

tilian agreed with it; though Mr. *Greaves*, who measured both these Feet with great Care, found some Difference between them, stating the *Cossutian*, as above, 967, and the *Statilian* 972. But by *Pæ-tus's* quoting *Philander*, it is plain he had not himself measured the latter; and therefore the Foot, called by him the *Colotian* and *Statilian*, is indeed purely the *Colotian* or *Cossutian* Foot; and the same has occurred to me also very nearly from my Measure of the Height of the *Trajan* Pillar, which I find, from the Ground to the Top of the Cimatium of the Capitol, to be 115 Feet 10 Inches $\frac{3}{4}$; and this Height divided by 120, gives very nearly 966 for the Quotient.

For the *Greek* Foot there seems to be no further Mystery, than that it was intended to be made to the *Roman* in the Proportion collected from *Pliny*, which is, that 625 *Roman* Feet made 600 *Greek*; by which Account the *Greek* Foot should contain 1007 of such Parts as the *Roman* contains 967; and the actual Quantity I took off was 1006.

III. Observaciones nonnullæ notatu non indignæ; Anno 1734. Ab Johanne Frid. Weidler, R. S. S. &c. Vitembergæ factæ.

I. DIE xxiii. Januar. A. 1734. iterum apparuit splendida admodum *Aurora Borealis*, vesperi hor. vii. m. 6. Sub septentrionem vitus arcus ater, cum

cum duplici fascia candida eidem insidente, quam nigra regio media distinguebat; assurgebat arcus ultimus candidus ad altitudinem 25 graduum; in tractu nigro subinde incendebantur pyramides lucidæ; reflexo lumine prope Zenith similis candidus arcus producebatur; h. vii. 30'. albus tractus in occasum longius ultra ipsum occasus æquinoctialis cardinem diffundebatur, attingebat in medio altitudinem 50 graduum; h. vii. 35'. clara regio usque in verticem diducebatur; nubes hinc inde intermissæ versus occasum tendebant, id quod raro in Auroris Borealibus solet evenire; admiratus etiam sum nubes quasdam circa N. E. hærentes, quæ ante regionem lucidam promovebantur, et ultra quas lux auroræ distincte cernebatur; ex quo elucet auroræ lumen longe ultra nubes attolli. h. vii. 38' lucida auroræ regio infra horizontem sese demittebat, imprimis versus occasum; etiam illud meretur attentionem, quod etsi hæc aurora splendida esset admodum, paucas tamen pyramides lucidas ostentaverit: hor. viii. 30' fere tota lux infra horizontem fuit condita, eminebat adhuc prope occasum altitudine 10 graduum; tractus arcus nigri sub septentrione una cum exigua fascia candida imminente adhuc hora x. conspiciebatur.

2. Die xxvii. *Januar.* vesperi hor. vi. 23'. notata fuit σ D φ . nempe reperi φ L 35. minorum unius φ \circ L \cup gradus: *Venus* meridiem, luna septentrionem respiciebat, hor. vi. 57' φ L = 26' & in hac observatiōne linea per Venerem & utramque falcis lunæ cuspidem ducta recta erat, postea luna sensim longius à Venere excessit.

3. Die xvii. *Februarii* non prætereunda est humilitas mercurii in barometro ad 28 Dig. 7. Lin. qualem antehac heic locorum non animadverti ; præfagium inde capere licuit horrendæ procellæ, & impetus ventorum, qui omnia fufque deque verfurus videbatur, lateres e tectis p. m. hor. iiii magno numero dejiciebantur, ut nemo in plateis tutus poffet ambulare. hæc procella in *Saxonia* et alibi in *Germania* paffim ædificiis, fylvis, hortisque damna longe maxima intulit, incredibilem arborum numerum radicitus evulfit, fregit annofas quercus aliasque arbores, homines in libero campo pedibus confiftere nequiverunt.

4. Die xix. *Martii* vefperi hor. vi. 45' circa N.N.W. fub feptemtrione apparuit arcus ater fascia alba lata extenfa veftitus ; lux albæ fasciæ clarior erat verfus occafum, quam verfus ortum, fed pyramides lucidæ vel undæ, quales auras boreales comitari folent, infecutæ non funt. Sunt ergo quædam auroræ boreales quæ candidam tantum fub feptentrione coeli regionem, fed fine lucis motu oftendunt.

5. Die xxix. *Martii* aurora borealis insignis explenduit, quam primum conſpexi hora ix. Luna vergebat in occafum, & per nubes, tantum lucebat ; coelum totum fere nubibus tectum erat & tamen circa feptentrionis cardinem clara poft diftractas nubes regio, e qua lucidæ fubinde pyramides, certiffimo auroræ borealis præſentis indicio, prodibant : deprehendi etiam poft nubes lucidum auroræ tractum in arcum componi : lucidæ pyramides ufque ad hor. xi. obſervari potuerunt ; rarum ſpectaculum
 coelo

coelo nubiloso & aere ventis agitato, auroram borealem spectari, quæ alias fere tantum sereno et tranquillo coelo emicare solet.

6. Die ix Augusti cum in vallum observandi Saturni causa me contulisset hor. xi. subito nubes quædam tenues circa N. N. E. & N. g. E. suspensæ ardere visæ sunt. Verum paucis radiationibus emissis versus verticem cessabat inflammatio, & nubeculæ in ortum leni vento propellebantur.

Ex his aliisque observationibus, quam varium et mutabile sit auroræ borealis lumen phænomenon, luculenter intelligitur.