

cannot but be of very great moment in the system of the universe.

I am, Gentlemen, with all possible respect,

London, Feb. 12, 1752. Your most obedient humble servant,

W. Watson.

LXII. *A Letter from Dr. Bevis to Dr. De Castro, F. R. S. containing Extracts of Father Augustin Hallerstein's astronomical Observations made at Pekin in 1744 and 1747.*

Read March 5, 1752. **I** AM much obliged to you, Sir, for furthering F. Aug. Hallerstein's letter to me. It informs me, that the instrument I wrote the description and use of, was arrived safe at Pekin. According to that missionary's request, I have carefully looked over the observations he sent to Dr. Sanchez at Paris, to be communicated to the Royal Society through your hands. They are comparisons of all the planets with known fix'd stars taken in the Jesuit's College at Pekin, in 1746 and 1747, with a well-adjusted pendulum-clock, and a micrometer; and appear to me to have been done with judgment and accuracy

accuracy; so as, in my humble opinion, to merit the Royal Society's consideration. I am,

Dear Sir,

Feb. 18, 1751.

Your obliged and

most obedient servant,

J. Bevis.

Observationes Lunæ 1747.

JAN. 1, mane, mox a media nocte, observata occultatio reguli (Bay α Ω) aluna ut sequitur.

| | h | /' | '' | | | h | /' | '' |
|---|----|----|--|--|----|----|----|----|
| 1 | 46 | 0 | | luna alta circ 59° capta ejus diameter | 31 | 48 | | |
| | 55 | 29 | | dist. α Ω a limbo lucid. propiore lunæ | 48 | 37 | | |
| 2 | 23 | 35 | } | distantia ejusdem ab eodem | | 37 | 25 | |
| | 35 | 49 | | | | 33 | 12 | |
| | 49 | 53 | | | | 27 | 20 | |
| 3 | 0 | 10 | | | | 23 | 18 | |
| | 16 | 44 | } | | | 16 | 44 | |
| 4 | 0 | 3 | | α Ω immerfit post limbum lunæ lucidum in linea recta ducta per Grimaldi medium, et Copernici limbum superiorem (situ recto) observata emerfit tubo 10 ped. | | | | |
| 5 | 15 | 51 | α Ω emerfit de sub lunæ limb. obscuro in linea recta per limb. superiorem Grimaldi, et inferiorem Copernici (situ erecto) observata emerfit una simul tubis 10 et 5 ped. | | | | | |

- 25 19 dist. α Ω a limb. remotiore lucid. lunæ 35 27
 30 12 dist. ejusdem ab eodem 37 37
 39 56 α Ω in horario
 42 23 lunæ limb. remotior lucidus in horario, erat-
 que α Ω borealior limbo austrino lunæ 34 3
 6 15 \circ capta rursus diameter lunæ 31 40 alta circ.
 43°.

Jan. 28. vesp. comparata luna cum stella ρ Ω , quæ
 a luna occultata fuerat, sed immersio quidem videri
 non potuit, luna post tectum templi adhucdum
 latente, itaque

- 9 29 57 emerfit stella de sub parte obscura lunæ, tum
 vero
 34 42 ρ Ω in horario
 36 40 limb. lucid. lunæ remotior ortivus in horar.
 eratque ρ borealior limbo austrino remotiore
 lunæ 29 29
 porro diameter lunæ per oblivionem non
 adnotata est.

Feb. 25, vesp. comparata luna cum Regulo five α
 Ω , quem illa quidem texerat, sed neque immersio
 visa neque emissio, luna post tectum templi la-
 tente; simul autem ac apparuit,

- 6 42 54 α Ω in horario
 44 \circ margo occidentis lunæ in horario
 45 56 macula Aristarchus in horar. australiori
 stellæ α \circ 12

 3 2 differentia temporar. stellæ α ab Aristarcho
 7 26 capta diameter lunæ 32 4
 42 39 α Ω in horar. accurate in eodem parallelo
 cum limbo lunæ, dum is postea circa hora-
 rium esset
 47 28 Aristarch. in horar. austral. stella α Ω 13 6
 Cum

Cum ergo $7^{\text{h}} 47' 28''$ Aristarch. esset australior stella $\alpha \Omega$ $13' 6''$, margo autem boreus lunæ, dum hujus centrum circa horarium esset, eundem præcise parallelum decurreret, quem decurrerat stella $\alpha \Omega$ liquet Aristarchum margine boreo lunæ australiorem fuisse itidem $13' 6''$. Erat autem idem Aristarchus orientalis margine occiduo lunæ $1' 56''$ penduli: hinc facile erit appulsus centri lunæ ad horarium eruere, habita jam diametro lunæ $32' 4''$.

Tempora quod attinet harum operationum, corrigenda sunt singula, demendo $1' 38''$ penduli. Totidem enim anticipasse sequenti meridie compertum est.

Observationes astronomicæ habitæ Pekini in Collegio S. J.

Observatio h 1746.

| | h | m | s | h | m | s |
|--------------|------------|------------|------------|---------------------------------------|------------|------------|
| Nov. 28 mane | 5 | 20 | 49 | h occidentalis in m | 0 | 3 0 |
| | | | | borealis | 40 | 2 |
| 29 | 5 | 44 | 0 | borealis in m | 37 | 36 |
| | | | | distabat ab eadem | 37 | 54 |

Observat. γ 1746.

| | | | | | | |
|---------------|---|----|---|-------------------------------------|----|-------|
| Jul. 13 vesp. | 8 | 0 | 0 | γ occident. ω Ophiuc. | 0 | 12 32 |
| | | | | borealis | 13 | 33 |
| | 8 | 15 | 0 | distans ab ω | 16 | 43 |
| Aug. 25 | 8 | 0 | 0 | γ orientalis ω | 0 | 1 30 |
| | | | | borealis | 0 | 45 |
| | | | | distans ab ω | 1 | 57 |
| 26 | 7 | 18 | 0 | γ orientalis ω | 0 | 6 1 |
| | | | | borealis | 0 | 0 |
| | | | | dist. | 5 | 28 |
| | | | | B b b 2 | | Aug. |

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| | | | | | | | | |
|---------|------|--------------|---|---|-----------------|---|----|----|
| Aug. 28 | 8 | 15 | 0 | 4 | occidentalior ω | 0 | 47 | 22 |
| | | | | | borealiior | | 15 | 17 |
| 29 | 8 | 15 | 0 | 4 | occidentalior ω | 0 | 48 | 53 |
| | | | | | borealiior | | 15 | 18 |
| 4 | pene | stationarius | | | dift. | | 48 | 20 |
| Aug. 4 | 9 | 0 | 0 | 4 | occidentalior ω | 0 | 49 | 38 |
| | | | | | borealiior | | 14 | 3 |
| | | | | | dift. | | 49 | 30 |
| 5 | 8 | 0 | 0 | 4 | occidentalior ω | 0 | 49 | 8 |
| | | | | | borealiior | | 13 | 39 |
| | | | | | dift. | | 48 | 10 |

Observationes 8 1746.

| | | | | | | | | | |
|----------|------|---|----|----|---|------------------------------------|---|----|----|
| Sept. 29 | mane | 5 | 0 | 0 | ♂ | orientalior α Ω | 0 | 21 | 48 |
| | | | | | | borealiior | | 45 | 53 |
| | | | | | | diff. | | 50 | 9 |
| Nov. 14 | mane | 4 | 59 | 56 | ♂ | orientalior β \mathcal{M} | 0 | 49 | 38 |
| | | | | | | borealiior | | 35 | 19 |
| 25 | | 4 | 8 | 13 | ♂ | occidentalior η \mathcal{M} | 0 | 41 | 7 |
| | | | | | | borealiior | | 33 | 42 |
| | | | | | | diff. | | 53 | 15 |
| Dec. 20 | | 3 | 12 | 12 | ♂ | occidental. θ \mathcal{M} | 0 | 20 | 3 |
| | | | | | | borealiior | | 6 | 9 |

Observationes ♀.

| | | | | | | | |
|--------------|----------|----------|-----------|-----------|----------|----------------------|----------------|
| Nov. 5 vesp. | 6 | | 5 | o | ? | occidentalior stella | |
| | | | | | | quadam ignota | o 35 35 |
| | | | | | | eaque borealior | 7 18 |
| 6 | | 6 | 16 | 18 | | ignota heri occiden- | |
| | | | | | | talior quam ϕ ? | 6 54 53 |
| | | | | | | eaque borealior | 7 18 |
| | | | | | | | Nov. |

1 1 11

• • •

Observatio § 1746.

Dec. 10 vesp. 5 27 47 ♀ occidentalis ♂ 6 29 49
borealis 14 11

Sedet hæc unica observatio subdubia.

Observationes h 1747.

| | | | | | | | | | |
|---------|-------|---|----|----|---|-------------------------------------|---|----|----|
| Jan. 2 | mane | 3 | 0 | 8 | h | occidentalior in m | 2 | 37 | 56 |
| | | | | | | australior | | 15 | 33 |
| Feb. 3 | mane | 1 | 48 | 20 | h | occidentalior 91 m | 2 | 38 | 41 |
| | | | | | | et borealior | | 12 | 13 |
| 4 | | 1 | 9 | 25 | h | occidentalior 95 m | 2 | 38 | 41 |
| | | | | | | borealior | | 12 | 13 |
| 5 | | 1 | 4 | 8 | h | occidentalior 95 m | 2 | 38 | 26 |
| | | | | | | borealior | | 12 | 46 |
| | | | | | | h itaque jam retrogradus | | | |
| Apr. 5 | mane | 4 | 40 | 29 | h | orientalior in m | 1 | 11 | 57 |
| | | | | | | borealior | | 40 | 9 |
| 8 | | 4 | 25 | 34 | h | orientalior in m | 0 | 58 | 38 |
| | | | | | | borealior | | 45 | 20 |
| | | | | | | h prope \odot cum. max. lat. bor. | | | |
| Jun. 21 | vesp. | 8 | 15 | 19 | h | occident. I (74 m) | 0 | 18 | 33 |
| | | | | | | australior | | 28 | 17 |
| | | | 38 | 10 | | dist. | | 33 | 51 |

Jun.

| | h | l | " | h | l | " | h | l | " |
|---------|---|----|----|---|-----------------|----|---|---|-------|
| Jun. 24 | 8 | 21 | 21 | h | occidental. | 74 | m | o | 18 55 |
| | | | | | australior | | | | 29 3 |
| 25 | 8 | 47 | 13 | h | occidentalior | 74 | m | o | 18 48 |
| | | | | | australior | | | | 29 16 |
| | | | | | itaque directus | | | | |
| Jul. 23 | 8 | 2 | 33 | h | orientalior | 74 | m | o | 20 25 |
| | | | | | et australior | | | | 53 1 |

Observationes 4 1747.

| | | | | | | | | | | | |
|--------|------|---|----|----|---|---------------|----|---|---|----|----|
| Feb. 3 | mane | 6 | 6 | 48 | ♂ | occidentalior | 28 | ♂ | 0 | 31 | 5 |
| | | | | | | et australior | | | | 31 | 30 |
| | | | | | | dist. | | | | 32 | 35 |
| 13 | | 5 | 39 | 38 | ♂ | occidentalior | ♂ | ♂ | 0 | 17 | 47 |
| | | | | | | australior | | | | 0 | 58 |
| 28 | | 5 | 37 | 26 | ♂ | orientalior | ♂ | ♂ | 0 | 1 | 23 |
| | | | | | | australior | | | | 47 | 5 |

Observationes ♂ 1747.

[illegible]

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| | | | | | | | | |
|------|----|-------|-------|----|------------|----------------|----|---------|
| Maii | 13 | ♂ | prope | 68 | australior | | 38 | 4 |
| | 16 | | 7 | 44 | 22 | ♂ occidentalis | μ | 5 27 54 |
| | | | | | | australior | | 26 34 |
| Jun. | 10 | vesp. | 8 | 21 | 17 | ♂ occid. λ | μ | 2 19 53 |
| | | | | | | australior | | 45 16 |
| Oct. | 27 | vesp. | 6 | 7 | 14 | ♂ occidentalis | λ | 4 39 45 |
| | | | | | | borealis | | 12 18 |
| Dec. | 31 | vesp. | 6 | 7 | 13 | ♂ occident. | σ | 0 54 8 |
| | | | | | | australior | | 6 33 |

Observationes ♀ 1747.

| | | | | | | | | |
|------|---|-------|---|----|----|--------------|---|---------|
| Jan. | 8 | vesp. | 5 | 41 | 20 | ♀ orientalis | β | 1 4 41 |
| | | | | | | australior | | 23 32 |
| Mar. | 5 | mane | 5 | 43 | 38 | ♀ occident. | β | 0 13 32 |
| | | | | | | australior | | 22 51 |

Observationes ♀ 1747.

| | | | | | | | | |
|------|----|------|---|----|----|----------------|---|---------|
| Jan. | 16 | mane | 6 | 4 | 53 | ♀ occidentalis | ξ | 7 43 16 |
| | | | | | | borealis | | 24 13 |
| | 19 | | 5 | 58 | 18 | ♀ occidentalis | ξ | 5 49 13 |
| | | | | | | australior | | 2 38 |
| | 23 | | 6 | 3 | 5 | ♀ occidentalis | ξ | 2 8 36 |
| | | | | | | australior | | 33 34 |
| | 24 | | 6 | 7 | 3 | ♀ occidentalis | ξ | 1 4 41 |
| | | | | | | australior | | 40 7 |
| | 25 | | 5 | 55 | 18 | ♀ occidentalis | ξ | 0 2 45 |
| | | | | | | australior | | 45 24 |
| | | | | 57 | 18 | dist. a | ξ | 45 39 |
| | 26 | | 6 | 18 | 37 | ♀ orientalis | ξ | 1 16 12 |
| | | | | | | australior | | 50 2 |

Jan.

| | | | |
|---------|-----------|--------------------------|---------|
| Jan. 26 | 6 26 35 8 | occidentalior ω 7 | 0 26 49 |
| | | et australior | 10 28 |
| | 31 56 | distans ab eadem | 26 52 |

Congressus planetarum observati 1747.

| | | | |
|--------------|----------------------|---------------------------------|-------|
| Jan. 13 mane | 2 51 54 ^b | in horario | |
| | 52 43 ⁸ | in horar. austral. | 47 2 |
| Dec. 6 vesp. | 5 34 34 ⁸ | immerfit totaliter | |
| | | sub limb. obsc. \mathfrak{d} | |
| | | dist. a cornu bor. | 23 28 |
| | | tum lunæ diam. | 32 53 |
| | 6 46 2 ⁸ | emerfit de sub ϵ dist. | 29 24 |
| | | a cornu boreo ejusdem. | |

LXIII. *Extracts of several Letters of Mor-
dach Mackenzie, M. D. concerning the
Plague at Constantinople.*

*Dr. Clephane, F. R. S. to the Rev. Mr. Birch,
Secr. R. S.*

S I R, Golden-Square, Feb. 25, 1752.

Read March 5, 1752. **B**EFORE I transcribe my friend Dr. Mackenzie's letters relating to the late plague at Constantinople, it may not perhaps be improper to mention a few particulars concerning the plague in general, as I find them scatter'd up and down his former letters to me on that subject.

In