0.44* | | 14.4 | 14.4 | 14.4 | 15.3 | 47 { Mostly ligh | |
| | | | | | | | | | | | | | | 5502 | | |

First part, fresh gales and squally. Latter, moderate and fair. A.M. Fog Bank exactly like an island, the outline perfectly well defined, except the extremities: I never before saw any cloud so like land. T.S. 74° . Changed the poles of the dipping-needle. Mean of the various trials changed and re-changed $3\frac{1}{2}$ S. viz.

| | E. | W. | MD. |
|-------------------------------------|-----|-----|-----|
| Changed the poles, marked end down, | 4.4 | 4. | 4.2 |
| Re-changed, ditto up, | 2.6 | 3. | 2.7 |
| Ditto, ditto down, | 4.4 | 4.6 | 4.5 |
| Ditto, ditto up, | 2.4 | 2.4 | 2.4 |
| Mean | 3.4 | 3.4 | 3.4 |

Constant trade wind. T.S. 74° .

First part, moderate. Middle, hard squalls and rain. T.S. $74^{\circ}\frac{1}{2}$.

A.M. saw a bird like a booby, but shorter winged and necked, called by sailors, poor John. Light breezes, swell much abated. T.S. 74° .

P.M. to the NE. the clouds very remarkable, being in white curved rays, like the variation chart. At 7 A.M. saw Trinidad from mast-head SSE. At 9 visible from deck. At noon, Trinidad S 36° E 11 leagues. Major part, moderate breezes and cloudy weather; winds variable and smooth water. By the bearings of Trinidad at noon, allowing it to lye in $20^{\circ} 27'$ S according to Dr. HALLEY.

| | | |
|--|-------------------|--|
| Its longitude per T. K. | 28.13° W | 28.13° |
| Mean diff. T.K. and \textcircled{D} 8 obf. \textcircled{C} and \textcircled{I}^* | 1.58 | 8 obf. \textcircled{C} 2.12 |
| Long. 8 obf. \textcircled{C} and \textcircled{D} 1 obf. \textcircled{I}^* At. | 30.11 | 8 obf. \textcircled{C} & \textcircled{D} 30.25 |
| By Dr. HALLEY, | 29.50 | 29.50 |
| Diff. | 0.21 | 0.35 |
| T.S. 74° . | | |

At Sun-set, Trinidad E by S $\frac{1}{2}$ S 8 or 9 leagues. T.S. 76° .

Mostly light breezes and cloudy. T.S. 74° .

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. | | D.L. | | Longitude from | |
|------|-----|------------------|----------|-----|----------|------------------------------|------|---|------|---|----------------|-------|
| | | R. | S. | Th. | D. | | N | S | W | E | A. | T.K. |
| | | | | | | | | | | | | |
| July | ° | In. Dec. | In. Dec. | ° | In. Dec. | f. C. | | | | | ° | ° |
| 20 | 75 | 30.4 | 30.3½ | 74½ | 30.3 | f. C. NE. | 3 | 5 | | | W | W |
| | | | | | | f. c. f. C. V. | | | | | 26.8 | 28.48 |
| | | | | | | f. E. ENE. | | | | | | |
| | | | | | | f. C. ENE. | | | | | | |
| 21 | 73 | 30.4 | 30.3¾ | 73¾ | 30.3¾ | f. c. ENE. E by N. | 4 | | | | 25.35 | 28.15 |
| | | | | | | c. h. E by N. ENE. | | | | | | |
| | | | | | | h. c. ENE. NE. | | | | | | |
| | | | | | | f. NE. | | | | | | |
| 22 | 74¼ | 30.5 | 30.4½ | 74 | 30.4¼ | f. h. f. fr. NE. V. | 2 | | 8 | | 24.49 | 27.21 |
| | | | | | | c. f. V. NE by E. V. | | | | | | |
| | | | | | | f. V. ENE. | | | | | | |
| 23 | 74 | 30.6 | 30.5½ | 74 | 30.5 | f. E. E by S. | 7 | 8 | | | 24.55 | 27.35 |
| | | | | | | f. E. E by N. E. | | | | | | |
| | | | | | | f. E by S. V. | | | | | | |
| | | | | | | f. SE by E. | | | | | | |
| 24 | 71¼ | 30.6 | 30.5½ | 71½ | 30.5 | f. SE by E. SE. | 2 | | 14 | | 25.20 | 28.12 |
| | | | | | | f. SE by E. ESE. | | | | | | |
| | | | | | | f. c. ESE. | | | | | | |
| | | | | | | c. ESE. SE by E. | | | | | | |
| 25 | 72½ | 30.6 | 30.5½ | 73 | 30.5 | c. ESE. SE. SE by E. | | | | | | |
| | | | | | | c. SE by E. | 2 | | 3 | | 25.49 | 28.38 |
| | | | | | | c. h. ESE. SE by E. | | | | | | |
| | | | | | | h. V. SE. | | | | | | |
| 26 | 71 | 30.6 | 30.5½ | 71½ | 30.5 | c. E by S. SE by E. S. by E. | 4 | 6 | | | 26.23 | 29.18 |
| | | | | | | c. f. with fr. V. SE by E. | | | | | | |
| | | | | | | f. with fr. h. SE by E. V. | | | | | | |
| | | | | | | h. f. SE. SE by E. V. | | | | | | |
| 27 | 70¼ | 30.6 | 30.5½ | 70¼ | 30.5 | f. ESE. SE. | 6 | | 4 | | 26.36 | 29.27 |
| | | | | | | f. SE. SE by E. ESE. V. | | | | | | |
| | | | | | | f. V. ESE. | | | | | | |
| | | | | | | f. E. E by S. | | | | | | |
| 28 | 68 | 30.5½ | 30.4¾ | 68¾ | 30.4½ | f. V. | | | | | | |
| | | | | | | f. C. | 6 | 9 | | | 26.18 | 29.0 |
| | | | | | | f. c. C. NE by E. C. | | | | | | |
| | | | | | | c. f. WNW. W by S. | | | | | | |
| 29 | 66¼ | 30.4¼ | 30.3½ | 66½ | 30.3¼ | h. W by S. V. | 6 | 3 | | | 25.21 | 27.50 |
| | | | | | | c. V. NW. | | | | | | |
| | | | | | | c. NW. V. | | | | | | |
| | | | | | | c. V. WNW. NW by W. | | | | | | |

Ship Grenville, Capt. BURNET ABERCROMBIE, kept by ALEXANDER DALRYMPLE, 17

| Distance from Greenwich | | | | | | Latitude | | Cor. Long. | Variation | | South Dip | | | | ML. | | |
|-------------------------|-------------------|-------------------------|-------------|-------------|----------------|----------|-------|---------------|---------------------|---------------------|-----------|------|------|------|--|----------------------------------|--------------------|
| T.K. | D. of T.K. | ° | S. | O. | E. | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | | |
| | | | | | | | | | | | E. | W. | | | | | |
| W | E | W | | | | S | S | W | E | E | | | | | 55° 2' | | |
| 28.48 | 137 | 31. 5 | 3 | ⊙ | 12 | 22.57 | 22.20 | 31. 0 | | *0.44 | 14.6 | 15. | 14.7 | 15.6 | Not very steady. | 10 Mostly calm | |
| 28.15 | 115 128 | 30.10 30.23 | 3 4 | ⊙ ⊙ | 29 16 | 24. 7 | 23 34 | 30.27 | *0.42 | 0.55* *1. 5 | 17.4 | 18. | 17.6 | 18.5 | { Extremely unsteady, the ship having an irregular motion, tho' smooth water. | 76 Major part | |
| 27.21 | 174 94 | 30.15 28.55 | 5 3 | ⊙ ⊙ | 22 18 | 25.10 | 24.39 | 29.33 | 0.11* W *0.15 | 0.17* W *0.22 | 19.4 | 20.4 | 20. | 20.7 | | Very steady. | 76 Pleasant breeze |
| 27.35 | 147 135 140 | 30. 2 29.50 29.55 | 3 3 3 | ⊙ ⊙ ⊙ | 24 16 20 | 26.12 | 25.48 | 29.47 | E 0. 6* | E 0.11* | 21. | 21.6 | 21.3 | 22.2 | { Extremely steady, though long swell. | 65 Pleasant breeze | |
| 28.12 | | | | | | 27.44 | 27.18 | 30.24 | 1. 0* *1.13 | 1.10* | 23 4 | 24. | 23.6 | 24.5 | | 96 { Pleasant breeze T.S. 69° | |
| 28.38 | | | | | | 28.54 | 28.30 | 30.50 | 2.12* *1.52 | 2.16* *1.27 | 26. | 27. | 26.4 | 27.3 | { Light breeze was a fair sea. | 76 | |
| 29.18 | | | | | | 29.55 | 29.35 | 31.29 | | 1.52* | 27.2 | 28. | 27.5 | 28.4 | | 69 Winds mostly | |
| 29.27 | | | | | | 30.36 | 30.22 | 31.37 | *3. 0 | *3.14 | 27.6 | 28.6 | 28.2 | 29.1 | { Very steady. | 43 Light airs. | |
| 29. 0 | | | | | | 30.45 | 30 37 | 31. 8 | 2.45* | 2.16* | 27.6 | 28.6 | 28.2 | 29.1 | | 18 Mostly calm | |
| 27.50 | | | | | | 31. 5 | 31.33 | 30. 2 | *2.10 | | 29. | 30. | 29 4 | 30.3 | Very unsteady. | 55 Major part | |
| | | | | | | | | | | | | | | | | 6084 | |

E, 1775.

Mostly calm throughout, with smooth water. T.S. $74^{\circ}\frac{1}{2}$.

Major part light breezes, with smooth water. T.S. 72° .

Pleasant breeze and smooth water. T.S. 72° .

Pleasant breezes; a long swell. T.S. 70° .

{ Pleasant breeze. At 10 A.M. saw a sail bearing S by W.
T.S. 69° .

{ Light breezes throughout. Passed by the sail at midnight; it
was a small two-mast vessel. At 6 A.M. saw the vessel
a-tern. T.S. $69^{\circ}\frac{1}{2}$.

Winds mostly variable. T.S. $67^{\circ}\frac{1}{4}$.

Light airs. T.S. 63° .

Mostly calm. T.S. 66° .

Major part light breezes. T.S. $67^{\circ}\frac{1}{2}$.

Journal of a Voyage to The East-Indies, in the Ship

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | | | D.L. A. T.K. | | Longitude from | |
|------|------------------|--------------------|--------------------|------------------|--------------------|---|---|----|----|--------------|-------|----------------|--|
| | | R. | S. | Th. | D. | | N | S | WE | A. | TK. | | |
| | | In. Dec. | In. Dec. | ° | In. Dec. | | | | | | | | |
| July | 65 | 30.2 $\frac{1}{4}$ | 30.1 $\frac{3}{4}$ | 65 $\frac{1}{4}$ | 30.1 $\frac{1}{2}$ | c. fq, r. c. fq. r. fq, r. c. c. c. fq. | NW by W. NW by W. NW by N. NW by N. NW by N. | 7 | 5 | 22.36 | 25.6 | | |
| 31 | 62 | | 29.8 | 62 | | f. c. fq. r. fq, r. fq. r. hsq. hsq, r. fq, hr. hsq. | NW by N. NW by N. NW by N. NNW. N by W. N. | 5 | 26 | 19.14 | | | |
| Aug. | 61 | | 29.8 $\frac{1}{2}$ | 61 $\frac{1}{4}$ | | fq, r. L. fq, r. L. fq, r. fq. c. c. | NNW. NNW. NNW. NW. WNW. WNW. W by N. | | | 16.28 | 19.24 | | |
| 2 | 58 $\frac{1}{2}$ | 29.9 | 29.8 $\frac{1}{4}$ | 58 $\frac{1}{2}$ | 29.8 $\frac{1}{2}$ | h. h. c. fq, r. L. fq. c. | W. W. V. W by S. W by S. WSW. WSW. V. W by S. | 2 | 16 | 14.53 | 17.33 | | |
| 3 | 55 $\frac{1}{2}$ | 29.3 | 29.2 $\frac{1}{2}$ | 55 $\frac{1}{2}$ | 29.2 $\frac{1}{4}$ | e. fq, r. L. to e.n.c. h. fq. fq. L, r. c. L, r. c. L, r. fr. | SW. V. W. NE by N. ENE. V. NE by E. N. WNW. V. W. | 1 | 5 | 13.56 | 16.29 | | |
| 4 | 54 $\frac{3}{4}$ | | 29.8 | 54 $\frac{3}{4}$ | | fq. c. r. fq, r. hard gales. ditto. | W by N. V. W by S. V. S by E. S by E. S by E. SSW. | 2 | 12 | 11.45 | 14.30 | | |
| 5 | 51 $\frac{1}{4}$ | | 30.0 $\frac{1}{2}$ | 50 $\frac{3}{4}$ | | h. fq, r. fq, r. fq. hail. fq. hail. fq, r. hail. fq. fq. fq, hail. hsq. hail. | SSW. SW by S. SW by S. V. SSW. S by W. | 11 | 35 | 9.24 | 11.34 | | |
| 6 | 53 | | 30.2 $\frac{1}{4}$ | 52 | | fq, r. fq. hail. fq, r. hail. fq, r. c. c. fq. fq, r. fq, r. fq. fr. | SSW. S by W. S by W. S. S. S. S by E. | 14 | 2 | 7.19 | 9.27 | | |
| 7 | 56 $\frac{1}{4}$ | | 30.0 $\frac{1}{2}$ | 56 | | c. c. f. h. h. c. fq, r. fq, r. | S by E. C. NNE. C. NNE. NE by N. V. NNE. NNE. NE by N. | 25 | 6 | 6.5 | | | |
| 8 | 60 $\frac{1}{4}$ | 30.1 | 30.0 | 60 | 30.0 | fq, r. fq, r. c. fq, r. fq, r. fq, r. f. | NN. NNE. NNE. V. N by E. N. V. NNW. V. | | | 3.55 | 5.57 | | |

| Distance from Greenwich | | | | | | | Magnetical | | | | | | | | | | |
|-------------------------|---------------|---|----|----|----------|----------|------------|---------------|------------|------------|-----------|------|------|------|-------------------------------|---|--------------------------|
| TK. | D. D. T.K. | D | S. | O. | E. D. | Latitude | | Cor. Long. | Variation. | | South Dip | | | | | ML. | |
| | | | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | | |
| | | | | | | | | | | | E. | W. | | | | | |
| W 25.6 | ' | ' | | | | S | S | W 27.10 | E 2.26* | E *1.42 | 31.3 | 32.3 | 31.7 | 32.5 | Not steady. | 6084 | 152 { An incre 9 P.M. |
| | | | | | | 33.14 | [33.19] | [24.3] | 0.44* | | | | | | { No obs. too much motion. | 184 { Strong g 12.30. | |
| 19.24 | | | | | | 33.35 | 33.35 | 21.22 | | | 34. | 35. | 34.4 | 35.2 | Very unsteady. | 141 { First pa modera 4.29.7 | |
| 17.33 | | | | | | 34.9 | 34.7 | 19.28 | W *2.35 | | 33.4 | 34.4 | 34. | 34.6 | Unsteady. | 86 Major part | |
| 16.29 | | | | | | 34.26 | 34.25 | 18.21 | W 3.18* | | 34.4 | 35.4 | 35. | 35.6 | { Not very un- steady. | 55 { Winds bar. 3 9 A.M. to the | |
| 14.30 | | | | | | 33.37 | 33.34 | 16.19 | | | | | | | { No obs. too much sea. | 129 { First pa hard g the shi 6.29.2 | |
| 11.34 | | | | | | 33.37 | 33.23 | 13.20 | | | | | 35. | 35.6 | Very unsteady. | 117 { Squally Bar. 4 9 A.M. | |
| 9.27 | | | | | | 33.37 | 33.9 | 11.10 | | | | | | | | 103 { First an great 5.30.1 | |
| | | | | | | 33.37 | [33.21] | [9.53] | | | | | | | | 62 { First, li with r rim rou | |
| 5.57 | | | | | | 33.51 | 33.48 | 7.37 | | | | | | | | 109 { First an modera a pinta 9.29.9 | |

{ An increasing gale from NW quarter, with frequent squalls.
9 P.M. bar. 30.1 $\frac{1}{2}$. 8 A.M. 30.2 $\frac{1}{2}$. T.S. 65 $\frac{1}{2}$.

{ Strong gales, with hard squalls and rain. 9 P.M. bar. 30.1 $\frac{1}{2}$.
12. 30.1. 8 A.M. 29.9 $\frac{1}{2}$. 10. 29.9. 11 $\frac{1}{2}$. 29.8 $\frac{1}{2}$.

{ First part, blowing very fresh from N.W. Latter, more moderate, with very large sea. Bar. 1 $\frac{1}{2}$. 29.7 $\frac{1}{2}$. 2 $\frac{1}{2}$. 29.7.
4. 29.7 $\frac{1}{2}$. 6. 29.8. 8. 29.8. 10. 29.8. A.M. 7. 29.8.

Major part, light breezes, with great swell.

{ Winds variable, with squally weather and confused sea.
bar. 3 P.M. 29.8. 6. 29.7 $\frac{1}{2}$. 10. 29.7. 8 A.M. 29.3.
9 A.M. 29.2 $\frac{1}{2}$. About noon, it appeared very threatening to the Northward, but the clouds dissipated.

{ First part, squally with some rain. The middle, excessive hard gales, with a great sea; and the spray so thick that the ship was covered with it. 2 P.M. bar. 29.2 $\frac{1}{2}$. 4. 29.2.
6. 29.2 $\frac{1}{2}$. 9. 29.5. 7 A.M. 29.7 $\frac{1}{2}$. 9. 29.7 $\frac{1}{2}$. 11. 29.8.

{ Squally weather, with much hail and rain, and a large swell.
Bar. 4 P.M. 29.8 $\frac{1}{2}$. 6. 29.9. 8. 30.0. 7 A.M. 30.0 $\frac{1}{2}$.
9 A.M. 30.0 $\frac{1}{2}$.

{ First and middle, fresh gales and squally. Latter, moderate; great swell. AM. some silver birds. Bar. 2 P.M. 30.0 $\frac{1}{2}$.
5. 30.1. 10. 30.2. 7 A.M. 30.2. 9. 30.3.

{ First, light airs, with cloudy weather. Latter, fresh gales, with rain. P.M. Venus appeared very dim and fuzzy; a rim round the Moon. 9 A.M. bar. 30.1 $\frac{1}{2}$. 11. 30.0 $\frac{1}{2}$.

{ First and middle, hard gales, squally with rain. Latter, moderate and hazy; great swell. A.M. some silver birds, a pintado bird. Bar. 2 P.M. 29.9 $\frac{1}{2}$. 8 A.M. 29.9 $\frac{1}{2}$.
9. 29.9 $\frac{1}{2}$. 10. { 30.0.
30.0 $\frac{1}{2}$.

| 1775 | Th. | Marine Barometer, | | | | Weather and Winds. | D.L. | | D.L. | | Longitude from | |
|------|-----|-------------------|----------|-----|-------|---|------|------|------|----|------------------|------------------|
| | | R. | | S. | | | A.O. | T.K. | W | E | A. | TK. |
| | | In. Dec. | In. Dec. | Th. | D. | | | | | | | |
| Aug. | | | | | | f. NW by N. NNW. f. fq. h. fq. r. NNW. N by E. fq. r. r. fq. N by E. N. fq. fq. r. N. | | | | | ° / W 1.29 | ° / W 3.14 |
| 9 | 62½ | | 30.0½ | 62½ | | fr. h. N. N by W. h. dr. h. N by W. N. h. c. N. N by E. c. N by E. | 8 | 17 | | | E 1.15 | 0.26 |
| 10 | 62¼ | 30.2½ | 30.2 | 62 | 30.1½ | h. N by E. h. fq. N by E. NNE. fq. c. NNE. c. f. NNE. | 4 | 4 | | | E 4.5 | E 2.25 |
| 11 | 61¼ | 30.1½ | 30.0½ | 60¼ | 30.0 | h. N by E. h. fr. N by E. fr. N. V. hr. V. | 17 | 1 | | | 6.17 | 5.2 |
| 12 | 60 | 30.1 | 30.0¼ | 59½ | 29.9¼ | r. c. N by W. NNW. c. fr. c. f. NNW. NW. f. NW. NNW. f. fq. r. c. NNW. NW by W. W by N. W. | 10 | | | | 8.43 | 7.26 |
| 13 | 58¾ | 30.2 | 30.1¼ | 59¼ | 30.0 | f. WSW. SW by W. c. SW by W. SSW. S by W. c. S by W. V. c. V. WSW. C. | 16 | 16 | | | 10.4 | 9.3 |
| 14 | 58¼ | 30.3½ | 30.3¼ | 59 | 30.2½ | f. c. V. c. NW by W. NW. c. NW. WNW. V. c. V. NNW. | | | | 32 | 11.10 | 10.41 |
| 15 | 60½ | 30.3 | 30.2¾ | 60½ | 30.1½ | c. N by W. c. f. c. N by W. fr. c. fq. c. fr. N by W. N by E. fr. c. N by E. | 2 | 9 | | | 13.32 | 13.12 |
| 16 | 60½ | 30.1½ | 30.1¼ | 60½ | 30.0¾ | c. fq. fq. r. N by W. V. NNW. fq. r. NNW. NW by N. fq. r. c. NW by N. V. c. NW by N. | 8 | 19 | | | 16.29 | 15.50 |
| 17 | 61 | 30.2 | 30.2 | 61 | 30.1 | f. N by E. N by W. f. c. N by W. c. h. N by W. N. V. h. V. | 4 | 9 | | | 19.1 | 18.13 |
| 18 | 61 | 30.2½ | 30.2½ | 61 | 30.1½ | | | | | | | |

Ship Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE

| Distance from Greenwich | | | Magnetical | | | | | | | | | | | | ML. | | |
|-------------------------|--------------|-----------|------------|----|----|-----------|------------|---------------|-----------------|--------------|-----------|------|------|------|------------------|---|---|
| T.K. | D.D. T.K. | D | S. | O. | E. | Latitude | | Cor. Long. | Variation | | South Dip | | | | | | |
| | | | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | | |
| | | | | | | | | | | | | E. | W. | | | | |
| 0° / 3.14 | / | 0° / E | | | | S 34.6 | S 34.11 | W 4.51 | 0° / 8.50* | 0° / 8.1* | | ° | ° | ° | ° | | 7222 |
| | | | | | | | | | | | | | | | | | 122 { First, moderate squalls at 12½. 30.0 |
| 0.26 | | | | | | 34.6 | 34.15 | 2.0 | | | | 37. | 39. | 38. | 38.6 | Very unsteady. | 136 { Major part 7. 30.1. Two black silver birds |
| E 2.25 | | | | | | 34.1 | 34.27 | E 0.54 | *12.43 | | | | | | | | 140 { Fresh gale 9 P.M. A.M. moderate |
| 5.2 | | | | | | 33.47 | [34.36] | 3.34 | | | | 39.4 | 41. | 40.2 | 41. | Unsteady. | 110 { Most part, to 30.0½. Johns. for pintado birds |
| 7.26 | | | | | | 33.37 | 34.13 | 6.3 | *16.9 | | | | | | | | 122 { Most part, 4. 30.0½. Several pintados. |
| 9.3 | | | | | | 33.44 | 34.4 | 7.43 | 16.43* | | | 41.4 | 43.2 | 42.3 | 43.1 | Very steady. | 67 { First part, 30.1½. some porpoises |
| 10.41 | | | | | | 33.49 | 34.9 | 9.24 | | | | 41.4 | 43.4 | 42.4 | 43.2 | { Extremely steady. | 55 { First part, with clouds |
| 13.12 | 94 | 11.38 | 4 | 0 | 13 | 33.53 | 34.15 | 11.58 | 18.18* | 17.52* | 42.6 | 44. | 43.3 | 44. | Very steady. | 119 { Moderate Bar. 4 P.M. 8 A.M. several fish about. | |
| 15.50 | 75 | 14.35 | 1 | 0 | | 34.1 | 34.15 | 14.39 | 19.39* | 19.56* | 43.4 | 45.2 | 44.3 | 45. | Not very steady. | 146 { Fresh gales P.M. large sheerwater 7 A.M. 3 | |
| 18.13 | | | | | | 34.5 | 34.15 | 17.5 | 20.50* +22.0 | 20.47* | 45.6 | 46.4 | 46.1 | 46.6 | | 126 { Pleasant breeze A.M. two swallow-tailed gramp | |

AMPLE.

First, moderate breezes and fair. Latter, fresh gales, with squalls and rain. Bar. 8 P.M. 30.1. 9. 30.0 $\frac{3}{4}$. 11. 30.0. 12 $\frac{1}{2}$. 30.0 6 A.M. 29.9 $\frac{1}{2}$. 8. 29.9 $\frac{1}{2}$. 9 $\frac{1}{2}$. 30.0 $\frac{1}{2}$.

Major part, fresh gales. Bar. 2 $\frac{1}{2}$ P.M. 30.0 $\frac{1}{2}$. 5. 30.0 $\frac{3}{4}$. 7. 30.1. 8. 30.1 $\frac{1}{4}$. 11 $\frac{1}{2}$. 30.1 $\frac{1}{2}$. 6 A.M. 30.2. 9. 30.2. Two black alcatrafs. A.M. a few pintado birds and some silver birds.

Fresh gales, with squally weather and a large sea. Bar. 9 P.M. 30.2. 11. 30.1 $\frac{1}{2}$. 9 A.M. 30.1. 10. 30.0 $\frac{1}{2}$. A.M. many pintado birds, sheerwaters, &c. one alcatraf.

Most part, fresh breezes and hazy. Bar. 1 to 10 P.M. 30.0 $\frac{1}{2}$ to 30.0 $\frac{3}{4}$. 8 A.M. 30.0 $\frac{1}{4}$. 9. 30.0 $\frac{1}{2}$. A.M. several poor Johns, some sheerwaters, and a young alcatraf, but no pintado birds.

Most part, fresh gales with some rain. Bar. 1 P.M. 30.0. 4. 30.0 $\frac{1}{4}$. 8. 30.0 $\frac{1}{4}$. 8 A.M. 30.0 $\frac{1}{2}$. 9. 30.0 $\frac{3}{4}$. 11. 30.1 $\frac{1}{2}$. Several poor Johns, sheerwaters; and A.M. a few pintados.

First part, fresh breezes. Latter, light airs. Bar. 8 P.M. 30.1 $\frac{1}{4}$. 12. 30.2 $\frac{1}{2}$. 9 A.M. 30.3 $\frac{1}{4}$. 12. 30.3 $\frac{1}{4}$. A.M. some porpoises.

First part, variable. Latter, an increasing gale from NW. with cloudy weather. Bar. 9 P.M. 30.3 $\frac{1}{4}$. 11. 30.3.

Moderate gales, with some light squalls and smooth water. Bar. 4 P.M. 30.2 $\frac{1}{2}$. 6. 30.2. 10. 30.2 $\frac{1}{4}$. 12. 30.2. 8 A.M. 30.1 $\frac{1}{2}$. 11. 30.1 $\frac{1}{4}$. A.M. some pintado birds, and several silver birds, some sitting on the water, others flying about.

Fresh gales throughout, with cloudy weather and some squalls. P.M. large black alcatrafs. A.M. some pintado birds, sheerwaters, &c. Bar. 3 P.M. 30.1 $\frac{1}{4}$. 9. 30.1 $\frac{1}{2}$. 12. 30.1 $\frac{1}{2}$. 7 A.M. 30.1 $\frac{1}{2}$. 9. 30.1 $\frac{1}{4}$.

Pleasant breeze and mostly hazy. Several pintado birds. A.M. two birds, somewhat larger than silver birds, with swallow-tails flying above the ship; also a Cape hen, and several grampusses. Bar. 9 P.M. 30.2 $\frac{1}{2}$. 12. 30.2 $\frac{1}{4}$. 9 A.M. 30.2 $\frac{1}{2}$.

Journal of a Voyage to The East-Indies, in the Ship Grei

[illegible]

p Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

[illegible]

Most part, light breezes and hazy. At 2 P.M. saw the land from mast-head ESE. per compass.

| | | | |
|-----------------------------------|-----------------|-------------------------------|-------------|
| | | Peaked hum of Cape Good Hope, | S 52.48 E |
| At 5½ h. | { | Hum. mistaken for Cape, | S 57. E |
| | | L. ext. Table Land, | E 4. N |
| | | L. ext. in sight, | E 19. N |
| At Sun-rise | | { | Sugar Loaf, |
| | Table Land, | | N 73. E |
| | Cape Good Hope, | | S 60. E |
| At noon | { | L. ext. | N 55. E |
| | | Cape Good Hope, | S 61. E |
| Longitude per T.K. | | | 19. 9 E |
| Cape <i>Good Hope</i> per chart, | | | 0.21 E |
| Longitude of <i>Cape</i> per T.K. | | | 19.30 |
| True longitude of <i>Cape</i> , | | | 18.27 |
| Error of T.K. | | | 1. 3 |

Major part, moderate and hazy. In False Bay.

At 4 h. Cape Good Hope, E 16°. S.

Sunset * L. ext. N 21°. E.

R 2.18 Bluff Point in one with Hummock.

72.30 Cape Good Hope * 2d.

86. 6 Hanglip.

* 2d Cape Good Hope.

L 24.30 Hummock, called Cape last night.

7. 0 Hummock.

1.50 Outer Hummock and highest part diff. Ridge.

R 13.48 Hanglip.

Bellows, E 15°. S.

Sunrise, Hanglip, S 47°. E.

Cape Good Hope, S 36°. W.

White Sand Hills in Symmon's Bay, N 33°. W.

At noon { Hanglip Point, S 35°. E

{ Cape Good Hope, S 50. W

{ Noah's Ark, NW about 4' dist.

N. B. All these bearings are by compass, without allowing for variation.

At 4 P.M. being calm, hoisted out the pinnace, and towed in towards the harbour. At 7 anchored in 20 fath. Noah's Ark W. Roman Rock NW ½ W dist. about two miles.

| | | | |
|---------|--|------------|---|
| Aug. 21 | Strong gales and squally. | S. S by E. | At 4 A.M. found ship drove, veered to a whole cable. |
| 22 | { Fresh gales with hard squalls. P.M. increasing. } | S by E. | |
| 23 | { Strong gales and excessive hard squalls. Towards midnight began to moderate. } | | At 8, gale increasing, swayed up lower yards. At 1 P.M. anchored in Symmon's Bay, in $7\frac{1}{2}$ fath. |
| 24 | Moderate and fair. | SE. | |
| 25 | Moderate and cloudy. | NW. | |
| 26 | Fresh breezes, with some rain. | W. SW. | |
| 27 | { Light breezes mostly from SE. with fair weather. } | SE. | |
| 28 | Light breezes and fair. | V. | Sailed a Dutch snow. |
| 29 | { First and middle, moderate and cloudy, with some rain. Latter, squally. } | NW to W. | Sailed La Bretagne, Capt. MANSON for Mauritius. |
| 30 | Strong gales and clear weather. | SW. | Returned. |
| Sept. 1 | Moderate and fair for most part, and a swell. | SSE. | |
| 2 | Strong gales and hard squalls. | SE. | |
| 3 | { Major part, squally with rain. Towards evening, light breezes and fair. } | NW. | Sailed again. |
| 4 | Moderate and fair. | V. | |
| 5 | { Strong gales and very hard squalls; could not send a boat ashore. } | S by E. | |
| 6 | Moderate and fair. | V. | |
| 7 | { Mostly light breezes. P.M. a fresh gale. } | V. | Sent long-boat to endeavour taking up the anchor: n |
| 8 | Moderate breezes. | W. | |
| 9 | Moderate and fair. | SW. | |
| 10 | Strong gales and hard squalls. | V. | |
| 11 | Light winds from Southward, and fair weather. | S by E. | |
| 12 | Fair. | S. | |
| 13 | Fair. | V. | |
| 14 | Light airs and | V. | |
| 15 | first part, calm: Latter part, breezes, | C. | Sailed the Anson, Capt. TRYON, for England. |
| 16 | Fair. | C. W. | Sent long-boat again to try for the anchor, but could |
| 17 | Strong gales, with rainy weather. | V. | |
| 18 | Fresh gales. | NW. | |
| | | NW. | |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMP

whole cable; got down top-gallant yards, lowered fore and main yards, and got sheet anchor overboard.

ds. At noon, close reefed top-fails, stopt the cable, and came to fail.

$7\frac{1}{2}$ fath. when moored, lower flag staff from Point WSW. Dolphin's Nose NE. Roman Rocks $E\frac{1}{2}$ S. Noah's Ark SE.

auritius.

anchor: returned with 80 fathoms of cable, but could not weigh the anchor.

nd.

but could not purchase it.

LYMPLE.

ark SE. Hanglip SE $\frac{1}{4}$ S off shore $\frac{3}{4}$ of a mile.

Journal of à Voyage to The East-Indies, in the Ship

| | Th. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | | D.L. A. T.K. | | Longitude from | |
|----------|-----|------------------|----------|------|----------|--|--------------|---|--------------------|----|----------------|-------|
| | | R. | S. | i h. | D. | | N | S | W | E | A. | TK. |
| | | In. Dec. | In. Dec. | ° | In. Dec. | | | | | | ° ' E | ° ' E |
| Sept. 19 | 59 | | 30.1 | 59 | | { f. NW. NW by W. c. f. NW by W. WNW. f. C. c. C. E. C. WNW. NW. } | | | | | 18.43 | 18.52 |
| 20 | 59½ | | 30.0¼ | 59 | | { c. NW. NW by N. c. fq. NW by N. N by W. fq. c. N by W. NNW. c. fq. fq. r. NNW. } | 4 | | | | 21.26 | |
| 21 | 57½ | | 30.1½ | 57¾ | | { c. NW by W. WNW. W by S. c. fq. c. W by S. W. c. W. W by S. c. fq. fq. r. W by S. } | 8 | | | | 24.22 | |
| 22 | 62 | | 30.2½ | 62 | | { fq. W by S. SW. c. f. S by W. S. f. c. S. C. V. c. f. NE. NE by E. ENE. } | 10 | | 49 | | 25.36 | |
| 23 | 66½ | | 29.6¾ | 66 | | { f. NE by E. ENE. f. NE by E. f. NE by E. f. ENE. NE by E. } | 6 | | | | 27. 8 | |
| 24 | 65 | | 29.5½ | 65 | | { h. NE by E. h. NE by E. NE by N. V. h. c. V. W. c. W. WNW. NW by W. } | 9 | | | | 28.13 | 27.23 |
| 25 | 58½ | | 29.7 | 58½ | | { c. W by N. V. W by N. c. h. c. r. c. W by N. WNW. V. NW. c. r. NW. V. r. fq. WSW. } | 15 | | | | 29.35 | |
| 26 | 61 | 29.9½ | 29.9 | 61 | 29.8½ | { fq. WSW. fq. fq. fr. fq. WSW. SW by W. c. r. SW by W. W by S. W by N. r. W by N. WNW. } | 21 | | | 31 | 32. 9 | 31.50 |
| 27 | 62½ | 30.1½ | 30.1¼ | 62½ | 30.0¾ | { c. N by W. c. fq. r. N by W. NNW. fq. r. h. NNW. W by N. fq. c. W by N. W. WNW. } | 1 | | | | 35.18 | |

the Ship Grenville, Capt. BURNET ABERCROMBIE, kept by ALEXANDER DALRYMPLE, 17

[illegible]

Cape of GOOD HOPE lat. 34.22° S.
long. 18.27° E.

7 { At Sun-set, Cape Good Hope NW=WNW. Table Land N by W=NW by N. Hanglip E 7° N=E $29\frac{1}{2}^{\circ}$ N. Eastern ext. in sight E 50° S=E $17\frac{1}{2}^{\circ}$ N distance 6 leagues from nearest land. At Sun-rise, Cape Good Hope N by W $\frac{1}{2}$ W=NW $\frac{1}{2}$ N 9 or 10 leagues. Hanglip Point NE=NNE. Ext. to E 4° ESE=E. Saw a fañ, supposed the Gatton, come round from Table Bay, to join us.
At noon, Cape Good Hope N per comp. = N $22\frac{1}{2}^{\circ}$ W. Hanglip N 35° E=N $12\frac{1}{2}^{\circ}$ E 9 leagues. Eastern ext. N 80° E=N $57\frac{1}{2}^{\circ}$ E. Major part, light breezes and fair weather, with great fwell from SW.

4 Fresh gale, with a very large sea. Bar. 9 P.M. 30.1. 8 A.M. 30.1.

4 Fresh gales and great fwell. Bar. 8 P.M. 30.1. 8 A.M. 30.1.

6 { First part, decreasing gale. Middle, calm. Latter part, a breeze from the NE. Great fwell. A.M. bar. 30.3. N.B. it was not observed at noon. Past 1 P.M. it was 30.2 $\frac{1}{2}$. Many alcatraffes, pettrils, pintado birds, &c.

2 { First part, fresh gales. Latter, hard gales, with great and confused sea. Mostly fair weather. 2 P.M. bar. 30.2 $\frac{1}{2}$. 9. 30.1. 11. 30.0. 8 $\frac{1}{2}$ A.M. 29.8. Many pettrils, pintado birds, &c.

8 { First part, hard gales from N^d. Latter, from W^d. with a very large NE fwell, confused in heaps. Many alcatraffes, pettrils, pintado birds, &c. Bar. 29.6 to 29.5 $\frac{1}{2}$.

9 { First part, light breezes. Latter part, fresh breezes. A.M. fwell much abated. Many alcatraffes, pintado birds, pettrils, &c. Bar. 2 P.M. 29.5 $\frac{3}{4}$. 3. 29.6. 12. 29.6. 8 A.M. 29.6 $\frac{1}{2}$. 9. 29.6 $\frac{1}{4}$.

7 { Strong gales, mostly W^d. with squalls and some rain. Many alcatraffes, pintado birds, &c. and great many pettrils. Bar. 2 P.M. 29.6 $\frac{1}{2}$. 4. 29.7. 6. 29.8. 9. 29.8 $\frac{1}{2}$. 8 A.M. 29.9. 9. 29.9 $\frac{1}{4}$. 11. 29.9 $\frac{1}{8}$.

8 { First part, fresh gales and squalls. Latter, moderate. A great fwell. Many alcatraffes, pintado birds, pettrils, &c. Bar. 4 P.M. 29.8 $\frac{3}{4}$. 6. 29.9. 9. 29.9. 12. 29.9. 8 A.M. 30.1. 9. 30.1 $\frac{1}{4}$. 11. 30.1 $\frac{1}{8}$.

| 1775 | Th. | Marine Barometer, | | | | Weather and Winds. | D.L. | | | | Longitude from C | | | | | |
|-------|------------------|--------------------|--------------------|------------------|--------------------|---|------|----|---|------|------------------|-----|------|---|---|--|
| | | R. | S. | Th. | D. | | A.O. | A. | | T.K. | A. | TK. | D.T. | | | |
| | | | | | | | | N | S | | | | | W | E | |
| Sept. | ° | In.Dec. | In.Dec. | ° | In.Dec. | | | | | | | | | | | |
| 28 | 62 $\frac{3}{4}$ | 30.3 | 30.2 $\frac{3}{4}$ | 62 $\frac{1}{2}$ | 30.2 | { h. fq. r. r. W by N. r. h. W. W by N. h. W by N. NW by W. h. V. NW by W. f. NW by N. N by W. f. fq. h. fq. N by W. V. N by E. c. N by E. N. c. N. N by E. c. hfq. r. L, Th. N by E. N. V. L. to sw. c. V. W. c. fq. r. W by S. fq. r. h. c. W by S. SW by W. SW. h. c. WSW. S by W. S. c. S. SSE. S by E. c. SE. SE by E. SE by S. c. SE. C. E. c. fr. E by S. E. V. fr. c. fq. h. V. ESE. E. ENE. h. NE. h. NE. NE by N. f. NE. f. h. f. NE. f. fq. h. NE. h. f. NE. NE by E. h. NE by E. h. NE. h. NNE. h. NNE. h. NE by N. h. NE by N. h. fq. c. NE by N. N. c. N. h. N by W. h. N by W. NNW. h. NNW. NW. h. c. NW. WNW. NW. V. S by E. SSE. c. fq. r. SE by E. V. SSE. r. h. ESE. SE by S. S by E. S. h. f. S by W. f. S by W. V. | / | / | / | / | ° | / | ° | / | 1 | |
| | | | | | | | | | | | | | | | | |
| 29 | 67 $\frac{1}{4}$ | 29.9 $\frac{1}{2}$ | 29.9 $\frac{1}{4}$ | 67 | 29.9 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 30 | 56 $\frac{1}{2}$ | 30.2 | 30.1 $\frac{3}{4}$ | 56 $\frac{1}{2}$ | 30.1 $\frac{1}{4}$ | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Oct. | | | | | | | | | | | | | | | | |
| 1 | 61 $\frac{1}{4}$ | 30.3 $\frac{1}{4}$ | 30.3 | 61 | 30.2 $\frac{1}{2}$ | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 2 | 65 $\frac{1}{2}$ | 30.1 $\frac{3}{4}$ | 30.1 $\frac{3}{4}$ | 65 | 30.1 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 3 | 67 $\frac{1}{4}$ | 30.3 | 30.2 $\frac{3}{4}$ | 67 | 30.2 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 4 | 66 $\frac{1}{2}$ | 30.3 $\frac{1}{4}$ | 30.2 $\frac{3}{4}$ | 66 | 30.2 $\frac{1}{2}$ | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 5 | 67 | 30.2 $\frac{1}{2}$ | 30.2 $\frac{1}{4}$ | 67 | 30.1 $\frac{3}{4}$ | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 6 | 62 $\frac{1}{4}$ | 30.2 | 30.1 $\frac{3}{4}$ | 62 | 30.1 $\frac{1}{4}$ | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 7 | 62 $\frac{1}{2}$ | 30.3 $\frac{3}{4}$ | 30.3 $\frac{3}{4}$ | 62 | 30.2 $\frac{1}{2}$ | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

| Distance from Greenwich | | | Magnetical | | | | | | | | | | G denot | | | | |
|-------------------------|--------------|----------------|------------|----------|-----|----------|-------|---------------|-----------|--------|-----------|------|----------|------|----------------------------|-------------------|---|
| TK. | D.D. T.K. | D | S. | O. | E. | Latitude | | Cor. Long. | Variation | | South Dip | | | | ML. | G denot Gatton | |
| | | | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | | |
| | | | | | | | | | | | E. | W | | | | | |
| 36.26 | E | E | | | | S | S | E | W | W | 57.4 | 58.4 | 58. | 58.4 | Very unsteady. | 885 | |
| 39.47 | | | | | | 35.49 | 34.31 | 39.47 | 27.43* | | | | | | | 86 | Pleasant b &c. Bar. 8 A.M. 30 |
| 42.57 | | | | | | 35.34 | 33.56 | 42.57 | | | | | | | | 144 | Major part petrels, & 30.2 1/2. 5 8. 29.9 1/2. |
| 45.41 | 9 59W | 45.32 46.40 | 6 3 | 26 21 | An. | 35.55 | 33.58 | 45.41 | | | | | 59 or 60 | | Extremely unsteady. | 64 | First part, A.M. man 9. 30.3. 1 |
| 47.56 | 32E | 47.24 | 5 | 38 | | 36. 6 | 34.11 | 47.56 | 26.49* | | 59. | 60. | 59.4 | 60. | Very un- steady. | 85 | First part, traffes, &c 30.3. 8. |
| 50.41 | 34W | 51.15 | 3 | 26 | | 36.13 | 34.20 | 50.41 | | | | | | | Larboard-side of cabin. | 110 | Moderate b birds, grea 4 az. 26° 30.1 1/2. 12 |
| 53.35 | | | | | | 36.11 | 34.16 | 53.35 | 25.57* | 25.39* | | | | | | 132 | Mostly fresh water smoc 30.2 1/2. 4 9. 30.3. |
| 56. 1 | | | | | | 36. 4 | 33.57 | 56. 1 | 24.42* | | 59.4 | 61. | 60.2 | 60.6 | Very steady. | 143 | Fresh breeze 4 az. 26° 30.2 1/2. 6 |
| 57.11 | 26E | 56.45 | 4 | 23 | At. | 35.49 | 33.25 | 57.11 | | | | | | | | 106 | First part, an alcatraz var. 2 az. 2 10. 30. 3. |
| | | | | | | | | | | | | | | | | 53 | First and mi and fair v and other b 9 1/2. 30.2 1/2. |

MPLE.

G denotes *Capt. Money's* Observations in the *Gatton*, the longitude reduced to *noon*.

Pleasant breeze. Many alcatraffes, pintado birds, pettrils, &c. Bar. 3 P.M. 30.1½. 6. 30.2. 10. 30.2½. 12. 30.2½. 8 A.M. 30.2½.

Major part, fresh gales. Many alcatraffes, pintado birds, pettrils, &c. Gatton, var. az. 28° 13' W. Bar. 1 P.M. 30.2½. 5. 30.1½. 9. 30.1. 12. 30.0½. 6 A.M. 29.9½. 8. 29.9½. 10. 29.9½.

First and middle, fresh gales, with hard squalls, thunder, lightning, and rain. Latter, blowing fresh and hazy weather. Many pettrils, pintado birds, &c. and A.M. one silver bird. Bar. 2 P.M. 29.8½. 4½. 29.8½. 5½. 29.7½. 6. 29.7½. 8½. 29.8½. 9½. 29.9. 11. 29.3.

First part, fresh gales. Latter, light breezes and calm. A.M. many alcatraffes, &c. Bar. 2½ P.M. 30.2. 5. 30.2. 9. 30.3. 12. 30.3. 6 A.M. 30.3½. 8. 30.3½. 11½. 30.3.

First part, light breeze. Latter, fresh. P.M. many alcatraffes, &c. G long. ☉ and ☾, 45° 31' E. Bar. 5½ P.M. 30.3. 8. 30.3. 12. 30.2. 8 A.M. 30.1½.

Moderate breezes throughout, weather changeable. Few birds, great dews, and water remarkably smooth. G var. 4 az. 26° 46' W, amp. 26° 47' W. Bar. 2 P.M. 30.1½. 6. 30.1½. 12. 30.2½. 8 A.M. 30.2½. 9½. 30.3.

Mostly fresh gales. Some pintado birds. A.M. great dews; water smooth. G long. ☉ and ☾ 50° 39' E. Bar. 1½ P.M. 30.2½. 4. 30.2½. 7½. 30.2. 12. 30.2. 6 A.M. 30.2½. 9. 30.3.

Fresh breezes. Some pintado birds. A.M. one pettril. G var. 4 az. 26° 9' W, amp. 26° 7' W. Bar. 2 P.M. 30.2½. 6. 30.2½. 6 A.M. 30.1½. 8. 30.2. 9½. 30.2½.

First part, fresh gales. Latter, light and variable. P.M. an alcatraff. A.M. several alcatraffes and pintado birds. G var. 2 az. 24° 42' W. Bar. 1½ P.M. 30.2. 4. 30.1½. 6. 30.1½. 10. 30.2. 12. 30.1½. 8 A.M. 30.1½. 9. 30.2.

First and middle, light breezes and rain. Latter, light breezes and fair weather. P.M. a *urile* passed; several alcatraffes and other birds. Bar. 2½ P.M. 30.1½. 5. 30.1½. 6. 30.2. 9½. 30.2½. 12. 30.2½. 8 A.M. 30.2½.

Journal of a Voyage to The East-Indies, in the Ship

| 1775 | Th. | Marine Barometer. | | | | Weather and Winds. | D.L. | | D.L. A.O. | A. T.K. | Longitude from | | | |
|------|-----|-------------------|----------|-----|----------|---|------|---|--------------|------------|----------------|-------|----|-----|
| | | R. | S. | Th. | D. | | N | S | | | W | E | A. | TK. |
| | | In. Dec. | In. Dec. | ° | In. Dec. | | | | | | | | ° | ′ |
| Oct. | ° | | | | | | | | | | | | | |
| 8 | 61½ | 30.3½ | 30.3 | 61 | 30.2½ | { c. SW. V. c. C. V. f. V. W. f. V. NW by W. | | 2 | | 23 | 56.32 | 57.55 | | |
| 9 | 63½ | 30.4¼ | 30.3¾ | 63 | 30.3¼ | { f. NW by W. WNW. W by N. f. W by N. WSW. f. WSW. SW by W. f. h. SW by W. V. | 13 | | | 12 | 58.18 | 59.53 | | |
| 10 | 61½ | 30.4½ | 30.4 | 61½ | 30.3½ | { h. f. S by W. S by E. SSE. f. V. SE by S. S by E. f. S by E. C. f. WNW. NW. WNW. | 5 | | | 1 | 58.46 | 60.22 | | |
| 11 | 62½ | 30.3¾ | 30.2¾ | 62½ | 30.2½ | { f. NW by W. f. c. NW by W. c. NW by W. WNW. c. f. WNW. | 6 | | | 27 | 60.18 | 62.21 | | |
| 12 | 64¼ | 30.3¼ | 30.3 | 64 | 30.2½ | { f. WNW. f. WNW. f. h. c. WNW. c. WNW. | 4 | | | 12 | 61.39 | 63.54 | | |
| 13 | 65¼ | 30.2¾ | 30.1¾ | 65 | 30.1¾ | { h. NW by N. NNE. h. NNE. N by E. h. c. N by E. c. f. c. N by E. | | 2 | | 10 | 63.34 | 65.59 | | |
| 14 | 66 | 30.3 | 30.2½ | 65½ | 30.2 | { h. N by E. h. N by E. NNE. h. NNE. h. NNE. NE by N. | 2 | | | 21 | 65.6 | 67.52 | | |
| 15 | 64¼ | 30.0 | 29.9½ | 63½ | 29.8½ | { f. NNE. NE. f. f. q. NE. NE by N. NNE. h. f. q. NNE. f. q. r. r. h. NNE. V. N. | | | | | 67.26 | | | |
| 16 | 59 | 30.3 | 30.2½ | 59 | 30.2 | { h. N. NNW. NW. h. c. NW. W by S. SW by S. c. SW by S. S by W. | | | 24 | 24 | 69.34 | 72.44 | | |
| 17 | 62½ | 30.4¼ | 30.4½ | 62½ | 30.2½ | { c. SSE. c. SSE. SE by S. c. SE by S. ESE. V. c. V. C. | 11 | | | 5 | 70.30 | 73.35 | | |

Ship Grenville, Capt. BURNET ABERCROMBIE, kept by ALEXANDER DALRYMPLE, 17

[illegible]

{ Mostly light airs and calms, with large swell from SW. Few birds. G var. 3 az. $23^{\circ} 32'$ *, amp. $23^{\circ} 50'$ *. Bar. 6 P.M. $30.3\frac{1}{2}$. 8 A.M. $30.3\frac{1}{4}$. 10. $30.3\frac{1}{4}$.

{ Major part, pleasant breezes and fair weather. Just before noon a *seal* passed close to the ship on the larboard side, at same time a flock of a vast number of *small white birds* at some distance on starboard quarter. G var. 2 az. $23^{\circ} 25'$ *. Bar $2\frac{1}{2}$ P.M. 30.3 . 7. $30.2\frac{3}{4}$. 1 A.M. $30.3\frac{1}{4}$. 9. $30.3\frac{1}{2}$.

{ Mostly light airs, with a large swell from W^d. P.M. a *grampus* very near the ship. Several alcatraffes, &c. G var. az. $22^{\circ} 19'$ *, amp. $22^{\circ} 23'$ *.

{ Pleasant breezes. Some pintado birds, &c. smooth water, but a long swell from SW. G var. az. $22^{\circ} 30'$ *, amp. $22^{\circ} 45'$ *.

{ First part, pleasant breezes. Latter, light airs, with great swell from SW. Some pintado birds, &c. Bar. 2 P.M. $30.2\frac{1}{2}$. $11\frac{1}{2}$. $30.2\frac{1}{4}$. $8\frac{1}{2}$ A.M. 30.3 .

{ First part, light breezes. Latter, moderate. Several pintado birds. A.M. a silver bird and pettril, several poor Johns. G var. 3 az. $21^{\circ} 28'$ *, amp. $20^{\circ} 59'$ *. Bar. 2 P.M. $30.2\frac{1}{4}$. $10\frac{1}{2}$. $30.2\frac{1}{4}$. 1 A.M. $30.2\frac{1}{4}$.

{ Pleasant breeze. Great dews. G long. ☉ and ☌ $67^{\circ} 56'$. Bar. 6 P.M. 30.2 . 11. $30.2\frac{1}{4}$. 12. $30.2\frac{1}{2}$. 8 A.M. $30.2\frac{1}{2}$.

{ First part, moderate. Latter, fresh gales and squally. Very damp weather. G var. 2 az. $19^{\circ} 23'$ *, amp. $19^{\circ} 43'$. Bar. 6 P.M. 30.2 . 12. $30.1\frac{1}{4}$. 9 A.M. $29.9\frac{1}{2}$.

{ Fresh gales, with squally weather. A.M. many pintado birds, some alcatraffes, &c. Bar. 2 P.M. $29.8\frac{1}{2}$. 4. $29.8\frac{1}{4}$. 6. $29.7\frac{3}{4}$. 10. $29.8\frac{1}{2}$. 12. 29.9 . $7\frac{1}{2}$ A.M. $30.1\frac{1}{2}$. 9. 30.2 . 10. 30.2 .

{ First part, moderate. Latter, light airs inclinable to calm, with a great swell. Several pintado birds, some alcatraffes, &c. At night, water luminous like blubbers. Bar. 2 P.M. $30.2\frac{1}{4}$. $4\frac{1}{2}$. 30.3 . 6. 30.3 . 10. $30.3\frac{1}{2}$. 12. 30.4 . 8 A.M. 30.4 . 9. $30.4\frac{1}{2}$. 10. $30.4\frac{1}{2}$.

| 1775 | Th. | Marine Barometer. | | | | Weather and Winds. | D.L. | | | | Longitude from | | |
|------|------------------|--------------------|--------------------|------------------|--------------------|--|--------------|------------|------|----|----------------|-------|-------|
| | | R. | S. | Th. | D. | | D.L. A.O. | D.L. A. | T.K. | A. | TK. | | |
| | | | | | | | | | | | | N | S |
| Oct. | ° | In. Dec. | In. Dec. | ° | In. Dec. | | | | | | | ° / | ° / |
| 18 | 63 $\frac{1}{4}$ | 30.4 $\frac{1}{4}$ | 30.4 | 63 | 30.3 $\frac{1}{4}$ | f. c. V. C. c. C. E by N. V. NE. V. c. h. c. NE by E. NE. V. c. V. N by E. | | | 6 | | | E | E |
| 19 | 66 $\frac{1}{2}$ | 30.4 | 30.4 | 66 $\frac{1}{2}$ | 30.3 | h. c. NNE. N. N by E. NE. c. NNE. N by E. NNE. NE. c. NE. NE by N. NNE. c. NE by N. N by E. | | 5 | 10 | | | 71.18 | 74.27 |
| 20 | 65 | | 30.3 | 64 $\frac{1}{4}$ | | f. NE by N. f. NE by N. N by E. f. N. NNE. f. NNE. N by E. N. | | 1 | 8 | | | 72.21 | 75.38 |
| 21 | 63 $\frac{1}{4}$ | 30.2 $\frac{1}{2}$ | 30.2 | 64 $\frac{1}{4}$ | 30.1 $\frac{1}{4}$ | f. N. N by W. f. c. N by W. c. fq. c. NNW. NW by N. c. fq. r. NW by N. NW. V. SW by S. | | 10 | 22 | | | 73.16 | 76.55 |
| 22 | 61 $\frac{3}{4}$ | 30.4 | 30.3 $\frac{1}{2}$ | 61 $\frac{1}{2}$ | 30.3 | f. SSW. f. SSW. S by E. c. SSE. c. SSE. SE. | | 7 | 15 | | | 74.46 | 78.10 |
| 23 | 66 | 30.3 $\frac{3}{4}$ | 30.3 $\frac{1}{4}$ | 66 | 30.3 | c. SE by E. ESE. E. c. E. V. c. fq. E by N. fq. c. E by N. | | 21 | 4 | | | 75.9 | 78.29 |
| 24 | 71 | 30.3 $\frac{3}{4}$ | 30.3 | 71 | 30.2 $\frac{1}{2}$ | f. NE by E. f. NE by E. NE. f. NE. NE by E. f. NE by E. V. | | 3 | 24 | | | 74.43 | 77.39 |
| 25 | 71 $\frac{1}{4}$ | 30.3 $\frac{3}{4}$ | 30.3 $\frac{1}{4}$ | 70 $\frac{1}{2}$ | 30.2 $\frac{1}{2}$ | f. NE by N. C. f. ENE. E by S. C. f. c. C. c. f. C. SW by S. C. | | 5 | 2 | | | 74.47 | 77.45 |
| 26 | 70 $\frac{1}{4}$ | 30.3 $\frac{3}{4}$ | 30.3 | 70 $\frac{1}{4}$ | 30.3 | h. fq. r. S by W. S by E. SE. fq. r. fq. c. r. SE. ESE. r. fq. r. ESE. fq. fq. r. V. | | 8 | 1 | | | 75.43 | 78.40 |
| 27 | 71 | 30.3 | 30.2 $\frac{1}{2}$ | 70 $\frac{3}{4}$ | 30.2 | fq. r. fq. V. E. E by S. fq. fq. r. E by S. fq. r. E by N. E. E by N. fq. r. fq. E by N. E. | | 37 | 4 | | | 75.41 | 78.34 |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMPLE

| Latitude from Greenwich | | | | | | Latitude | | Cor. Long. | Variation | | Magnetical South Dip | | | | ML. | |
|-------------------------|--------------------|----------|----|----|----------|----------|----------|---------------|------------------|----------|-------------------------|-----------|------------|-------------|--------------------------|------|
| TK. | D. D T.K. | D | S. | O. | E. D. | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | |
| | | | | | | | | | | | E. | W. | | | | |
| ° / E | ' | ° / E | | | | ° / S | ° / S | ° / E | ° / W | ° / W | ° / E. | ° / W. | ° / MD. | ° / C.D. | | |
| 73.31 | | | | | | 34.53 | 31.37 | 73.31 | | | 61. | 62. | 61.4 | 62. | Pretty steady. | 2717 |
| 74.27 | | | | | | 34.52 | 31.41 | 74.27 | | | 60.6 | 61.6 | 61.2 | 61.6 | Very steady. | 33 |
| 75.38 | { 3W 64E 60E | 75.41 | 4 | ⊙ | 37 | 34.49 | 31.39 | 75.38 | 14. 9* | 14.48* | | | | | | 40 |
| | | 74.34 | 4 | ⊙ | 51 | | | | | | | | | | | 55 |
| | | 74.38 | 4 | ⊙ | 35 | | | | | | | | | | | 84 |
| 76.55 | | | | | | 33.45 | 30.25 | 76.55 | | | 59.4 | 60.4 | 60. | 60.4 | Very steady. | 142 |
| 78.10 | | | | | | 31.47 | 28.20 | 78.10 | 12.44* | 12.49* | 58. | 58.6 | 58.3 | 58.7 | Not steady. | 97 |
| 78.29 | | | | | | 29.55 | 26.28 | 78.29 | | | 56.4 | 57.2 | 56.7 | 57.3 | Very steady. | 59 |
| 77.39 | | | | | | 29. 4 | 25.37 | 77.39 | * 7.53* 10.10 | 8. 1* | 56.2 | 56.6 | 56.4 | 57. | | 7 |
| 77.45 | | | | | | 29. 6 | 25.44 | 77.45 | 10. 3* *9.20 | *9. 8 | 56.2 | 57. | 56.5 | 57.1 | { Extremely unsteady. | 120 |
| 78.40 | | | | | | 27.17 | 23.47 | 78.40 | | | | | | | | 89 |
| 78.34 | | | | | | 25.49 | 21.42 | 78.34 | | | | | | | | 3443 |

RYMPLE.

ML.

2717

33

Mostly light airs and calm, with a large swell. At night, sea luminous like blubbers. Several alcatraffes, &c. lost sight of Gatten; got sight of her again before noon. Bar. 2 P.M. 30.4. 5½. 30.4. 11. 30.4. 1 A.M. 30.4. 8. 30.4½. 10. 30.4½.

40

Light airs. Sea luminous at night like blubber. P.M. an uncommon bird like Cape hen, some alcatraffes. Bar. 2 P.M. 30.4. 4. 30.4. 10. 30.4. 12½. 30.4. 7½. A.M. 30.3½. 8½. 30.4. 10. 30.4½.

55

Pleasant breezes. Sea luminous at night like blubbers. A.M. sky mare's tails. No birds. G var. 4 az. 15° 24'*. amp. 15° 2*. Long. ☉ and ☽ 75° 56'. Bar. 2½ P.M. 30.3½. 11. 30.3½. 1 A.M. 30.3½. 8. 30.3½.

84

Moderate breezes. Sea luminous at night like blubbers. Towards evening became cloudy. No birds. G var. 2 az. 14° 10'*. Bar. 2 P.M. 30.3. 6. 30.2½. 8. 30.2½. 10½. 30.2½. 12. 30.2½. 8 A.M. 30.2. 9. 30.1½. 10. 30.2. 11. 30.2½.

142

Fresh gales. A.M. one or two poor Johns. No other birds. G var. 2 az. 12° 31'*, amp. 12° 51'*. Bar. 2 P.M. 30.2. 4. 30.1½. 5½. 30.2. 6½. 30.2½. 10½. 30.2½. 12. 30.2½. 9 A.M. 30.3½.

97

Major part, moderate breezes. P.M. several poor Johns, though slenderer and smaller than usual. A.M. poor Johns, a pettril, and a sheerwater. Bar. 2 P.M. 30.3. 6½. 30.3½. 12. 30.3½. 8½. 30.3½. 9. 30.3½. 10. 30.3½.

59

First part, pleasant breeze. Latter, light air and variable. P.M. an alcatrafs. A.M. an alcatrafs. G var. 2 az. 8° 54'*, amp. 9° 9'*. Bar. 2 P.M. 30.3. 4. 30.2½. 6. 30.3. 7½. 30.3. 11. 30.3.

7

Mostly calm. Some birds at distance. G var. az. 8° 38'*. Bar. 2 P.M. 30.3. 8. 30.3. 10. 30.3½. 8 A.M. 30.3. 8½. 30.3½. 9. 30.3½.

120

Fresh gales, with squalls and rain; sometimes squalls very hard. Great irregular swell. Several birds, chiefly poor Johns or black sheerwaters, being of the colour of the former, and shape like the latter, but without white breasts. Bar. 2 P.M. 30.3. 5. 30.2½. 6. 30.2½. 8. 30.3. 12. 30.2½. 9 A.M. 30.3.

89

Fresh gales and squally. Several sheerwaters, or birds like them, of different colours, grey, brown, and blackish; some white breasted and white under the wings. Bar. very unsteady these two days from ship's motion. Great irregular sea. Bar. 2 P.M. 30.2½. 2½. 30.3. 4. 30.2½. 6. 30.2½. 10. 30.3. 12. 30.3. 8 A.M. 30.2½. 9. 30.2½. 10. 30.2½.

3443

Journal of a Voyage to The East-Indies, in the Ship Gro

| | | Marine Barometer | | | | Weather and Winds. | | D. L. | | D. L. | | Longitude from | | | | | |
|------|----|------------------|-------|----------|-------|--------------------|------------|----------------------|---|-------|----|----------------|-------|-------|---|-------|--|
| | | R. | | S. | | Th. | | D. | | A. O. | | T. K. | | A. | | T. K. | |
| 1775 | | In. Dec. | | In. Dec. | | ° | | In. Dec. | | N S | | W E | | | | | |
| | | | | | | | | | | | | | | | | | |
| Oct. | | | | | | | | | | | | | | | | | |
| 28 | 72 | 30.2½ | 30.2 | 72 | 30.1½ | { | fq. fq. r. | E. E by S. | } | 16 | | 8 | 76.9 | 79.10 | ° | ° | |
| | | | | | | { | fq. | E by S. | | | | | | | | | |
| | | | | | | { | fq. c. fq. | ESE. E by S. | | | | | | | | | |
| | | | | | | { | fq. h. | E by S. ESE. | | | | | | | | | |
| | | | | | | { | c. | ESE. E by S. ESE. | } | 2 | 8 | 76.52 | 79.45 | ° | ° | | |
| 29 | 73 | 30.2½ | 30.2 | 73½ | 30.1½ | { | c. | E by S. | | | | | | | | | |
| | | | | | | { | c. fq. h. | ESE. E by S. | | | | | | | | | |
| | | | | | | { | h. f. | E by S. ESE. E by S. | | | | | | | | | |
| | | | | | | { | f. fq. | ESE. E by S. | } | 5 | 15 | 77.39 | 80.17 | ° | ° | | |
| 30 | 75 | 30.2 | 30.1½ | 74½ | 30.1 | { | fq. c. | ESE. E by S. | | | | | | | | | |
| | | | | | | { | c. | E by S. | | | | | | | | | |
| | | | | | | { | c. | E by S. | | | | | | | | | |
| | | | | | | { | h. | ESE. E by S. | } | 3 | 3 | 78.10 | 80.51 | ° | ° | | |
| 31 | 77 | 30.1 | 30.0½ | 77 | 30.0 | { | h. fq. | E by S. | | | | | | | | | |
| | | | | | | { | fq. r. fq. | E by S. E. | | | | | | | | | |
| | | | | | | { | fq. | E. E by N. | | | | | | | | | |
| Nov. | | | | | | { | h. fq. r. | E. VE. | } | 1 | 1 | 78.17 | 80.59 | ° | ° | | |
| 1 | 78 | 30.1 | 30.0¼ | 78½ | 30.0 | { | fq. r. h. | E. | | | | | | | | | |
| | | | | | | { | h. fq. hr. | E. VEy. | | | | | | | | | |
| | | | | | | { | fq. c. | VEy. | | | | | | | | | |
| | | | | | | { | h. | E by N. | } | | 10 | 78.26 | 80.58 | ° | ° | | |
| 2 | 81 | 30.0¼ | 30.0¼ | 81 | 30.0 | { | h. | E by S. E by N. | | | | | | | | | |
| | | | | | | { | h. | V. E. E by N. | | | | | | | | | |
| | | | | | | { | h. f. | E by N. E. | | | | | | | | | |
| | | | | | | { | f. c. | E. | } | 5 | 9 | 79.5 | 81.28 | ° | ° | | |
| 3 | 81 | 30.0½ | 30.0 | 80¾ | 29.9½ | { | c. | E. | | | | | | | | | |
| | | | | | | { | c. f. | E. | | | | | | | | | |
| | | | | | | { | f. | E. | | | | | | | | | |
| | | | | | | { | f. c. | E. E by S. E. | } | 5 | 13 | 79.36 | 81.46 | ° | ° | | |
| 4 | 82 | 30.0½ | 29.9¾ | 82 | 29.9¼ | { | c. f. | E. | | | | | | | | | |
| | | | | | | { | f. | E. | | | | | | | | | |
| | | | | | | { | f. | E. | | | | | | | | | |
| | | | | | | { | h. | E. | } | 7 | 18 | 80.19 | 82.11 | ° | ° | | |
| 5 | 82 | 30.0 | 29.9½ | 81½ | 29.9 | { | h. | E. | | | | | | | | | |
| | | | | | | { | h. f. | E. V. E. | | | | | | | | | |
| | | | | | | { | f. | E. | | | | | | | | | |

hip Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

| Longitude from Greenwich | | | | | | Latitude | | Cor. Long. | Magnetical | | | | | | ML. | |
|--------------------------|---------------|----------------|----|----|----------|----------|-------|---------------|----------------|-------|-----------|------|------|------|--|--|
| T.K. | D. of T.K. | " | S. | O. | D. | A. | O. | | Variation | | South Dip | | | | | |
| | | | | | | | | | Az. | Amp. | Face | | MD. | C.D. | | |
| | | | | | | | | | | | E. | W. | | | | |
| E | E | E | | | | S | S | E | W | W | | | | | | |
| 79.10 | | | | | | 24.17 | 19.54 | 79.4 | | | | | | | 3443 | |
| 79.45 | 35 56 | 79.10 78.49 | 4 | 0 | 27 | 22.54 | 18.33 | 79.33 | | | | | | | 96 { Most large Bar. 6.30 | |
| 80.17 | | | | | | 21.11 | 16.45 | 79.59 | | 4.4* | 46.2 | 47.2 | 46.6 | 47.3 | 93 { Fresh P.M. high, Glor 6.30 10.3 | |
| 80.51 | | | | | | 19.8 | 14.45 | 80.27 | *3.17 | | 44. | 45. | 44.4 | 45.1 | 113 { Strong Vast 3.30 30.1½ | |
| 80.59 | | | | | | 17.15 | 12.51 | 80.29 | | | 41. | 42. | 41.4 | 42.1 | 127 { Squally unsafe 4.30 8.30 | |
| 80.58 | 114 108 | 79.4 79.10 | 8 | 0 | 42 | 15.44 | 11.20 | 80.22 | 1.20* *1.12 | *1.42 | 38.6 | 39.4 | 39.1 | 39.7 | 114 { Squally shape, ☉ and 9½.3 | |
| 81.28 | | | | | | 13.47 | 9.18 | 80.46 | 0.59* | | 35.4 | 36.4 | 36. | 36.6 | 92 { Moder. grey more Bar. 30.0½ | |
| 81.46 | 82 41 | 80.24 81.5 | 6 | *A | 17 28 | 11.57 | 7.23 | 80.58 | 0.3* | | 32.6 | 33.6 | 33.2 | 34. | 123 { Pleasant a trop tance, var. a 7½ A. | |
| 82.11 | | | | | | 10.5 | 5.26 | 81.17 | *0.8 | | 29.2 | 29.6 | 29.4 | 30.3 | 114 { Major I and m | |
| | | | | | | | | | | | | | | | 119 { Fresh g booby fomet Sautbe like a ☉. az. 29.9. | |

3

6

Mostly fresh gales from Eastward, with squalls and rain and a large swell. Several birds as before. A.M. many flying fish. Bar. very unsteady, 1 P.M. 30.2½. 4. 30.1½. 5½. 30.2. 6. 30.2. 8. 30.2½. 10. 30.2½. 12. 30.2½. 9 A.M. 30.2½.

3

Fresh gales, with some squalls. Several birds as before. P.M. a large white bird which flapped its wings and flew high, unlike the birds which are found in the main sea. G long. ☉ and ☾ 77° 39' E. Bar. 2 P.M. 30.1½. 4. 30.1½. 6. 30.1½. 10. 30.2. 11½. 30.2. 8 A.M. 30.2½. 9. 30.2½. 10. 30.2½.

3

Strong gales, with frequent squalls. Some birds as before. Vast flocks of flying fish. Swell abated. Bar. 2 P.M. 30.2. 3. 30.1½. 4. 30.1½. 10½. 30.2. 12½. 30.2. 8 A.M. 30.1½. 9. 30.1½.

7

Squally. Few birds as before. Swell increased and weather unsettled. G long. ☉ and ☾ 79° 8' E. Bar. 2 P.M. 30.1. 4. 30.1. 6. 30.0½. 10. 30.1. 12½. 30.1. 6 A.M. 30.0½. 8. 30.0½. 9. 30.0½. 10½. 30.0½.

4

Squally. P.M. a tropic bird, which resembles a paroquet in shape, but is of a whitish grey. Swell much abated. G long. ☉ and ☾ 79° 10' E. Bar. 2 P.M. 29.9½. 4. 30.0. 6. 30.0. 9½. 30.0½. 12½. 30.0. 9 A.M. 30.0½.

3

Moderate breezes, with some squalls. A.M. few birds; the grey white under wings; frequently overcast. A.M. a little more swell from Northward. G var. 2° 3'*, amp. 2° 4'*. Bar. 2½ P.M. 29.9½. 6. 30.0. 12½. 30.0½. 8 A.M. 30.0½. 9½. 30.0½. 11½. 30.0½.

3

Pleasant gale, with fair weather. A.M. a bird, larger than a tropic bird, with black wings and white body at a distance, it flapped the wings very much. A head swell. G var. az. 1° 0'*, 0° 52'*. Bar. 2 P.M. 30.0½. 6. 30.0½. 7½ A.M. 30.0½.

1

Major part moderate. P.M. some *Southern lights*, very rare and motionless. Bar. 2½ P.M. 29.9½. 6. 29.9½. 8. 30.0.

1

Fresh gales, with fair weather. P.M. a large bird of the booby kind above the ship; it had a long neck, and was something in shape and size like a wild goose. At night, *Southern lights*, some diverging in rays downwards, some like a rare cloud, very little motion; a faint ring round ☉. A.M. four tropic birds. G var. 4 az. 0° 21' *E. az. 0° 4' E. Bar. 2½ P.M. 29.9½. 6. 29.9½. 1 A.M. 29.9. 8. 29.9½.

| 1775 | Th. | Marine Barometer. | | | | Weather and Winds. | D.L. | | D.L. | A. | Longitude from | | | |
|------|------------------|--------------------|--------------------|------------------|--------------------|---|------|----|------|----|----------------|-------|----|-----|
| | | R. | S. | Th. | D. | | N | S | | W | E | TK | A. | TK. |
| | | | | | | | | | | | | | | |
| | ° | In. Dec. | In. Dec. | ° | In. Dec. | | | | | | | | | |
| Nov. | | | | | | | | | | | | | | |
| 6 | 2 $\frac{3}{4}$ | 30.0 $\frac{1}{4}$ | 29.9 $\frac{3}{4}$ | 82 $\frac{1}{4}$ | 29.9 $\frac{1}{4}$ | { c. E. c. E. c. E. E by N. E. c. E by N. E. | 1 | | 18 | | 80.48 | 82.22 | | |
| 7 | 83 | 30.0 | 29.9 $\frac{1}{2}$ | 82 $\frac{1}{2}$ | 29.9 | { h. E. E by S. h. E. E by S. h. ESE. c. SE by E. | 9 | | 31 | | 81.46 | 82.49 | | |
| 8 | 83 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 29.9 $\frac{1}{4}$ | 82 $\frac{1}{2}$ | 29.9 $\frac{1}{4}$ | { h. SE by E. h. E by N. ENE. E. h. fq. E. E by S. f. E by S. | 17 | | 20 | | 82.12 | 82.55 | | |
| 9 | 83 $\frac{3}{4}$ | 29.9 $\frac{3}{4}$ | 29.9 | 83 $\frac{1}{4}$ | 29.8 $\frac{1}{2}$ | { f. V. E. f. E by N. E. f. hr. dr. E. E by N. V. c. E. | | 14 | 53 | | 82.31 | 82.21 | | |
| 10 | 81 $\frac{3}{4}$ | 29.9 $\frac{3}{4}$ | 29.9 | 81 $\frac{1}{4}$ | 29.9 $\frac{3}{4}$ | { c. E by S. E. E by S. c. r. c. V. c. V. E by N. E by S. c. fq. E by S. SE by E. SE. SE by E. | 3 | | 45 | | 83.19 | 82.24 | | |
| 11 | 83 $\frac{3}{4}$ | 29.9 $\frac{3}{4}$ | 29.9 | 83 $\frac{1}{2}$ | 29.8 $\frac{3}{4}$ | { h. c. SE by E. c. E by S. ESE. E by S. c. E by S. E. E by S. fq, hr. c. ESE. V. | 9 | | 33 | | 84. 5 | 82.37 | | |
| 12 | 80 $\frac{3}{4}$ | 29.9 $\frac{1}{2}$ | 29.9 | 80 $\frac{1}{4}$ | 29.8 $\frac{1}{2}$ | { fq. r. V. r. L. to nw. f. V. c. fq, r. L. to e. V. E by N. fq. r. V. NE. V. | | | 32 | | 84.25 | 82.25 | | |
| 13 | 82 | 29.9 $\frac{1}{2}$ | 29.8 $\frac{3}{4}$ | 82 | 29.8 $\frac{1}{2}$ | { c. r. c. C. V. C. c. hr. c. L. to s. C. c. C. c. fq, r. c. C. V. NW. V. | 2 | | 19 | | 84.33 | 82.14 | | |
| 14 | 82 | 29.9 $\frac{1}{2}$ | 29.8 $\frac{3}{4}$ | 82 | 29.8 $\frac{1}{2}$ | { c. fq, hr. NW by W. V. c. V. NW. C. c. C. V. W by S. c. r. c. W by S. SW. SSW. | | 2 | | | 85. 0 | 82.39 | | |

the Ship Grenville, Capt. BURNET ABERCROMBIE, kept by ALEXANDER DALRYMPLE, 1

| Distance from Greenwich | | | | | | Latitude | | Cor. Long. | Magnetical | | South Dip | | | | ML. | | |
|-------------------------|------------|-------|----|----|----|----------|-----------|---------------|------------|-------|-----------|-------|-------|-------|---|-----|--|
| TK. | D. T.K. | D | S. | O. | E. | A. | O. | | Variation. | | Face | | | | | | |
| ° ' E | ° ' E | ° ' E | | | | ° ' S | ° ' S | ° ' E | ° ' E | ° ' E | ° ' E | ° ' E | ° ' E | ° ' E | | | |
| 82.22 | 75 | 81. 7 | 5 | *F | 37 | 8.24 | 3.44 | 81.22 | *0. 8 | | 26.2 | 26.6 | 26.4 | 27.3 | Very steady. | 101 | { Modera motion G var 29.92. |
| 82.49 | | | | | | 6.19 | 2.30 | 81.43 | 1.12* | 1. 6* | 24.4 | 25. | 24.6 | 25.5 | { Not steady, ship laying to lor boat. | 89 | |
| 82.55 | | | | | | 5.17 | 1.11 | 81.43 | | | 22. | 22.2 | 22.1 | 23. | { Extremely steady. | 69 | { Major the G Mr. H P.M. |
| 82.21 | | | | | | 4.20 | 0.18 | 81. 3 | | | 20. | 20 4 | 20.2 | 21.1 | Very steady. | 61 | { Variable 9 A.M |
| 82.24 | | | | | | 3.18 | N 0.47 | 81. 0 | 0.52* | | 19.4 | 19. | 19.4 | 20.1 | { Not very steady. | 81 | { Mostly appear time li fresh w the ref the fit not fe 29.82. |
| 82.37 | | | | | | 2. 3 | 2. 1 | 81. 7 | | | 15 4 | 15 6 | 15.5 | 16.4 | | 82 | { Most pa latter e |
| 82.25 | | | | | | 1.12 | 2.52 | 80.49 | | | 15.4 | 16. | 15.6 | 16.5 | { Pretty steady, but ship not having steer- age-way. | 61 | { Winds land b distanc a gull. 8 A.M |
| 82.14 | 95 | 80.39 | 3 | 0 | 28 | 1.12 | 2.54 | 80.32 | | | 14.4 | 15.4 | 15. | 15.7 | Very steady. | 8 | { Light a &c. 2 0's li P.M. 2 |
| 82.39 | | | | | | 1. 7 | 2.59 | 80.51 | | | 15. | 16. | 15.4 | 16.3 | { Not very steady. | 28 | { Winds plover: Bar. 21 11 1/2. 20 |

5014

LE, 1775.

Moderate breezes. *Northern lights* to Northward. Little motion, but great extent, and afterwards *Southern lights*. G var. amp. $0^{\circ} 48'$ *E. Bar. 2 P.M. 29.9 $\frac{1}{2}$. 1 A.M. 29.9 $\frac{1}{2}$. 9. 30.0.

Moderate breezes. G var. az. $0^{\circ} 45'$ *E, amp. $0^{\circ} 13'$ *E. Bar. 2 P.M. 30.0. 6. 29.9 $\frac{1}{2}$. 1 A.M. 29.9 $\frac{1}{2}$. 8. 29.9 $\frac{1}{2}$.

Major part, moderate breezes. A.M. came on board from the *Gaston* Major SEARS and Capt. ALCOCK for Madras, Mr. HORSLEY went aboard that ship for Bombay. Bar. 2 P.M. 29.9. 12. 29.9 $\frac{1}{2}$. 9 A.M. 29.9 $\frac{1}{2}$.

Variable winds, with rain at times. Bar. 4 P.M. 29.8 $\frac{1}{2}$. 9 A.M. 29.7 $\frac{1}{2}$.

Mostly fresh breezes. At 10 $\frac{1}{2}$ A.M. there was to the SE. the appearance of something black like a rock, and at the same time like a *foal*; but it being to windward, and ship having fresh way, could not determine whether it was a *foal* or the reflection of the Sun behind the clouds. This is nearly the situation of the *Ouro*. A man sent to mast-head could not see any thing. Bar. 2 P.M. 29.8 $\frac{1}{2}$. 9. 29.8 $\frac{1}{2}$. 12. 29.8 $\frac{1}{2}$. 8 A.M. 29.9 $\frac{1}{2}$.

Most part the wind Easterly, with some squalls towards the latter end. Bar. 1 A.M. 29.9. 8. 29.9 $\frac{1}{2}$.

Winds variable with unsettled weather. P.M. a bird like a land bird. A.M. many yellow tails; two black birds at a distance like land birds: a white bird with black wings, like a gull. Bar. 2 P.M. 29.8 $\frac{1}{2}$. 4. 29.8. 6. 29.9. 12. 29.9. 8 A.M. 29.9 $\frac{1}{2}$. 10 $\frac{1}{2}$. 29.9 $\frac{1}{2}$. 11. 29.8 $\frac{1}{2}$.

Light airs and calms, with hard rain. Many fish, porpoises, &c. A.M. a mottled grey bird of the booby kind. The \odot 's limb not distinct when longitude observed. Bar. 2 P.M. 29.8 $\frac{1}{2}$. 12 $\frac{1}{2}$. 29.8 $\frac{1}{2}$. 7 $\frac{1}{2}$ A.M. 29.8 $\frac{1}{2}$. 8 $\frac{1}{2}$. 29.9 $\frac{1}{2}$.

Winds and weather very unsettled. P.M. a sea bird like a plover: many fish. P.M. caught a shark. A.M. saw a fall. Bar. 2 P.M. 29.8 $\frac{1}{2}$. 4. 29.8 $\frac{1}{2}$. 12 $\frac{1}{2}$. 29.9. 8 A.M. 29.9 $\frac{1}{2}$. 11 $\frac{1}{2}$. 29.9.

Journal of a Voyage to The East-Indies, in the Ship

| 1775 | Th. | Marine Barometer. | | | | Weather and Winds. | D.L. | | D.L. | | Longitude from | |
|------|------------------|--------------------|--------------------|------------------|--------------------|---|------|---|------|----|----------------|-------|
| | | R. | S. | Th. | D. | | A.O. | | A. | | A. | TK. |
| | | In. Dec. | In. Dec. | ° | In. Dec. | | N | S | W | E | ° | ' |
| Nov. | ° | | | | | c. fq, r. fq, hr. V. | | | | | ° | ' |
| 15 | 81 $\frac{3}{4}$ | 29.9 $\frac{1}{2}$ | 29.9 | 81 $\frac{3}{4}$ | 29.8 $\frac{1}{2}$ | c. fq. r. V. W by N. W by S. | 19 | 2 | | | E | E |
| | | | | | | r. fq, r. c. W by S. SSE. SSW. | | | | | 86. 9 | 83.46 |
| | | | | | | c. SW. | | | | | | |
| 16 | 81 | 30.0 | 29.9 $\frac{1}{4}$ | 80 $\frac{1}{2}$ | 29.9 | c. fq, hr. SW. S. | 9 | | 6 | | 87. 5 | 84.48 |
| | | | | | | hr. V. S by W. | | | | | | |
| | | | | | | hr. c. S by W. SW. | | | | | | |
| | | | | | | c. r. c. SW. | | | | | | |
| 17 | 80 | 29.9 $\frac{3}{4}$ | 29.9 | 80 | 29.8 $\frac{3}{4}$ | fq, hr. c. fq. S. V. | 21 | | | 18 | 88. 2 | 86. 3 |
| | | | | | | c. hr. c. fq, hr. S by W. SSE. SE. | | | | | | |
| | | | | | | fq, hr. V. S by E. | | | | | | |
| | | | | | | r. c. S by E. C. | | | | | | |
| 18 | 83 $\frac{1}{2}$ | 30.0 | 29.9 $\frac{1}{4}$ | 83 $\frac{1}{2}$ | 29.9 | fr. c. C. E. E by S. | 6 | | | 9 | 88.16 | 86.26 |
| | | | | | | c. r. E by S. | | | | | | |
| | | | | | | r. c. E. E by N. NE by E. | | | | | | |
| | | | | | | c. fq. NE by E. NE by N. N by E. | | | | | | |
| 19 | 83 | 29.9 $\frac{3}{4}$ | 29.9 | 83 | 29.8 $\frac{3}{4}$ | c. fq, r. fq, th, L, hr. NNW. NW. V. | 18 | | 19 | | 88.57 | 87.26 |
| | | | | | | fq, th, L, hr. V. C. V. C. | | | | | | |
| | | | | | | r. c. V. N. | | | | | | |
| | | | | | | c. r. c. N. N by E. NE by N. | | | | | | |
| 20 | 82 $\frac{1}{2}$ | 30.0 | 29.9 $\frac{1}{2}$ | 82 $\frac{1}{4}$ | 29.9 | fq, fr. fq. NE by N. NE. | 30 | | 13 | | 90.27 | 89. 9 |
| | | | | | | fq, fq, L, hr. hr. NE by E. E by N. NE by E. ENE. NE. | | | | | | |
| | | | | | | hr. fq. V. SE by E. SE. SSE. | | | | | | |
| | | | | | | c. fq, flying th. SSE. S by W. | | | | | | |
| 21 | 80 $\frac{3}{4}$ | 30.0 $\frac{1}{4}$ | 29.9 $\frac{3}{4}$ | 80 $\frac{1}{2}$ | 29.9 $\frac{1}{4}$ | r. SW. V. | 15 | | 27 | | 90.54 | 90. 3 |
| | | | | | | r, L. to nw. V. C. V. | | | | | | |
| | | | | | | h. V. C. | | | | | | |
| | | | | | | h. r. h. C. V. W. V. N. | | | | | | |
| 22 | 81 $\frac{1}{4}$ | 30.0 | 29.9 $\frac{1}{2}$ | 81 $\frac{3}{4}$ | 29.9 | c. fq. N. N by W. | 14 | | 55 | | 91.17 | 91.21 |
| | | | | | | fq, hr. c. r. N by W. C. SE by S. V. | | | | | | |
| | | | | | | r. V. | | | | | | |
| | | | | | | r. c. NE by E. C. | | | | | | |
| 23 | 82 | | 29.9 $\frac{1}{2}$ | 82 | | c. C. E. V. | 6 | | 8 | | 91. 8 | 91.20 |
| | | | | | | c. V. E by N. | | | | | | |
| | | | | | | c. h. NE by E. NE. | | | | | | |
| | | | | | | h. NE by E. NE. NNE. | | | | | | |

Ship Grenville, Capt. BURNET ABERCROMBIE, 1775, kept by ALEXANDER DALRYMPLE

| Latitude from Greenwich | | | S. | O. | E. | Latitude | | Cor. Long. | Magnetical | | | | | | ML. | |
|-------------------------|--------------|-------|----|----|----|-----------|-------|---------------|------------|-------|-----------|-------|------|------|------|--|
| TK. | D. D T.K. | D | | | | A. | O. | | Variation | | South Dip | | | | | |
| | | | | | | | | | Az. | Amp. | Face | | MD. | C.D. | | |
| ° ' " | ° ' " | ° ' " | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | |
| E | E | E | | | | S | N | E | W | W | E. | W | | | | |
| 83.46 | | | | | | 0.57 | 2.50 | 81.52 | | | 14.4 | 14.6 | 14.5 | 15.4 | 5014 | |
| 84.48 | 76 | 83.32 | 4 | 0 | 18 | 0.46 | 2.52 | 82.48 | | | 13.4 | 14. | 13.6 | 14.5 | 71 | |
| 86. 3 | | | | | | 0.32 | 3.27 | 83.57 | | | 14.4 | 15.2 | 14.7 | 15.6 | | |
| 86.26 | | | | | | 0. 3 | 4. 2 | 84.13 | | | 11.1 | 11.5 | 11.3 | 12.2 | | |
| 87.26 | | | | | | 0. 3 | 3.44 | 85. 7 | | | 10.6 | 11.2 | 11. | 11.7 | | |
| 89. 9 | | | | | | 0.17 | 3. 0 | 86.40 | | | 11.4 | 12.2 | 11.7 | 12.6 | | |
| 90. 3 | | | | | | 0. 3 | 3.29 | 87.28 | | | 10.2 | 10.6 | 10.4 | 11 3 | | |
| 91.21 | | | | | | N 0. 9 | 3.55 | 88.39 | | | 10.6 | 11.2 | 11. | 11.7 | | |
| 91.20 | | | | | | 0.45 | 4.37 | 88.31 | | | 7.6 | 8.4 | 8.1 | 9. | | |
| 5484 | | | | | | | | | | | | | | | | |

Mostly
colours
shorter
29.8½

First pair
latter,
very
4. 29.

Very u
2. 29.
At first
was all
when
and from
E 14.
W 15.

Mostly
bird in
pretty
P.M.

Variable
wings
like a
few ye
like a
1 A.M.

Fresh b
The li
to be a
like a
29.8½
10. 29

Variable
A.M.
½ P.M.
12½ A.

Major
aboard
kind.
Water
12½ A.

First pair
weather
birds.
Bar. 41
9. 30.0

Mostly variable wind and rain. P.M. a sail; shewed French colours on firing a gun to speak with her, but did not shorten sail. Several birds and many fish. Bar. 2 P.M. 29.8½. 6. 29.9. 12. 29.9½. 8 A.M. 29.9½.

First part, mostly squally with very heavy rain. Middle and latter, light airs and cloudy with some rain. ☉'s limb not very distinct when *long.* observed. Bar. 2 P.M. 29.8½. 4. 29.8½. 10. 29.9½. 12. 29.9½. 8 A.M. 29.9½. 9. 30.0.

Very unfettered weather with rain. Bar. 1 P.M. 29.9½. 2. 29.9. 4. 29.9. 9½. 30.0. 1 A.M. 29.9½. 9. 29.9½. *At first the dipping-needle had no motion, but with the face East was at 120°; when moved a little, it remained motionless; when moved with the face to West, the needle turned round, and stood any where. Moved several times, it pointed with face E 14½. W 15½.* } Very steady.

Mostly light breezes. P.M. saw two dolphins, heard a tropic bird in night. A.M. caught two dolphins. *Dipping-needle pretty steady, and no appearance of defect as yesterday.* Bar. 2 P.M. 29.8½. 4. 29.8½. 12½ A.M. 29.9. 8. 29.9½. 11. 29.9½.

Variable winds, with rain. P.M. a swallow with short wings and white breast. A.M. a small land bird shaped like a water wag-tail, but in colour like a linnet, with a few yellowish feathers in the flank. A.M. a bird at distance like a gannet. Bar. 2 P.M. 29.8½. 4. 29.8½. 6. 29.8½. 1 A.M. 29.9½. 8. 29.9½.

Fresh breezes, with some squalls and a great deal of rain. The land bird aboard still. P.M. heard a bird, supposed to be a booby. A.M. passed a drift; a grey sea bird shaped like a plover. A black sea bird at a distance. Bar. 1 P.M. 29.8½. 6. 29.8½. 1 A.M. 29.9. 7½. 29.9½. 9. 29.9½. 10. 29.9½. 11. 29.9½. 11½. 29.9½.

Variable, with rain and calms. The land bird aboard still. A.M. saw a tropic bird. Passed a drift. Light airs. Bar. ½ P.M. 29.9½. 2. 29.9. 4. 29.9½. 6. 29.9½. 7. 29.9½. 12½ A.M. 29.9½. 8. 29.9½. 10. 30.0.

Major part, light breezes, with some rain. The land bird aboard still. P.M. saw a booby, some fish of the porpoise kind. A.M. a horse fly, several riplings, and many fish. Water luminous at night. Bar. 4 P.M. 29.9½. 5. 29.9½. 12½ A.M. 29.9½. 7. 29.9½. 8½. 30.0. 9. 30.0. 10½. 30.0.

First part, calm. Latter, light breeze from NE, with hazy weather. The land bird aboard still. A.M. several tropic birds. Passed a bamboo adrift. Water luminous at night. Bar. 4 P.M. 29.9½. 6. 29.9. 14½ A.M. 29.9½. 8. 29.9½. 9. 30.0.

| 1775 | Th. | Marine Barometer. | | | | Weather and Winds. | D.L. | | | Longitude from Gre | | | | | | | |
|------|------------------|--------------------|--------------------|------------------|--------------------|---|--------------|------------|----|--------------------|--------------|-------|-------------------|----|---|---|--|
| | | R. | S. | Th. | D. | | D.L. A.O. | A. T.K. | A. | TK. | D. D T.K. | | | | | | |
| | | | | | | | | | | | | N | S | WE | | | |
| | ° | In. Dec. | In. Dec. | ° | In. Dec. | | ' | ' | ' | ' | ° | ' | ' | ° | ' | ' | |
| Nov. | | | | | | | | | | | | | | | | | |
| 24 | 82 $\frac{1}{4}$ | 30.0 $\frac{1}{4}$ | 29.9 | 82 $\frac{1}{4}$ | 29.9 | { f. NNE. NE by N. NE. f. NE. r. f. NE by N. f. fq, r. c. NE. } | | 10 | 32 | | 90.29 | 90. 9 | | | | | |
| 25 | 82 | 30.0 $\frac{1}{4}$ | 29.9 $\frac{3}{4}$ | 82 | 29.9 $\frac{1}{4}$ | { c. fq. NE. V. fq. c. r. V. E by N. fq, r. V. ENE. fq. c. fq. NE by E. NE. } | | 19 | 43 | | 90.13 | 89.10 | | | | | |
| 26 | 82 | 30.0 $\frac{1}{4}$ | 29.9 $\frac{3}{4}$ | 81 $\frac{1}{2}$ | 29.9 $\frac{1}{4}$ | { fq, fr. c. fq, r. V. NE. V. fq, r. fq. c. NE. V. c. V. NE by E. c. fq. NE. NE by E. V. } | | 8 | 30 | | 90 19 | 88.46 | | | | | |
| 27 | 83 $\frac{1}{2}$ | 30.0 $\frac{1}{4}$ | 29.9 $\frac{3}{4}$ | 83 $\frac{1}{2}$ | 29.9 $\frac{1}{2}$ | { c. L. all round. V. E by N. fq. h. L. all rd. E. E by N. h. E by N. } | | 3 | 55 | | 90.48 | 88.20 | 79 | | | | |
| 28 | 84 $\frac{1}{2}$ | 29.9 $\frac{1}{4}$ | 29.9 $\frac{1}{4}$ | 84 $\frac{1}{2}$ | 29.9 | { c. E by N. c. E by N. ENE. E by N. c. fq. E by N. E. fq. c. E by N. } | | 4 | 20 | | 90.50 | 88. 2 | 142 | | | | |
| 29 | 84 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 30.0 | 84 $\frac{1}{2}$ | 29.9 $\frac{1}{2}$ | { fq, r. c. fq. V. E. fq, r. c. V. ENE. c. ENE. c. h. NE by E. ENE. NE by E. } | | 15 | 13 | | 90.39 | 87.38 | 152 139 160 | | | | |

in the Ship Grenville, Capt. BURNET ABERCROMBIE, kept by ALEXANDER DALRYMPL

| From Greenwich | | | | | | | | | Magnetical | | | | | | | | | |
|----------------|-------------------|-------------------------|-------------|-------------|----------------|------|---------------|------------|------------|-----------------------------|--------------------------------|-----------------------------|-------------------------------------|------------------------------------|------------------|--------|-------|--|
| | | | | | Latitude | | Cor. Long. | Variation. | | South Dip | | | | | | | | |
| D. | D. | | S. | O. | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | | | | |
| | T.K. | | | E. | | | | | | E. | W. | | | | | | | |
| ' | ' | ' | | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | | | | | |
| | E | E | | | N | N | E | E | E | | | | | | | | | |
| 9 | | | | | 1.37 | 5.19 | 88.13 | 0.53* | { | 7. 6.4 | 7.2 6.6 | 7.1 6.5 | 8. 7.4 | h. m. | By estimation. | N.lat. | Long. | |
| | | | | | | | | | | | | | | 11. 0PM | 4.39 | 88.29 | | |
| | | | | | | | | | | | | | | 9. 0AM | 5.21 | 88.26 | | |
| 0 | | | | | 2.50 | 6.13 | 87. 7 | | { | 8.2 6.2 5.6 5. 4.4 | 8.4 6.6 6.2 5.4 5. | 8 3 6.4 6. 5.2 4.6 | 9.2 7.3 6.7 6.1 5.5 | Very steady. | 1. 0PM | 5.17 | 88.18 | |
| | | | | | | | | | | | | | | 9.15 | 5.23 | 88.10 | | |
| | | | | | | | | | | | | | | 12.30AM | 5.45 | 88.11 | | |
| | | | | | | | | | | | | | | 9.10 | 6. 4 | 87.25 | | |
| | | | | | | | | | | | | | | 0.30 PM | | | | |
| 6 | | | | | 3.23 | 6.38 | 86.36 | | | 5 4 | 6.2 | 5 7 | 6.6 | Very steady. | | | | |
| 0 | 79 | 87. 1 | 5 | 0 | 43 | 3.28 | 6.40 | 86. 3 | | 4.2 | 4.6 | 4.4 | 5.3 | Very unsteady. | | | | |
| 2 | 142 | 85.40 | 6 | 0 | 38 | 4.46 | 8. 2 | 85.40 | { | 3. 1.6 | 3.4 2.2 | 3.2 2. | 4.1 2.7 | 1. 0AM | 7.20 | 86. 2 | | |
| | | | | | | | | | | | | | | Very steady. | 0.30 PM | 8. 5 | 85 40 | |
| 8 | 152 139 160 | 85. 6 85.19 84.58 | 5 7 6 | 0 0 0 | 37 20 21 | 5.57 | 9.28 | 85.10 | { | 0.4 0.2 0.0 ND. 0.2 1.2 1.2 | 1. 0.6 0 4 0.2 ND. 0.2 1.6 1.4 | 0 6 0.4 0.2 1.1 0.0 ND. 1.4 | 1.5 1.3 1.1 0.7 ND. ND. ND. 0.5 0.4 | Very steady, though ship pitching. | 6.30 | 8.20 | 85.39 | |
| | | | | | | | | | | | | | | 9. 0 | 8.25 | 85.38 | | |
| | | | | | | | | | | | | | | 11.10 | 8.30 | 85 37 | | |
| | | | | | | | | | | | | | | Very steady. | | | | |
| | | | | | | | | | | | | | | 1. 0AM | 8.35 | 85 36 | | |
| | | | | | | | | | | | | | | Pretty steady, | | | | |
| | | | | | | | | | | | | | | 9. 0 | 9.14 | 85.15. | | |
| | | | | | | | | | | | | | | 0.45PM. | Not very steady. | | | |

AMPLE, 1775.

| | ML. | |
|--|------------|---|
| mation. Long. 88.29 88.26 | 5484 73 | Moderate breezes, and mostly fair. The land bird aboard still. A.M. saw a ship, the Dudley, Capt. BARRINGTON, from Madras to the Nicobars and Pegu; the Captain came on board. At 10 saw another ship. Bar. 6 P.M. 29.9. N.B. <i>Standing to SW. from 10 A.M. to 1 P.M. the dipping needle increased in dip, the distance not above 10 miles</i> |
| 88.18 88.10 88.11 87.25 | 81 | Winds from NE. with frequent squalls and rain. The land bird aboard still. 1 P.M. spoke the ship Floyer, from Madras to Malay Coast, Capt. RICH. Water luminous. Sea bird shaped like plover, grey with upper part of head black, and wings tipped with black. Same bird seems to have been about ship several days. Bar. 5 P.M. 29.9. 6. 29.9. 1 A.M. 29.9½. 8. 30.0. 9. 30.0½. 11. 30.0½. |
| | 87 | Fresh gales and squally throughout. The land bird aboard still. Sea very luminous. P.M. a small mew came on board. Bar. 2 P.M. 29.9½. 10. 30.0. 1 A.M. 29.9½. 8. 30.0. |
| | 64 | Winds most Easterly, with squalls and rain. Sent a boat on board a country snow with red colours; she was bound from Trankbar to Acheen. Sight ☉ not very good. Bar. 4 P.M. 29.9½. 6. 29.9½. 12½ A.M. 29.9½. 8½. 30.0½. |
| 86. 2 85 40 | 78 | Moderate breezes, and mostly cloudy. Bar. 2 P.M. 29.9½. 4. 29.9. 6. 29.9. 12½ A.M. 29.9½. 8. 29.9½. 11. 29.9½. |
| pitching. 85.39 85.38 85.37 85.36 85.15. y steady. | 72 5939 | Increasing breeze from Eastward, with squally weather and rain. Bar. 3 P.M. 29.8½. 4. 29.8½. 6. 29.9. 1 A.M. 29.9. 9. 30.0. 10. 30.0. |

Journal of a Voyage to The East-Indies, in the Ship Gre...

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D. L. | | | Longitude from | | |
|------|-----|------------------|----------|-----|-------|---|-------|-------|----|----------------|-------|------------|
| | | R. | | S. | | | A. O. | T. K. | A. | T. K. | | |
| | | In. Dec. | In. Dec. | Th | D. | | | | | | | |
| Nov. | | | | | | | | | | | | |
| 30 | 84½ | 30.2¼ | 30.0 | 85 | 29.9½ | c. NE by E. c. ENE. c. h. ENE. NE by E. h. NE by E. | 11 | | 5 | 90.15 | 87.19 | 1 |
| Dec. | | | | | | | | | | | | |
| 1 | 78 | | 30.0 | 77½ | | h. NE by E. N. NE by N. h. NE by N. NNE. h. c. fq, r. NNE. NE. fq, r. fq, hr. NE. V. | | | 6 | 90.36 | 87.34 | |
| 2 | 82½ | 30.0 | 29.9½ | 82 | 29.9¼ | fq, r. r. V. r. c. V. NE. N by E. c. N by E. NE by N. NNE. c. NE by N. | | | 5 | 91.20 | 88.13 | |
| 3 | 83½ | 30.0 | 29.9 | 83¼ | 29.9 | c. NE by N. NNE. c. NE by N. NE. c. h. NNE. N by E. h. f. N. NNW. N by W. | 8 | | 9 | 92. 4 | 89. 6 | 9 |
| 4 | 83 | 30.0 | 29.9½ | 83¼ | 29.9 | h. NNW. NW. NW by W. V. h. c. L. to nw. V. WNW. c. WNW. V. c. SW. V. SSW. | 4 | | 3 | 92.16 | 89.21 | 11 |
| 5 | 84 | 30.0¼ | 29.9¾ | 83½ | 29.9¼ | h. SSW. h. SSW. S. h. f. S. V. SE by S. f. SE by S. | 2 | | 5 | 91.58 | 89. 8 | |
| 6 | 83 | 30.0 | 30.0 | 83½ | 29.9 | f. SE. SE by E. f. fq, r. fq, fr. SE by E. E. ENE. V. fq, hr. c. V. C. NE by E. c. E by N. | 9 | 9 | | 91.16 | 88.17 | 13 |
| 7 | 80½ | 30.0¾ | 30.0¼ | 80½ | 29.9¾ | c. ENE. NE by E. c. NE by E. NE. NE by E. c. NE by E. c. f. NE by E. | 12 | 17 | | 89.26 | 86.10 | |
| 8 | 81¼ | 31.0½ | 31.0 | 81¼ | 30.0½ | h. ENE. c. f. ENE. NE. f. NE. ENE. f. h. ENE. | 12 | 3 | | 87. 9 | 83.50 | 188 200 |

6 Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

| Distance from Greenwich | | | | | | Magnetical | | | | | | | | | | | |
|-------------------------|---------------|----------------|--------|----------|----------|------------|---------|---------------|-----------|-------|-----------|-----|-----|------|------------------|---|--|
| T.K. | D. C. T.K. | C | S. | O. | E. | Latitude | | Cor. Long. | Variation | | South Dip | | | | ML. | | |
| | | | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | | |
| | | | | | | | | | | | E. | W. | | | | | |
| 87.19 | | | | | | S | S | E | E | E | | | | | | 5939 | |
| | | | | | | 7.13 | 10.55 | 84.55 | | | 4. | 4.4 | 4.2 | 3.3 | Very steady. | 79 { Moderate b 29.9 8 | |
| 87.34 | | | | | | 7.24 | [11. 1] | 85.15 | | | 3.6 | 4.2 | 4. | 3.1 | Pretty steady. | 61 { Variable w land bird 1 P.M. 30 12 1/2 A. M | |
| 88.13 | | | | | | 7.17 | 10.50 | 85.58 | | | 2.2 | 2.6 | 2.4 | 1.5 | Not steady. | 52 { First part, very black and it ca A.M. the 4. 29.9. 7 1/2. 29.9 1/2 | |
| 89. 6 | 97 | 87.29 | 4 | *A *F | 43 | 7. 8 | 10.33 | 86.49 | | | 3. | 3.6 | 3.3 | 2.4 | Not very steady. | 47 { Decreasing land bird. 4. 29.9. 29.9 1/2 | |
| 89.21 | 116 | 87.25 | 6 | *A | 12 | 7.52 | 11.13 | 87. 2 | 1.32* | 1.41* | 5.4 | 5.6 | 5.5 | 4.6 | Very steady. | 52 { Mostly ligh 29.8 1/2. 6. | |
| 9. 8 | | | | | | 8.39 | 12. 2 | 86.47 | *1.12 | *1.22 | 6.6 | 7.2 | 7. | 6.1 | Very steady. | 50 { Light breeze flew like a 7 A.M. 29 | |
| 8.17 | 137 | 86. 0 | 6 | *P | 28 | 9.42 | 12.56 | 85.44 | | | 7.6 | 8.2 | 8. | 7.1 | Pretty steady. | 75 { First part, The same Saw a fine Bar. 4 P.M. 10. 30.0. 29.9 1/2. 8 1/2 | |
| 6.10 | | | | | | 11. 0 | 14. 2 | 83.45 | | | 8.6 | 9.2 | 9. | 8.1 | Pretty steady. | 134 { Fresh gales, board. A r 4. 29.9 1/2. | |
| 3.50 | 188 205 | 80.42 80.15 | 5 6 | *A *A | 36 43 | 11.27 | 14 17 | 81.23 | | | 9.2 | 9.6 | 9.4 | 8.5 | Very steady. | 135 { Fresh breeze 2 1/2 P.M. 29 30.0 1/2. 9. | |
| 6624 | | | | | | | | | | | | | | | | | |

Moderate breezes, and mostly hazy. Bar. 3 P.M. 29.9 $\frac{1}{2}$. 5. 29.9 $\frac{1}{2}$. 8 A.M. 30.0.

Variable winds and weather, with much rain. A.M. a small land bird, probably same we lost some days ago. Bar. 1 P.M. 30.0. 3. 29.9 $\frac{1}{2}$. 4. 29.9 $\frac{1}{2}$. 6. 29.9 $\frac{1}{2}$. 9 $\frac{1}{2}$. 30.0 $\frac{1}{2}$. 12 $\frac{1}{2}$ A.M. 29.9 $\frac{1}{2}$. 7 $\frac{1}{2}$. 30.0. 8. 30.0 $\frac{1}{2}$. 8 $\frac{1}{2}$. 30.0 $\frac{1}{2}$.

First part, squally with rain. Past 6 P.M. weather looked very black and threatening, but the barometer did not fall, and it came to nothing. Middle and latter, moderate A.M. the same land bird. Bar. 2 P.M. 29.9 $\frac{1}{2}$. 2 $\frac{1}{2}$. 29.8 $\frac{1}{2}$. 4. 29.9. 6. 29.9. 9 $\frac{1}{2}$. 30.0. 12 $\frac{1}{2}$ A.M. 29.9 $\frac{1}{2}$. 6. 29.9. 7 $\frac{1}{2}$. 29.9 $\frac{1}{2}$. 8 $\frac{1}{2}$. 29.9 $\frac{1}{2}$. 11 $\frac{1}{2}$. 29.9 $\frac{1}{2}$.

Decreasing breeze, with pleasant weather. A.M. the same land bird. A small mew about ship. Bar. 2 $\frac{1}{2}$ P.M. 29.9. 4. 29.9. 7. 29.9 $\frac{1}{2}$. 12. 29.9 $\frac{1}{2}$. 7 A.M. 29.9 $\frac{1}{2}$. 7 $\frac{1}{2}$. 29.9 $\frac{1}{2}$.

Mostly light airs. A.M. the same land bird. Bar. 2 P.M. 29.8 $\frac{1}{2}$. 6. 29.8 $\frac{1}{2}$. 10. 29.9 $\frac{1}{2}$. 12. 29.9 $\frac{1}{2}$. 7 A.M. 29.9.

Light breezes. A.M. the same land bird. P.M. a land bird, it flew like an owl. Bar. 3 P.M. 29.9. 4. 29.9 $\frac{1}{2}$. 7. 29.9 $\frac{1}{2}$. 7 A.M. 29.9 $\frac{1}{2}$. 11 $\frac{1}{2}$. 29.9 $\frac{1}{2}$.

First part, moderate breezes. Middle and latter, squally. The same land bird on board. A sand lark on board. Saw a snow standing to N^d: it hoisted English colours. Bar. 4 P.M. 29.9 $\frac{1}{2}$. 7 $\frac{1}{2}$. 30.0. 7 $\frac{1}{2}$, in squall, 29.9 $\frac{1}{2}$. 10. 30.0. 12 $\frac{1}{2}$ A.M. 29.9 $\frac{1}{2}$. 12 $\frac{1}{2}$, before hard rain, 29.9. 29.9 $\frac{1}{2}$. 8 $\frac{1}{2}$. 30.0. 9 $\frac{1}{2}$. 30.0.

Fresh gales, with pleasant weather. The same land bird on board. A mottled bird came on board. Bar. 2 $\frac{1}{2}$ P.M. 29.9 $\frac{1}{2}$. 4. 29.9 $\frac{1}{2}$. 6. 29.9 $\frac{1}{2}$. 10. 30.0. 8 A.M. 30.0 $\frac{1}{2}$. 11. 30.0 $\frac{1}{2}$.

Fresh breeze throughout. A small land bird aboard. Bar. 2 $\frac{1}{2}$ P.M. 29.9 $\frac{1}{2}$. 4. 30.0. 6. 30.0. 1 A.M. 30.0. 30.0 $\frac{1}{2}$. 9. 31.0 $\frac{1}{2}$.

| 1775 | Th. | Marine Barometer. | | | | Weather and Winds. | D.L. | | | | Longitude from | | |
|------|-----|-------------------|---------|-----|---------|--------------------|--------------|--------------------|--------------|-----|----------------|-------|-------|
| | | R. | S. | Th. | D. | | D.L. A.O. | D.L. A. T.K. | A. | TK. | D | | |
| | | | | | | | | | | | | N | S |
| | ° | in.Dec. | in.Dec. | ° | in.Dec. | | | | | | | ° | ° |
| | | | | | | | | | | | | E | E |
| cc. | 9 | 80 | 30.1 | 79½ | | { | h. | ENE. | | | | | |
| | | | | | | | h. | ENE. | | | | | |
| | | | | | | | h. | E. | | | | | |
| | | | | | | | h. | E. ENE. | | | | | |
| | | | | | | | | | 22 | 1 | | 86.18 | 82.56 |
| 10 | | | | | | f. | | ENE | | | | | |
| 1776 | | | | | | | | | 6 | | | 86.14 | |
| | | | | | | | | | in 5½ hours. | | | | |

| | | | | | | | | | | | | | | | |
|-------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 10 | At anchor in Madras Road, in the Grenville's cuddy (cabin before the round-house) | | | | | | | | | | | | | | |
| 10 | Ashore, in the fort of the Company's house near the church, | | | | | | | | | | | | | | |
| 28 | Ditto, | | | | | | | | | | | | | | |
| Oct 3 | Ditto, | | | | | | | | | | | | | | |

| | | | |
|---|---------|-------|--------------------|
| By the latitude observed at noon, the 9th of December, and the bearings of PULICAT Flag Staff, we were then from Fort St. George, | 0.13 E. | 80.42 | Longitude 9th noon |
| Longitude of FORT ST. GEORGE, by eclipse of Jupiter's first satellite, | 80.29 | 82.56 | Longitude by T |
| Longitude of 9th noon, by map, | 80.42 | | |
| Longitude by mean of 52 observations, | 80.28 | | |
| Difference, | .14 | | 2.14 Error of Time |

N. B. There being a very considerable difference in the position of Fort St. George according to

| | | |
|---|--|------------|
| Lat. 13. 8. 0 N. 7th Oct. 1776, A.D. on board the Swallow sloop of war | { merid. alt. } by a Hadley made by Bird. | Long. from |
| 13. 8. 0 | { 1761, Rev. Mr. Hirst, many obs. made not long ago with an excellent quadrant (vide Ph. Tr. vol. LII. part I. p. 396). N.B. It does not clearly appear whether these obs. were made by Mr. Hirst or by some other person. | 80.28.45 H |
| 13. 8. 0 | { Several observations by Mr. William Nicholson, master of the Elizabeth man of war, p. 48. Remarks and Observations made on a voyage to the East Indies. | 80.15. 0 A |
| 13. 7. 0 | Major James Rennell, surveyor-general of Bengal. | 80.24. 0 A |
| 13. 4. 54 | Major William Stevens, chief engineer of Fort St. George. | 80. 2.15 R |
| 13. 4. 41 | Rev. Mr. William Smith, alt. of *, some to Northward, some to Southward. | 80.41. 0 R |
| By a survey which has been made of the country from FORT ST. GEORGE to Allimparva, Allimparva is 17 fathoms miles, or | { 14.36" W of Fort St. George. | 81. 1.45 D |
| From PONDICHERY, by M. D'après, Allimparva is | 13. E. | |
| Fort St. George Eastward of Pondicherry, | 27.36 | PONDICHERY |

Ship Grenville, *Capt.* BURNET ABERCROMBIE, *kept by* ALEXANDER DALRYMPLE, 177

| Distance from Greenwich | | | | Latitude | | Cor. Long. | Magnetical | | South Dip | | M.L. | Remarks |
|-------------------------|-------|-----|----------|----------|---------|------------|------------|------|-----------|------|------|--------------|
| TK. | D. D. | D. | E | A. | O. | | Variation. | Face | MD. | C.D. | | |
| | T.K. | | S. O. D. | | | | Az. | Amp. | E. | W. | | |
| ° / | ° / | ° / | ° / | ° / | ° / | ° / | ° / | ° / | ° / | ° / | ° / | |
| E | E | E | | N | N | E | E | E | | | | |
| 82.56 | | | | 11. 9 | 13.37 | 80.42 | | | 5.6 | 6.2 | 5. | 5.1 |
| | | | | | | | | | | | | Very steady. |
| | | | | 10.47 | [13. 9] | | | | | | | |
| | | | | | 13. 7 | | | | 5.6 | 6.6 | 6.2 | 5.3 |
| | | | | | 13. 8 | | | | 5.6 | 5.6 | 5.6 | 4.7 |
| | | | | | | | | | 5.6 | 6. | 5.7 | 5. |
| | | | | | | | | | 5.6 | 6. | 5.7 | 5. |

N.B. All the observations of the dip were taken with the needle standing on the table in the Grenville's round-house towards the starboard side of the ship, except 2d, 3d, 6th, and 8th of October 1775; and 10th and 28th of September, and 3d of October 1776.

Distance from Greenwich.

80.28.45 Hon. Thomas Howe, eclipse of Jupiter's first satellite, 5th July 1755.

80.15. 0 A.D. mean of 52 observations, compared together by the Time-keeper, in this Journal.

80.24. 0 A.D. ☉ and ☿ 7th Oct. 1776, 3 sights ext. diff. 10'.

80. 2.15 Rev. Mr. Hirst, *Transit of Venus* 1761.

80.41. 0 Rev. Mr. Smith, by Dr. Maskelyne's calculation, } Em. 27th May 1777.

81. 1.45 Ditto, by Mr. Smith's calculation, }

PONDICHERRY, by M. Le Gentil 1769, is in 11.55.42 N. 79.52.30 E long. from Greenwich.

To the Cape

6732

8479

15,211

Which places Fort St. George in

80.20. 6

At noon,

At 6h. 30

At 9h. 40

3, 1775.

9th December.

Pleasant gale. At 2½ P.M. had soundings, 28 fath. gravelly sand; and at day-light saw the land bearing SW by W.

| h | Weather. | Winds. | Course. | K.F. | Soundings. |
|-----|----------|--------|---------|------|--------------------------|
| 2 | h. | E | WSW | 1.5 | 30. no ground. |
| 2½ | | | | | 24. gravelly sand. |
| 3 | | | SbE½E | 1. | 20. 19. 18. 17. ditto. |
| 4 | | | | | 16½. 18. 17½. 20. ditto. |
| 5 | | SSE | | 2. | 25. 25½. 26. ditto. |
| 6 | | | | | 25½. 25. blue mud. |
| 7 | | | | | 25½. 26. ditto. |
| 8 | | | | | 26. 27. ditto. |
| 9 | | ENE | | 2.3 | 37. 26. 25. |
| 10 | | | | | 25. 24½. |
| 10½ | | | S | 2.2 | 23. 21. 20. 19. 18½. 18. |
| 11 | | | | | 18. 17½. 17½. 17. |
| 12 | | SSE | S by E | 4. | 18. to 25. |
| | | | | | |

At 6h. 30. Armegon Hill, W 13° N 10 or 12 miles off shore. Southernmost part in Pulicat Ridge in sight; SW. The extreme in haze.

At 9h. 40. * A Hill or Grove, W 11° S.

- R 28.30 Sandy Point of Armegon.
- 35.16 White Building.
- 43.38 Ext. in sight to the Northward.
- L 4.37 Highest Peak of Pulicat Ridge.
- 14.25 Kettle Bottom, ditto.
- 22.40 Ext. in sight to the Southward.

At noon, * Pulicat Flag-staff, S 52° W.

- R 33. 6 Kettle Bottom, Pulicat Ridge.
- 46.30 Highest Peak, ditto.
- 50. 0 Sandy Point.
- L 5. 0 Point to Southward of Pulicat.
- 19.30 Tuft near South ext. in sight.

10th December.

| h | Weather. | Winds. | Course. | K.F. | Soundings. |
|---|----------|--------|---------|------|------------|
| 1 | f. | | S | 4.5 | 27. 23. |
| 2 | | | | | 20. 13. |
| | | | S by W | 4.5 | |

At 5h. 30'. Anchored in Madrafs Road in 10½ fath.

* Fort St. George Flag staff, S 31° W. about 4 miles off shore.

- R 14.31 Obelisk and Punch-house in one.
- 18.15 Armenian Church.
- 49.12 White-house on the Sea-beach.
- L 18.47 Nabob's White Building.
- 25. 9 St. Thomas's Mount.
- 28.40 Triplicane Pagoda.
- 29. 6 Peak of 4 Sierras.

ERRATA and ADDENDA in the GRENVILLE'S

In the explanation of *weather* dr. denotes *drizzling rain*, and a comma (,) after any *all the weathers*, so separated by *comma*, are connected: thus, fq, r, th, L. imply *lightning*: fq. r. th, L. imply *squally, rain, thunder and lightning*, to have all b but not at the same time.

In the explanation of the 5th column, *for* N denoting that the *observation* read N *observation*.

| | For | D.L. | | D.L. | | Long. from Gr. | | Latitude | | Read |
|---|-----|------|----|------|---|----------------|-------|----------|-----|------|
| | | A.O. | | T.K. | | A. | TK. | A. | O. | |
| | | N | S | W | E | | | | | |
| | | / | / | / | / | ° E' | • / | ° / | ° / | |
| May 2d, | — | — | 9 | — | — | — | — | — | — | — |
| 4th, | — | — | 31 | — | — | — | — | — | — | — |
| 8th, | — | — | 39 | — | — | — | — | — | — | — |
| 9th, | — | — | 11 | — | — | — | — | — | — | — |
| 10th, add 4' to Lat. A till 15th inclusive, and | — | — | — | — | — | — | — | 39.26 | — | — |
| 14th, | — | — | 20 | — | — | — | — | — | — | — |
| 15th, | — | — | 25 | — | — | — | — | — | — | — |
| 18th, in column $\begin{smallmatrix} D. \\ T.K. \end{smallmatrix}$ for W read E | — | — | — | — | — | — | — | — | — | — |
| 22d, | — | — | 18 | — | — | — | — | — | — | — |
| 27th, subtract 10' from Lat. A till 20th of June inclusive, and | — | — | — | — | — | — | — | 15.32 | — | — |
| June 1st, subtract 10' from Long. A to 25th of June inclusive, and | — | — | — | — | — | 16.51 | — | — | — | — |
| 5th, | — | — | — | 20 | — | — | — | — | — | — |
| 9th, | — | — | — | — | — | — | 14. 1 | — | — | — |
| 21st, subtract 11' from Lat. A till 1st July inclusive, and | — | — | — | — | — | — | — | 3.45 | — | — |
| 26th, | — | — | 21 | — | — | 10. 2 | — | — | — | — |
| 27th, | — | — | — | — | — | 10. 6 | — | — | — | — |
| 28th, | — | — | — | — | — | 11.10 | — | — | — | — |
| 29th, add 13' to Long. A till 2d August inclusive, and | — | — | — | — | — | 12.18 | — | — | — | — |
| July 2d, | — | — | — | — | — | — | — | 0.22 S | — | — |
| 3d, | — | — | — | — | — | — | — | 1. 6 | — | — |
| 4th, add 21' to Lat. A. till 19 August inclusive, and | — | — | — | — | — | — | — | 2.13 | — | — |
| 24th, add 2' to Long. T.K. till 28th July inclusive, and | — | — | — | — | — | — | 28.12 | — | — | — |
| 28th, | — | — | 9 | — | — | — | — | — | — | — |

er any *weather* marked, implies that
 . imply *squally* with *rain*, *thunder* and
 e all been in the period of six hours,
 ead N denoting that the *latitude* by

| Read | D.L. | | D.L. | | Long. from Gr. | | Latitude | |
|------|------|---|------|---|----------------|-------|----------|----|
| | A.O. | | T.K. | | A. | T.K. | A. | O. |
| | N | S | W | E | | | | |
| | / | / | / | / | ° | ' | ° | ' |
| — | 9 | | | | | | | |
| — | 23 | | | | | | | |
| — | 19 | | | | | | | |
| — | 10 | | | | | | | |
| — | — | — | — | — | — | — | 39.30 | |
| — | 26 | | | | | | | |
| — | 20 | | | | | | | |
| — | 16 | | | | | | | |
| — | — | — | — | — | — | — | 15.22 | |
| — | — | — | — | — | 16.41 | | | |
| — | — | — | 19 | | | | | |
| — | — | — | — | — | — | 14.15 | | |
| — | — | — | — | — | — | — | 3.34 | |
| — | 18 | — | — | — | 10.16 | | | |
| — | — | — | — | — | 10.20 | | | |
| — | — | — | — | — | 11.24 | | | |
| — | — | — | — | — | 12.31 | | | |
| — | — | — | — | — | — | — | 0.33 S | |
| — | — | — | — | — | — | — | 1.23 | |
| — | — | — | — | — | — | — | 2.34 | |
| — | — | — | — | — | — | 28.14 | | |
| — | — | — | 9 | | | | | |

| For | D.L. | | A. | | Long. from Gr. | | Latitude | | Read | |
|---|------|------|----|-----|----------------|-------|-----------|-------|------|---|
| | A.O. | T.K. | S | W/E | A. | T.K. | A. | O. | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| July 29th, add 6' to Long. T.K. till 10th August inclusive, and | — | 3 | — | — | — | 27.56 | — | 31.33 | — | — |
| Aug. 3d, add 11' to Long. A. to 9th August inclusive, and | — | — | — | — | 13.56 | — | — | — | — | — |
| 10th, subtract 11' from Long. A. till 18 August inclusive; } and | — | — | — | — | — | 2.25 | — | — | — | — |
| subtract 6' from Long. T.K. till 12th August inclusive, } | — | — | — | — | — | 7.26 | — | — | — | — |
| 13th, subtract 4' from Long. T.K. till 18th August inclusive, and | — | — | — | — | — | — | — | — | — | — |
| 14th, — — — — | — | 16 | — | — | — | — | — | — | — | — |
| 19th, — — — — | — | — | — | — | — | 19. 9 | — | — | — | — |
| Sept. 20th, subtract 10' from Long. A. till 8th Dec. inclusive, and | — | — | — | — | 21.26 | — | — | — | — | — |
| 27th, subtract 20' from Lat. A. till 16th Oct. inclusive, and | — | — | — | — | — | — | 36.40 | — | — | — |
| Oct. 17th, subtract 59' from Lat. A. till 22d inclusive. — | — | — | — | — | — | — | 34.57 | — | — | — |
| 23d, — — — — | — | — | — | — | — | — | 29.55 | — | — | — |
| 24th, subtract 41' from Lat. A. till 10th of Nov. inclusive, and | — | — | — | — | — | — | 29. 4 | — | — | — |
| Nov. 5th, — — — — | 7 | — | — | — | — | — | — | — | — | — |
| 9th, — — — — | — | 14 | — | — | — | — | — | — | — | — |
| 11th, subtract 31' from Lat. A. till 17th inclusive, and — | — | — | — | — | — | — | 2. 3 | — | — | — |
| 18th, — — — — | — | — | — | — | — | — | 0. 3 | — | — | — |
| 19th, — — — — | — | — | — | — | — | — | 0. 3 | — | — | — |
| 20th, — — — — | — | — | — | — | — | — | 0.17 | — | — | — |
| 21st, — — — — | — | — | — | — | — | — | 0. 3 | — | — | — |
| 22d, add 31' to Lat. A. till 9th Dec. inclusive, and — | — | — | — | — | — | — | N 0. 9 | — | — | — |
| Dec. 9th, — — — — | — | — | — | — | 86.18 | — | — | — | — | — |
| 10th, — — — — | — | — | — | — | 86.14 | — | — | — | — | — |

LE'S JOURNAL.

| Read | D.L. | | D.L. | | Long. from Gr. | | Latitude | |
|------|------|---|------|---|----------------|-------|----------|----|
| | A.O. | | T.K. | | A. | T.K. | A. | O. |
| | N | S | W | E | | | | |
| | / | / | / | / | o | / | o | / |
| — | — | — | — | 3 | — | 28. 2 | 31. 3 | |
| — | — | — | — | — | 14. 7 | | | |
| — | — | — | — | — | — | 2.19 | | |
| — | — | — | — | — | — | 7.22 | | |
| — | 16 | — | — | — | — | | | |
| — | — | — | — | — | — | 19. 5 | | |
| — | — | — | — | — | 21.16 | | | |
| — | — | — | — | — | — | — | 36.20 | |
| — | — | — | — | — | — | — | 33.58 | |
| — | — | — | — | — | — | — | 29.17 | |
| — | — | — | — | — | — | — | 28.23 | |
| — | 5 | — | — | — | — | — | | |
| — | — | 4 | — | — | — | — | | |
| — | — | — | — | — | — | — | 1.32 | |
| — | — | — | — | — | — | — | N | |
| — | — | — | — | — | — | — | 0.28 | |
| — | — | — | — | — | — | — | 0.28 | |
| — | — | — | — | — | — | — | 0.14 | |
| — | — | — | — | — | — | — | 0.28 | |
| — | — | — | — | — | — | — | 0.40 | |
| — | — | — | — | — | 86. 8 | | | |
| — | — | — | — | — | 86. 2 | | | |

Register of the Dip in His Majesty's Sloop

N. B. The ship having an iron tiller, and much iron about the after part, it was found, the observations taken in were not consistent or meriting confidence. From *Anjengo* they were all taken on the binnacle, which seemed to fit place in the ship.

| | | Lat. | Long. | Magnetical | | | | | | |
|---------|---|---------|----------|----------------|----------------|-----------|-----|-----|------------|---------------------------------|
| | | | | Variation | | South Dip | | | | |
| | | | | Az. | Amp. | Face | | MD. | C.D. | |
| 1776 | | | | | | E. | W. | | | |
| Oct. 14 | Ashore at <i>Trinquemalé</i> on Ceyloan. | N. 8.32 | E. 81.30 | ° W' | ° W' | 3.6 | 3.6 | 3.6 | 4.5 | |
| 28 | { At anchor 10 fath. sand and } { shells, <i>Anjengo</i> Road. | 8.41 | 76.54 | 1.12* | 1.13* | 3.4 | 3.4 | 3.4 | 4.3 | Very steady. |
| 30 | | 9.58 | 75.4 | | | 1.6 | 1.6 | 1.6 | 2.5 | Pretty steady. |
| 31 | | 9.54 | 74.24 | 1.3* | 0.53* | 2.1 | 2.1 | 2.1 | 3. | Ditto. |
| Nov. 1 | Off <i>Kalpeny</i> . } <i>Lacadivé</i> Is. { | 9.57 | 73.35 | 1.25* | | 1.7 | 1.7 | 1.7 | 2.6 | Not very steady. |
| 2 | Off <i>Scheulpar</i> . } | 9.59 | 72.30 | | | 1.5 | 1.5 | 1.5 | 2.4 | Pretty steady. |
| 3 | | 9.38 | 71.18 | | | 2.7 | 2.7 | 2.7 | 3.6 | Ditto. |
| 4 | | 9.49 | 70.26 | 1.30* | | 3.2 | 3.2 | 3.2 | 4.1 | Ditto. |
| 5 | | 9.53 | 69.11 | 2.12* | 1.54* | 3. | 3. | 3. | 3.7 | Ditto. |
| 6 | | 9.55 | 67.35 | | | 3. | 3. | 3. | 3.7 | Not very steady. |
| 7 | | 10.43 | 65.30 | 4.0* *4.4 | 4.3* *4.18 | 1.4 | 1.4 | 1.4 | 2.3 | Ditto. |
| 8 | | 11.57 | 63.22 | 4.23* | | ND. | ND. | ND. | 0.3 ND. | { Not steady, 1 when most at |
| 9 | | 12.45 | 60.34 | 5.15* *5.37 | | 3. | 3. | 3. | 2.1 | Very unsteady. |
| 10 | | 12.59 | 57.21 | 6.0* *7.4 | 6.6* | 4. | 4. | 4. | 3.1 | Pretty steady. |
| 11 | | 13.29 | 55.12 | 7.30* *8.24 | 7.54* | 5 | 5. | 5. | 4.1 | Ditto. |
| 12 | Off <i>Socotra</i> . | 13.16 | 52.55 | 7.57* | 8.15* | 5.4 | 5.4 | 5.4 | 4.5 | Ditto. |
| 13 | | 13.28 | 50.58 | 9.20* *8.59 | 8.58* *9.0 | 5.6 | 6.6 | 6.2 | 5.3 | Very steady. |
| 14 | In sight of <i>Coast of Arabia</i> . | 13.51 | 49.37 | 9.35* | 9.32* | 7.2 | 8.6 | 8. | 7.1 | Quite steady. |
| 15 | Ditto. | 13.37 | 48.33 | 9.1* *8.46 | 9.30* *9.30 | 8. | 9. | 8.4 | 7.5 | Ditto. |

Sloop of War The Swallow, Captain JOHN ALEXANDER PANTON.

taken in the cabin
ined to be the only

ady.

eady.

y steady.

eady.

steady.

eady, but taken
most at rest.

eady.

eady.

ady.

eady.

| | | Magnetical | | | | | | |
|---------|--|------------|---------|------------------|------------------|-----------|------|------|
| | | Lat. | Long. | Variation | | North Dip | | |
| | | | | Az. | Amp. | Face | | MD. |
| 1776 | | | | | | E. | W. | |
| Nov. 16 | In fight of <i>Coast of Arabia.</i> | 12.54 | 47. 4 | 9.31* *10.38 | 9.39* *10.35 | 6.2 | 7.2 | 6.6 |
| 17 | <i>Cape Aden</i> in fight. | 12.41 | 45.25 | *11.25 | *11.30 | 6.2 | 7.2 | 6.6 |
| 18 | | 12.38 | [44. 5] | 11. 3* *11.14 | 11. 5* *11.18 | 7.2 | 8.2 | 7.6 |
| 20 | At anchor at <i>Mocha.</i> | 13.22 | 44.10 | 11.35* | 11.22* | 8.6 | 9.6 | 9.2 |
| 21 | Ditto. | 13.22 | 44.10 | | 11. 2* | 8.4 | 9.4 | 9. |
| | <i>Alhore</i> at the <i>Company's factory.</i> | 13.20 | 44.11 | | | 9.2 | 9.6 | 9.4 |
| 22 | In fight of <i>Gebel Zeker.</i> | 14.24 | 43.35 | | 11.11* | 12.4 | 12.4 | 12.4 |
| 23 | In fight of <i>Gebel Tar.</i> | 15.29 | 43.12 | 13.10* *13.14 | 12.50* | 14.2 | 14.2 | 14.2 |
| 24 | Ditto. | 16. 2 | 42.49 | 14. 3* *12.57 | 13.53* | 15.6 | 15.6 | 15.6 |
| 25 | | 16.24 | 42.22 | 14. 2* *13.31 | 14.10* | 16.6 | 16.6 | 16.6 |
| 26 | | 17. 5 | 41.54 | 13.44* | 13.50* | 19.1 | 19.1 | 19.1 |
| 27 | | 18.14 | 41. 0 | 13.54* | 13.58* | 20.6 | 21. | 20.7 |
| 28 | | 19.36 | 40.30 | 13.12* *12.56 | 13.19* *12.42 | 24.2 | 24.6 | 24.4 |
| 29 | Off <i>Judda.</i> | 20.59 | 39.56 | 12.52* | 12.59* | 26.7 | 26.7 | 26.7 |
| 30 | | 21.43 | 39. 3 | | 12.49* | 29.6 | 29.6 | 29.6 |
| Dec. 1 | In fight of <i>Coast of Abyssinia.</i> | 21.56 | 37.57 | | | about | 30. | |
| 2 | | 22.44 | 38.24 | | | 32.6 | 32.6 | 32.6 |
| 3 | | 22.46 | 38.11 | | | 32. | 32. | 32. |
| 4 | | 22.54 | 37.44 | | | 32.4 | 32.4 | 32.4 |
| 6 | At anchor on <i>Coast of Arabia.</i> | 24.16 | 38.29 | | | 34.6 | 34.6 | 34.6 |
| 7 | Off <i>Coast of Arabia.</i> | 24.17 | 38.21 | 14.52* | 15. 0* | | | |

| North Dip | | | |
|-----------|------|------|---|
| 7. | MD. | C.D. | |
| | ° | ° | |
| .2 | 6.6 | 5.7 | Pretty steady. |
| .2 | 6.6 | 5.7 | Ditto. |
| .2 | 7.6 | 6.7 | Ditto. |
| .6 | 9.2 | 8.3 | Ditto. |
| .4 | 9. | 8.1 | Not steady, much wind. |
| .6 | 9.4 | 8.5 | |
| .4 | 12.4 | 11.5 | Pretty steady. |
| .2 | 14.2 | 13.3 | Very steady. |
| .6 | 15.6 | 14.7 | Ditto. |
| .6 | 16.6 | 15.7 | Ditto. |
| .1 | 19.1 | 18.2 | Ditto. |
| . | 22.7 | 20. | Pretty steady. |
| .6 | 24.4 | 23.5 | Ditto. |
| .7 | 26.7 | 26. | Ditto. |
| 6 | 29.6 | 28.7 | { Very unsteady, much wind and pitching. |
| u | 30. | | Very unsteady. |
| 6 | 32.6 | 32. | Not very steady. |
| | 32. | 31.2 | Pretty steady. |
| 4 | 32.4 | 31.6 | Not very steady. |
| 6 | 34.6 | 34. | Pretty steady. |

| 1776 | | Lat. | Long. | Magnetical | | | | | | | |
|--------|--|-------------------------|--------|------------|------------------|-----------|-----------------|------|------|----------------------------|---------------------------------------|
| | | | | Variation | | South Dip | | | | | |
| | | | | Az. | Amp. | Face | | MD. | C.D. | | |
| | | | | | | E. | W. | | | | |
| Dec. 8 | { Ashore on a small island on Coast of Arabia. | 24.17 | 38.30 | ° E | ° E | 35. | 35. | 35. | 34.2 | Much wind. | |
| 9 | | 24.16½ | 38.30 | | 14. 1* | 35. | 35. | 35. | 34.2 | Pretty steady. | |
| 10 | | { At anchor at Bareedy. | 24.16¾ | 38.30 | | 13.50* | 35. | 35.2 | 35.1 | 34.3 | Very steady. |
| 11 | | | | | | 13.50* | 35. | 35. | 35. | 34.2 | { Not very steady, good deal of wind. |
| 14 | | | | | | | 35.2 | 35.2 | 35.2 | 34.4 | Very steady. |
| 15 | | 24.19 | 38.18 | | | 35. | 35. | 35. | 34.2 | Not steady, swell from Sd. | |
| 17 | | 24.25 | 36.30 | | | 35. | 36. | 35.4 | 34.6 | Much motion, with wind. | |
| 19 | | 25. 4 | 36.10 | *11.48 | *11.41 | 36.2 | 36.2 | 36.2 | 35.4 | Pretty steady. | |
| 20 | | 25.45 | 36.26 | 11.30* | 11.40* | 38. | 38. | 38. | 37.2 | Not very steady. | |
| 21 | | 26. 9 | 36.11 | | | 38.4 | 38.4 | 38.4 | 37.6 | Pretty steady. | |
| 22 | | 26.25 | 36. 1 | 12.15* | 12. 5* *12.10 | 38.6 | 39. | 38.7 | 38.1 | Extremely steady. | |
| 23 | | 26.55 | 35.38 | 12.58* | 12.46* | 39.7 | 40.7 | 40.3 | 39.5 | Very steady. | |
| 25 | In sight of Ras Mahomet. | 27.36 | | | | | ab ^t | 42. | | Very unsteady, much wind. | |
| 26 | | 27.47 | | | 13.19* | | | | | | |
| 27 | | 27.58 | | | 13.29* | | | | | | |
| 28 | | 28. 4 | | | | 42. | 42. | 42. | 41.2 | Pretty steady. | |
| 29 | At anchor off Tor. | 28.16 | | | | 42.2 | 42.2 | 42.2 | 41.4 | Ditto, a little swell. | |

Astronomical Observations

| Long. from Greenwich. | | | | | Long. from Greenwich. | | | | |
|-----------------------|-----|----------|------|-------|-----------------------|------|----------|------|-------|
| D. & T.K. | ° | ' | O.S. | E. D. | D. & T.K. | ° | ' | O.S. | E. D. |
| Nov. 1 | W | 73.31.30 | ○ | 6 32 | Nov. 19 | E | 44. 8.18 | ○ | 5 14 |
| 4 | | 70.26. | ○ | 5 15 | 20 | | 44.16. | ○ | 5 8 |
| 6 | E | 67. 5. | ○ | 5 13 | 21 | | 44. 6. | *A | 3 15 |
| 7 | W | 65.52. | ○ | 4 6 | 24 | .21 | 42.28. | *A | 5 13 |
| 15 | E | 47.11. | ○ | 6 20 | 29 | 1. 9 | 38.47. | *A | 5 33 |
| 16 | .50 | 46.14. | ○ | 5 28 | Dec. 2 | .35 | 37.49. | ○ | 7 20 |
| | | | | | 3 | .38 | 37.34. | ○ | 5 15 |

Kalpeny bearing N.

At anchor
20th. Obs
glafs, a
Per
W:
Ecl

of War The Swallow, Captain JOHN ALEXANDER PANTON.

| | | 1777 | | Lat. | Long. | Magnetical | | | | | | |
|-----------------------|--------|--|----------|-------|-------|------------|--------|-----------|------|------|------|-------------------------------|
| | | | | | | Variation. | | South Dip | | | | |
| | | | | | | Az. | Amp. | Face | | MD. | C.D. | |
| | | | | | | | | E. | W. | | | |
| | | | | | | ° E | ° E | ° | ° | ° | ° | |
| | Jan. 2 | At anchor at 5 fath. on <i>Coast of Africa</i> | 29.12 | | | | | 43.6 | 44. | 43.7 | 43.2 | { Fresh wind ar of motion. |
| | 3 | | 29.35 | | | | 12.50* | 46. | 46. | 46. | 45.3 | Ditto. |
| dy, good | 4 | Off <i>Suez</i> . | 29.51 | 32.12 | | | | 45.2 | 45.6 | 45.4 | 44.7 | Perfectly steady. |
| from S ^d . | 5 | At anchor off <i>Suez</i> . N. Lat. obl. | 29.58.12 | 32.15 | | | | 45.6 | 45.6 | 45.6 | 45.1 | |
| ith wind. | 6 | Ditto. 29.58. 1 | 29.58 | | | | | 45.2 | 45.2 | 45.2 | 44.5 | Very steady. |
| | 7 | Ditto. | | | | | | 45.2 | 45.2 | 45.2 | 44.5 | |
| | | Changed the poles, <i>unmarked end</i> dips, | | - | - | - | | 43.6 | 43.3 | 43.4 | 44. | A little wind. |
| | | Rechanged the poles, <i>marked end</i> dips, | | - | - | - | | 44.4 | 44.4 | 44.4 | 44. | Ditto. |
| nuch wind. | 8 | At anchor off <i>Suez</i> . 29.58.25 | 29.58 | | | | | 44.5 | 44.5 | 44.5 | 44. | Perfectly steady. |
| | 9 | Ditto. | | | | | | 45.5 | 45.7 | 45.6 | 45.1 | Ditto. |
| | 10 | Ditto. | 29.58 | | | | | | | | | |
| | | <i>Suez</i> 29.58.10 | 30. 2 | 32.16 | | | | | | | | |
| ll. | | | | | | | | | | | | |

Observations in The Swallow.

| | | Long. from Greenwich. | | | |
|--------|------|-----------------------|--------|------|----------|
| | | D. C. T.K. | “ | O.S. | E. D. |
| | ° E' | ° | ' | '' | |
| Dec. 6 | .29 | 37 | 50. | ⊙ | 3 3 |
| 1777 | | | | | |
| Jan. 4 | { | | 32.12. | ⊙ | 3 10 |
| | | | 32.11. | ⊙ | 5 10 |
| 5 | | | 32.42. | ⊙ | 5 8 |
| 6 | { | | 31.47. | ⊙ | 5 14 |
| | | | 32.21. | ⊙ | 5 24 |

Off Suez.

At anchor in Suez Road.

h wind and good deal
motion.

tly steady.

ready.

e wind.

tly steady.

z Read.

XIX. *Journal of a Voyage to The East Indies, in the Ship Grenville, Captain Burnet Abercrombie, in the Year 1775.* By Alexander Dalrymple, Esq. F. R. S.

Communicated by the Honourable Henry Cavendish, F. R. S.

Read January 29, 1778.

EXPLANATION OF THE COLUMNS.

1st, THE date^(a).2d, The *height* of the *thermometer*, according to FAHRENHEIT'S scale. This thermometer belonged to Mr. RUSSELL, and hung in the open air in the balcony.3d, including four columns, contains the *register* of the *marine barometers*, all of which, as well as the thermometers, were made by NAIRNE and BLUNT: those marked R and D are quicksilver, of the kind usually made by them. That marked S is compounded of quicksilver, and of a lighter fluid, for the purpose of making the alterations more visible, which is a very great convenience at sea; a quicksilver thermometer being fixed to it for the sake of correcting its height, the heat by which is set down in the column marked Th. next to that marked S.4th, The *weather* and *winds* in four lines; 1st line from noon to 6 P.M.; 2d, from 6 P.M. to midnight; 3d, from midnight to 6 A.M.; 4th, from 6 A.M. to noon.In the column of *weather*, f. denotes *fair*; sq. *squally*; c. *cloudy*; h. *bazy*; r. *rain*; hr. *hard rain*; fr. *small rain*; dr. r. *drizzling rain*; sh. *showers*; th. *thunder*; l. *lightning*.It is proper to remark, that the *winds* are set down according to the *compass*, without any allowance for the *Variation*.5th in 2, The *difference* between the daily alteration of *latitude* by *account* and *observation*; N. denoting that the *observation* was to the *Northward* of the *account*; S. that it was to the *Southward*^(b).

(a) Here, for want of room, the day of the month only is expressed; but in the original journal the days of the week, and of the Moon, are also inserted.

(b) Next to these columns in the original journal are the following, which are left out here only for want of room: Correct course, lee-way variation &c. allowed, and the different courses reduced to one straight course. Distance on that straight course.

Difference of latitude by account,
Difference of latitude by observation,
The departure,The difference of longitude by account,
The difference of longitude by the time-keeper,

} in minutes of a degree.

6th in 2, The *difference* between the daily alteration of *longitude* by the *account* and *time-keeper*; W. denoting that the *longitude* by the *time-keeper* was to the *Westward* of *account*; E. that it was to the *Eastward*.

The result of those differences indicates the daily effect of current; however an error in the course sailed, or distance run by log, would make the current appear different from what it really was.

7th, The *longitude* from Greenwich, in seven columns.1st, The *longitude* by *account*.2d, The *longitude* by the *time-keeper*, which was made by ARNOLD, but without his late improvements.3d, The *difference* between the *longitudes* deduced from *observations* of the *Moon* and from the *time-keeper uncorrected*; E. denoting the *time-keeper* to be to the *East* of ϵ ; W. denoting *time-keeper* to *West* of ϵ . This, admitting the *time-keeper* not to be liable to any sudden changes in its rate of going, indicates the precision with which the observations of the Moon may be relied on, all circumstances of weather and of the ship's motion considered.4th, The *longitude* by *observations* of the *Moon's distance* from the *Sun* or *Stars*, adjusted, by the log, to the noon nearest the time of observation.5th, The number of *sights* or *distances* observed.6th, The *object* whose *distance* from the *Moon* was *observed*; \odot denoting the *Sun*; * the *Star*; S. *Spica Virginis*; R. *Regulus*; A. *Aldebaran*; At. *Atair*; P. *Pollux*; F. *Fomalhaut*; An. *Antares*.7th, The *extreme differences* between the *biggest* and *lowest observation*; expressed in minutes of a degree; when the *seconds* amount to more than 30, the next minute above is taken, otherwise the next minute below.8th, The *latitude* in two columns:1st, The *latitude* by *account*, carried on from the *land*, in the same manner as the *longitude* by *account*.

* D d d 2

2d,

2d, The latitude by *observation*; and where the *latitude* could not be had by *observation*, it is deduced by *account* from the *last observation*, in which case it is included within [].

9th, The *correct longitude* from Greenwich deduced from the *time-keeper corrected* by the *sight of lands*, whereof the *longitudes* are known, and by *observations of the Moon*, taking a *mean* of the several observations of the *Moon* made within a short period of each other. The *error* of the *time-keeper*, between the *longitude corrected by sight of land* or *observations of the Moon*, is supposed to have arisen by the *time-keeper* having altered its rate of going *uniformly* between these observations; and the *intermediate longitudes* are determined by the *time-keeper* on this supposition. Where no observations of the *time* were made, it is deduced by the account from the *last observation of the time*, and is then included within [].

10th, The *magnetical observations* of the *variation* and *dip*, in seven columns.

1st, } The varia- { azimuth, } * *before*, denoting the observation to have been in
2d, } tion by { amplitude, } the *morning*; * *after*, denoting the observation to
have been in the *evening*. The *variation* was observed by the officers with the
compasses belonging to the ship.

3d, The *dip* with the *face* of the *instrument* to the East.

4th, Ditto, ditto, ditto, West.

5th, The *mean dip* of the foregoing observations.

6th, The *mean corrected*, or what is *supposed* to be the *true dip*.

7th, The *circumstances* under which the *observations* of the *dip* were made.

12th, The *miles* run by *log*.

The *dip* was observed with a *dipping-needle* belonging to the hon. Mr. CAVENDISH, made by Sisson.

The following *remarks* on the *dipping-needle* and *observations* are by Mr. CAVENDISH.

The ends of the axis of the dipping-needle are made conical, and turn in conical holes of bell-metal, in the manner of Mr. LORIMER'S needle, described in Phil. Transf. vol. LXV. p. 79. The dip was constantly observed both with the face of the instrument to the East and to the West, and the poles were changed twice during the voyage, in order to see whether the needle continued well balanced. The use of this method of observing is explained in Phil. Transf. vol. LXVI. p. 396.

The mean dip corrected is what is supposed to be the *true dip*. The foundation of this correction is as follows.

By the observations on July 12th, when the poles were changed, it appears, that the marked end of the needle was too heavy, so as to make that end point $\frac{1}{16}$ ths of a degree too low at that place; and therefore, if we suppose that the force of magnetism is equally strong in all parts of the earth, the error produced thereby in other places should be to $\frac{1}{16}$ ths of a degree as the cosine of the dip to the radius. The observations also made when the poles were changed at Suez, agree well enough with this supposition: therefore, as in all the observations the marked end of the needle pointed to the North, the mean dip in all that part of the voyage subsequent to July 12th is corrected by subtracting

| | | | |
|----------------|---|--|--|
| $\frac{1}{16}$ | $\left\{ \begin{array}{l} \text{of a degree from the mean dip,} \\ \text{when the mean dip is between} \end{array} \right.$ | $\left\{ \begin{array}{ll} 63^{\circ} \text{ and } 52^{\circ} \\ 52 & 43 \\ 43 & 30 \\ 30 & 0 \end{array} \right.$ | $\left\{ \begin{array}{l} \text{North, and adding as much when} \\ \text{the dip is as much South.} \end{array} \right.$ |
| | | | |
| | | | |

But as before the needle left London, changing the poles was found to make very little difference in the dip, the correction in the preceding part of the voyage is made not so great, *videlicet*;

| | |
|---|---|
| $\left\{ \begin{array}{l} \text{of a degree is subtracted from the mean} \\ \text{dip, when that dip is between} \end{array} \right.$ | $\left\{ \begin{array}{ll} 70^{\circ} \text{ and } 62^{\circ} \\ 62 & 52 \\ 52 & 43 \\ 43 & 35 \\ 35 & 30 \\ 30 & 25 \\ 25 & 0 \end{array} \right.$ |
| | |
| | |
| | |
| | |
| | |

The dip was observed on board the Grenville at Deptford, after her return, in the same part of the ship in which the observations were usually made, and was found not to differ more than 5' from that observed with the same needle in a pretty large garden in London, about five miles distant; so that the observations on board the Grenville seem to be not much influenced by the iron-work of the ship.

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | D.L. A.T.K. | Longitude from Greenwich | | | | S. | Q. | D. | E. | Latitude | | Cor. Long. | Variation. | | Dip | | | | ML. | N. B. Log-line 51 feet to 29' 1/2. | |
|---------|--------|------------------|----------|-----|----------|---|--------------|----------------|--------------------------|-------|---------|----------------|--------|---------|--------|--------|----------|------|---------------|------------|------------------------|--------|---|--|------|-----|------------------------------------|---|
| | | R. | S. | Th. | D. | | | | A. | TK. | D. T.K. | D | | | | | A. | O. | | Az. | Amp. | Face | | MD. | C.D. | | | |
| | | | | | | | | | | | | | | | | | | | | | | E. | W. | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Apr. 28 | | In. Dec. | In. Dec. | | In. Dec. | i. h. f. SE. ESE. S by E. E by S. ESE. SE. | | | ° W | ° W | W | ° W | ° N | ° N | ° W | ° W | ° W | ° W | ° | ° | ° | ° | | | | | | Between Ram-head and the Lizard. |
| 29 | | | | | | i. h. SE. V. W. S. WSW. SW by W. SW. WSW. V. C. V. WSW. | | | | | | | | | | | | | | | | | | | | | | Lizard Point E 1/2 N = ENE 1/2 N. 7 or 8 leagues off shore. |
| 30 | | | 30.2 1/2 | | 55 | { h. r. SW by S. WSW. W. h. r. WNW. NW by W. h. r. WNW. C. NNW. r. f. NNW. NW by N. NW. | 6 | 7 | 6.19 | 6.12 | | | 49.25 | 49.19 | 6.12 | | 73. | 74. | 73.4 | 73.4 | Great swell. | 37 | { At 1 P.M. the Lizard Point bore by compass E 1/2 N. Variation allowed ENE 1/2 N 7 leagues. The Land's End N by ENE N by W. Take a departure from the Lizard in 49° 57' 30" N lat. Long. 5° 15' W. First and middle part, light airs and calm. Latter, pleasant breezes. Great swell from W. | | | | | |
| May 1 | 59 | | 30.4 1/2 | | 61 | { f. NW by N. NW by W. WNW. f. NW by W. NW. f. WNW. W by N. f. W. WSW. W by S. | 11 | 14 | 6.40 | 6.19 | | | 48.42 | 48.25 | 6.19 | | 72. | 73.4 | 72.6 | 72.6 | | 51 | | Light breezes; great swell from Westward. | | | | |
| 2 | 57 | | | | 56 | { h. r. WSW. SW by W. h. r. SW by S. SW. W by S. r. h. f. W. WNW. h. r. f. h. NW by W. WNW. NW by W. | 9 | 33 | 7.22 | 7.34 | | | 48.51 | 48.43 | 7.34 | | 72.4 | 73. | 72.6 | 72.6 | Great swell. | 47 | | Major part light breezes; great swell from Westward. | | | | |
| 3 | 54 1/2 | | 30.0 1/2 | | 54 | { c. NW by N. C. c. C. c. C. E. c. h. E. E by N. | 31 | 9 | 7.29 | | | | 48.34 | [48.26] | [7.41] | | 72. | 72.4 | 72.2 | 72.2 | | 18 | | Mostly calm. A very large swell from Westward. | | | | |
| 4 | 56 1/2 | | 30.0 1/2 | | 56 1/2 | { h. ENE. h. ENE. h. c. ENE. V. c. NE. V. C. | | | 7.57 | 8.18 | | | 47.51 | 47.20 | 8.18 | | 71.4 | 72.6 | 72.1 | 72.1 | Very steady. | 48 | Light breezes and a great swell. | | | | | |
| 5 | 57 1/2 | | 30.0 | | 57 1/2 | { h. C. W by S. c. h. W. WSW. SW. h. r. SW. WSW. h. r. c. W by S. WSW. NE by N. | 13 | 7 | 7.13 | 7.27 | | | 46.56 | 46.12 | 7.27 | | 71. | 72.4 | 71.6 | 71.6 | Great motion. | 68 | { First part, calm. Middle, an increasing breeze from Westward, with rain. Latter, a fine breeze from the Northward. | | | | | |
| 6 | 55 1/2 | | 30.2 | | 55 1/2 | { h. N. NNE. h. NNE. NE. ENE. h. c. ENE. ESE. E by N. c. f. E by N. E by S. | 19 | 12 | 8.36 | 8.38 | | | 45.58 | 44.55 | 8.38 | 18.42* | 71. | 72. | 71.4 | 71.4 | { Good deal of motion. | 83 | | Mostly light breezes, with a swell from NW. | | | | |
| 7 | 57 | | 30.2 1/2 | | 56 1/2 | { f. ESE. f. E. f. E. f. E. E by N. ENE. | 21 | 4 | 10.13 | 10.19 | | | 44.14 | 42.50 | 10.19 | | 69.6 | 71. | 70.3 | 70.3 | Very steady. | 126 | An increasing gale from the Eastward. | | | | | |
| 8 | 61 1/2 | | 30.2 1/2 | | 60 1/2 | { h. NE by E. NNE. h. NNE. h. NNE. h. NNE. NE. | 39 | 13 | 10.22 | 10.43 | 3 14 | 10.40 10.29 | 4 4 | 41.52 | 40. 9 | 10.43 | | 68.4 | 69.2 | 68.7 | 68.6 | Ditto. | 142 | First part, fresh gales. Latter, moderate. | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | Th. | Marine Barometer | | | | Weather and Winds. | D.L. A.O.T.K. | Longitude from Greenwich | | | | S. | O. | E. | Latitude | Cor. Long. | Magnetical | | | | | | ML. | T.S. denotes the temperature of the sea-water taken up in a bucket about noon, and the thermometer immersed in this bucket for some minutes. | | |
|--------|-----|------------------|----------|-----|----------|---|------------------|--------------------------|-----|--------------|-------|----------|----------------|------------------|----------|---------------|------------|------------------|--------|------|------|------|--------------|---|--|--|
| | | R. | S. | Th. | D. | | | A. | TK. | D.D. T.K. | D | | | | | | Variation. | Dip | | | | | | | | |
| | | | | | | | | | | | | | | | | | | Az. | Amp. | Face | | MD. | | | C.D. | |
| 1775 | | In. Dec. | In. Dec. | | In. Dec. | | N | S | WE | | | | | A. | O. | | | | | E. | W. | | | | | |
| May 18 | 69 | 30.2 | 30.1½ | 68½ | 30.2 | <div><div>h. ENE.</div><div>h. ENE. E.</div><div>h. E. ENE.</div><div>h. E. ENE.</div></div> | 15 | | 10 | 17.9 | 16.46 | W | W | ° N | ° N | ° W | ° W | ° W | ° W | ° W | ° W | ° W | ° W | ° W | 1273 | |
| 19 | 68 | 30.2½ | 30.2½ | 67½ | 30.2½ | <div><div>h. E by N.</div><div>h. NE by N.</div><div>h.c. N by W. C. N by W. NNE.</div><div>c. f. NNE.</div></div> | 6 | | 1 | 17.17 | 16.55 | | | 27.53 | 27.16 | 16.55 | 16.53* | 17. 6* | 60.2 | 61.2 | 62.6 | 62. | 61.6 | 53 | Light breezes and smooth water At noon, Peak of Tenerif 5 30° E. | |
| 20 | 68 | 30.1½ | 30.1½ | 68 | 30.1½ | <div><div>c. NNE. NE.</div><div>c. NE. N by E. NE by N. N by E.</div><div>c. N by E. NNE.</div><div>c. NNE.</div></div> | 24 | | 3 | 17.42 | 17.17 | | | 26.46 | 25.45 | 17.20 | 16.37* | 16.17* | 59.2 | 60.2 | 59.6 | 59.4 | Very steady. | 70 | Light breezes and smooth water throughout. Several petrels in the wake. | |
| 21 | 68½ | 30.1½ | 30.1 | 68 | 30.1 | <div><div>f. c. NE by N. N by E.</div><div>c. N by E. N by W.</div><div>c. f. N by W. N by E.</div><div>f. N by E. NNE.</div></div> | 1 | | 4 | 18.18 | 17.57 | 57 | 18.54 | 4 ⊙ 29 | 25. 5 | 24. 3 | 18. 3 | | 15 36* | 58.2 | 59.2 | 58.6 | 58.4 | 106 | Pleasant trade. In Captain KEMERO's chart there being soundings laid down not far to the Eastward of our situation, founded at 8 P.M. but had no ground 40 fath. Several petrels in the wake of ship. | |
| 22 | 70 | 30.1½ | 30.1½ | 70½ | 30.1½ | <div><div>f. N.</div><div>f. c. N. NNE.</div><div>c. NNE.</div><div>c. NNE. NE by N. NE.</div></div> | 18 | | | 18.49 | 18.28 | 66 | 19.34 | 3 ⊙ 28 | 23.43 | 22.25 | 18.37 | 15.13* | *15. 2 | 56.4 | 57.4 | 57. | 56.6 | 87 | Light breezes with smooth water throughout. Many petrels. N.B. There was apparently an error in this day's long. by time-keeper. The succeeding days diff. long. was as much less as this day's was more than account. I have here corrected it as conformable to the Lunar observations. T.S. 69°. | |
| 23 | 68 | 30.2 | 30.1½ | 68 | 30.2 | <div><div>f. NE by N.</div><div>f. NE by N.</div><div>f. NE by N. NE.</div></div> | | | 1 | 19.28 | 19.6 | 41 65 | 19 47 20 11 | 4 ⊙ 47 3 ⊙ 71 | 21.54 | [20.36] | 19.18 | 14 35* *13. 9 | *13. 7 | 54. | 55.2 | 54.5 | 54.3 | 115 | In the evening, the water appeared of a muddy green, like soundings; but did not found. An increasing trade with fair weather, the water continuing of same colour. T.S. 69°. | |
| 24 | 68½ | 30.1 | 30.0½ | 68½ | 30.0½ | <div><div>f. NE. NE by N.</div><div>f. NE by N.</div><div>f. c. NE by N.</div><div>c. h. NE by N.</div></div> | 14 | | | | | | | | | | | | | | | | | 153 | These 24 hours a fresh trade, and usually fair weather, the water remaining the same as before. T.S. 68¾. | |
| 25 | 71½ | 30.0 | 29.9½ | 72 | 29.9½ | <div><div>h. N by E.</div><div>h. N by E.</div><div>h. N by E.</div><div>h. NNE.</div></div> | 1 | | 4 | 18.33 | 18.23 | | | 17. 1 | 15.28 | 18.41 | 13.18* | 12.32* | 48.6 | 49.4 | 49.1 | 48.6 | 150 | Fresh trade and hazy weather. In the afternoon the sea remarkably confused, breaking different ways. Sounded in the morning, but had no ground 40 fath. In the morning the water appeared blue again. T.S. 71°. | | |
| 26 | 76½ | 30.0½ | 30.0 | 76½ | 30.0 | <div><div>h. NE by N.</div><div>h. V. WNW. NW.</div><div>h. NW. V. NNE.</div><div>h. c. NNE. E by S. ESE.</div></div> | 8 | | 2 | 18.37 | 18.25 | | | 16. 3 | 14.22 | 18.46 | | | 46.4 | 48. | 47.2 | 46.7 | Very steady. | 59 | Light breezes chiefly. In the night, no ground 70 fath. There were many bladders in the ship's wake, which made a very luminous appearance: they seemed in shape like a sausage about 8 or 9 inches long. In the day, sea was covered with Portuguese men of war, of which took up several; also some pilot-fish and skip-jacks. T.S. 74°. | |

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D. L. A. O. T. K. | | | | Longitude from Greenwich | | | | Cor. Long. | Magnetical | | | | | | ML. | | | | |
|--------|--------|------------------|----------|--------|----------|---|-------------------|----|-------|-------|--------------------------|----------------|-----------|-------|------------|------------|--------|------|-----------|------|--------------------------------|--------------|---|---|------|----|
| | | R. | S. | Th. | D. | | N | S | W | E | A. | T.K. | D. & T.K. | C | | S. | O. | D. | Variation | | Dip | | | | | |
| | | | | | | | | | | | | | | | | | | | Az. | Amp. | Face | | | MD. | C.D. | |
| | | | | | | | | | | | | | | | | | | | | | E. | | | | | W. |
| | | In. Dec. | In. Dec. | | In. Dec. | | | | | | | | | | | | | | | | | | | | | |
| May | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | 76 1/4 | 30.0 1/4 | 30.0 | 76 | 30.0 | { h. SE by E. h. c. V. E by N. c. h. E by N. V. h. V. NNW. NE. } | 7 | 4 | 18.18 | 18.2 | E | W | N | N | W | W | W | W | 46. | 46.4 | 46.2 | 45.7 | 2140 | Light airs of wind, variable, with very damp weather. In the night, no ground 40 fath. Many fish about the ship; some under the quarter, darting through the water, and making streaks of light in various directions, had a fine appearance. T.S. 75°. | | |
| 28 | 78 1/2 | 30.0 | 30.0 | 78 1/2 | 30.0 | { f. NNE. N. f. N. NW by N. f. h. NW by N. h. NW by N. WNW. } | 1 | 3 | 17.26 | 17.7 | | | 14.28 | 12.45 | 17.34 | 13.0* | 44.4 | 45. | 44.6 | 44.3 | Very steady. | 82 | Light breezes throughout. In the night, lightning to the Eastward. Many luminous blubbers and fish about the ship in the night. Puffed several turtle. Had ground at 11 A.M. 32 fath. coarse sand, with black specks and shells. At noon, 30 fath. coarse sand and flat coral. T.S. 75 1/2°. | | | |
| 29 | 80 | 30.1 | 30.1 1/2 | 80 | 30.1 | { h. W. h. C. SW. SW by W. h. SW by W. C. S. V. h. SW. SW by W. ESE. ENE. } | 2 | 8 | 17.16 | 16.49 | | | 13.57 | 12.12 | 17.19 | 12.37* | 43.6 | 44. | 43.7 | 43.4 | | 37 | First and latter, light breezes. Middle, calm. Great many fish about the ship, and in the morning vast flocks of birds. Soundings, sand of various kinds from 28 to 17 1/2 fath. at 8 A.M.; at 9 A.M. 21 fath. blue mud; and at 11 A.M. no ground 35 fath. T.S. 77°. | | | |
| 30 | 77 1/2 | 30.0 1/2 | 30.0 1/2 | 77 | 30.0 1/2 | { h. ENE. NE. V. W by S. h. SW by W. C. h. C. W. C. h. NW by N. NNW. N by W. } | 2 | 3 | 17.9 | 16.39 | | | 13.26 | 11.43 | 17.12 | 12.36* | 42.6 | 43.4 | 43.1 | 42.6 | Very steady. | 32 | Light airs and calm. At 5 P.M. 56 fath. green mud. At midnight, 45 fath. blue mud. In the night, the water very luminous when put in motion, and many shoals of fish looking like breakers. A.M. a turtle puffed; vast flocks of sea birds. At noon, the sea covered with Portuguese men of war, like the ground with leaves in Oct. 23 f. blue mud. T.S. 76 1/4°. | | | |
| 31 | 80 | 30.0 1/2 | 30.0 | 80 | 30.0 | { f. NNW. f. f. h. NW. NW by W. E. f. h. c. h. E. C. ENE. E by S. h. f. NE. } | 1 | 10 | 17.4 | 16.44 | | | 12.22 | 10.40 | 17.20 | 12.24* | 41.6 | 42.4 | 42.1 | 41.5 | | 69 | Most part pleasant land and sea breezes. At midnight, a hard squall from the land: it was preceded by great deal of lightning over the land, and long threatening before the squall came off. It rose in a dark black cloud, with a white streak like a bow under it, and below this very dark. It came off very hard, and raised the spray of the sea in a foam. P.M. Soundings, 25 to 21 fath. sand. A.M. No ground 60 and 40 fath. T.S. 80°. | | | |
| June 1 | 82 1/2 | 30.1 | 30.1 | 82 1/2 | 30.1 | { f. NNE. N. NNW. f. SW by W. W. f. c. h. V. C. h. c. f. h. NW. SE by E. SE. } | 10 | 10 | 16.51 | 16.11 | | | 11.40 | 10.8 | 16.50 | 13.7* | 41. | 42. | 41.4 | 41. | Very unsteady. | 53 | Major part, light breezes. P.M. No ground 40 to 80 fath. | | | |
| 2 | 82 1/2 | 30.0 1/2 | 30.0 1/2 | 82 1/2 | 30.0 1/2 | { h. SE. W. h. W. C. W. h. W. C. WNW. W by N h. W by N. } | 17 | | 16.25 | 15.45 | | | 11.14 | 9.59 | 16.26 | 12.35* | 40.4 | 41.2 | 40.7 | 40.3 | { Not very good observation. } | 39 | First and latter parts, pleasant breezes from Westward. The middle, calm, with hot sultry weather. At midnight, 80 fath. coarse black sand, with bits of coral. At noon, 26 fath. coarse brown sand. T. S. 81°. | | | |
| 3 | 82 1/2 | 30.0 1/2 | 30.0 1/2 | 81 1/2 | 30.0 1/2 | { h. NW. L. to E. f. n. c. NW. NW by N. E. V. c. L. to E. V. S by W. V. E by S. ESE. h. f. E by S. E. ESE. } | 8 | 6 | 16.6 | 15.20 | 35 62 | 15.55 16.22 | 3 3 | 10.38 | 9.15 | 16.09 | 12.48* | 38.6 | 39.6 | 39.2 | 38.6 | Very steady. | 45 | Major part, light airs. Many sharks about the ship; above a dozen in sight at once; caught one. P.M. Soundings 27 to 35 fath. At noon, no ground 88 fath. T.S. 80 1/4°. | | |
| 4 | 81 1/2 | 30.0 1/2 | 30.0 1/2 | 80 1/2 | 30.0 1/2 | { f. SE. SSE. SE by S. SSE. S by E. c. L. all round, f. SSE. S by E. S by W. f. SSW. C. f. c. C. NNW. } | 10 | 10 | 16.2 | 15.6 | | | 10.23 | 9.10 | 15.58 | | 38.4 | 39.2 | 38.7 | 38.3 | | 34 | The first part, light breezes of wind from the Southward. The latter, mostly calm, with hot weather. In the evening, the clouds very remarkable; some appearing like dirty wool, and apparently very near all round the horizon; the sky above, in many places, a fine pink, and bluish grey beneath it. In the morning, many grampusses about the ship. At noon, ground 60 fath. T. S. 81 1/4°. | | | |
| | | | | | | | | | | | | | | | | | | | | | | 2577 | | | | |

| 1755 | Th. | Marine Barometer, | | | | Weather and Winds. | Longitude from Greenwich | | | | Cor. Long. | Latitude | | Magnetical | | Dip | | | | ML. | | | | | | | |
|------|-----|--------------------|--------------------|------------------|--------------------|---|--------------------------|-----|---------|-------|------------|----------|--------|------------|-----------|--------|-------|--------|------|------|--|--|---|--------------|-------------------------|--|--|
| | | R. | S. | Th. | D. | | A. | TK. | D. T.K. | D | | S. | C. | D. | Variation | | Face | | MD. | | | C.D. | | | | | |
| | | | | | | | | | | | | | | | Az. | Amp | E. | W. | | | | | | | | | |
| | | In. Dec. | In. Dec. | | In. Dec. | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | 5 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 80 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | { h. c. C. W by S. c. L. all r. r. W by S. WSW. V. NNW. r. h. sq. and hr. sq. r. NNW. SE by E. E by S. V. h. V. S by E. SSE. | 10 | 20 | 15.43 | 14.28 | | 9.43 | 8.40 | 15.43 | | | 38.2 | 38.4 | 38.3 | 37.7 | 48 | { Mostly light breezes. Past a P.M. a hard squall, with great deal of thunder, lightning, and rain. P.M. a boat came on board from the Polly, a whaling vessel, from Boston in New England; the vessel was hull down when they came aboard. A.M. spoke with the Mary, Captain JONES, from Liverpool to Sierra Leon. P.M. 40 to 36 fath. coarse sand. A.M. no ground 55 fath. T.S. 83 $\frac{1}{2}$. | | | | | |
| | 6 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 83 | 30.0 $\frac{1}{2}$ | { f. L. to Eastw. SW by W. h. sq. r. L. all r. r. c. E by S. SE. E. E by N. c. f. E by N. C. SSE. S by E. | 11 | 8 | 15.41 | 14.34 | | 9.12 | 8.20 | 15.53 | *13.33 | | 36.6 | 37.2 | 37. | 36.4 | Very steady, | 38 | { Mostly light airs and calms. At midnight, a violent gust of wind came off: its violence did not continue above a minute or two; but brought much rain, and was attended with thunder and lightning. A.M. no ground 83 fath. T.S. 82 $\frac{1}{2}$. | | | | |
| | 7 | 30.1 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | 82 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | { h. c. SE by S. S by E. C. h. c. V. SSE. SE by S. c. sq. S by W. V. C. sq. c. C. S by E. SSE. S. | 11 | 19 | 15.41 | 14.53 | | 8.56 | 8.15 | 16.16 | | 12.28* | 36.6 | 37.6 | 37.2 | 36.6 | | 31 | { Light airs chiefly: a long swell from the SW. T.S. 82 $\frac{1}{2}$. | | | | |
| | 8 | 30.1 $\frac{1}{2}$ | 30.1 $\frac{1}{2}$ | 83 | 30.1 $\frac{1}{2}$ | { c. hr. and L. to s.w. S. C. V. SW. sq. c. sq. SW. SW by W. SW. c. C. c. f. C. | 23 | 12 | 15.22 | 14.22 | | 8.33 | 8.15 | 15.49 | | | 36.6 | 37.6 | 37.2 | 36.6 | { Very unsteady, great swell, and no fail. | 30 | { First, light airs. Middle, fresh breezes and squally. Latter, calm. At midnight, carried away the main and fore-top-mast by the badness of the rigging. Had, for some hours, a pretty fresh SW wind; but not enough to have endangered the top-masts had the rigging been good. At 11 got fore-top-mast up. T.S. 83 $\frac{1}{2}$. | | | | |
| | 9 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 84 | 30.0 $\frac{1}{2}$ | { h. C. h. L. to westw. C. h. c. C. W by S. c. W by S. | 3 | 3 | 15.28 | 14.14 | | 8.29 | 8. 8 | 15.46 | | | 36.4 | 37.6 | 37.1 | 36.5 | Pretty steady. | 6 | { Mostly calm, with swell from Southward. At 9 A.M. got up main-top-mast. T.S. 82 $\frac{1}{2}$. | | | | |
| | 10 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 80 $\frac{1}{2}$ | 30.0 | { f. c. sq. r. W. NNE. sq. r. c. NNE. V. C. c. L. to E. hr. C. V. C. ENE. r. c. ENE. V. SW by W. | 3 | 19 | 15.0 | 14.15 | 53 | 15.8 | 5 | *8.48 | 8. 1 | 7.43 | 15.51 | | | 35.6 | 36.6 | 36.2 | 35.6 | Very steady. | 35 | { First, fair. Middle, squally, with hard rain. Latter, variable, with calms. T.S. 81 $\frac{1}{2}$. | |
| | 11 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 76 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | { c. sq. r. SW. SW by S. c. f. c. sq. r. SW. sq. r. SSW. SW. WSW. hr. r. WSW. V. | 30 | 24 | | 14.19 | | 7. 9 | [7.14] | [14.53] | | | 34.6 | 35.6 | 36.2 | 35.6 | { remarkably steady. | 64 | { Cloudy and rainy, with a gentle breeze: great swell from Southw. T.S. 81 $\frac{1}{2}$. | | | | |
| | 12 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 82 | 30.0 $\frac{1}{2}$ | { hr. V. SW. fr. r. c. SW. SW by S. SSW. c. r. SSW. C. V. c. C. V. | | | 14.4 | 12.55 | 58 | 13.53 | 3 | *5.39 | 6.53 | 7. 5 | 14.39 | | | 35.2 | 35.4 | 35.3 | 34.7 | Very steady. | 22 | { Calm and cloudy: great long swell from Southward. A.M. a very large shark was struck with the harpoon; but it broke the harpoon, and got off. Many fish and birds. T.S. 82 $\frac{1}{2}$. | |
| | 13 | 30.0 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | 81 $\frac{1}{2}$ | 30.0 $\frac{1}{2}$ | { c. WNW. NW. c. L. to westw. NW. c. NW. NW by N. c. th. L. to SW. V. NNE. | 2 | | 13.50 | 12.39 | 115 | 14.34 | 3 | *5.15 | 6.25 | 6.37 | 14.27 | 13.18* | | | 32.4 | 33.4 | 32.6 | 32.1 | { Tightened the screws. | 31 | { Light airs and cloudy through. Many fish and birds. P.M. no ground 70 fath. A.M. hooked a shark. T.S. 81 $\frac{1}{2}$. |
| | | | | | | | | | | | | | | | | | | | | | | 2882 | | | | | |

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | D.L. T.K. | Longitude from Greenwich | | | | S. | O. | D. | Latitude | | Cor. Long. | Magnetical | | | | ML. | | | | | |
|---------|-----|------------------|----------|-----|----------|---|--------------|--------------|--------------------------|------|----|------|----|----|----|----------|----|---------------|------------|---------|-----------------|--------|------|------|------|------|------|---|
| | | R. | S. | Th. | D. | | | | A. | T.K. | D. | T.K. | | | | A. | O. | | Variation | | Dip | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Az. | Amp. | Face | MD. | | C.D. | | | | |
| | | In. Dec. | In. Dec. | | In. Dec. | | N | S | W | E | | | | | | | | | | | | | | | | | | |
| June 14 | 82½ | 30.0½ | 30.0½ | 82½ | 30.0 | <div><div>c.</div><div>c.</div><div>c.</div><div>hr. c. r. c.</div></div> <div>V. C. SW by S. SSW. SSW. SW. C. V. S by E.</div> | 15 | | 4 | | W | W | E | W | | | | 6. 5 | 6.32 | 14. 6 | W | W | | | | | 2882 | In the night, many fish. A.M. struck an albacore; it has from the back fin to the tail nine little yellow fins, and nine more such from the belly fin to the tail. Besides the fin on the back, it has another fin, composed of a thin membrane, with sharp prickly ribs; this fin it can strike, having a groove to receive it, so that there remains no projection or appearance of it. Light air. No ground 65 to 70 fath. T.S. 81°. |
| 15 | 83 | 30.0½ | 30.0½ | 82½ | 30.0 | <div><div>h.</div><div>h. f.</div><div>c. r. c.</div><div>c. T. to s.e.</div></div> <div>S by W. S. SSW. SSW. SSW. SW. V. V. SW by W. SSW. SW.</div> | 15 | | 7 | | | | | | | | | 5.32 | 6.14 | 13.18 | | 13.32* | 32.6 | 33.6 | 33.2 | 32.5 | 37 | |
| 16 | 82 | 30.0½ | 30.0½ | 82 | 30.0 | <div><div>c. fr. f. r.</div><div>f. L. to n.e.</div><div>c.</div><div>c. r. c.</div></div> <div>SW. V. S by W. S by W. V. C. SW. SW by S. SW by S. C. V. C. V.</div> | 5 | | | | | | | | | | | 5.18 | 6. 5 | [12.59] | | | 31.6 | 32. | 31.7 | 31.2 | 19 | PM. many fish; but swimming very deep. A.M. caught three sharks. Most part light air and calm with rain. T.S. 81°. |
| 17 | 79½ | 30.0½ | 30.0½ | 78½ | 30.0½ | <div><div>f. r.</div><div>f. r. c.</div><div>c. r. c.</div><div>c. hr. c.</div></div> <div>V. S by W. V. SSW. SSW. S. SW. SW by W. WSW. SW by W.</div> | 7 | | | | | | | | | | | 4.55 | 5.49 | 12.13 | | | 30. | 30.6 | 30.3 | 29.6 | 43 | |
| 18 | 80½ | 30.0½ | 30.0½ | 80½ | 30.0½ | <div><div>c.</div><div>f. c.</div><div>a.</div><div>c.</div></div> <div>SW by W. SW. C. W by N. W by N. W by S. V. C. C. NE. NE. ENE.</div> | 7 | | 5 | | | | | | | | | 4.36 | 5.23 | 11.54 | | | 29.2 | 30. | 29.5 | 28.7 | 24 | Pleasant weather. A.M. some dolphins. Light air of wind, variable with calms. T.S. 81°. |
| 19 | 80½ | 30.0½ | 30.0½ | 80 | 30.0½ | <div><div>h.</div><div>L. to n.d. c.</div><div>c.</div><div>c. fr. c.</div></div> <div>NNE. C. V. V. WSW. WSW. W by S. V. V. C. SW by S.</div> | 5 | | 1 | | | | | | | | | 4.15 | 5. 7 | 11.38 | 13.30* | 13.50* | 28.6 | 29.6 | 29.2 | 28.4 | 26 | |
| 20 | 82 | 30.0½ | 30.0½ | 81 | 30.0½ | <div><div>c.</div><div>c. L. f. r. c.</div><div>c.</div><div>c. r.</div></div> <div>SW by S. SSW. SW by S. SW by S. SSW. SW by S. SW. SSW. SSW. V. S by W. S by E. C. SE by S. V.</div> | 16 | | 5 | | | | | | | | | 3.49 | 4.57 | 10.56 | 14.23* 14.43 | 14.41* | 28.6 | 29.6 | 29.2 | 28.4 | 46 | Mostly light breezes and cloudy, with rain. I ascribe the error of this day's log partly to the course having made no allowance for lee-way. T.S. 82°. |
| 21 | 79 | 30.0½ | 30.0½ | 79 | 30.0½ | <div><div>c.</div><div>c. L. from n. to s.e. f. r.</div><div>r. hr.</div><div>hr. c. r.</div></div> <div>S by E. S. SSW. SSW. SW by S. SSE. S. S. S by E. C.</div> | 13 | | 3 | | | | | | | | | 3.45 | [4.54] | 10.38 | 14.40* | | 28.4 | 29.4 | 29. | 28.2 | 44 | |
| 22 | 80½ | 30.0½ | 30.0½ | 80½ | 30.0½ | <div><div>hr.</div><div>hr.</div><div>hr. f. hr.</div><div>f. r.</div></div> <div>C. SSW. V. C. C. ESE. V. V. SSE. V. V.</div> | 13 | | 3 | | | | | | | | | 3.19 | 4.39 | 10.44 | | | 27.6 | 28.4 | 28.1 | 27.3 | 35 | At Sun-set, the extremes N½E to E½S (per compass) distance off shore about 6 leagues. 43 fath. blue mud. Variable winds, with very much hard rain. T.S. 81°. |
| | | | | | | | | | | | | | | | | | | | | | | | | | 3210 | | | |

[illegible]

| 1775 | Th. | Marine Barometer, | | | | Weather and Winds. | D.L. A.O. | D.L. T.K. | Longitude from Greenwich | | | | S. | O. | E. | Latitude | | Cor. Long. | Magnetical | | | | | | ML. | | | |
|----------|----------|-------------------|----------|-----|-------|---|--------------|--------------|--------------------------|---------|------------|----------------|--------|----------|------|----------|-------|---------------|------------|----------------|----------------|------|------|------|------|------|---|--|
| | | R. | S. | Th. | D. | | | | A. | TK. | D. T.K. | D | | | | A. | O. | | Variation | | Dip | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Az. | Amp. | Face | | MD. | C.D. | | | | |
| | | | | | | | | | | | | | | | | | | | | | E. | W | | | | | | |
| In. Dec. | In. Dec. | In. Dec. | In. Dec. | N | S | W | E | A. | TK. | D. T.K. | D | A. | O. | Az. | Amp. | E. | W | MD. | C.D. | | | | | | | | | |
| July | 76 | 30.2½ | 30.2½ | 76 | 30.2½ | h. sq. r. SE by E. SE by S. SE by E. sq. r. c. E by S. SE. c. SE. SE by S. SSE. c. SE by S. S by E. SSE. | 2 | 6 | 23.30 | 25.47 | | | W | W | E | W | S. | S. | W | W | W | W | 3.4 | 3.4 | 3.4 | 3.4 | 4942 | First part, fresh gales and squally. Latter, moderate and fair. A.M. Fog Bank exactly like an island, the outline perfectly well defined, except the extremities: I never before saw any cloud so like land. T.S. 74°. Changed the poles of the dipping-needle. Mean of the various trials changed and re-changed 3½ S. viz. |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | 111 | | |
| 14 | 76 | 30.3½ | 30.3 | 76 | 30.2½ | i. sq. SE by S. SE. sq. l. SE by E. SE by S. c. sq. c. SE by S. SE. c. l. SE. SE by E. SE. | 3 | 9 | 24.27 | 26.53 | | | | | | | 17.46 | 16.59 | 28.45 | 1.48* *1.45 | 1.36* *1.49 | 5.2 | 5.4 | 5.3 | 6.2 | 104 | Coefficient trade wind. T.S. 74°. Not very steady. | |
| 15 | 76½ | 30.2½ | 30.2½ | 76½ | 30.2½ | f. c. sq. SE. SE by S. SE. c. r. c. sq. r. SE by E. SE by S. SSE. V. sq. r. c. SE. c. h. SE by E. | | 1 | 25.20 | 27.45 | | | | | | | 18.58 | 18.11 | 29.39 | *1.21 | | 7.4 | 8. | 7.6 | 8.5 | 88 | | |
| 16 | 74½ | 30.3½ | 30.3 | 74½ | 30.2½ | c. SE. SE by E. c. SE by E. ESE. c. E by S. SE by E. E by S. SE by E. c. SE. ESE. | 1 | 1 | 25.42 | 28. 8 | | | | | | | 19.47 | 19. 1 | 30. 4 | 0.42* | | 9.2 | 9.6 | 9.4 | 10.3 | 54 | A.M. saw a bird like a booby, but shorter winged and necked, called by sailors, poor John. Light breezes, swell much abated. T.S. 74°. P.M. to the NE. the clouds very remarkable, being in white curved rays, like the variation chart. At 7 A.M. saw Trinidad from mast-head SSE. At 9 visible from deck. At noon, Trinidad S 36° E 11 leagues. Major part, moderate breezes and cloudy weather; winds variable and smooth water. By the bearings of Trinidad at noon, allowing it to lye in 20° 27' S according to Dr. HALLEY. | |
| 17 | 73 | 30.4 | 30.3½ | 73 | 30.3½ | c. SE by E. V. SSE. V. ESE. c. sq. sq. SE by E. V. SE. sq. sq. SE by E. V. sq. sq. c. sq. SE. E by S. ESE. | 2 | 5 | 26. 2 | 28.33 | 105 | 30.18 | 3 | 11½ | 31 | | 20.47 | 19.59 | 30. 31 | | | 11. | 11.2 | 11.1 | 12. | 69 | | |
| 18 | 75½ | 30.4 | 30.3½ | 75½ | 30.3½ | l. SE by E. SE. l. c. SE by E. c. SE by E. SE. c. l. SE. E by S. ESE. E by S. | 8 | 4 | 26.29 | 29. 4 | 138 120 | 31.22 31. 4 | 3 3 | 11 23 | | | 22. 9 | 21.29 | 31.15 | 0.20* E | 0.13* E | 13. | 13. | 13. | 13.7 | 87 | At Sun-set, Trinidad E by S ½ S 8 or 9 leagues. T.S. 76°. Its longitude per T. K. 28.13 W 28.13 Mean diff. T.K. and D 8 obf. 1.58 8 obf. 1.12 and 1* 30.11 8 obf. 30.15 Long. 8 obf. 30 and D 1 obf. 30 At. 29.50 By Dr. HALLEY, Diff. 0.11 0.35 T.S. 74°. | |
| 19 | 73½ | 30.4 | 30.3 | 73½ | 30.3 | c. sq. c. ENE. sq. sq. V. ESE. r. sq. r. f. sq. r. V. C. NE. V. sq. r. c. l. C. N. V. N. | | | 26.12 | 28.47 | 145 | 31.12 | 3 | 15 | | | 22.48 | 22. 8 | 30. 59 | 0.44* E | | 14.4 | 14.4 | 14.4 | 15.3 | 47 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 5502 | Modly light breezes and cloudy. T.S. 74°. | |

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | D.L. T.K. | Longitude from Greenwich | | | | S. | O. | E. | D. | Latitude | | Cor. Long. | Magnetical | | South Dip | | | | ML. | | |
|------|-----|------------------|----------|-----|----------|---|--------------|--------------|--------------------------|-------|-------------------|------------------------|----|----|----------------|-------|----------|-------|---------------|---------------|-------|-----------|------|------|------|--|--|----|
| | | R. | S. | Th. | D. | | | | A. | T.K. | D. & T.K. | C. | | | | | A. | O. | | Variation | | Face | | | | | | |
| | | | | | | | | | | | | | | | | | | | | Az. | Amp. | E. | | W. | MD. | | C.D. | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | | In. Dec. | In. Dec. | | In. Dec. | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 75 | 30.4 | 30.3½ | 74½ | 30.3 | f. C. f. C. NE. f. c. f. C. V. f. E. ENE. | 3 | 5 | 26.8 | 28.48 | 137 | 31.5 | 3 | 0 | 12 | 22.57 | 22.20 | 31.0 | E | E | *0.44 | 14.6 | 15. | 14.7 | 15.6 | Not very steady. | 5502 | |
| 21 | 73 | 30.4 | 30.3½ | 73½ | 30.3½ | f. C. ENE. f. c. ENE. E by N. c. h. E by N. ENE. h. c. ENE. NE. | 4 | | 25.35 | 28.15 | 115 128 | 30.10 30.23 | 3 | 0 | 29 16 | 24.7 | 23.34 | 30.27 | *0.42 | *0.55 1.5 | | 17.4 | 18. | 17.6 | 18.5 | { Extremely unsteady, the ship having an irregular motion, tho' smooth water. | 76 | |
| 22 | 74½ | 30.5 | 30.4½ | 74 | 30.4½ | f. NE. f. h. f. fr. NE. V. c. f. V. NE by E. V. f. V. ENE. | 2 | 8 | 24.49 | 27.21 | 174 94 | 30.15 28.55 | 5 | 0 | 22 18 | 25.10 | 24.39 | 29.33 | 0.11* W | 0.17* W | | 19.4 | 20.4 | 20. | 20.7 | Very steady. | 76 | |
| 23 | 74 | 30.6 | 30.5½ | 74 | 30.5 | f. E. E by S. f. E. E by N. E. f. E by S. V. f. SE by E. | 7 | 8 | 24.55 | 27.35 | 147 135 140 | 30.2 29.50 29.55 | 3 | 0 | 24 16 20 | 26.12 | 25.48 | 29.47 | E | E | 0.6* | 0.11* | 21. | 21.6 | 21.3 | 22.2 | { Extremely steady, though long swell. | 65 |
| 24 | 71½ | 30.6 | 30.5½ | 71½ | 30.5 | f. SE by E. SE. f. SE by E. ESE. f. c. ESE. c. ESE. SE by E. | 2 | 14 | 25.20 | 28.12 | | | | | | 27.44 | 27.18 | 30.24 | 1.0* 1.13 | 1.10* | | 23.4 | 24. | 23.6 | 24.5 | | 96 | |
| 25 | 72½ | 30.6 | 30.5½ | 73 | 30.5 | c. ESE. SE by E. c. SE by E. c. h. ESE. SE by E. h. V. SE. | 2 | 3 | 25.49 | 28.38 | | | | | | 28.54 | 28.30 | 30.50 | 2.12* 1.52 | 2.16* 1.27 | | 26. | 27. | 26.4 | 27.3 | | 76 | |
| 26 | 71 | 30.6 | 30.5½ | 71½ | 30.5 | c. E by S. SE by E. S.E. c. f. with fr. V. SE by E. f. with fr. h. SE by E. V. h. f. SE. SE by E. V. | 4 | 6 | 26.23 | 29.18 | | | | | | 29.55 | 29.35 | 31.29 | | 1.52* | | 27.2 | 28. | 27.5 | 28.4 | | 69 | |
| 27 | 70½ | 30.6 | 30.5½ | 70½ | 30.5 | f. ESE. SE. f. SE. SE by E. ESE. V. f. V. ESE. f. E. E by S. | 6 | 4 | 26.36 | 29.27 | | | | | | 30.36 | 30.22 | 31.37 | *3.0 | *3.14 | | 27.6 | 28.6 | 28.2 | 29.1 | Very steady. | 43 | |
| 28 | 68 | 30.5½ | 30.4½ | 68½ | 30.4½ | f. V. f. C. f. c. C. NE by E. C. c. f. WNW. W by S. | 6 | 9 | 26.18 | 29.0 | | | | | | 30.45 | 30.37 | 31.8 | 2.45* | 2.16* | | 27.6 | 28.6 | 28.2 | 29.1 | | 18 | |
| 29 | 66½ | 30.4½ | 30.3½ | 66½ | 30.3½ | h. W by S. V. c. V. NW. c. NW. V. | 6 | 3 | 25.21 | 27.50 | | | | | | 31.5 | 31.33 | 30.2 | *2.10 | | | 29. | 30. | 29.4 | 30.3 | Very unsteady. | 55 | |

[illegible]

| 1775 | Th. | Marine Barometer, | | | | Weather and Winds. | Longitude from Greenwich | | | | Cor. Long. | Magnetical | | | | | | ML. | | | | | | | |
|------|-----|-------------------|----------|-----|----------|---|--------------------------|-----|-------------|-------|------------|------------|-------|---------|----------|------------------|-----------|--------|-----------|------|------|------------------------|------|-----------------------|-----|
| | | R. | S. | Th. | D. | | A. | TK. | D.D T.K. | D | | S. | O. | E. | Latitude | | Variation | | South Dip | | | | | | |
| | | | | | | | | | | | | | | | A. | O. | Az. | | Amp. | Face | | MD. | C.D. | | |
| | | In. Dec. | In. Dec. | | In. Dec. | | | | | | | | | | | | | | | | | | | | |
| Aug. | 9 | 62½ | 30.0½ | 62½ | | f. NW by N. NNW. f. sq. h. sq. r. NNW. N by E. sq. r. f. sq. N by E. N. sq. sq. r. N. | 8 | 17 | 1.29 | 3.14 | E | E | S | S | W | W | W | | | | | 7222 | | | |
| 10 | 62½ | 30.2½ | 30.2 | 62 | 30.1½ | f. h. N. N by W. h. dr. h. N by W. N. h. c. N. N by E. c. N by E. | + | 4 | 1.15 | 0.26 | E | | 34. 6 | 34.15 | 2. 0 | | | 37. | 39. | 38. | 38.6 | Very unfleady. | 136 | | |
| 11 | 61½ | 30.1½ | 30.0½ | 60½ | 30.0 | h. N by E. h. sq. N by E. NNE. sq. c. NNE. c. f. NNE. | 17 | 1 | 4. 5 | 2.25 | E | | 34. 1 | 34.27 | 0.54 | *12.43 | | | | | | | 140 | | |
| 12 | 60 | 30.1 | 30.0½ | 59½ | 29.9½ | h. N by E. h. fr. N by E. fr. N. V. hr. V. | 25 | | 6.17 | 5. 2 | | | 33.47 | [34.36] | 3.34 | | | 39.4 | 41. | 40.2 | 41. | Unfleady. | 110 | | |
| 13 | 58½ | 30.2 | 30.1½ | 59½ | 30.0 | r. c. N by W. NNW. c. fr. c. f. NNW. NW. f. NW. NNW. f. sq. r. c. NNW. NW by W. W by N. W. | 10 | | 8.43 | 7.26 | | | 33.37 | 34.13 | 6. 3 | *16.9 | | | | | | | 122 | | |
| 14 | 58½ | 30.3½ | 30.3½ | 59 | 30.2½ | f. WSW. SW by W. c. SW by W. SSW. S by W. c. S by W. V. c. V. WSW. C. | 16 | 16 | 10. 4 | 9. 3 | | | 33.44 | 34. 4 | 7.43 | 16.43* | | 41.4 | 43.2 | 42.3 | 43.1 | Very fleady. | 67 | | |
| 15 | 60½ | 30.3 | 30.2½ | 60½ | 30.1½ | f. c. V. c. NW by W. NW. c. NW. WNW. V. c. V. NNW. | 32 | | 11.10 | 10.41 | | | 33.49 | 34. 9 | 9.24 | | | 41.4 | 43.4 | 42.4 | 43.2 | { Extremely fleady. | 55 | | |
| 16 | 60½ | 30.1½ | 30.1½ | 60½ | 30.0½ | c. N by W. c. f. c. N by W. fr. c. sq. c. fr. N by W. N by E. fr. c. N by E. | 2 | 9 | 13.32 | 13.12 | 94 | 11.38 | 4 | 13 | 33.53 | 34.15 | 11.58 | 18.18* | 17.52* | 42.6 | 44. | 43.3 | 44. | Very fleady. | 119 |
| 17 | 61 | 30.2 | 30.2 | 61 | 30.1 | c. sq. sq. r. N by W. V. NNW. sq. r. NNW. NW by N. sq. r. c. NW by N. V. c. NW by N. | 8 | 19 | 16.29 | 15.50 | 75 | 14.35 | 1 | 13 | 34. 1 | 34.15 | 14.39 | 19.39* | 19.56* | 43.4 | 45.2 | 44.3 | 45. | } Not very fleady. | 146 |
| 18 | 61 | 30.2½ | 30.2½ | 61 | 30.1½ | f. N by E. N by W. c. h. N by W. h. N by W. N. V. h. V. | 4 | 9 | 19. 1 | 18.13 | | | 34. 5 | 34.15 | 17. 5 | 20.50° +22. 0 | 20.47* | 45.6 | 46.4 | 46.1 | 46.6 | | 126 | | |

| 1775 | T. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | D.L. A.T.K. | Longitude from Greenwich | | | | S. | O. | E. | D. | Latitude | | Cor Long. | Magnetical | | South Dip | | | | ML. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|----|------------------|----------|-----|----------|--------------------|--------------|----------------|--------------------------|------|--------------|---|----|----|----|----|----------|----|--------------|------------|------|-----------|--|-----|------|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | R. | S. | Th. | D. | | | | A. | T.K. | D. & T.K. | C | | | | | A. | O. | | Variation | | Face | | MD. | C.D. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | Az. | Amp. | E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | In. Dec. | In. Dec. | | In. Dec. | | N | S | W | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|---------|--|------------|--|
| Aug. 21 | Strong gales and squally. | S. S by E. | At 4 A.M. found ship drove, veered to a whole cable; got down top-gallant yards, lowered fore and main yards, and got sheet anchor overboard. |
| 22 | { Fresh gales with hard squalls. P.M. in-creasing. | S by E. | |
| 23 | { Strong gales and excessive hard squalls. Towards midnight began to moderate. | | At 8, gale increasing, fwayed up lower yards. At noon, close reefed top-sails, stopt the cable, and came to fail. |
| 24 | Moderate and fair. | SE. | At 1 P.M. anchored in Symmon's Bay, in 7½ fath. when moored, lower flag staff from Point WSW. Dolphin's Nose NE. Roman Rocks E½S. Noah's Ark SE. Hanglip SE½S off shore ½ of a mile. |
| 25 | Moderate and cloudy. | NW. | |
| 26 | Fresh breezes, with some rain. | W. SW. | |
| 27 | { Light breezes mostly from SE. with fair weather. | SE. | |
| 28 | Light breezes and fair. | V. | Sailed a Dutch snow. |
| 29 | { First and middle, moderate and cloudy, with some rain. Latter, squally. | NW to W. | Sailed La Bretagne, Capt. MANSON for Mauritius. |
| 30 | Strong gales and clear weather. | SW. | |
| Sept. 1 | Moderate and fair for most part, and a swell. | SSE. | Returned. |
| 2 | Strong gales and hard squalls. | SE. | |
| 3 | { Major part, squally with rain. Towards evening, light breezes and fair. | NW. | Sailed again. |
| 4 | Moderate and fair. | V. | |
| 5 | { Strong gales and very hard squalls; could not send a boat ashore. | S by E. | |
| 6 | Moderate and fair. | V. | |
| 7 | { Mostly light breezes. P.M. a fresh gale. | V. | Sent long-boat to endeavour taking up the anchor: returned with 80 fathoms of cable, but could not weigh the anchor. |
| 8 | Moderate breezes. | W. | |
| 9 | Moderate and fair. | SW. | |
| 10 | Strong gales and hard squalls. | V. | |
| 11 | Light winds from Southward, and fair weather. | S by E. | |
| 12 | Fair. | S. | |
| 13 | Fair. | V. | |
| 14 | Light airs and | V. | Sailed the Anson, Capt. TAYNOR, for England. |
| 15 | first part, calm: Latter part, breezes, | C. | |
| 16 | Fair. | C. W. | Sent long-boat again to try for the anchor, but could not purchase it. |
| 17 | Strong gales, with rainy weather. | V. | |
| 18 | Fresh gales. | NW. | |
| | | NW. | |

| 1775 | Th. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | D.L. A.T.K. | Longitude from Greenwich | | | | S. | O. | E. | Latitude | | Cor. Long. | Magnetical | | Cape of GOOD HOPE lat. 34.22 S. long. 18.27 E. | | | | ML. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----|------------------|----------|------|----------|--------------------|--------------|----------------|--------------------------|-----|---------|---|----|----|----|----------|----|---------------|------------|----|---|----|-----|------|-----|--|------|--|-----|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | R. | S. | i h. | D. | | | | A. | TK. | D. T.K. | D | | | | A. | O. | | Variation. | | South Dip | | Az. | Amp. | | | Face | | MD. | C.D. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | E. | W. | E. | W. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | In. Dec. | In. Dec. | | In. Dec. | | N | S | W | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| 1775 | Th. | Marine Barometer, | | | | Weather and Winds. | D.L. A.O. | D.L. A.T.K. | Longitude from Greenwich | | | | S. | O. | E. | Latitude | | Cor. Long. | Magnetical | | ML. | G denotes Capt. Money's Observations in the Gutton, the longitude reduced to noon. | | | |
|----------|----------|-------------------|----------|-------|-----|--------------------|-----------------------|------------------------------|--------------------------|-----|--------|----|----|----|----|----------|-----|---------------|------------|------|-----|---|-----------|-----|------|
| | | R. | S. | Th. | D. | | | | A. | TK. | D.T.K. | D | | | | A. | O. | | Az. | Amp. | | | South Dip | | |
| | | | | | | | | | | | | | | | | | | | | | | | Face | MD. | C.D. |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| In. Dec. | In. Dec. | In. Dec. | In. Dec. | N | S | W | E | S. | O. | E. | A. | O. | W | W | E. | W | MD. | C.D. | | | | | | | |
| Sept. | 28 | 62½ | 30.3 | 30.2½ | 62½ | 30.2 | h. f. q. r. r. | W by N. | 9 | | | | | | | | | | | | 885 | | | | |
| | | | | | | | r. h. | W. W by N. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. | W by N. NW by W. | 1 | | | | | | | | | | | | 86 | Pleasant breeze. Many alcastraffes, pintado birds, pettrils, &c. Bar. 3 P.M. 30.1½. 6. 30.2. 10. 30.2½. 12. 30.2½. 8 A.M. 30.2½. | | | |
| | | | | | | | h. | V. NW by W. | | | | | | | | | | | | | | | | | |
| | | | | | | | f. | NW by N. N by W. | | | | | | | | | | | | | | | | | |
| | 29 | 67½ | 29.9½ | 29.9½ | 67 | 29.9 | f. f. q. h. f. q. | N by W. V. N by E. | 4 | | | | | | | | | | | | 144 | Major part, fresh gales. Many alcastraffes, pintado birds, pettrils, &c. Gutton, var. az. 28° 13' W. Bar. 1 P.M. 30.2½. 5. 30.1½. 9. 30.1. 12. 30.0½. 6 A.M. 29.9½. 8. 29.9½. 10. 29.9½. | | | |
| | | | | | | | c. | N by E. N. | | | | | | | | | | | | | | | | | |
| | | | | | | | c. | N. N by E. | | | | | | | | | | | | | | | | | |
| | | | | | | | c. h. f. q. r. L, Th. | N by E. N. V. | | | | | | | | | | | | | | | | | |
| | 30 | 56½ | 30.2 | 30.1½ | 56½ | 30.1½ | L. to w. c. | V. W. | 20 | | | | | | | | | | | | 153 | First and middle, fresh gales, with hard squalls, thunder, lightning, and rain. Latter, blowing fresh and hazy weather. Many pettrils, pintado birds, &c. and A.M. one silver bird. Bar. 2 P.M. 29.8½. 4½. 29.8½. 5½. 29.7½. 6. 29.7½. 8½. 29.8½. 9½. 29.9. 11. 29.3. | | | |
| | | | | | | | c. f. q. r. | W by S. | | | | | | | | | | | | | | | | | |
| | | | | | | | f. q. r. h. c. | W by S. SW by W. SW. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. c. | WSW. S by W. S. | | | | | | | | | | | | | | | | | |
| Oct. | 1 | 61½ | 30.3½ | 30.3 | 61 | 30.2½ | c. | S. SSE. S by E. | 19 | | | | | | | | | | | | 64 | First part, fresh gales. Latter, light breezes and calm. A.M. many alcastraffes, &c. Bar. 2½ P.M. 30.2. 5. 30.2. 9. 30.3. 12. 30.3. 6 A.M. 30.3½. 8. 30.3½. 11½. 30.3. | | | |
| | | | | | | | c. | SE. SE by E. SE by S. | | | | | | | | | | | | | | | | | |
| | | | | | | | c. | SE. C. E. | | | | | | | | | | | | | | | | | |
| | | | | | | | c. fr. | E by S. E. V. | 12 | | | | | | | | | | | | | | | | |
| | 2 | 65½ | 30.1½ | 30.1½ | 65 | 30.1 | fr. c. f. q. h. | V. ESE. E. ENE. | | | | | | | | | | | | | 85 | First part, light breeze. Latter, fresh. P.M. many alcastraffes, &c. G long. 2 and 4, 45° 31' E. Bar. 5½ P.M. 30.3. 8. 30.3. 12. 30.2. 8 A.M. 30.1½. | | | |
| | | | | | | | h. | NE. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. | NE. NE by N. | | | | | | | | | | | | | | | | | |
| | | | | | | | f. | NE. | | | | | | | | | | | | | | | | | |
| | 3 | 67½ | 30.3 | 30.2½ | 67 | 30.2 | f. h. f. | NE. | 2 | | | | | | | | | | | | 110 | Moderate breezes throughout, weather changeable. Few birds, great dews, and water remarkably smooth. G var. 4 az. 26° 46' W, amp. 26° 47' W. Bar. 2 P.M. 30.1½. 6. 30.1½. 12. 30.1½. 8 A.M. 30.2½. 5½. 30.3. | | | |
| | | | | | | | f. f. q. h. | NE. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. f. | NE. NE by E. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. | NE by E. | | | | | | | | | | | | | | | | | |
| | 4 | 66½ | 30.3½ | 30.2½ | 66 | 30.2½ | h. | NE. | 2 | | | | | | | | | | | | 132 | Modfly fresh gales. Some pintado birds. A.M. great dews; water smooth. G long. 2 and 4 50° 39' E. Bar. 1½ P.M. 30.2½. 4. 30.2½. 7½. 30.2. 12. 30.2. 6 A.M. 30.2½. 9. 30.3. | | | |
| | | | | | | | h. | NNE. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. | NNE. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. | NE by N. | | | | | | | | | | | | | | | | | |
| | 5 | 67 | 30.2½ | 30.2½ | 67 | 30.1½ | h. | NE by N. | 2 | | | | | | | | | | | | 143 | Fresh breezes. Some pintado birds. A.M. one pettril. G var. 4 az. 26° 9' W, amp. 26° 7' W. Bar. 2 P.M. 30.2½. 6. 30.2½. 8 A.M. 30.1½. 8. 30.2. 9½. 30.1½. | | | |
| | | | | | | | h. f. q. c. | NE by N. N. | | | | | | | | | | | | | | | | | |
| | | | | | | | c. | N. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. | N by W. | | | | | | | | | | | | | | | | | |
| | 6 | 62½ | 30.2 | 30.1½ | 62 | 30.1½ | h. | N by W. NNW. | 12 | | | | | | | | | | | | 106 | First part, fresh gales. Latter, light and variable. P.M. an alcastraff. A.M. several alcastraffes and pintado birds. G var. 2 az. 24° 42' W. Bar. 1½ P.M. 30.2. 4. 30.1½. 6. 30.1½. 10. 30.2. 12. 30.1½. 8 A.M. 30.1½. 9. 30.2. | | | |
| | | | | | | | h. | NNW. NW. | | | | | | | | | | | | | | | | | |
| | | | | | | | h. c. | NW. WNW. NW. V. S by E. SSE. | | | | | | | | | | | | | | | | | |
| | | | | | | | c. f. q. r. | SE by E. V. SSE. | | | | | | | | | | | | | | | | | |
| | 7 | 62½ | 30.3½ | 30.3½ | 62 | 30.2½ | r. h. | ESE. SE by S. S by E. S. | 17 | | | | | | | | | | | | 53 | First and middle, light breezes and rain. Latter, light breezes and fair weather. P.M. a north wind; several alcastraffes and other birds. Bar. 2½ P.M. 30.1½. 5. 30.1½. 6. 30.2. 9½. 30.1½. 12. 30.1½. 8 A.M. 30.2½. | | | |
| | | | | | | | h. f. | S by W. | | | | | | | | | | | | | | | | | |
| | | | | | | | f. | S by W. V. | | | | | | | | | | | | | | | | | |

[illegible]

[illegible]

| 1775 | Marine Barometer | | | | Weather and Winds. | D. L. A. O. | D. L. T. K. | Longitude from Greenwich | | | | S. | O. | E. | Latitude | | Cor. Long. | Magnetical | | ML. | | | | | |
|------|------------------|----------|-------|----------|--------------------|----------------|----------------|--------------------------|-------|---------------|----|----|----|----|----------|----|---------------|------------|------|-----|--|-----------|----|-----|-------|
| | R. | S. | Th. | D. | | | | A. | T. K. | D. & T. K. | C. | | | | A. | O. | | Variation | | | | South Dip | | | |
| | | | | | | | | | | | | | | | | | | Az. | Amp. | | | Face | | MD. | C. D. |
| | | | | | | | | | | | | | | | | | | | | | | E. | W. | | |
| | In. Dec. | In. Dec. | | In. Dec. | | N | S | W | E | | | | | | | | | | | | | | | | |
| Oct. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 72 | 30.2½ | 30.2 | 72 | 30.1½ | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | 73 | 30.2½ | 30.2 | 73½ | 30.1½ | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 75 | 30.2 | 30.1½ | 74½ | 30.1 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | 77 | 30.1 | 30.0½ | 77 | 30.0 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nov. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 78 | 30.1 | 30.0½ | 78½ | 30.0 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 81 | 30.0½ | 30.0½ | 81 | 30.0 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 81 | 30.0½ | 30.0 | 80½ | 29.9½ | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 82 | 30.0½ | 29.9½ | 82 | 29.9½ | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 82 | 30.0 | 29.9½ | 81½ | 29.9 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

[illegible]

| 1775 | Th. | Marine Barometer. | | | | Weather and Winds. | D.L. A.O. T.K. | | | | Longitude from Greenwich | | | | Cor. Long. | Magnetical | | | | | | ML. | | | | | | | |
|------|-----|-------------------|----------|----------|----------|---|----------------|----|---|---|--------------------------|-------|---------|-------|------------|------------|------|-------|-----------|-------|-----------|------|------|------|------|------|--------------|----|--|
| | | R. | S. | Th. | D. | | N | S | W | E | A. | TK. | D. T.K. | D | | S. | O. | E. | Variation | | South Dip | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | Az. | Amp. | Face | | | MD. | C.D. | | | | |
| | | | | | | | | | | | | | | | | | | | | | E. | | | | | W | | | |
| | | In. Dec. | In. Dec. | In. Dec. | In. Dec. | | | | | | | | | | | | | | | | | | | | | | | | |
| Nov. | | | | | | c. sq. r. sq. hr. V. | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 81 | 29.9 | 29.9 | 81 | 29.8 | c. sq. r. V. W by N. W by S. | 19 | 2 | | | E | E | E | E | | S | N | E | W | W | | | | | | | | | |
| | | | | | | r. sq. r. c. W by S. SSE. SSW. | | | | | 86.9 | 83.46 | | | | 0.57 | 2.50 | 81.52 | | | 14.4 | 14.6 | 14.5 | 15.4 | | | | | |
| | | | | | | c. sq. hr. SW. S. | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 81 | 30.0 | 29.9 | 80 | 29.9 | hr. V. S by W. | 9 | 6 | | | 87.5 | 84.48 | 76 | 83.32 | 4 | 0 | 18 | 0.46 | 2.52 | 82.48 | | | 13.4 | 14. | 13.6 | 14.5 | Very steady. | 57 | |
| | | | | | | hr. c. S by W. SW. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | c. r. c. SW. | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 80 | 29.9 | 29.9 | 80 | 29.8 | sq. hr. c. sq. S. V. | 21 | 18 | | | 88.2 | 86.3 | | | | | | | | | | | | | | | | | |
| | | | | | | c. hr. c. sq. hr. S by W. SSE. SE. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | sq. hr. V. S by E. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | r. c. S by E. C. | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 83 | 30.0 | 29.9 | 83 | 29.9 | fr. c. C. E. E by S. | 6 | 9 | | | 88.16 | 86.26 | | | | | | | | | | | | | | | | | |
| | | | | | | c. r. E by S. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | r. c. E. E by N. NE by E. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | c. sq. NE by E. NE by N. N by E. | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | 83 | 29.9 | 29.9 | 83 | 29.8 | c. sq. r. sq. th. L. hr. NNW. NW. V. | 18 | 19 | | | 88.57 | 87.26 | | | | | | | | | | | | | | | | | |
| | | | | | | sq. th. L. hr. V. C. V. C. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | r. c. V. N. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | c. r. c. N. N by E. NE by N. | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 82 | 30.0 | 29.9 | 82 | 29.9 | sq. fr. sq. NE by N. NE. | 30 | 13 | | | 90.27 | 89.9 | | | | | | | | | | | | | | | | | |
| | | | | | | sq. sq. L. hr. hr. NE by E. E by N. NE by E. ENE. NE. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | hr. sq. V. SE by E. SE. SSE. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | c. sq. flying th. SSE. S by W. | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | 80 | 30.0 | 29.9 | 80 | 29.9 | r. SW. V. | 15 | 27 | | | 90.54 | 90.3 | | | | | | | | | | | | | | | | | |
| | | | | | | r. L. to nw. V. C. V. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | h. V. C. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | h. r. h. C. V. W. V. N. | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | 81 | 30.0 | 29.9 | 81 | 29.9 | c. sq. N. N by W. | 14 | 55 | | | 91.17 | 91.21 | | | | | | | | | | | | | | | | | |
| | | | | | | sq. hr. c. r. N by W. C. SE by S. V. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | r. V. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | r. c. NE by E. C. | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | 82 | 29.9 | 29.9 | 82 | | c. C. E. V. | 6 | 8 | | | 91.8 | 91.20 | | | | | | | | | | | | | | | | | |
| | | | | | | c. V. E by N. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | c. h. NE by E. NE. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | h. NE by E. NE. NNE. | | | | | | | | | | | | | | | | | | | | | | | |

[illegible]

| 1775 | Ft. | Marine Barometer | | | | Weather and Winds. | D.L. A.O. | D.L. T.K. | Longitude from Greenwich | | | | S. | O. | D. | Cor. Long. | Magnetical | | | | | | ML. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----|------------------|----------|----|----------|--------------------|--------------|--------------|--------------------------|------|-----------|---|----|----|----|---------------|------------|----|-----------|------|-----------|----|-----|-----|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | R. | S. | Th | D. | | | | A. | T.K. | D. & T.K. | ε | | | | | Latitude | | Variation | | South Dip | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | A. | O. | Az. | Amp. | Face | | | MD. | C.D. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | E. | W. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | In. Dec. | In. Dec. | | In. Dec. | | N | S | W | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Th. | Marine Barometer. | | | | Weather and Winds. | D.L. | | | Longitude from Greenwich | | | | Latitude | | Cor. Long. | Magnetical | | ML. | | | | |
|-----|-------------------|----|-----|----|--------------------|------|---|---|--------------------------|----|-----|---------|----------|----|------------|------------|----|-----|------------|------|-----------|-----|
| | R. | S. | Th. | D. | | N | S | W | E | A. | TK. | D. T.K. | S. | O. | | D. | E. | | Variation. | | South Dip | |
| | | | | | | | | | | | | | | | | | | | Az. | Amp. | Face | MD. |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |

In the explanation of *weather* dr. denotes *drizzling rain*, and a comma (,) after any *weather* marked, implies that *all the weathers*, so separated by *comma*, are connected: thus, fq, r, th, L. imply *squally with rain, thunder and lightning*: fq. r. th, L. imply *squally, rain, thunder and lightning*, to have all been in the period of six hours, but not at the same time.

In the explanation of the 5th column, for N denoting that the *observation* read N denoting that the *latitude* by *observation*.

| For | D.L. | | D.L. | | Long. from Gr. | | Latitude | | Read | D.L. | | D.L. | | Long. from Gr. | | Latitude | |
|--|------|---|------|---|----------------|-------|----------|--------|------|------|---|------|-------|----------------|-------|----------|-----|
| | A.O. | | T.K. | | A. | T.K. | A. | O. | | A.O. | | T.K. | | A. | T.K. | A. | O. |
| | N | S | W | E | | | | | | N | S | W | E | | | | |
| | / | / | / | / | ° E' | • / | ° / | ° / | | / | / | / | / | ° / | ° / | ° / | ° / |
| May 2d, | — | — | — | — | — | — | — | — | — | 9 | — | — | — | — | — | — | — |
| 4th, | — | — | — | — | — | — | — | — | — | 23 | — | — | — | — | — | — | — |
| 8th, | — | — | — | — | — | — | — | — | — | 19 | — | — | — | — | — | — | — |
| 9th, | — | — | — | — | — | — | — | — | — | 10 | — | — | — | — | — | — | — |
| 10th, add 4' to Lat. A till 15th inclusive, and | — | — | — | — | — | — | 39.26 | — | — | — | — | — | — | — | — | 39.30 | — |
| 14th, | — | — | — | — | — | — | — | — | — | 26 | — | — | — | — | — | — | — |
| 15th, | — | — | — | — | — | — | — | — | — | 20 | — | — | — | — | — | — | — |
| 18th, in column $\frac{D. 2}{T.K.}$ for W read E | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 22d, | — | — | — | — | — | — | — | — | — | 16 | — | — | — | — | — | — | — |
| 27th, subtract 10' from Lat. A till 20th of June inclusive, and | — | — | — | — | — | — | 15.32 | — | — | — | — | — | — | — | — | 15.22 | — |
| June 1st, subtract 10' from Long. A to 25th of June inclusive, and | — | — | — | — | 16.51 | — | — | — | — | — | — | — | 16.41 | — | — | — | — |
| 5th, | — | — | — | — | — | — | — | — | — | — | — | — | 19 | — | — | — | — |
| 9th, | — | — | — | — | — | 14. 1 | — | — | — | — | — | — | — | 14 15 | — | — | — |
| 21st, subtract 11' from Lat. A till 1st July inclusive, and | — | — | — | — | — | — | 3.45 | — | — | — | — | — | — | — | — | 3.34 | — |
| 26th, | — | — | — | — | 21 | — | 10. 2 | — | — | 18 | — | — | — | 10.16 | — | — | — |
| 27th, | — | — | — | — | — | — | 10. 6 | — | — | — | — | — | — | 10.20 | — | — | — |
| 28th, | — | — | — | — | — | — | 11.10 | — | — | — | — | — | — | 11.24 | — | — | — |
| 29th, add 13' to Long. A till 2d August inclusive, and | — | — | — | — | — | — | 12.18 | — | — | — | — | — | — | 12.31 | — | — | — |
| July 2d, | — | — | — | — | — | — | — | 0.22 S | — | — | — | — | — | — | — | 0.33 S | — |
| 3d, | — | — | — | — | — | — | — | 1. 6 | — | — | — | — | — | — | — | 1.23 | — |
| 4th, add 21' to Lat. A. till 19 August inclusive, and | — | — | — | — | — | — | — | 2.13 | — | — | — | — | — | — | — | 2.34 | — |
| 24th, add 2' to Long. T.K. till 28th July inclusive, and | — | — | — | — | — | 28.12 | — | — | — | — | — | — | — | — | 28.14 | — | — |
| 28th, | — | — | — | — | — | — | — | — | — | — | — | — | 9 | — | — | — | — |

| For | D. L. A. T. K. | | | | Long. from Gr. | | Latitude | | Read | D. L. A. T. K. | | | | Long. from Gr. | | Latitude | |
|---|----------------|----|---|---|----------------|-------|----------|-------|------|----------------|---|---|-------|----------------|-------|----------|----|
| | | | | | A. | T. K. | A. | O. | | | | | | A. | T. K. | A. | O. |
| | S | W | E | | | | | | | N | S | W | E | | | | |
| July 29th, add 6' to Long. T. K. till 10th August inclusive, and | - | - | 3 | - | - | 27.56 | - | 31.33 | - | - | - | 3 | - | 28. 2 | 31. 3 | | |
| Aug. 3d, add 11' to Long. A. to 9th August inclusive, and | - | - | - | - | 13.56 | - | - | - | - | - | - | - | 14. 7 | | | | |
| 10th, subtract 11' from Long. A. till 18 August inclusive; } and | - | - | - | - | - | 2.25 | - | - | - | - | - | - | - | 2.19 | | | |
| subtract 6' from Long. T. K. till 12th August inclusive, } | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| 13th, subtract 4' from Long. T. K. till 18th August inclusive, and | - | - | - | - | - | 7.26 | - | - | - | - | - | - | - | 7.22 | | | |
| 14th, — — — — | - | 16 | - | - | - | - | - | - | - | 16 | - | - | - | - | | | |
| 19th, — — — — | - | - | - | - | - | 19. 9 | - | - | - | - | - | - | - | 19. 5 | | | |
| Sept. 20th, subtract 10' from Long. A. till 8th Dec. inclusive, and | - | - | - | - | 21.26 | - | - | - | - | - | - | - | 21.16 | | | | |
| 27th, subtract 20' from Lat. A. till 16th Oct. inclusive, and | - | - | - | - | - | - | 36.40 | - | - | - | - | - | - | - | 36.20 | | |
| Oct. 17th, subtract 59' from Lat. A. till 22d inclusive. — | - | - | - | - | - | - | 34.57 | - | - | - | - | - | - | - | 33.58 | | |
| 23d, — — — — | - | - | - | - | - | - | 29.55 | - | - | - | - | - | - | - | 29.17 | | |
| 24th, subtract 41' from Lat. A. till 10th of Nov. inclusive, and | - | - | - | - | - | - | 29. 4 | - | - | - | - | - | - | - | 28.23 | | |
| Nov. 5th, — — — — | - | 7 | - | - | - | - | - | - | - | 5 | - | - | - | - | | | |
| 9th, — — — — | - | 14 | - | - | - | - | - | - | - | 4 | - | - | - | - | | | |
| 11th, subtract 31' from Lat. A. till 17th inclusive, and — | - | - | - | - | - | - | 2. 3 | - | - | - | - | - | - | - | 1.32 | | |
| | | | | | | | | | | | | | | | N | | |
| 18th, — — — — | - | - | - | - | - | - | 0. 3 | - | - | - | - | - | - | - | 0.28 | | |
| 19th, — — — — | - | - | - | - | - | - | 0. 3 | - | - | - | - | - | - | - | 0.28 | | |
| 20th, — — — — | - | - | - | - | - | - | 0.17 | - | - | - | - | - | - | - | 0.14 | | |
| 21st, — — — — | - | - | - | - | - | - | 0. 3 | - | - | - | - | - | - | - | 0.28 | | |
| | | | | | | | N | | | | | | | | | | |
| 22d, add 31' to Lat. A. till 9th Dec. inclusive, and — | - | - | - | - | - | - | 0. 9 | - | - | - | - | - | - | - | 0.40 | | |
| Dec. 9th, — — — — | - | - | - | - | 86.18 | - | - | - | - | - | - | - | 86. 8 | | | | |
| 10th, — — — — | - | - | - | - | 86.14 | - | - | - | - | - | - | - | 86. 2 | | | | |

N. B. The ship having an iron tiller, and much iron about the after part, it was found, the observations taken in the cabin were not consistent or meriting confidence. From *Anjengo* they were all taken on the binnacle, which seemed to be the only fit place in the ship.

nt place in the imp.

| 1776 | | Lat. | Long. | Magnetical | | | | | | |
|---------|--|---------|----------|------------|-------|-----------|-----|-----|------|--|
| | | | | Variation | | South Dip | | | | |
| | | | | Az. | Amp. | Face | | MD. | C.D. | |
| | | | | | | E. | W. | | | |
| Oct. 14 | Ashore at <i>Trinquemali</i> on Ceylon. | N. 8.32 | E. 81.30 | ° W | ° W | 3.6 | 3.6 | 3.6 | 4.5 | |
| 25 | { At anchor 10 fath. sand and shells, <i>Anjengo</i> Road. } | 8.41 | 76.54 | 1.12* | 1.13* | 3.4 | 3.4 | 3.4 | 4.3 | Very steady. |
| 30 | | 9.58 | 75.4 | | | 1.6 | 1.6 | 1.6 | 2.5 | Pretty steady. |
| 31 | | 9.54 | 74.24 | 1.3* | 0.53* | 2.1 | 2.1 | 2.1 | 3. | Ditto. |
| Nov. 1 | Off <i>Kalpeny</i> . } | 9.57 | 73.35 | 1.25* | | 1.7 | 1.7 | 1.7 | 2.6 | Not very steady. |
| 2 | Off <i>Schenpar</i> . } | 9.59 | 72.30 | | | 1.5 | 1.5 | 1.5 | 2.4 | Pretty steady. |
| 3 | | 9.38 | 71.18 | | | 2.7 | 2.7 | 2.7 | 3.6 | Ditto. |
| 4 | | 9.49 | 70.26 | 1.30* | | 3.2 | 3.2 | 3.2 | 4.1 | Ditto. |
| 5 | | 9.53 | 69.11 | 2.12* | 1.54* | 3. | 3. | 3. | 3.7 | Ditto. |
| 6 | | 9.55 | 67.35 | | | 3. | 3. | 3. | 3.7 | Not very steady. |
| 7 | | 10.43 | 65.30 | 4.0* | 4.3* | 1.4 | 1.4 | 1.4 | 2.3 | Ditto. |
| 8 | | 11.57 | 63.22 | 4.23* | | ND. | ND. | ND. | 0.3 | { Not steady, but taken when most at rest. |
| 9 | | 12.45 | 60.34 | 5.15* | | 3. | 3. | 3. | 2.1 | Very unsteady. |
| 10 | | 12.59 | 57.21 | 6.0* | 6.6* | 4. | 4. | 4. | 3.1 | Pretty steady. |
| 11 | | 13.29 | 55.12 | 7.30* | 7.54* | 5 | 5. | 5. | 4.1 | Ditto. |
| 12 | Off <i>Socetra</i> . | 13.16 | 52.55 | 7.57* | 8.15* | 5.4 | 5.4 | 5.4 | 4.5 | Ditto. |
| 13 | | 13.28 | 50.58 | 9.20* | 8.58* | 5.6 | 6.6 | 6.2 | 5.3 | Very steady. |
| 14 | In sight of <i>Coast of Arabia</i> . | 13.51 | 49.37 | 9.35* | 9.32* | 7.2 | 8.6 | 8. | 7.1 | Quite steady. |
| 15 | Ditto. | 13.37 | 48.33 | 9.1* | 9.30* | 8. | 9. | 8.4 | 7.5 | Ditto. |

| 1776 | | Lat. | Long. | Magnetical | | | | | | |
|---------|---|-------|---------|-----------------|-----------------|-----------|------|------|------|---|
| | | | | Variation | | North Dip | | | | |
| | | | | Az. | Amp. | Face | | MD. | C.D. | |
| | | | | | | E. | W. | | | |
| Nov. 16 | In fight of <i>Coast of Arabia.</i> | 12.54 | 47. 4 | 9.31* 10.38 | 9.39* 10.35 | 6.2 | 7.2 | 6.6 | 5.7 | Pretty steady. |
| 17 | <i>Cape Aden</i> in fight. | 12.41 | 45.25 | 11.25 11.30 | 11.30 11.30 | 6.2 | 7.2 | 6.6 | 5.7 | Ditto. |
| 18 | | 12.38 | [44. 5] | 11. 3* 11.14 | 11. 5* 11.18 | 7.2 | 8.2 | 7.6 | 6.7 | Ditto. |
| 20 | At anchor at <i>Mocha.</i> | 13.22 | 44.10 | 11.35* | 11.22* | 8.6 | 9.6 | 9.2 | 8.3 | Ditto. |
| 21 | Ditto. | 13.22 | 44.10 | | 11. 2* | 8.4 | 9.4 | 9. | 8.1 | Not steady, much wind. |
| | Ashore at the <i>Company's factory.</i> | 13.20 | 44.11 | | | 9.2 | 9.6 | 9.4 | 8.5 | |
| 22 | In fight of <i>Gebel Zeker.</i> | 14.24 | 43.35 | | 11.11* | 12.4 | 12.4 | 12.4 | 11.5 | Pretty steady. |
| 23 | In fight of <i>Gebel Tar.</i> | 15.29 | 43.12 | 13.10* 13.14 | 12.50* | 14.2 | 14.2 | 14.2 | 13.3 | Very steady. |
| 24 | Ditto. | 16. 2 | 42.49 | 14. 3* 12.57 | 13.53* | 15.6 | 15.6 | 15.6 | 14.7 | Ditto. |
| 25 | | 16.24 | 42.22 | 14. 2* 13.31 | 14.10* | 16.6 | 16.6 | 16.6 | 15.7 | Ditto. |
| 26 | | 17. 5 | 41. 54 | 13.44* | 13.50* | 19.1 | 19.1 | 19.1 | 18.2 | Ditto. |
| 27 | | 18.14 | 41. 0 | 13.54* | 13.58* | 20.6 | 21. | 20.7 | 20. | Pretty steady. |
| 28 | | 19.36 | 40. 30 | 13.12* 12.56 | 13.19* 12.42 | 24.2 | 24.6 | 24.4 | 23.5 | Ditto. |
| 29 | Off <i>Judda.</i> | 20.59 | 39.56 | 12.52* | 12.59* | 26.7 | 26.7 | 26.7 | 26. | Ditto. |
| 30 | | 21.43 | 39. 3 | | 12.49* | 29.6 | 29.6 | 29.6 | 28.7 | { Very unsteady, much wind and patching. |
| Dec. 1 | In fight of <i>Coast of Abyssinia.</i> | 21.56 | 37.57 | | | about 30. | | | | Very unsteady. |
| 2 | | 22.44 | 38.24 | | | 31.6 | 32.6 | 32.6 | 32. | Not very steady. |
| 3 | | 22.46 | 38.11 | | | 32. | 32. | 32. | 31.2 | Pretty steady. |
| 4 | | 22.54 | 37.44 | | | 32.4 | 32.4 | 32.4 | 31.6 | Not very steady. |
| 6 | At anchor on <i>Coast of Arabia.</i> | 24.16 | 38.29 | | | 34.6 | 34.6 | 34.6 | 34. | Pretty steady. |
| 7 | Off <i>Coast of Arabia.</i> | 24.17 | 38.21 | 14.52* | 15. 0* | | | | | |

| 1776 | | Lat. | Long. | Magnetical | | | | | | |
|--------|--|-------|-------|------------|--------|-----------|------|------|------|---|
| | | | | Variation | | South Dip | | | | |
| | | | | Az. | Amp. | Face | | MD. | C.D. | |
| | | | | E. | W. | E. | W. | | | |
| Dec. 8 | { Ashore on a small island on Coast of Arabia. | 24.17 | 38.30 | E | E | 35. | 35. | 35. | 34.2 | Much wind. |
| 9 | | 24.16 | 38.30 | | 14. 1* | 35. | 35. | 35. | 34.2 | Pretty steady. |
| 10 | | | | | 13.50* | 35. | 35.2 | 35.1 | 34.3 | Very steady. |
| 11 | { At anchor at Barudy. | 24.16 | 38.30 | | 13.50* | 35. | 35. | 35. | 34.2 | { Not very steady, good deal of wind. |
| 14 | | | | | | 35.2 | 35.2 | 35.2 | 34.4 | Very steady. |
| 15 | | 24.19 | 38.18 | | | 35. | 35. | 35. | 34.2 | Not steady, swell from S ^d . |
| 17 | | 24.25 | 36.30 | | | 35. | 36. | 35.4 | 34.6 | Much motion, with wind. |
| 19 | | 25. 4 | 36.10 | *11.48 | *11.41 | 36.2 | 36.2 | 36.2 | 35.4 | Pretty steady. |
| 20 | | 25.45 | 36.26 | 11.30* | 11.40* | 38. | 38. | 38. | 37.2 | Not very steady. |
| 21 | | 26. 9 | 36.11 | | | 38.4 | 38.4 | 38.4 | 37.6 | Pretty steady. |
| 22 | | 26.25 | 36. 1 | 12.15* | 12. 5* | 38.6 | 39. | 38.7 | 38.1 | Extremely steady. |
| 23 | | 26.55 | 35.38 | 12.58* | 12.46* | 39.7 | 40.7 | 40.3 | 39.5 | Very steady. |
| 25 | { In sight of Ras Mabomet. | 27.36 | | | | | ab | 42. | | Very unsteady, much wind. |
| 26 | | 27.47 | | | 13.19* | | | | | |
| 27 | | 27.58 | | | | 13.29* | | | | |
| 28 | | 28. 4 | | | | 42. | 42. | 42. | 41.2 | Pretty steady. |
| 29 | { At anchor off Tor. | 28.16 | | | | 42.2 | 42.2 | 42.2 | 41.4 | Ditto, a little swell. |

| 1777 | | Lat. | Long. | Magnetical | | | | | | |
|--------|---|-----------------------|-------|------------|--------|-----------|------|------|------|---------------------------------------|
| | | | | Variation. | | South Dip | | | | |
| | | | | Az. | Amp. | Face | | MD. | C.D. | |
| | | | | E. | W. | E. | W. | | | |
| Jan. 2 | { At anchor at 5 fath. on Coast of Africa | 29.12 | | E | E | 43.6 | 44. | 43.7 | 43.2 | { Fresh wind and good deal of motion. |
| 3 | | 29.35 | | | 12.50* | 46. | 46. | 46. | 45.3 | Ditto. |
| 4 | Off Suez. | 29.51 | 32.12 | | | 45.2 | 45.6 | 45.4 | 44.7 | Perfectly steady. |
| 5 | At anchor off Suez. | N. Lat. obl. 29.58.12 | 29.58 | 32.15 | | 45.6 | 45.6 | 45.6 | 45.1 | |
| 6 | Ditto. | 29.58. 1 | 29.58 | | | 45.2 | 45.2 | 45.2 | 44.5 | Very steady. |
| 7 | Ditto. | | | | | 45.2 | 45.2 | 45.2 | 44.5 | |
| | Changed the poles, unmarked end dips, | | | | | 43.6 | 43.3 | 43.4 | 44. | A little wind. |
| | Rechanged the poles, marked end dips, | | | | | 44.4 | 44.4 | 44.4 | 44. | Ditto. |
| 8 | At anchor off Suez. | 29.58.25 | 29.58 | | | 44.5 | 44.5 | 44.5 | 44. | Perfectly steady. |
| 9 | Ditto. | | | | | 45.5 | 45.7 | 45.6 | 45.1 | Ditto. |
| 10 | Ditto. | 29.58 | | | | | | | | |
| | Suez | 29.58.10 | 30. 2 | 32.16 | | | | | | |

Astronomical Observations in The Swallow.

| Long. from Greenwich. | | | | | |
|-----------------------|---|----------|------|----|--------------------|
| D. & T.K. | € | O.S. | E. | D. | |
| Nov. 1 | W | 73.31.30 | 6.33 | | Kalpeny bearing N. |
| 4 | | 70.26. | 5.15 | | |
| 6 | E | 67. 5. | 5.13 | | |
| 7 | W | 65.52. | 4. 6 | | |
| 15 | E | 47.11. | 6.20 | | |
| 16 | W | 46.14. | 5.28 | | |

| Long. from Greenwich. | | | | | |
|-----------------------|---|----------|------|----|--|
| D. & T.K. | € | O.S. | E. | D. | |
| Nov. 19 | E | 44. 8.18 | 5.14 | | At anchor in Mecha Road. |
| 20 | | 44.16. | 5. 8 | | 20th. Observed an immersion of 1st sat. of Jupiter with my glass, a good deal of wind and ship not very still, |
| 21 | | 44. 6. | 5.15 | | Per watch — 11. 0.30 |
| 24 | | 42.28. | 5.13 | | Watch slower than apparent time 1.52.19 |
| 29 | | 38.47. | 5.33 | | Eclipse per naut. alm. — 12.52.49 |
| Dec. 2 | | 37.49. | 7.20 | | 9.56.48 |
| 3 | | 37.34. | 5.15 | | 2.56. 1 = 44.0.15 |

| Long. from Greenwich. | | | | | |
|-----------------------|---|--------|------|----|-------------------------|
| D. & T.K. | € | O.S. | E. | D. | |
| Dec. 6 | E | 37.50. | 3. 3 | | |
| 1777 Jan. 4 | | 32.12. | 3.10 | | Off Suez. |
| | | 32.11. | 5.10 | | |
| 5 | | 32.42. | 5. 8 | | |
| 6 | | 31.47. | 5.14 | | At anchor in Suez Road. |
| | | 32.21. | 5.24 | | |