

A prognostication everlastinge of righte goode effecte, fruitfully augmented by the auctour, contayning plain, briefe, pleasaunte, chosen rules to iudge the weather by the sunne, moone, starres, comets, rainebow, thunder, cloudes, with other extraordinarye tokens, not omitting the aspects of planets, with a briefe iudgement for ever, of plenty, lacke, sickenes, dearth, warres etc., opening also many naturall causes worthy to bee knowen ... / corrected and augmented by Thomas Digges his sonne.

Contributors

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Digges, Thomas, approximately 1546-1595

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GENERAL PROGNOSTICATION -- DIGGES 1578







1756

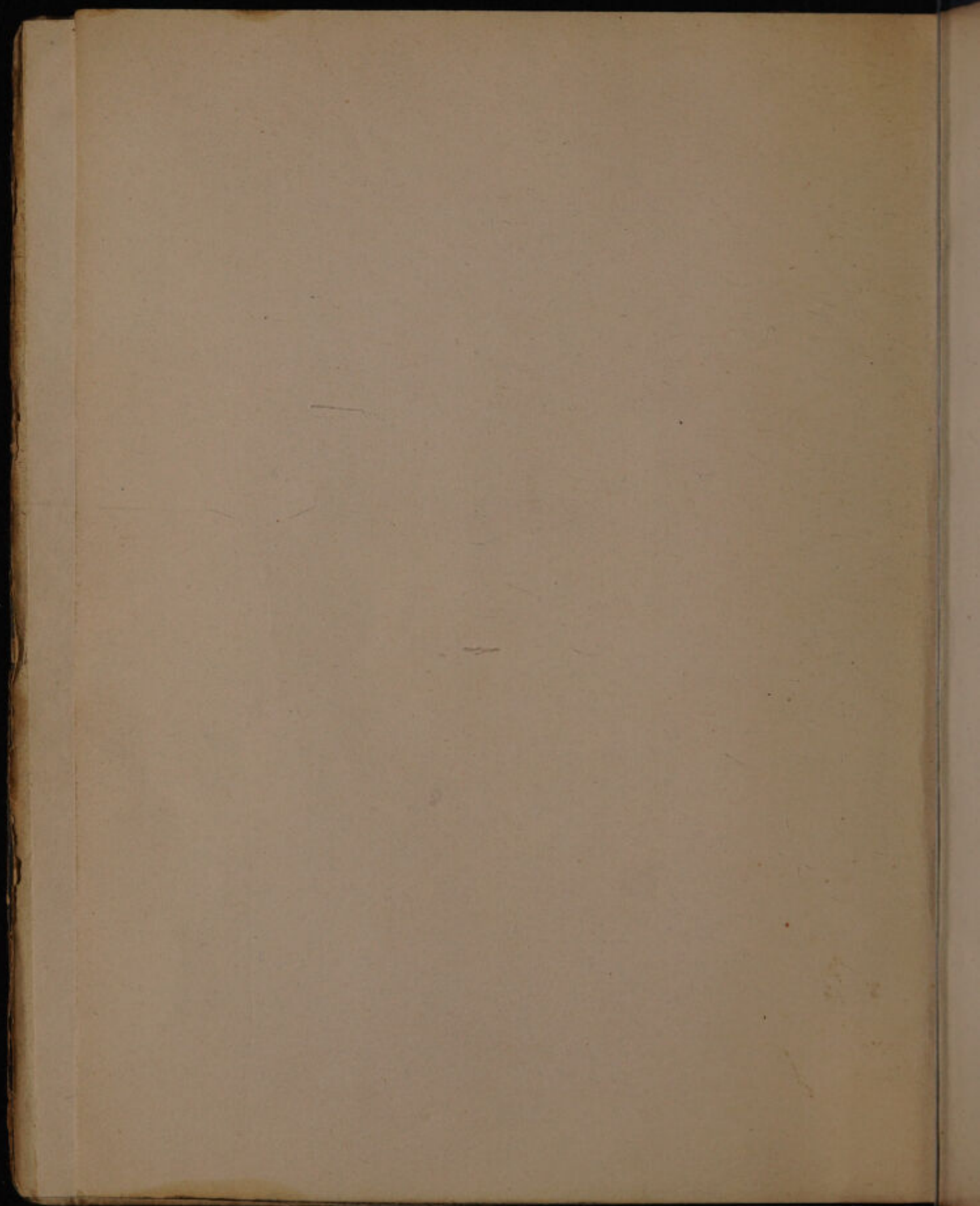
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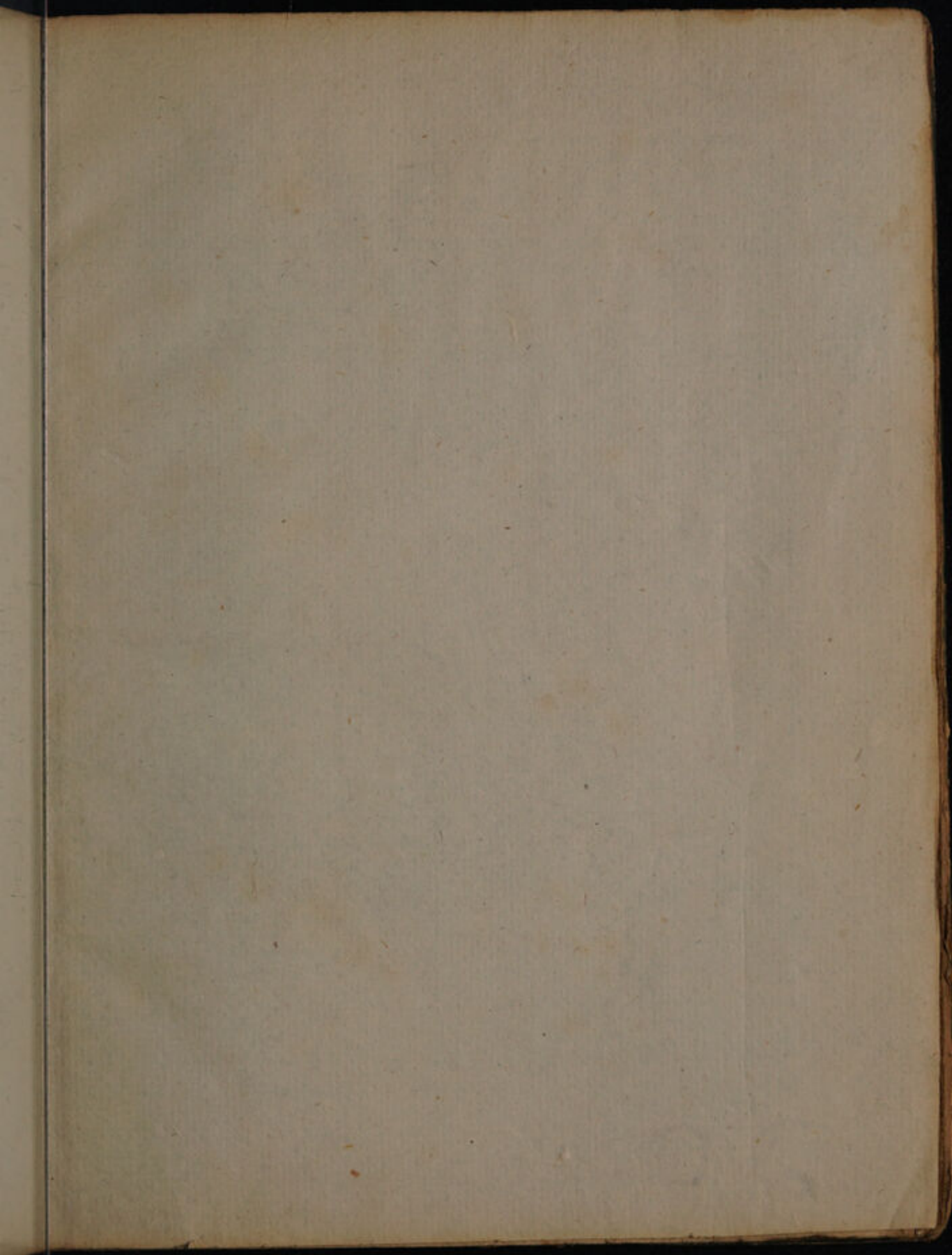
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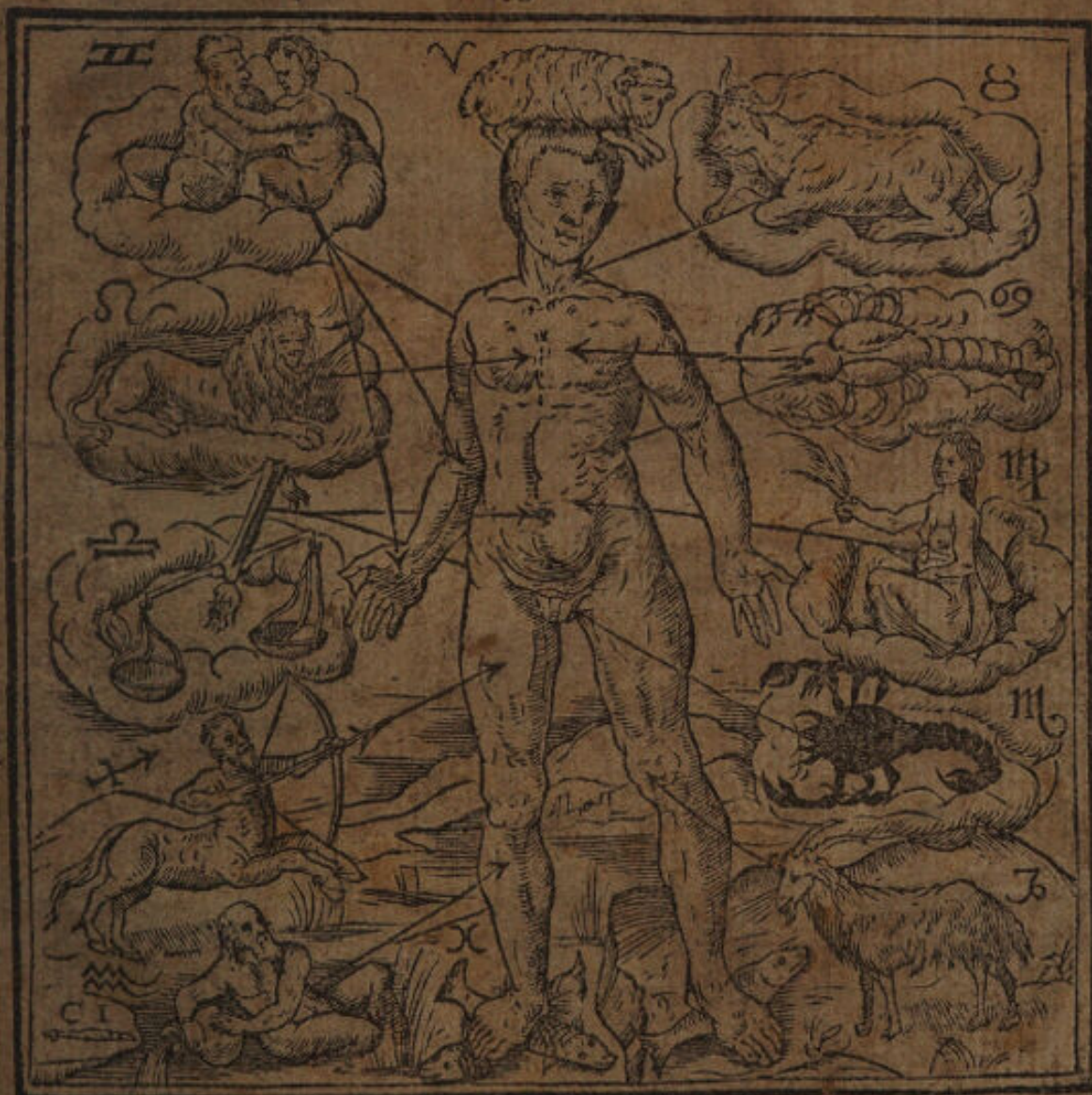


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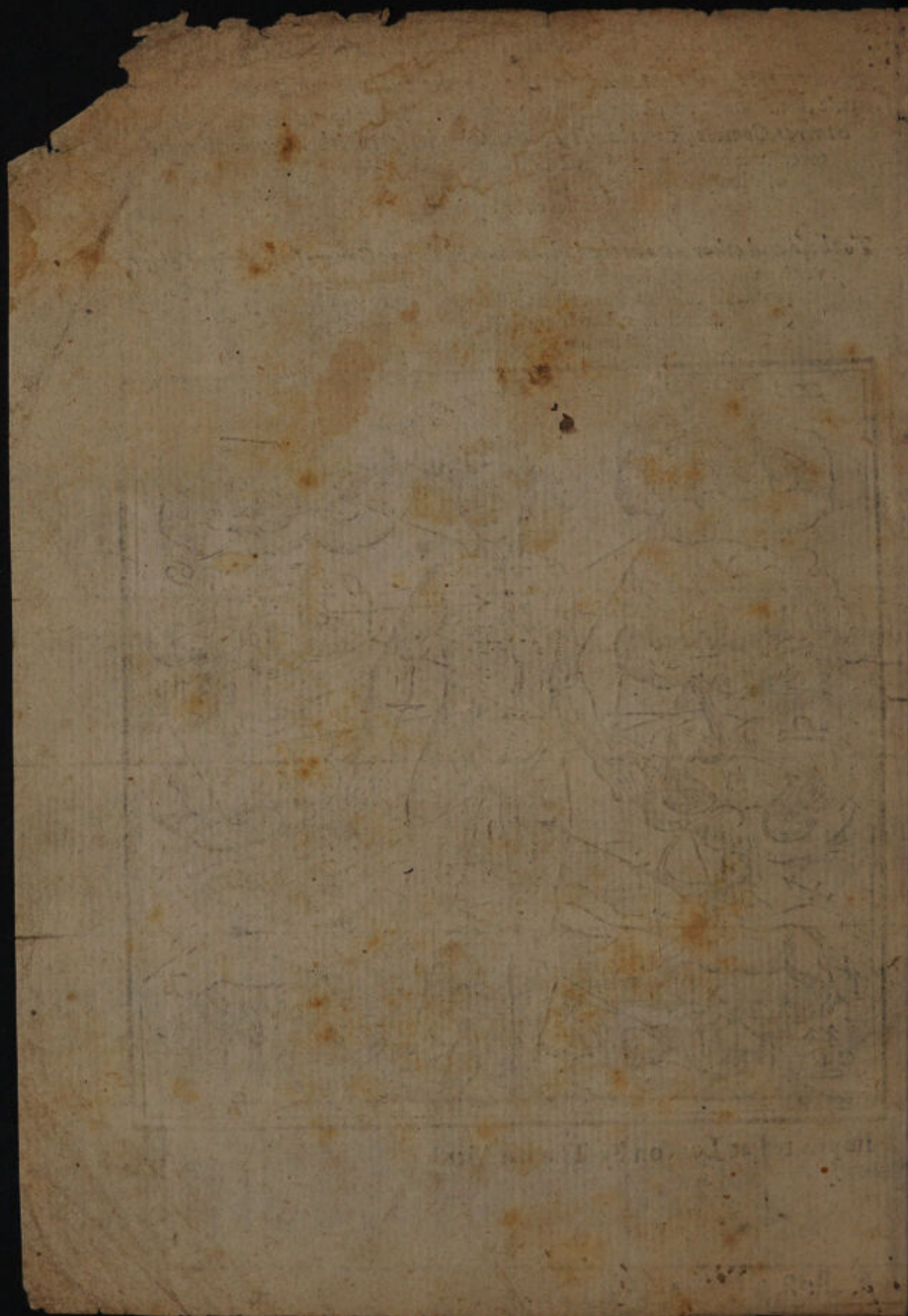
*¶ A Prognostication euerlasting of right
 good effecte, fruitfully augmented by the auctour, containing plain,
 briefe, pleasaunt, chosen rules to iudge the Weather by the Sunne, Moone,
 Starres, Comets, Rainebow, Thunder, Cloudes, with other extraordinary
 tokens, not omitting the Aspects of Planets, vvith a briefe iudgement for euer,
 of Plenty, Lacke, Sickenes, Deearth, VVarres &c. opening also many
 naturall causes vvorthy to bee knowen.*

*To these and other now at the last, are ioyned diuers General pleasaunt Tables,
 vvith many compendious Rules, easie to be had in memory, manifold vvayes
 profitable to all men of vnderstanding, Published by Leonard Digges
 Gentleman, Lately corrected and augmented by
 Thomas Digges his Sonne.*



Imprinted at London by Thomas Marth.

Anno 1578.



TO THE RIGHT HONORABLE SIR EDWARD
Pines, Earle of Lincolne, Baron of Clinton and Say, knight of the
noble order of the Garter, Lord high Admiral of England, Ireland &
Wales, and of the Dominions and Iles thereof: of the towne of Calice &
Marches of the same, Normandy, Gascoigne & Guien. And Captain generall
of the Queenes Maiesties Seas and Navie Royall.

Right honourable, hauing of long time sundry
wayes found your Lordships great fauour not
only toward my father in his lifetime but al-
so toward his, most beautifully continued since
his death, I haue carefully thought which way
I might some way yelde a testimony of a gratefull minde.
And Perusing of late a Booke of my fathers to your Lord-
ship dedicate, by negligēce or ignorāce of Correcters ma-
ny wayes depraued: I determined both to amēd the faults
& with some additions to amplifie the same, briefly also to
touch & discouer certaine errors touching matters of
Nauigation transferred into our language. And although
I haue in a peculiere volume for that purpose prepared to
entreate at large deliuering new Rules & Methodes hi-
therto in no language published, nor to my knowledge of
any forraine Natio practized, not onely in demonstration
void of all error, but also in practize feasible. Yet in the
meane least farther bouldnes by ignorances should encrease
to deriue vs mo errors from other nations, wherof our
Seamen haue learned to many already: I thought good at
the end of this booke to note some of the most vsed & este-
med & among that factio held for Oracles, wherby, in dede
they haue bin & are (in all Nauigations) so misled, that
were they not by sight of the coast, & soundings better di-
rected, then by any troth in their Art, many mo vessels
should daily perish. This present, toke therefore of dutifull
good wil I shal humbly desire your lordship in good part to
accept, meanig hereafter (God sparing life to honour your
Lordship & profir my country with matters more rare,
And in the meane humbly take my leaue.

At your Lordships commaundement
Tho. Digges.)

To the reader.



Though (gentle Reader) the verely care
trauayles and paines of other, with the
confusions, repugnances, and manyfolde
errozs partly by negligēce & oft through
ignorauce committed: I haue agayne
briely set forth a Prognosticatio general,
for euer to take effect, aduynning thereto
diuers profitable collections, and many pleasaunt conclusions,
easie of al willing ingenious to be perceiued. Here note (Rea-
der) wheras the eleuate Pole and Meridian should be conside-
red, in this worke it is perfourmed for Londō, because I wish
this Meridian situation or clime the exact truth of thinges. If
any yearly practises in like matters agree not with my calcu-
lations, be assured they are false, or at the least for other Ele-
uations or Meridians supputated, and therfore little seruing
thy purpose. And that the late rude inuentions, and grosse
deuises of some this yeare, & two yeares past published might
be of them perceiued, then filed, and to serue to some profite: I
haue purposed euen now to put forth a booke named Panau-
ges wel seruing their turne, and so generally and most exactly
al Europe, pleasaunt, profitable to the learned, & no smal de-
light to all maner of men. An other booke is also ready come
to thy handes, tituled Tectonicon a treasure vnto the Masōs,
Carpēters, Lādmeaters, correcting their old error swōg-
fully reckened of them as infailible grounds, teaching faith-
fully, sufficiently, and very briely, the true mensuration of all
maner land, timber, stone, wood, glasse, &c. And at the end co-
taining an instrument Geometricall appointed to their vse.
Take in good worth these labours (loving Reader, and looke
thoroly for the pleasaunte fruites Mathematicall, euen such as
haue bin promised by my friends and partly by mee. Neither
shal my desire to profite herestay: but entēdeeth farther to pro-
ceede, if these seeme accepted. As the good will of Printers not
had, hath kept: & kepte from you: so I trust & willing minde
& excellēcy of Tho Gemini, shal bring them shortly vnto you.
Certes my hope is while life remaineth, not to be vnfruitful
in this common wealth with study and practise.

Against

Against the reprovuers of Astronomie, and Science Mathematicall.



IAm diuersly occasioned (louinge reader) somewhat to write in the commendatio of the Mathematicals which needed not, but onely to open the foolishhe rashnesse, and rash foolishnesse of such, which of late haue in writinge dyspraysed these goodly artes. It is an olde sayde saw, & true: *Scientia non habet inimicum nisi ignorantem*. But to auoyde tediousnesse, and chiefly for the more satisfiying, I referre all of that sort, which haue tasted any learninge (the rest not regarded) to the first parte of famous Guido Bonatus de vtilitate Astronomie in communi, where hee wyrteth contra illos, qui dicunt quod scientia Stellarum non potest sciri ab aliquot: contra illos, qui dixerunt, quod scientia Stellarum non est utilis, sed potius damnoſa &c. contra illos, qui contradicunt iudiciis Astronomie, & qui reprehendunt eam, nescientes dignitatem eius, eo quod non est lucratiua. Also for breuitie I appointe all nice diuines, or (as Melancthon termeth them) Epicurei Theologi, to his hie commendations touching Astronomy, uttered in his Epistles to Simon Grineus, to Schonerus, & to the peroration of Cardanus's booke, where he sheweth how farre wpe they alledge the Scriptures agaynst the Astronomer, which make wholly with the Astronomer. Melancthon wyrteth and affirmeth. *Arrogantiam esse cum summa stultitia coniunctam, venari choragium aliquod glorie ex insectatione artium, que sunt graui autoritate doctorum prouidentiu recepta, hee calleth it manifestum insanie genus, declarans quod magis opus habent Medicis, quam Geometris, aduising the learned not to giue eare vnto theyr folly. Sinamus (ait) una cum Epicuro ineptire.* Whych counsell lo, I folow. Now therefore, ye enemies of all good doctryne epther geue an ouerthrowe & that w your penne, or let famous Guido, or learned Melancthon satisfie. If neither: certes I will shortly (God sparing life) take some paine in publishing the wonderfull vknowne pleasaunt profits of these dysprayed high knowledges and by that meanes to enforce silence.

Vituperant
qui simpliciter
eas ignorant.

Now in few, for thy encouragement in these, thus I say and truly, thee ingenious learned, & wel experiēced circumspect student Mathematicall, recepueth dayly in his witty practises more

A.

pleasaunt

Stulti negligunt & contemnunt:
qui contradicunt
ambitiosus est,
qui maledicunt,
fatuus.

pleasunt ioy of mynde, then all thy goods (howe riche soener thou bee) can at any time purchase. *Id tantum quod pulchrum est, quod purum est, quod diuinum est, nihil mortale sapiens dulci ardore amplectitur. Ut multa paucis: crede mihi, extinguit dulce erit Mathematicarum artium labore.* Now to ende: that learned Guido, y excellent Guido bonatus, sheweth what Astrologie or Astronomie is, & ought not (sayth he) by any meane to be reprehended, in that the most wyse, yea, the holy fathers haue practised that science. We praeue it one of the chiefe sciences Mathematicall. by the aucthority of the best learned, & by Aristotle in his Posteriorum. Howe cometh it to passe louinge Reader, seeinge it is a noble Science. *Et Scientia est notitia vera conclusionum, quibus propter demonstrationem firmiter assentimur,* that it is counted bayne, and of so small strenght: the secret truthes and most pleasaunte profiters therein not desired, yea vtterly dyspyled and of some busy byting bodie reiected as very lies? Let no man doubt ignorance, the great enemy of all pure learninge hath wrought this. *Nam incertam vocat hanc artem vulgus, propter errores non arti, sed hominum indoctissimorum in scitia, & temeritati imputandos, qui citra delectum omnia effutiant.* Thus I leaue indigently farther to trouble: fauour me as I tender the furtherance of good learninges, profitable to a common wealth. Fare most hartely well, vnfayned good Christian Reader.

The contentes of this booke.



From y^e next syde to the fyft leafe are contained
y^e form of a Quadzante, Square, Circle, Qua-
ntities, with a figure trulye placinge the sayde
Quancity in the heauen.

From the fyfte to the thirtenth, yee haue the
iudgement of weathers by the Sun, Moone,
Starres, Comets, Raynbow, Thunder, Clouds, with extraor-
dinary tokens and aspectes of Planets. &c.

The 13. 14. 15. and 16 leafe, shewe the causes of such alteration
according to Aristotle. Fyft of y^e Raynbow, then Rayne, Frost,
Dewe, Snowe, Hayle, Wyndes, Earthquakes, Thunders,
Lightninges, Comets, Sunne and Moone eclipsed, Quanti-
ties of the Planets, and their placynge ocularly demonstrated.

The 17 the aspectes of the Moone and her sygnification in the
12. celestiaall Signes.

The 18. 19. and 20. What Signe the Moone is in & halbee for
euer, the meete time to let blood, to purge, to bathe, to fall timber
to sow, to plant, to grasse ent geloe.

The 20. and 21. haue Tables for the Sunday letter, for y^e Gol-
den number or Prime, for the Epact and moueable feastes, many
wayes conducing.

The 22. 23. and 24. the age of the Moone, y^e chaunge and quar-
ters for euer are declared, the Ebbings and Flowings, the break
of the day, the Sunne rising, the length of the daye, and Night, y^e
Twylghe for al the yeaere.

The 25. 26 and 27, shewe exacte pleasaunt wayes for the day
and night howze, with composition of meete instruments.

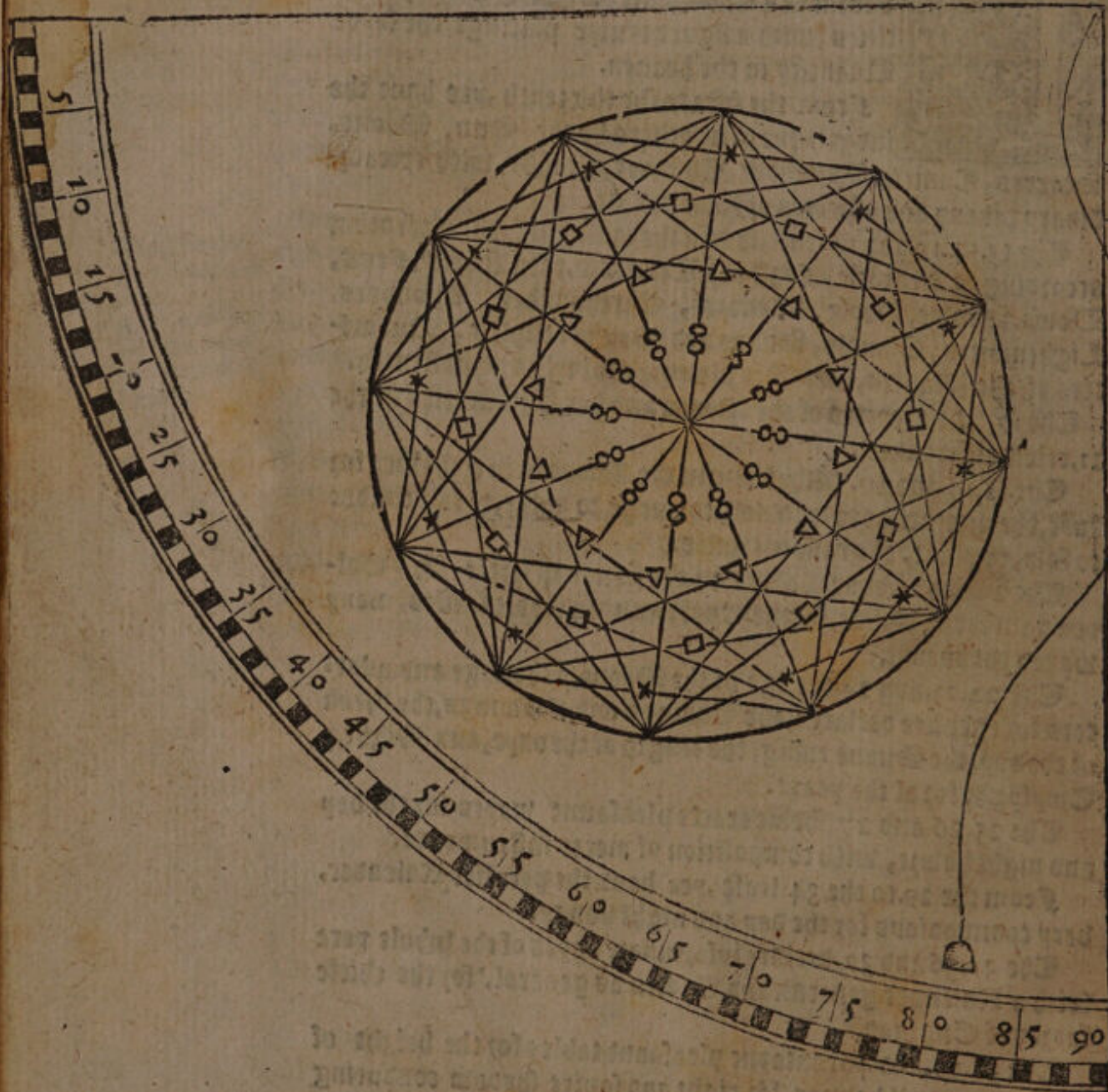
From the 29. to the 34. leafe, yee haue the peculiar Kalender,
very commodious for the day and night howze.

The 35. 36 and 37. declare infortunate dayes of the whole yere
with a Kalender general, and Tables as general, for the chiefe
fayres of England.

The 38. 39. and 40. contayne pleasaunt tables for the height of
the Sunne at all howzes, for right and squire shadow conducing
also to the composition of many instrumentes. &c.

The 40 and 41. leafe, Collections easy to be had in memozye

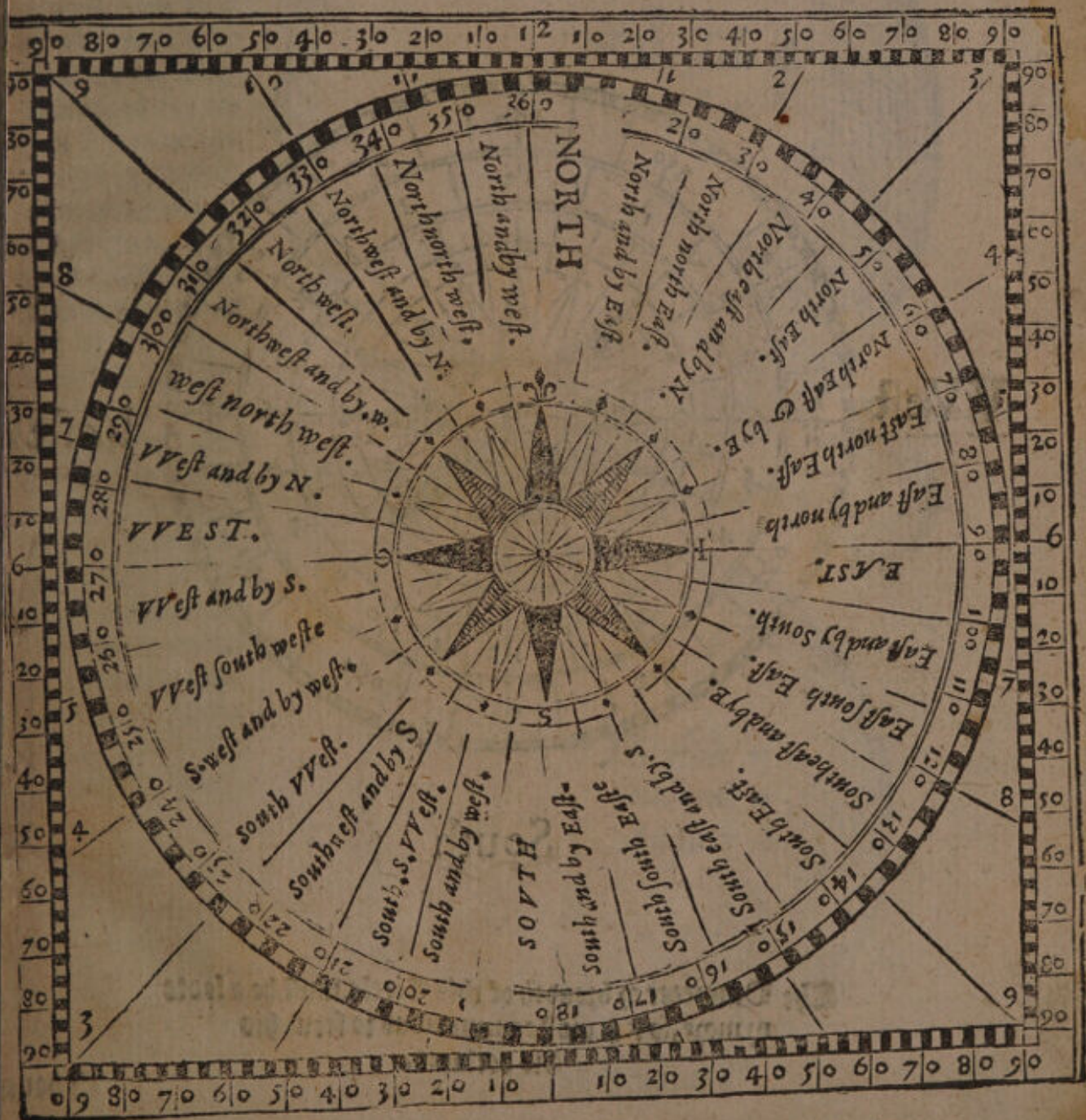
¶ This Quadrant is appoynted here to gette exacttlye the length of Staffe.
and Squier shadow, how vnleuel soeuer the ground be, as I haue sufficient
ly instructed in the eight and thirtie leafe.



If ye list not to make a Quadrant, ye may vse this very vvel: adding a plumbmet and
lyne, vvith sightes or othervvise,

This

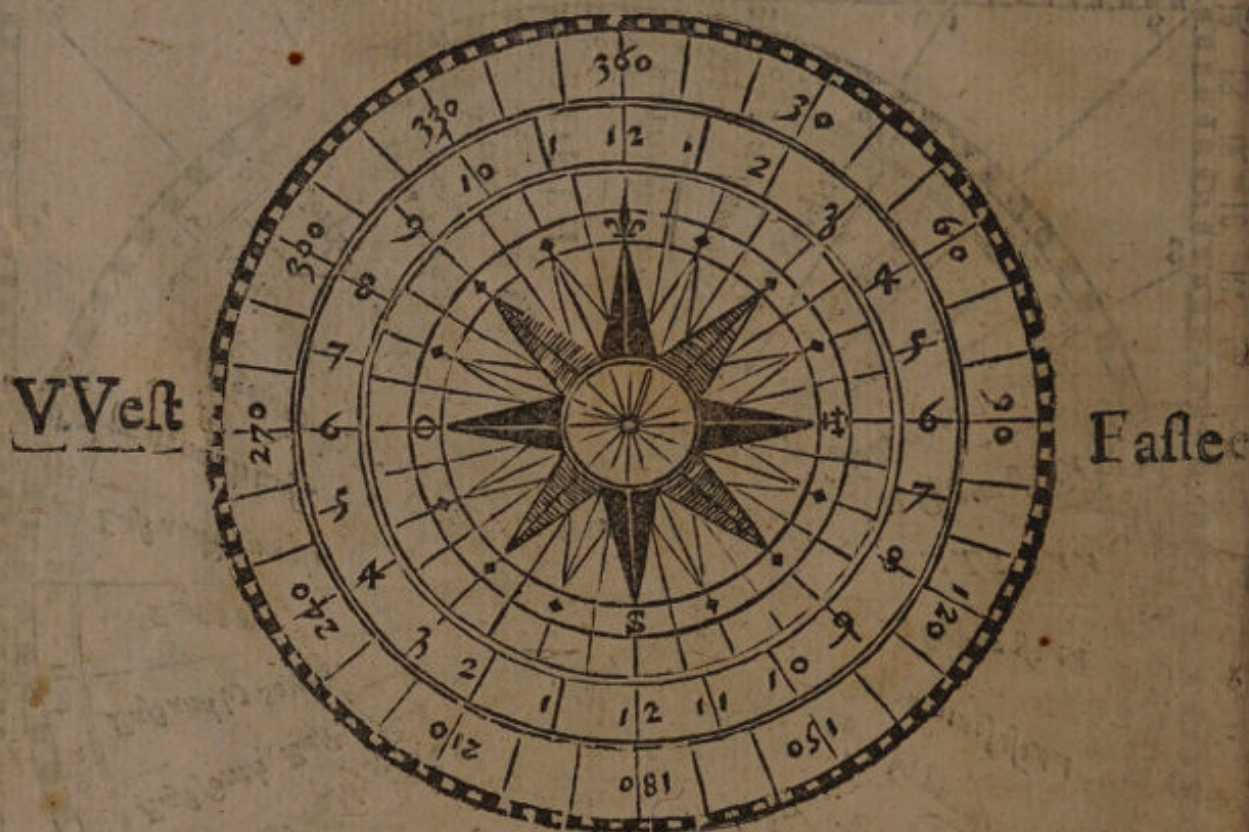
This instrument must be made in a playne fyne metall plate, a foote or more square. Then it is pleasant for the houre of the day and nyght, either to be fixed about your house, or moveable if ye list, by a Needle to placed where and when ye wil. The 26. leafe sheweth the making.



The good Mariner may long for the vse of this Instrument: it
serueth marueplously his tunc.

Or thus without the Square, this Circle wil serue wel.
your purpose beyng exactly made, and truly placed.

North



South

The Diameter or breadth of this Circle, must be a foot
or more, so it is most commodious to serue his
use declared.

I have

I have placed
ready to bee con-
ceyued even here
at the eye, & true
quāties of mag-
nitudes of the se-
uen Planets, the
one to the other,
and every one to
the earth: whych
may satisfie them
that Scorned my
last publyshinge,
where I declared
the Globe of the
Sunne, to con-
teyne & Globe of
the Moone. 7000.
tymes. I woulde
they were able to
concelue Demon-
stration made: the
the truth moze e-
vidently appea-
ring, would pull
scornings away.



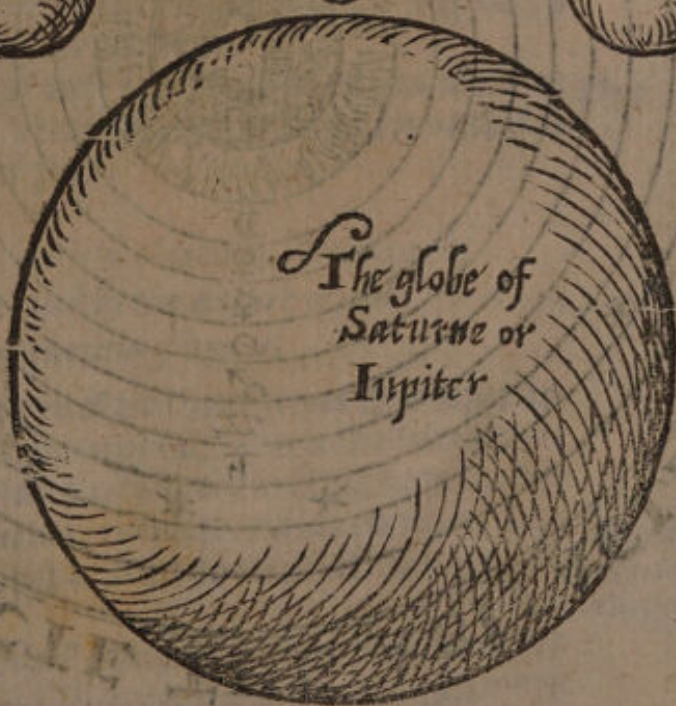
Earth.



Venus or the Moone.



Mars.

The globe of
Saturne or
Iupiter

I thought it mete also to put here this figure, shewing the placing
 compassing, and distances of ech of the foresayd Planets in the hea-
 ven; which distances at my last publishing were thought impossible.
 This figure wittily wayed may confirme a possibility to agre vnto
 the true Quantities, immediatly before put forth, therefore not om-
 mitted here to bee placed.



HOVV TO IVDGE OF Fol. 5.

weather by the Sunne rising

or going downe.



If the Sunne in the Horizon or rising, cleare & bright, sheweth a pleasant day, but thinly overcast with a cloude, betokeneth soule weather. Also at \bar{p} going down, the body diuersly coloured or red, & about dispersed with like cloudes, the beames red, & of length, pronounceth great wyndes, the next day from that part. Blacknes in the Sunne or Moone, betokeneth water: Red signifieth Winde.

*De obseruan-
dis meteoris.*

The Element redde in the evening, the next day sayre: but in the morning redde, wynde and rayne. Also the Sun beames spotted, greene, pale, or blacke, gathered to a cloude, signifieth rayne. Further the Sun at the setting playnly seene without any cloude, declareth a sayre night to ensue.

Here note, Ptolome willety vs diligently to obserue, the circle or circles about the Sun. If it be cleare, & that circle of no continuance, behold sayre weather. If many of them, winde.

Winds more behement are signified, if \bar{p} the circles be somewhat redde, here & there broken: but these obscured thicke, & blacke, looke for cold wynde and snow.

What is spoken of the Sun, touchinge the circles, the same Note. is ment of the Moone. Note here that greater wynds chaunce in the day, then in the night.

*Howe weather is declared by the colour of
the Moone, and by the nature of the
Signe wherein shee is.*

If the Moone in the third of hir change, yea three dayes before the full, or in the middes of the quarter, be sound of pure light, nothing compassing hir, th'ende direct vp, she promisseth sayre weather, but bent to red coloure, pronoketh winde. The Moone pale or somewhat inclined to black, obscure or thicke, th'eatneth rayne.

*Luna rubens rē-
tat, pallor pluit,
Alba serenat.*

Also by the nature of the signe, weather may be iudged, thus according to Stofferinus, Monte regius, Leupoldus, & famous

B.

Guido

A Generall Prognostication.

Guido Bonatus, whiche other wel travelled in his mutations of ayre

Consider the nature of the signe where the Moone is at the change, quarter, and ful. If she be in hote and dry signes, as Aries, Leo, Sagittarius, in winter a good token of fayre weather. In Sommer a great signification of immoderate heat: If in earthy cold and dry signes, as Taurus, Virgo & Capricornus, in winter iudge cold, frost, & snow to ensue, but in sommer temperate weather. In Ayrie and windy signes as Gemini, Libra and Aquarius, much wynde. If in watrye colde and moyste signes, as Cancer, Scorpio and Pisces, in Winter wet weather watrye. In sommer a pleasant temperature.

Also the Sunne in Aquary, the Moone at the change, there or in Sagittary, or at the ful in Leo, betokeneth raine. The Sunne in Pisces or Aries, the more in Virgo, Libra, or Sagittary, signifyeth raine especially in watry dwellinges. The Moone in Aquarius or Pisces, loke for change of weather, the chiefly she troubleth the ayre. The Moone also at the change or rather at the ful, in Aries, Libra, Scorpio or Pisces, tempestuous weather followeth. The Sunne in Aquarie in Aries, Libra, or Scorpio, but chiefly in Leone, the Moone then at the ful, and that after raine or mistings, loke for lighening thunder &c. To conclude the Moone in Cancer, Leo, Capricornus, or Aquarius, ayded with any aspect, but chiefly with opposition or Quadrat of Venus raine followeth.

The iudgement of weather by Starres.

Behold the Stars whose magnitude you know best. If they appeare of much light, in bignes greates more blasinge then they are commonly, it betokeneth great wind or moisture in that part where they shew: in winter, cold and frost. When starres seeme to runne in the Element, it sheweth wynde. Affirme also alteration of weather, if they be slowe in number, cloudye, and of little lighte. Further when dim starres appeare with long fiery tayles, iudge wyndes and great drought, the more in number, the greater effect. When Stars in the night (as it is sayd) shoote

Cū maior
apparēt
tū enim
Humore
medius
crasset
aer.

shoote or seem to fall, it argueth wynd in þ parte. If in diuers places, inordinate wyndes, if in al places, then pronostice winds chunder, lightnings, yea weather most tempestuous.

¶ The significations of Comets.

Comets signifie corruption of the ayre. They are signes of Earthquakes, of warres, chaunginge of kingdomes, great dearth of Corne, yea a common death of man and beast.

De cometarū
prodigijs, lege
Cardanū lib. 4
Fol. 83. & An-
tonium Mizal-
dū de Cometo-
graphia.

Pontanus sic scribens: Ventorum quoque certa dabunt tibi signa Cometa: Illi etiam belli motus, feraq; arma minantur, Magnorum & elades popularium, & funera regum, aquarum significat penuriam.

¶ How by the Clowdes, chaunge of weather is perceyued.

If thicke clowdes resembling flockes, or rather great heapes of wol, be gathered in many places, the shewe raygne. Also when grosse thick darke clowdes right ouer the Nozthe parte, or somewhat declyninge to the Weste are close with the Earth immediatly followeth rayne. If they appeare like Hilles, some deale fro the earth, a good token of weather ouerpassed. Black clowdes, signify rayne. Whyte clowdes appearing in winter, at the Horizon two or thye dayes togeather, prognosticate cold, and snow.

Of the Raynbow and his effect touching alteration of Ayre.

If in the morning the raynbowe appeare, it signifyeth moysture, vnlesse great drought of ayre worke the contrary. If in the evening it shew it selfe, saye weather ensueth, so that aboute moyst ayre take not away the effect.

Arcus nisi sole
aduerso non
fiunt.

Or thus,

The raynbow appearing, if it be saye, it betokenneth foule weather: if foule, looke for saye weather. The greener, the moze rayne, redder winde.

Non apparet
nisi cum vapo-
res rarificantur
vel inspissantur

Of thunders, what they signifie,

B 2

Thun-

A generall Prognostication

Signum futu-
rorū bellorū.

Tunders in the morning, signify wynd. About noone, rain.
In the Evening, great tēpest. Some write (their grounde I
see not) that Sondays thunder, Shoulde byng the deathe of
learned men, Iudges and others.

Sondays thunder, the death of women.

Tuesdages thunder, plenty of grayne.

(thet.

Wednesdages thunder, the death of harlots, and other bloud-

Thursdages thunder, plenty of sheepe and coyne.

Frydages thunder, the slaughter of a greate man, and other
horrible murders.

Saturdays thunder, a general pestilent plague and greas
deathe.

*¶ How weather is knowen after the
chaunge of euery Mone by the
Prime daye.*

Sunday Prime, dry weather. Monday prime, moyst weather.
Tuesday Prime, colde and windy. Wednesday Prime, won-
derful. Thursday Prime, fayre and cleare. Frydais Prime,
mixt weather. Saturday Prime, moyst weather.

*¶ Nowe ys saeth extraordinary tokens
for the knowledge of weather.*

Common to-
kens of wea-
ther meete for
all manner of
wits.

Some haue obserued euil weather to follow, whan as watry
foules leaue y^e Sea despying lande: the foules of the land fly-
ing high, y^e cryng of foules about waters, making a great noise
wth their wings: Also y^e Seas swelling wth vnaccustomed waues,
if beastes eate greedily, if they licke their hooues: if they sodayn-
ly moue here and there making a noise, b^yethinge vp to y^e ayre
with open nosthils: if rayne foloweth. And the busy hearinge of
Moles, the appearing or comming out of wormes, Venues re-
sorting to the pearch or roust covered with dust, declare rayn.
The ample working of the spinner in the ayre: the Ant busied
wth her egges: the Bees in fayre weather not far wandring,
the continual prating of the Crow, chiefly twise or thise quick
calling. Hew tēpest. When the Crow or Rauē gapeth against
the Sunne in Sommer, heat foloweth. If they busie themselves
in

in prouiding or washing, & that in winter, loke for rayn, The vn-
 custumed noise of poultry, the noise of swine, of Peacocks, de-
 clare the same. The swallow flying and beating the water, the
 chirping of the Sparow in the morning, signify rayne. Rayne
 suddenly dyed by. Muddy coueringes straiter then of custome.
 Vels hard further then commonly, the wallowing of dogges
 the alteration of Cock crowing, al declare rainy weather. I
 leaue these, wanting y good ground of the rest. If the learned
 be despyeful of the foresayd, lette them read graue Virgil,
 Primo Georgicorum. At Bor. &c.

There be a multitude of other not extraordynary, but of the
 best knowe causes: many for breuity here omitted, y most part
 not mentioned, because they passe the capacity of the comon soze
 vpon al the which the Astronomer both wel and learnedly co-
 clude. I doubt not, ther be also sometime vnknewen matters,
 mitigating the aforesayd or prouoking tempest vnloked for,
 which neither experience, ne learning hath established. How vn-
 kinde (these considered) yea how far from worthy thanks ge-
 uing are they, which in generall headdely do blame, cheeking
 bitterly the Astrologer, with these Iudiciary matters, the
 least part among a number of his most certayne doinges whe-
 chinges fortune contrary to expectation? Understande gentle
 Reader, y consent of a multitude famously learned is their buc-
 ler, euen in these matters iudiciary. Who haue wayed a long
 time prudently, the great strength, the vehement force, & mar-
 uailous natures of al erratical, & celestial constellations, with
 their Angles, Radiations, Aspectes, Affections, Stations,
 Progressions, Defections, Dispositions, Applications, Pre-
 uentions, Refrenations, Contrarieties, Abscissions, Coniuncti-
 ons, Quadratures, and Oppositions &c. Therefore extreame
 folly, yea moze then madness doth be vtter, which imbrayneth
 or backbitteth these knowledges, not remembringe the great
 and manifold benefytes had through them, and that with most
 certaynty in al other doinges.

What Meteoroscooper, yea who learned in matters Astro-
 nomical, noteth not the great effectes at y rising of the starre
 called the little Dog? Truly y consent of the best learned doo-
 gre of his force, yea Plini, in his history of nature affirmeth y
 Seas the most fierce. wines to flow in cellers, standing waters

Canis minoris
 efficitur.

Orionis, Arc-
turi, Coronæ,
Capræ, Iucula-
rum effectus,

♂ □ & ! ○ ○ ♀
 என்ரு @ அரு D.

♂ ♀ ☐ & ○ ○
cum ♀ aut. cum
☉, &c.

to moue, dogs enclined to madnes, then most woode. Farther
these constellations, Orion, Acturus, Corona, ryling prouoke
tempesteous weather. The Kid and Goat, winds, Hyades, oz,
Succule rayne. What Meteorologer consenteth not to þ great
alteration and mutation of ayre, at the coniunctiõ, oppositiõ oz
quadrate aspect of Saturne, with either two lights? Who is
ignozaunt, yea meanly trauelled in Astronomy, that Iupiter is
Mercurie oz with the Sunne, enforceth rage of windes. What
is he that perceiueth not the fearful thunders, lightnings &
raies at þ meeting of Mars & Venus, oz Iupiter & Mars. &
Leaue, for shame to oppugne these iudicials strõgly authorisẽd.
We that any other part carpeþ may seeme moze then mad. All
truth, al experience, a multitude of infallible grounded rules
are agaynst him. *Certum est omnibus que notum, quod cœli motus
signorum ortus, & occasus, planetarũ aspectus, & coniunctiones lu-
minarium Eclipsis, &c, certissimam, determinatam, ac infallibilẽ
habent causam. Quis iam sane mentis negabit eorum effectus sape
innotescere, utpote bella, fames, grandines, aëris perturbationes, ele-
mentorum commotiones, terra motus, & similia? Positis causis
naturalibus, & non impeditis, sequitur effectus.*

The learned that listeth ingeniously to prognosticate of weather wil not onely discretely way al before wrytten, but consider also with them the aspectes of the Planets followinge, and their Combustion in the xii. signes, with the coniunctiō of fixed starres, mansions of the Moone, Ascendent, Climes &c. Also the times or quarters of the yeare must be noted diligently (as ensueth) and iudgement accordingly pronounced.

Of the year are denved into 4 quarters

୪୪ II Po.
 vyer ouer, the
 best.

¶ Po=
vvet ouer all
gumes.

The Spring time is hot and moyst, and continueth so longe as the Sunne is in Aries, Taurus, Gemini, which is from the tenth of March vnto the xii. of Iune. The Sommer is hot and drye, compted from the beginninge of Cancer to the ende of Virgo that is from the twelc of Iune to the 14 of September. Haruest is cold and dry compted from the beginning of Libra to the end of Sagittary, counted from the 14. day of September to the xiii. of December. Winter is cold and moyste, con-

Continued from the beginning of Capricornus, to the end of Pisces, & is from the twelfth of December, to the tenth of March.

Here followe the aspectes of the Planets,
for the better iudgement of
Weather

BEfore I declare of Planets & the signification of aspectes, it behoueth briefly to open what I call planets, & what aspectes, and how they are Characteres & figured. Understand there be seuen moueable stars pleasant to the sight called Planets, & highest Saturn, then Jupiter ♃, Mars ♂, Sunne ☉ Venus ♀ Mercury ☿ and ☾ Moone next to the Earth.

Now when I desyre to expresse Saturne, I write this figure ♄ for Jupiter this ♃ for Mars thus ♂, thus of the other as their Characters declare. All Radiations or aspectes are expressed as follow: A Coniunction thus figured ☿ and it is when another Planet is ioyned with the Sunne or Moone, or others among themselves, within one degree or lesse.

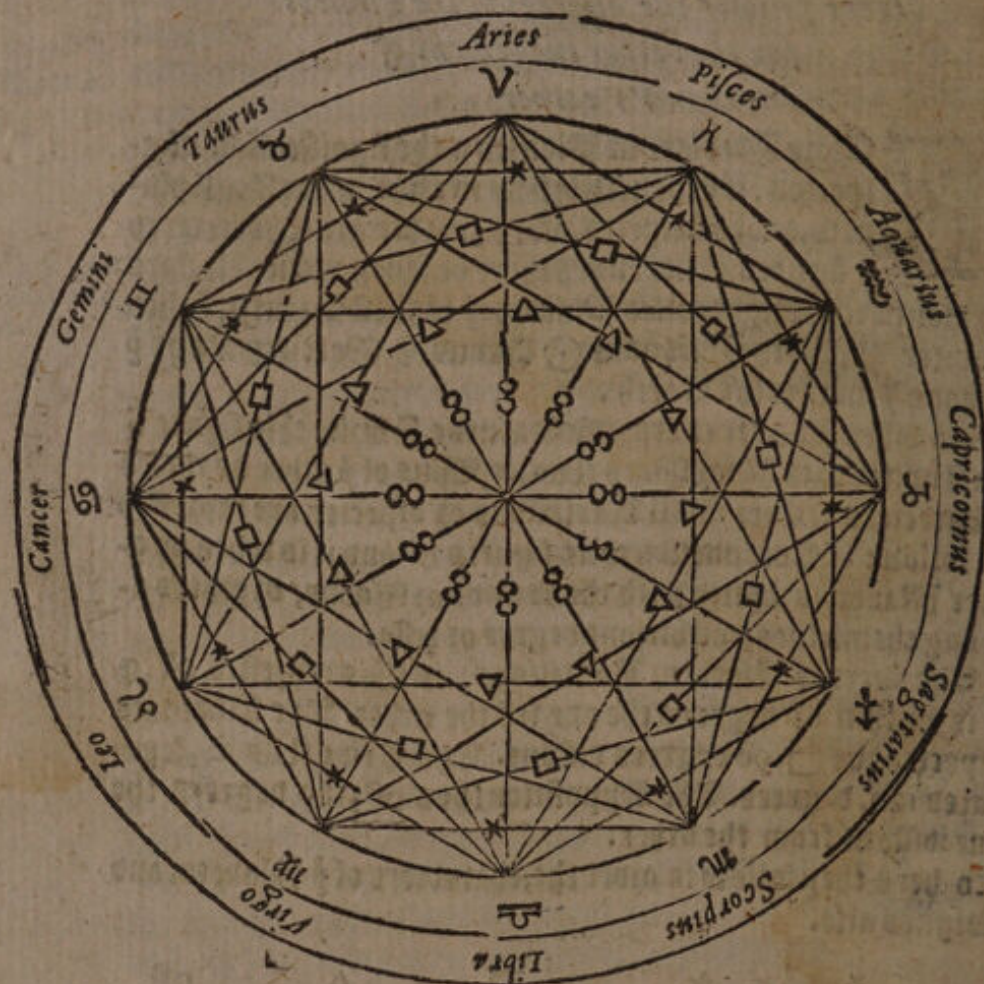
The Sextile Aspect or Radiations, is thus expressed *, & it is within 60 degrees the one from the other. The Quadrate aspect thus □, 90 degrees distant. The Trine thus △, separated 120. degrees. The Opposition thus ☾, 180. degrees the one distant from the other.

So here they follow in order the characters of the Planets, and Signes also.

☿	*	□	△	☾	
Coniunction,	Sextile,	Quadrate,	Trine,	Oppositio	
♄	♃	♂	☉	♀	☿
Saturne,	Jupiter,	Mars,	Sunne,	Venus,	Mercury,
☾					
♈	♉	♊	♋	♌	♍
Aries,	Taurus,	Gemini,	Cancer,	Leo,	Virgo,
♎	♏	♐	♑	♒	♓
Libra,	Scorpius,	Sagittarius,	Capricornus,	Aquarius	Pisces
				♈	♉

A Generall Prognostication

Yet for more playnnesse behold this figure.



The signification of aspectes of Planets among themselves: for the iudgement of weather.

h & cum h

The coniunction or meeting of Saturne wth Iupiter, in fiery signes, enforceth great drought. In watry signes, flouds continuall rayne, generall overflowinges, &c. In ayrie signes, plenty of wyndes.

The

The Quadzante, Sextile, or Opposition of Saturne wth Iupiter, in moyste Signes, causeth troubled Ayre, by Hayle, Wynde, Rayne, Thunder &c. before & after. $\text{h}\square^{\circ}\&\circ\circ$
cum v .

The Coniunction, Quadzature or Opposition of Saturne, with Mars, in watry Signes, declare in Sommer rayne, ofte houres with hayle, thunder and lightning. $\text{h}\delta\square^{\circ}\&\circ\circ$
cum δ .

The Coniunction Quadzature or Opposition of Saturne with the Sunne chiefly in colde signes, shew darke weather, hayle, rayne, thunder, and colde dayes. $\text{h}\delta\square^{\circ}\&\circ\circ$
cum \circ .

The Coniunction, Quadzature or opposition of Saturne with Venus, in winter engender, cold and raine, principally in moist Signes: in sommer, mitigation of heate. $\text{h}\delta\square^{\circ}\&\circ\circ$
cum v .

The Coniunction, Quadzature, or Opposition of Saturne with Mercurie, in watry Signes, bring raine, in hotte or dry signes, brought in Sommer, thunder lightnings & tempest. $\text{h}\delta\square^{\circ}\&\circ\circ$
cum v .

The Coniunction, Quadzature, or Opposition of Iupiter with Mars in moyste Signes, declare thunders, lightnings & rayne: in winter snow, or cloudy thicke weather. $\text{v}\delta\square^{\circ}\&\circ\circ$
cum δ .

The Coniunction, Quadzature, or Opposition of Iupiter with the Sunne, great and most vehement wyndes. $\text{v}\delta\square^{\circ}\&\circ\circ$
cum \circ .

The Coniunction, Quadzature or Opposition of Iupiter with Venus in moyste Signes, cold and mistings, in the reste Signes, fayre weather. $\text{v}\delta\square^{\circ}\&\circ\circ$
cum v .

The Coniunction Quadzature or Opposition of Iupiter with Mercurie, great wyndes. $\text{v}\delta\square^{\circ}\&\circ\circ$
cum v .

The Coniunction, Quadzature, or Opposition of Mars, with the Sunne in fiery signes, brought: in watry, thunder, and rayne. $\delta\delta\square^{\circ}\&$
cum \circ .

The Coniunction Quadzature or Opposition of Mars with Venus, in moyste signes, rayne and tempest. $\delta\delta\square^{\circ}\&$
cum v .

The Coniunction, Quadzature or Opposition of Mars, with Mercurie in hot signes, great heat: in dry signes, brought in watry, Rayne sometimes, Thunders, lightnings, and so- dayne fierce wyndes. $\delta\delta\square^{\circ}\&$
cum v .

A Generall Prognostication.

☿☐&♂
cum ♀.

The Coniunction Quadrature or opposition of Venus with Mercury causeth rayne: in Sommer they prouoke tempest, the more if they agree in watry signes. Note what is sayd of the Coniunction Quadrature or Opposition, the same is also met of ☿ Sextile and Trine, but they are of lesse signification, so the learned noteth.

A Declaration of Weather, by Aspects of the Moone with Planets.

☿☐&♂
cum ♄.

The Coniunctio Quadrature or Opposition of the Moone with Saturne in moyst signes, bringeth a cloudy day, cold ayre according to the nature of the signe: If she go fro Saturne, to the Sunne, by coniunction or otherwise, harder weather ensueth.

☿☐&♂
cum ♃.

The Coniunctio Quadrature or Opposition of the Moone with Iupiter in Aries or Scorpio, sheweth fayre weather, white disparted cloudes.

☿☐&♂
cum ♂.

The Coniunction, Quadrature or Opposition of the Moone with Mars in watry signes, rafne. In hoate signes, diuers coloured cloudes are made, at the Elemēt ouer. In Sommer often thunder.

☿☐&♂
cum ☉.

The Coniunction, Quadrature or Opposition of the Moone with the Sunne in moyst signes, rainy weather. The more if the Moone go from the Sunne to Saturne.

☿☐&♂
cum ♀.

The Coniunction Quadrature or Opposition of the Moone with Venus, chiefly in moyst signes, rayne followeth. The Moone going from Venus to Mars, more variety of weather.

☿☐&♂
cum ♀.

The Coniunction Quadrature or Opposition of the Moone with Mercury in moyst signes, sheweth rayne and wynd, the more when the Moone passeth from Mercury to Iupiter: then great Windes follow.

How

How the weather is iudged by the O-
 rientall and Occidentall station of Planets, with their
 Combustion in the 12. Signes Celestiall. First
 of the Planets in Aries.

SATVRNE in Aries Combust, that is to say h in γ
 vnder the beames of the Sunne, maketh a cloudy
 darke troubled ayre: Orientall, I meane in the
 morning appearing before the Sunne, sayre wea-
 ther. Occidental, that is to say, shewing himselfe
 after the Sunne going downe, betokeneth great wyndes.

Jupiter in Aries combust, a token of raine, being Occidental, u in γ
 bringeth clouds, & dewes: Orientall, sayre pleasant weather.

Mars in Aries combust and Occidental, good weather: contra- d in γ
 ry Orientall.

Venus in Aries combust Occidental, moistnes, great winds: f in γ
 Orientall thunders, and raynes.

Mercury in Aries combust, Tempest: Occidental and Orien- f in γ
 tall, sayre windy weather.

Of the Planets in Taurus.

SATVRNE in Taurus combust, and stationary, bringeth h in δ
 thicke cloudes, thunders and troublesome weather.

Jupiter in Taurus combust, indifferent weather: Occidental, u in δ
 pleasaunt showres.

Mars in Taurus combust, a quiet ayre: but Orientall windy. d in δ

Venus in Taurus combust, thunders. &c. Occidental, sayre. f in δ

A Generall Prognostication.

Of the Planets in Gemini.

♄ in ♊	SATVRNE in Gemini combust and Occidental, droughe.
♃ in ♊	Iupiter in Gemini combust, a good signification.
♂ in ♊	Mars in Gemini combust and Occidental beate:
♀ in ♊	Venus in Gemini combust Occidental, wynde.
☿ in ♊	Mercurie in Gemini combust, wynde.

Of the Planets in Cancer.

♄ in ♋	SATVRNE in Cancer combust, darcke weather, great winde and troublesome weathers: Occidental, calmer.
♃ in ♋	Iupiter in Cancer combust, bringeth calme pleasant weather.
♂ in ♋	Mars in Cancer combust, greete beate.
♀ in ♋	Venus in Cancer combust, a quiet calme time.
☿ in ♋	Mercury in Cancer combust, tempestuous weather, chiefly on the Sea: Occidental, calmer.

Of the Planets in Leone.

♄ in ♌	SATVRNE in Leone combust, maketh wynds and mis-tinges.
♃ in ♌	Iupiter in Leone combust, pleasaunt wyndes.
♂ in ♌	Mars in Leone combust, Occidental, droughe.
♀ in ♌	Venus in Leone combust, droughe:
☿ in ♌	Mercurie in Leone combust wyndes.

Of the

Of the Planets in Virgo.

SATVRNE in Virgine combust, is a significatour of in-^h in m^e
firmities,

Iupiter in Virgine combust, manifesteth abundance of things ⁴ in m^e

Mars in Virgine combust, like unto Saturne. ³ in m^e

Venus in Virgine combust, drought, Oriental contrary. ² in m^e

Mercurie in Virgine combust, drought, raging seas, Occi-² in m^e
dentall, drought.

Of the Planets in Libra.

SATVRNE in Libra combust, sheweth infirmity of sight ^h in ¹
Oriental, cold wyndes.

Iupiter in Libra combust, indifferent weather. ⁴ in ¹

Mars in Libra combust, bringeth moysture. ³ in ¹

Venus in Libra combust, moyst ayre. ² in ¹

Mercurie in Libra combust, wyndes. ² in ¹

Of the Planets in Scorpio.

SATVRNE in Scorpio combust, cold ayre: Occidental ^h in m^e
frost, Oriental, cold, North wyndes.

Iupiter in Scorpio combust, raine: Occidental, bitter weather. ⁴ in m^e

Mars in Scorpio combust, declareth moysture: Oriental, winds ³ in m^e

Venus in Scorpio combust, raine, both Occidental & Oriental. ² in m^e

Mercurie in Scorpio, combust, raging weather, chiefly Oriē. ² in m^e
tall.

Of the

11.10 A Generall Prognostication.

Of the Planets in Sagittarius.

- ♄ in ♐ SATVRNE in Sagittarius combust, colde rainy ayre: Orientall, colde and frost.
- ♃ in ♐ Iupiter in Sagittarius combust, much rayne: Oriental, worse weather.
- ♂ in ♐ Mars in Sagittarius combust, drought.
- ♀ in ♐ Venus in Sagittarius combust, raine: Occidental wind & cold.
- ☿ in ♐ Mercury in Sagittarius combust, rayne: Occidental, cleare ayre.

Of the Planets in Capricornus.

- ♄ in ♑ SATVRNE in Capricornus combust, signifieth barcke weather with South winde: Occidental cold: Oriental North wyndes.
- ♃ in ♑ Iupiter in Capricornus combust, moyste Ayre: Occidental increasing the same.
- ♂ in ♑ Mars in Capricornus combust, cloudy: Occidental some heate
- ♀ in ♑ Venus in Capricornus combust, colde ayre: Oriental rayne.
- ☿ in ♑ Mercury in Capricornus combust rayne, both Oriental and Occidental.

Of the Planets in Aquarius.

- ♄ in ♒ SATVRNE in Aquarius combust, cold ayre: Occidental dangerous Seas, Oriental, rayne.
- ♃ in ♒ Iupiter in Aquarius combust: Occidental, rayne.
- ♂ in ♒ Mars in Aquarius combust, drought: Occidental & Oriental plenty of wyndes.
- ♀ in ♒ Venus in Aquarius combust, cloudy: Occidental hotte: Oriental, rayne.
- ☿ in ♒ Mercury in Aquarius combust, snow: Occidental more colde, Oriental rayne.

Of the

Of the Planets in Pisces.

SATVRNE in Pisces combust, bringeth cloudes: Occi- h in ☿
dentall rayne.

Iupiter in Pisces combust Oriental, calme waters. 4 in ☿

Mars in Pisces combust Occidentall brought: Oriental, light- 3 in ☿
ning and thunders.

Venus in Pisces combust cold, Occidentall, disposed to snow. 2 in ☿

Mercury in Pisces Combust moyst ayre.

Thus much of the iudgement of weather. 2 in ☿

¶ Seing that I haue now sufficiently declared how, by what rules and tokens, weather is iudged, I thinke it conuenient to adioyne here a bziere collection, how Plenty, Scarcitye, Sickenesse, Death Alterations, troubles, warres &c. are for euer perceyued.

A Rule to Prognosticate the foresaide, by the falling of Newyeres day.

Sunday.

It is affirmed of some, whē Newyeres day falleth on the Sunday, then a pleasant winter doth ensue, a natural Sommer, fruite sufficient. Harvest indifferēt, yet some winde and rayne, many mariages: plenty of Wine, & Hony, death of yong men and cattell, robberies in most places, newes of Prelates, of kinges, and cruell Warres in the ende.

Monday.

On Monday, a Winter somewhat vncomfortable, Sommer temperate, no plenty of fruite, many fancies & fables opened, agues shal raigne: kings & many others shal die: mariages shalbe in most places, and a common fall of Gentlemen.

Tuesday.

On Tuesday a stormy winter, a wet Sommer, a diuers Harvest, corne & fruite indifferent, yet herbes in gardens shal not floyste, greate sicknesse of Men, Women, and yonge children

A Generall Prognostication.

children. Beasts shal hunger sterue, and die of the botch, many shippes, galleis and hulkes, shalbe lost: & the bloody fluxes shal kill many men: all thinges beare saue Corne.

Wednesday.

On *Wednesday*, loe a warme winter. In the end snow & froste, cloudy Sommer, plenty of fruitte, of Corne, Hays, Wyne, and hony: great payn to women wpth child, and death to infants, good for sheepe, newes of kyngs, great wars, battell, and slaughter toward the middes.

Thursday.

On *Thursday*, winter and sommer windy. A rainy haruest: therfore we shal haue ouerflowings. Much fruitte, plenty of hony. Yet flesh shalbe deare, cattel in generall shal dye, great trouble, warres. &c. Wpth a licentious life of the feminine sexe.

Friday.

On *Friday*, winter stormy, Sommer scant pleasaunt. Haruest indifferent, little store of fruit, of wine and hony, corn deare. Many beate eyes: poult shal dye. Earthquakes are perceived in many places, plenty of thunders, lightnings & comets, with a sodayne death of cattell.

Saturday.

On *Saturday*, a meane wynter: Sommer very hot. A late Haruest, good cheape garden herbes, much burnt ag, plenty of hempe, flaxe, and hony. Old folk shal dye in most places, Feuers and tertians shal greene many people, great muttering of warres, murders shalbe sodenly committed in many places, for light matters.

& Now that I haue opened diuers waies, both for y^e learned and v^elearned, how weether to come at al times may be wel iudged & knowe. &c. I thought it mete for farther knowledge therein not to omit here the natural causes of such and so many alterations of ayre. Lo therfore orderly they follow.

Natu.

*Naturall causes, conducing to all the asere-
sayd, and first of the Raynbow.*

The Raynbow is the shynge and rebounding of beames of
lighte, that tourne to the contrary vapoure agayne in the
cloude. It declarerh sometime rayne, and many times sayre
weather: when the one, and how the other, is before opened.

Of Rayne.

Rayne is a colde vapoure, an earthy humour, or fumosities,
out of waters or earth drawn vp by the vertue of y^e Sun,
to the neither part of the middle space of y^e ayre, therethrough
cold thicked, the dissolved: thus engedred, falleth on the earth.
Where I leaue to speake of miraculous raynes, as Milke,
Bloud, Flethe, Iron, Woll. &c. For more satisfiying in these,
reade Plinius in the second booke 58. Chapter.

Quare lapides
pluant, lege
Pli. Lib. 2.
Cap. 58.

Of Frost, and Dewe.

A Colde moyste vapoure, a litle way drawn vp in the day
through faint heate of the Sunne descendeth in y^e night, dis-
solved on the earth, there congelated or resolved into water,
the one called Frost, the other Dewe. The last is a signe of
sayre weather in the Spring, or Haruest.

Ros estate,
pruina hiem
fit.

Of Snowe.

It is a moyste vapoure, drawn vp to the middle Region of
the ayre, then thicked, and frozen into the body of a cloude:
So congelated, descendeth.

Nix humor
modice con-
cretus.

Of Hayle.

A Cloude resolved into Water, in the fall congelated, ma-
kerh Hayle. The higher it cometh from above, & the lon-
ger it tarreth in the ayre, the rounder Hayle.

Gado, pluua
in descensu con-
gelata.

D.

De

A Generall Prognostication

Of Wyndes.

Ventorū ergo
materia calida
& sicca exha-
latio.

Winde is a multitude of dye exhalacions, drawē by frō
the earth and aboue the earth enforced here and there

Of Earthquakes in the most quiet time.

Quēadmodū
in nube tonit-
ruum, sic in
terra tremor.

Plenty of wyndes, entred into hooles, cones, or caues of the
earth, which absent from aboue the earth causeth quietnes:
the violent busting out of them the earth closed againe) is f
Earthquake: *Signum est futurorum Bellarum.*

Tokens of Earthquakes to come,

Signa terra-
motus.

A fiery cloude, appearing in the Element like a little Pillar
is a token of Earthquakes to come. The obscurity or dark-
nes of the Sunne, without cloudes, and straungely coloured,
bloudy or otherwys, is a token of Earthquakes.

Also when Well water and others are troubled or salt, or
infected by sauer. &c.

A great quietnes of ayre, by land and sea, & chiefly the long
absent of wyndes.

Also straunge noises hard, as clamours of men, rushing of
barnesse, mourninges, lamentacions. &c. All these haue bene
observed, to signify Earthquakes at hand.

Of Thunders and Lightnings.

Fulgetrū prius
cerni, quā to-
nitruū audiri, cū
simul fiant cer-
tū est, Pl. lib. 2
Cap. 35, contra
Arista.

Thunder is the quenching of fyre, in a cloude. Or thider is
an exhalation, hot & dry, mixt with moisture caried by to
the middle Region, there thicked and wrapped into a cloude: of
this hotte matter coupled wth moistnes, closed in the cloude, gro-
weth a strife, the heate beating, and breaking out the sides of f
cloude with a thundring noise: the fyre then dispersed, is the
lightninge. Thus for the learned *Tonitrum sonitus est, qui edi-
tur quando nubem rumpit halitus. Fulmen flamma vel repentinus
est ignis, qui ex collisione nubium, aut ruptura nascitur.* Aristotle
saith the lightning after f thunder, but the fire doth first
appare, in that the sight is before the hearing. If this sa. is f
nat, read the second of his Meteoron. Here foloweth a not^e of
lyghs.

Lightnings.

*There be three kindes of Lightnings,
dry, moist, and cleare.*

DRy do not burne but cleaue, depart or deuide. Moyste burne Note.
not but alter colour. The Cleare are of marueylous natu-
res, ful barrels by it are emptied. It melteth money in y^e purse
it breaketh the sworde, the purse and scaberd not perished, yea
ware in them vnmolten.

Of the Comets or flames in the Nighte.

A Comet is a flame working in a dry, hot, stymie exhalation Ventorum
causa.
drawn by to the highest part of the ayre. This matter or sub-
stance after it is brent, dispersed, prouoketh wynds.

The naturall cause of the Sunne Eclipsed.

Nothing els is the Eclipse of the Sunne, but y^e direct put-
ting the body of the Moone betwene the Sunne and the
earth, or betwene our sight & the Sunne which chaunceth one
ly at the chaunge.

A Corollarie,

By this gather the darkenesse at Chrysts death, not to stand
by naturall Eclipsical cause: but by supernaturall, or My-
racle: for it was at the full Moone, y^e Scriptures witness which Miracle.
enforced Dionisius Arcopagita, at the tyme of hys passion, to
speake thus. *Aut Deus nature patitur, aut mundi machina dis-*
solvitur.

The cause of the Moone Eclipsed.

The Sunne being in the contrary poynt to y^e full Moone, en-
forceth the shadow of the earth then directly put betwene
the Sun & the Moone, to ward y^e Moone, hiding more or lesse Vniuersalis
est Eclipsis
Lune. Nō sem-
per in noui Lu-
nio, sed in ca-
& cauda.
of the Moone, as she differeth from the Eclipsical. Some ob-
serue pestilent plagues, sodaine battayle, greate dearthe, to
ensue these Eclipses: which all I desire G D D to auerte
from his chosen: Many other thynges by these Eclipses are
gathered, as Longitudes of Countreys, the Quantity of the
Sunne, contayning the bignesse of the Earth: 62. tymes the
D 2. compasse

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Compass of the earth. 21600. miles, whose thickness, according to Archimedes rule is. 6872. miles, & eight eleuenths of a mile.

The quantitie of the Moone is the. 43. part of the Earth.

The Sunne containeth the Globe of the Moone 7000. times.

Omniū planetarum ad terrā magnitudo.

Saturnus comprehendeth the bigness of the earth. 91. times, Iupiter. 95. times. Mars, once, and ten sixtenths. Venus the. 37. part. Mercury, one. 32000. part of the earth.

Note here, that Alfraganus affirmeth the leaste fixed Starre perfectly seene, as bigge as the whole earth.

Dimetiens O ad terrē dimetiētem 11. ad. 2

Cubus 1331 terre. 8

Dimetiens terrę ad diam̃ ad 5. Cubus terrę 4913. Cubus 125.

HÆc non erunt admirationi si Globi capacitatem ex longitudine Diametri quæsieris. Continet enim solis dimetiens, terra dimetiētem quinq̃ uies & semissem. Estque proportio diametri Solis ad terrę dimetiētem, quę est numeri undecim ad duo, quintupla sesquialtera. Cubus solis mille tercentum unam & triginta partes tales continet, cuiusmodi terrę Cubus octonauis complectitur. Cubus enim numeri undecim, est mille tercentum unum & triginta. Cubus uero binarij, qui est terrę, octo Subducto quoties id fieri potest, minore Cubo qui est terrę, octo Subducto quoties id fieri potest, minore Cubo qui est terrę, a maiore qui est solis cognoscitur Cubi ad cubū proportio, & quanto Sol maior terrę sit. Inuenimus ergo octo centies, sexagies sexies, in mille tercentum uno & triginta.

Terrę Diametros Luna dimetiētem complectitur ter, & duas eius diametri portiones quintas: estq; ea proportio dimetiētis terrę ad Lunę diametrum, quę est septēdecim ad quinque tripla superbi partiens quintas. Cubus numeri septēdecim est quater mille nō-genta terdecim. Cubus numeri quinque est cōrum viginti quinque. Maiore Cubo per minorem distributo, reperimus numerum centiā viginti quinque, tricies nouies in quater mille nongentis tredecim; quod paululum a superioribus observationibus differt.

The quantities, or rather true proportion of all the Planets unto the Earth, ocularly demonstrated by figure follow.

inge.

The Globe



The globe of
the Sonne

Earth.



Mars.



Venus or the Moon

The globe of
Saturne or
Iuypter



Mercury is but adoynd in respect of
these Quantities.

A generall Prognostication

By these five Globes are represented true magnitudes of 7. Planets. One Globe of like magnitude appointed for Saturne, & Iupiter. Euen so for the Moone, & Venus, the rest haue several Globes, (as ye may see) according to their quantities.

*The nature, course colour, and placing of these
seuen Planets, according to Ptolomei*

SATVRNE is the highest and slowest in proper motion, cold, dry, and pale, like unto leade colour requyringe thirty yeares to ende his course. Di. 9. ad. 2.

IVpiter is next vnder Saturne temperate, fayre and bright: his course is perfourmed in .12. yeares. Di. 32. ad. 7.

MARS is hote and dry of fiery colour, in two yerres endeth his course. Di. 7. ad. 6.

The Sunne is placed in the middle of all the Planets: most cleare and bright, the well of pure light: euerie yere finishing his course. Di. 11. ad. 2.

VENUS is next to the Sunne cold moyst, and cleare yea moze bright then Iupiter, hir course is like vnto the Sunnes: neuer above eight and forty degrees from the Sunne, called the Morninge Star when she goeth before the Sunne, comming after the Sunne, she is named the Euen starre. Di. 3. ad. 10.

MERCURY is next vnder Venus, somewhat shyninge, but not very bright: neuer above .29. degrees from the Sunne, hys course, is like to Venus, of the Sunnes motion.

The Moone is lowest of all the seuen, running ouer the whole Zodiacke in .29. dayes and 8. houres and somewhat moze. Di. 5. ad. 17.

For more playnnesse of that which is opened, nowe shall followe a figure by the which yee may perceyue how the Orbe of the one Planet compasseth the other. Also how these Planets are placed in the Heauen, yea which Planet is highest from the earth, and which neerest vnto vs. Consider well this figure, so needeth no farther declaration,

The



A generall Prognostication

Ye may here behold first the Elemental part subiect vnto alteration, consisting of the foure Elements, first Earth & Water, wheron we are, then Ayre & Fire. Then y^e other Ethereal part (which the Philosophers call *quinte essence*) containeth the. 10. Orbes: the bigger compasseth the next lesser, as the figure before sheweth. It beginneth at the Moone, then Mercury, Venus, &c. in height more & more. As the figure declareth Saturne to be the highest Planet, so is the Moone lowest.

*The distaunce or myles that the Moone is
from the Earth, and euery Planet
from other.*

As some haue published, it is frō the Earth to the Moone,
15750. miles.

From the Moone to Mercury, is. 12812. myles.

From Mercury to Venus, as many myles.

From Venus to the Sunne, is. 23437. myles and a halfe.

From the Sunne to Mars, is. 15725. myles.

From Mars to Iupiter, is. 78721. myles.

From Iupiter to Saturne, as many myles.

From Saturne to the Firmament. 120485. myles, &c.

The whole sum from the Earth to the Firmament, is. 35846. myles and a halfe.

Here demonstration might be made of the distaunce of these Orbes, but that passeth the capacity of the common soze.

The natural operations of these Planets by Coniunction, Opposition, &c. ensueth: But more largely of me opened in a pleasure booke shortly to be published. First here will I ende y^e natural causes of many Sunnes and Moones then of the Planets by Coniunction.

*The naturall causes of many Sunnes,
or Moones.*

Milichius noteth the kinge of Pole to haue seene 6. Sunnes at ones.

These come to passe, when a thicker cloude is gathered towa^rde the side of the Sunne or Moone, in the which the broken beames of the Sunne do leaue the fashion and veriforme of that Sunne. Thus as followeth, saith Plinius in the second booke of the History of Nature, 31. Chapter. Many Sunnes are perceyued in our time when

three, and they are neuer seene, either above or beneath the Sunne, but on the sides: neuer in the night but onely at the Sunne rising or going downe.

What is to bee chosen or avoyded under euery aspecte of the Moone, with her signification in the 12. signes touching the same.

The Coniunctio, Quadrature or Opposition of Saturn with the Moone, causeth an euil vnluckye daye for all matters. Leauetherfore to haue to do any maner way nothing shal prosper or come wel to passe then attempted. Yet the Sextile or Trine of Saturne with the Moone, declareth a conuenient time to til, delue, or digge, to sow to lay foundations to erect or repayre houses, yea a meete time to obtain suites of fatherly farmours. The Moone in Capricornus or Aquarius, bringeth this latter effect of the Sextile & Trine.

♄ ☾ ☐ ☾
cum ☾

♄ ✕ ☐ cum ☾

☾ in ♑ vel ♒

The Coniunction, Sextile, Trine, Quadrature or Opposition of Iupiter with the Moone, sheweth a fortunate day chiefely to obtain suites of Kinges noble Princes, Prelates, of lawyers and Religious persons: and a meete time to study to iourney, to take an honest matter in hand. The Moone in Taurus, in Leo or Sagittarius, sheweth the same.

♃ ☾ ☐ ☐
vel ☾ cum ☾

☾ in ♉ vel ♐

The Coniunction, Sextile, Trine, Quadrature, or Opposition of Mars with the Moone, warneth thee not to match thy selfe by day with warriours notwithstanding verie good & most meete to finishal manner fiery workes, nought to iourney yet most conuenient for valiant captayns to worke their fear, to leade, encourage or stomach their souldiers moste vnnieete to to create peace, to take seruantes, or to seeke friendship.

♂ ☾ ✕ ☐ ☐
vel ☾ cum ☾

☉ ☾ ☐ vel
☉ cum ☾

The Coniunction, Quadrature, or Opposition of the Sun with the Moone declareth a very unhappy day for all matters therfore attempt nothing, ne any maner suite, neither pante, build, ne iourney. Yet the Sextile and trine are very fortunat specially to obtayn suite of kinges Princes and other Nobles. The Moone in Aries enforceth the effect of this latter part.

☉ in ♈

E.

The

The Generall Kalender.

♀♂*△□
vel ☉ cum ♀

The Coniunction, Sextile, Trine, Quadrature, or Opposition of Venus with the Moone, causeth a daye most apt to obtayne all suites of women, good to woo, to attempt marriage, & to follow all maner pleasures, and pl^asaunt pastimes: not vnmeet to hire seruants, to let bloud &c. The Moone in Libra or Pisces prouoketh the like.

♀♂*△□
vel ☉ cum ♀

The Coniunction Sextile, Trine, Quadrature or Opposition of Mercury with the Moone, promisseth a fortunate happy day to Buy and Sel, very good to entre Childzen in Liberall artes, an apt time for y^e verifiers: good to vse Parchaubise, to iourney to send ambassage, to geue accomptes and such like.

♂ in ♊ vel
☿

The Moone in Gemini, Cancer, or Virgo, euclineth euen to the same aforesayd.

♂ cum ♄

The Moone with the Dragons head, sheweth a luckye daye for all matters, with the rayle contrary.

Now ensueth a Table Shewing what signe the
Moone is in and shalbe for euer, declaring
also the meetest time to let Bloud to
Purge and to Bath,

The Table hath at the head seven titles. The first monethes the second dayes, then the Prime: The twelue Signes: the titles to let Bloud: to Purge, and to Bathe

Here it is to be noted, that those dayes are good for these purposes, which be signed with this letter G: and those euill dayes that are noted with B.

This

¶ This Table declareth for euer, in what Signe the Moone is or shall
be at any daye in the yeare. It serueth also very well
to let Bloud, to Purge, and Bathe.

Monethes.	Dates.	Prime.	The 12. Signes.	To let Bloude	To Purge.	To Bathe.
Febr. Nouē.	1	3	Aries.	G	B	G
Marche.	2		Aries.	G	B	G
	3	14	Taurus.	B	B	B
Decembre.	4	6	Taurus.	B	B	B
	5		Gemini.	B	G	
Aprill.	6	17	Gemini.	B	G	
	7	9	Cancer.		G	G
Maie.	8	1	Cancer.		G	G
	9		Cancer.		G	G
	10	12	Leo.	B	B	G
	11	4	Leo.	B	B	G
Iune.	12		Virgo.	B	B	B
	13	15	Virgo.	B	B	B
Iuly.	14	7	Libra.			
	15		Libra.			
	16	18	Scorpius.		G	G
	17	10	Scorpius.		G	G
Auguste.	18	2	Scorpius.		G	G
	19		Sagittarius.	G		G
	20	13	Sagittarius.	G		G
	21	5	Capricornus.	B	B	B
Septembre.	22		Capricornus.	B	B	B
	23	16	Aquarius.			G
Ianua. Octo.	24	8	Aquarius.			G
	25		Pisces.		G	G
	26	19	Pisces.		G	G
	27	11	Pisces.		G	G

The Generall Kalender.

Seke out vnder the titles of the Monethes, the name of the moneth, whose day you must looke outright agaynst the moneth, vnder the title of dayes, & there begin to tel downwards 1. 2. 3. &c. to the end, if it so require, and then fro the beginning if neede bee, vntil you haue reckned the number of the day that you seke. Loke what number it falleth vpon in this table vnder the title of dayes that number kepe in mind. Then seke vnder the title of the Prime, the golden nūber for the yere right agaynst that leftward vnder the titles of Dayes, beginne to tel downwards 1. 2. 3. &c. vntil you haue reckned the number which you did keepe in mind. Agaynst that towardes your right hand vnder the Title of Signes is the signe wherin the Moone shal be the day. Euen then vnder the other titles, yee shal fynde in righte orde for Letting blood, for Purgig and Bathing, according as they be noted with G which is good, and B. signifyeth bad.

Ensample.

The first day of March in the yere of our lord 1555 I desire to know what celestiaall signe the moone doth then occupie. I find first the name of the Moneth, & is, March: and the daye as followeth, in the next order of this table. I beginne here to tel right agaynst my moneth, at the figure of 2. saying 1. 2. 3. &c. so I haue at the ende, & compte of sixe dayes this figure 7. which I kepe in mind. Now I must seeke out the Golden nūber for the yere aforesaid, vnder the title of the Prime here, & is 17. agaynst the which on the left side is 6. There you must begin agayne to compe: 1. 2. 3. &c. vntil you come to your number 7. So on youre right hand in the row or order you shal see Virgo, the Celestial Signe that the Moone is in and after the these three letters B which declare bad or euil to let Blood, to purge or Bath agreeable to the titles in the head G. there had signified good.

As for as much as letting of Blood, Purgig and bathing, Inundations: f londs. Timber falling, Sowing, plating, Grasing, cutting &c. depend chiefly on the Signe wherin the Moone is, which I haue euen before plainely opened, I thoughte it meete to haue them now orderly touched, as followeth

A con.

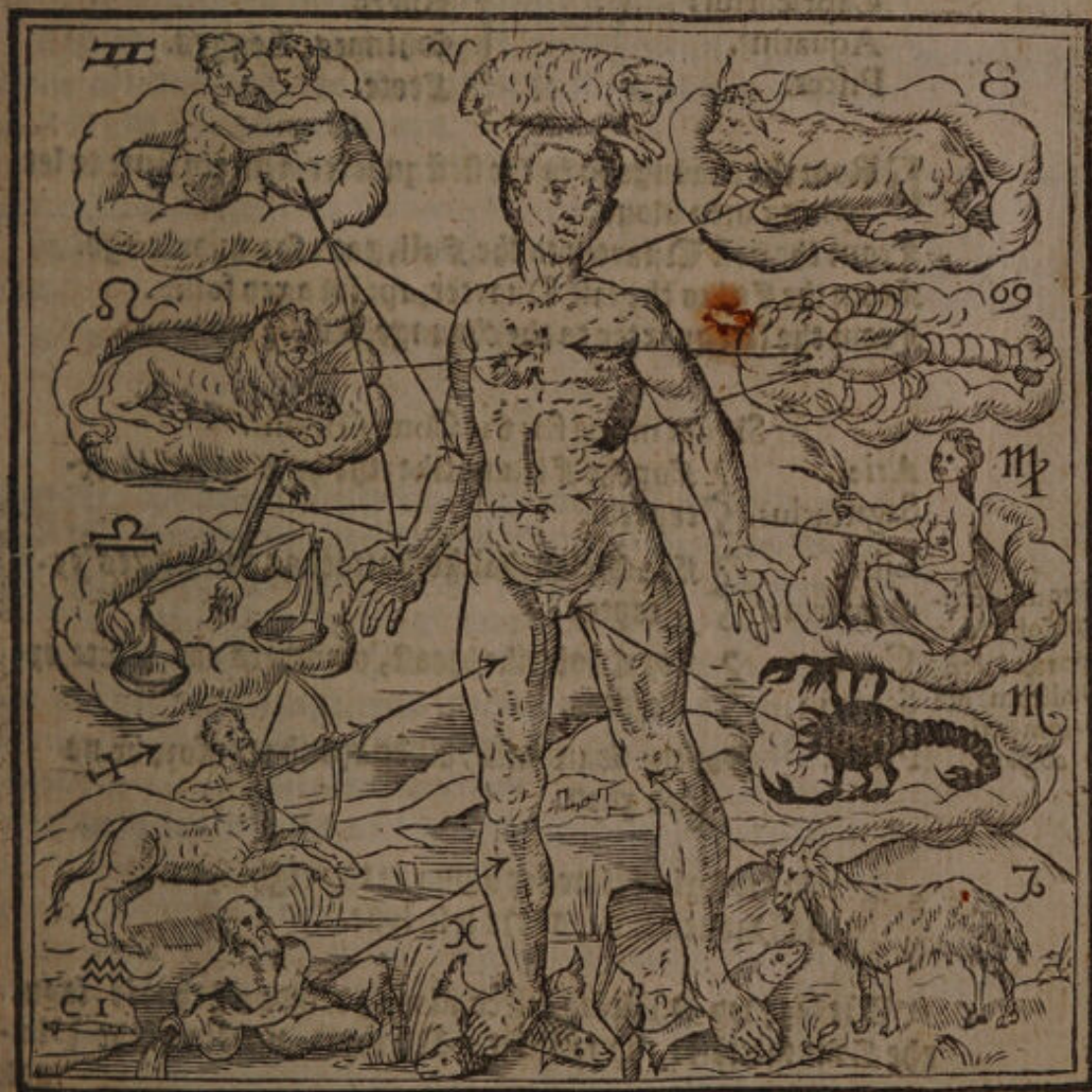
Let bloude at no tyme without greate cause, for it bringeth weaknes and many infirmities. If ye do see it be after good digestion, & fasting in a faire temperate day beware before of al maner exercise, Bathings, watchings, & carnal copulatio. After vse fine meates of light digestion, abstaining from al þ aforesaid, until the fourth day.

Malum minui
vel purgatio-
nibus vti, teme-
pore caloris
propter defe-
ctū hum oris

These Signes are most dangerous for bloud lettinge the Moone being in the Taurus, Gemini, Leo, Virgo, & Capricornus. with the last halfe of Libra and Scorpis, The rest are all good: so the Moone beare no Dominion in that member which ye cut. As followeth.

I to let bloud
in 8 II 9
m w

Behold this figure.



Profitable Rules

The Dominion of the Moone in Mans Body.

Aries	} THE {	Head and Face.
Taurus.		Necke.
Gemini.		Armes, Handes, Shoulvers.
Cancer.		Brest, Stomacke, Ribbes,
Leo.		Hart, Backe.
Virgo.		Bowels, belly.
Libra.		Raynes, Nauill, Buttocks.
Scorpius.		Secrete members.
Sagittarius.		Thies.
Capricornus		Knees.
Aquarius.		Shinnes, Legges.
Pisces.		Feete.

From the chaunge to to the first quarter, a meete time to let young men bloud.

From the first Quarter to the Fall, good for middle age.

From the Fall to the last Quarter, apt for aged folke.

From the last quarter to the chaunge, best for old men.

Signes meete for the Complexions.

Aries.	}	For the Fleumaticke, the head and this ex-
Sagittarius.		cepted.
Libra	}	For Melancholike: buttocks and legges, ex-
Aquarius		cepted.
Cancer	}	For Cholerike brest, members and Feete ex-
Scorpio		cepted.
Pisces.		For the Sanguine, all be apt that tofore be na- med good.

*Hæc diligētis-
sime obseruare
oportet solentē
Medicum; nisi
maiora pericu-
la cogant.*

In the spring time, let bloud at the right syde.

In Haruest time, at the left syde.

The learned Physitian wil consider, besyde all that is sayd, the Coniunctions, opposition, & Quozat aspects of the Pla-
nets

ness: With many other things, Astronomical, most necessary both in Bloudletting, Purging, Bathing, &c.

For to take Purgation, and to Bathe.

The meetest time to take purgation &c. is neither in hotte nor cold dayes, that is from the tenth of March, to the xii of June.

Further by rules Astronomical, it must be performed when the Moone is in cold, moist, and watry signes, as Cancer Scorpius: and Pisces: comforted by Aspectes and radiations of Planets, fortifying the vertue of the body expulsive.

The Moone in Aries, Taurus, & Capricornus, naught. One cause of vomiting, the Purgation is, if the Moone haue aspect to any Planet retrograde.

The Moone in these Signes following, very good to Bathe Aries, Leo, Sagittarius, Cancer, Scorpius & Pisces.

These ensuing are eull to bath Taurus, Virgo & Capricornus.

Of Inundations, or Floods, of Timber falling, Sowing, Planting, Graffing, Heare clipping, Shauing and Gelding.

The flood is biggest at y full: because then dispersing her vertue, she filleth all places w moisture: Be common experience, toynd with learning I knowe at y full y Moone lodeth all bodyes with humors, & so are emptied, growing to the chaunge. Of this some gather the fall of timber at the chaunge, more to the purpose then other times wanting then superfluous moisture, the cause of putrefaction. *Omnis putredo ab aqua humido ortum habet.* Schoner willety from the 15. day vnto the 22. day of the Moone, trees co be felled, & thacater Midsumer to Ianuary. So timber is strong sounde, and boyd of wormes.

To Sow Taurus, Cancer, Virgo Libra, and Capricornus are best in the increase of the Moone.

To Plant or Graffe, is best, when the Moone hath her being, in any fixed signe, either in Taurus or Aquarius, in the encrease

good to purge
S m K.

Bad to purge
V & W.

Good to bath
V R 7 S
m K.
Bad to Bathe
S m K.

The fall of
Timber.

Good to sow,
S S m K.

To plant or
graffe: S m

Dayre

Profitable Rules

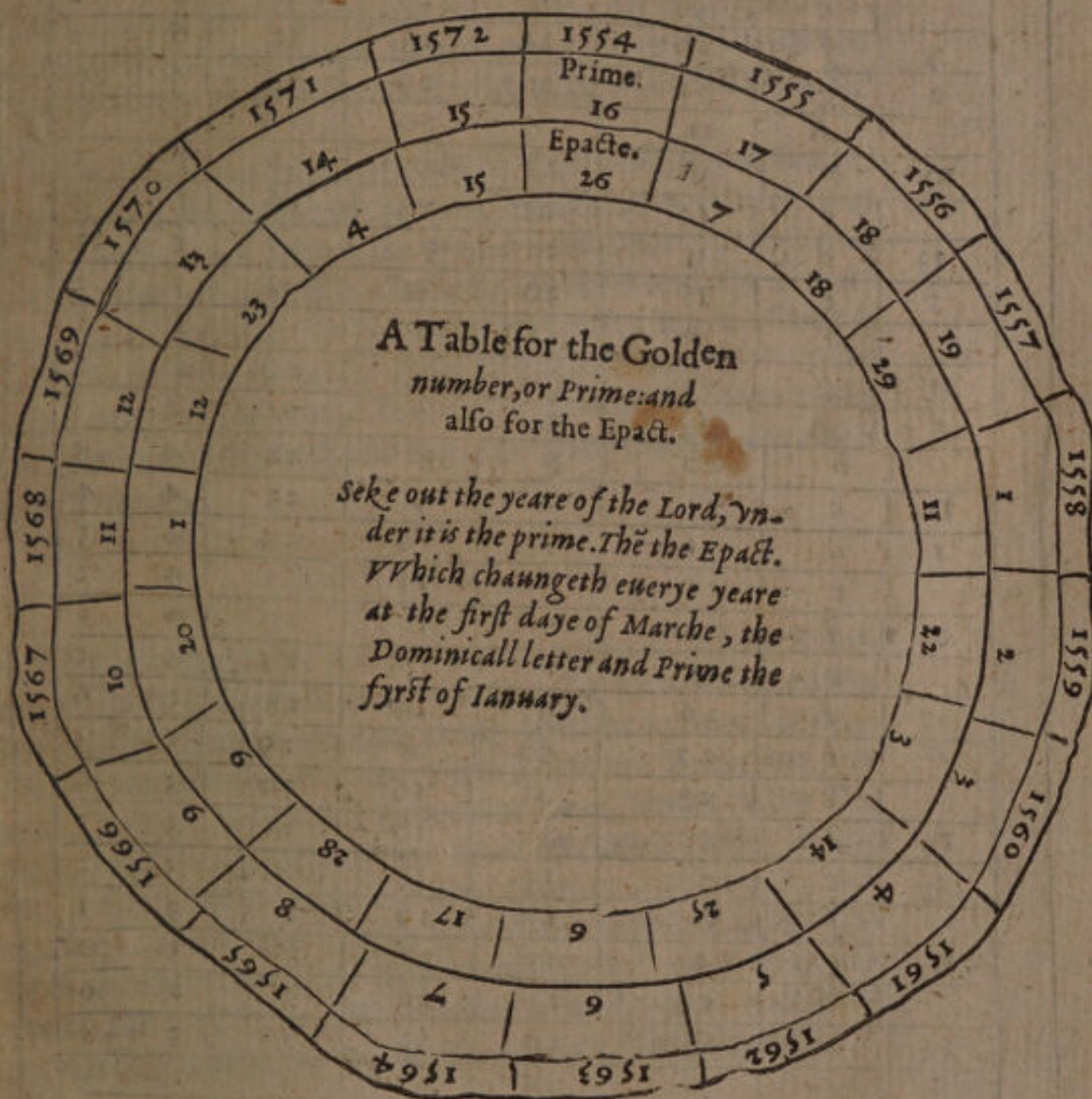
Haire cutt groweth wel, the Moone encreasing being in Taurus, Virgo or Libra..

Cutting, Hauing, clippinge in the wane causeth baldnes, what is then cutt groweth litle. *Caluitium prohibet oleum Tarsari* The best time of Cutting is in Cancer, Scorpio or Pisces in the wane

These twoo rounde Tables that now ensue conduce to the rest following.



*When yee haue gone rounde about the yeares,
of these two Tables, begin againe.*



The prime.	The sondaies letter.	The first Lent son- daye.	Easter. daye.	Rogas- tion.	whitson- tide.	Betwixt whitsond. & midso.
16		Februarie.	Marche.	April.	Maye.	wek. daies
5	d	8	22	26	10	6 3
	e	9	23	27	11	6 2
13	f	10	24	28	12	6 1
2	g	11	25	29	13	6 0
	A	12	26	30	14	5 6
10	b	13	27	May. 1.	15	5 5
	c	14	28	2	16	5 4
18	d	15	29	3	17	5 3
7	e	16	30	4	18	5 2
	f	17	31	5	19	5 1
15	g	18	April. 1	6	20	5 0
4	A	19	2	7	21	4 6
	b	20	3	8	22	4 5
12	c	21	4	9	23	4 4
1	d	22	5	10	24	4 3
	e	23	6	11	25	4 2
9	f	24	7	12	26	4 1
	g	25	8	13	27	4 0
17	A	26	9	14	28	3 6
6	b	27	10	15	29	3 5
	c	28	11	16	30	3 4
14	d	Marche. 1.	12	17	31	3 3
3	e	2	13	18	June. 1.	3 2
	f	3	14	19	2	3 1
11	g	4	15	20	3	3 0
	A	5	16	21	4	2 6
19	b	6	17	22	5	2 5
8	c	7	18	23	6	2 4
	d	8	19	24	7	2 3
	e	9	20	25	8	2 2
	f	10	21	26	9	2 1
	g	11	22	27	10	2 0
	A	12	23	28	11	1 6
	b	13	24	29	12	1 5
	c	14	25	30	13	1 4

*The vse of this Table appoynted for the
moueable Feastes.*

This Table containeth in the first Title the Prime: in the second, the Dominical letter: in the third, Lent, in the fourth Easter day, in the fifth, Rogation day, in the sixth Whitsonday: in the seventh, howe many Weekes and dayes are betweene Whitsonday and Midsummer. Which al appeare by their Titles.

Ye shal consider by the litle round Table before put forth, what nūber the Prime is that yere, wherof ye desyre to know all these aforesayd, and seeke that number vnder the first title of this table ensuing. Then seeke vnder the second the Dominical letter next after the Prime for that yere, whiche title ensueth the Prime. Directly agaynst the same dominicall letter towardes your right hand in the same lyne, ye shal fynd vnder the titles, what Moneth and day, euery one of these aforesayd shal happen.

Ensample.

I would know this yere of our Lord. M. D. LII. these moueable feastes, the first Lent Sonday, Easter day, Rogation dayes, Whitsonday, and how many weekes betwixt Whitsonday and Midsummer day. First I fynd the Prime this yere xvii. which xvii. I loke out vnder the title of Prime in the Table before. Then I seeke in the next order (and after the Prime for the Dominical letter that yere. Now in right order, according to the Titles. I fynd the third of March to be the first Lent Sonday: the xiiii. of April Easter daye: the xix. of May, Rogacion, the ii. of Iune, Whitsonday, and iiii. weekes & one day betwixt Whitsonday and Midsummer day, Thus for ener,

The prime.	The sondaies letter.	The first Lent son- daye.	Easter. daye.	Rogas- tion.	whitson- tide.	Betwixt whitsond. & midso.
16		Februarie.	Marche.	April.	Maye.	wek. daies
5	d	8	22	26	10	6 3
	e	9	23	27	11	6 2
13	f	10	24	28	12	6 1
2	g	11	25	29	13	6 0
	A	12	26	30	14	5 6
10	b	13	27	May. 1.	15	5 5
	c	14	28	2	16	5 4
18	d	15	29	3	17	5 3
7	e	16	30	4	18	5 2
	f	17	31	5	19	5 1
15	g	18	April. 1	6	20	5 0
4	A	19	2	7	21	4 6
	b	20	3	8	22	4 5
12	c	21	4	9	23	4 4
1	d	22	5	10	24	4 3
	e	23	6	11	25	4 2
9	f	24	7	12	26	4 1
	g	25	8	13	27	4 0
17	A	26	9	14	28	3 6
6	b	27	10	15	29	3 5
	c	28	11	16	30	3 4
14	d	Marche. 1.	12	17	31	3 3
3	e	2	13	18	June. 1.	3 2
	f	3	14	19	2	3 1
11	g	4	15	20	3	3 0
	A	5	16	21	4	2 6
19	b	6	17	22	5	2 5
8	c	7	18	23	6	2 4
	d	8	19	24	7	2 3
	e	9	20	25	8	2 2
	f	10	21	26	9	2 1
	g	11	22	27	10	2 0
	A	12	23	28	11	1 6
	b	13	24	29	12	1 5
	c	14	25	30	13	1 4

And Tables. Fo. 22

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Profitable Rules.

*How to know the age of the Moone,
then the chaunge, and Quarter
for euer.*

First learne the Epact (as I haue instructed) for that yere ye
seeke to know the age of the Moone, then reckon how many
dayes is past of y^e moneth, which day ye desyre to know y^e age.
Put that number to the Epact, Then begin at Marche and rec-
ke for euery moneth from him orderly one, vntil your sayd day,
includinge both the moneth of Marche, and also the moneth of
your sayd day. Adde all these dayes vnto your former number:
putting away as many thirtie dayes as ye fynd. The rest is the
age of the Moone. The age found, the chaunge is knowne.
If ye adde vii dayes to the chaunge, ye haue the first quarter,
then 7 dayes, and somewhat moze, belweth the Full: and so to
adding 7 and moze, byngeth the last quarter thus by 7 vnto y^e
new Moone.

Ensample.

The 1. day of January, the yere then being M.D.L.V.
I desyre the age of the Moone, I find the Epact vntil Marche,
ensuing to be xxvi. that added vnto 1. maketh xxxvi. then xl. for
the monethes from Marche to January, includinge both Moone-
thes, byngeth xlvii, now thirtie pulled away leueth xlii. the
age of the Moone.

*Now ensueth two perfect tables declaring the
true houre and minute of Ebbing and
flowing in most Coastes of
England.*

Quin South- ampton. Ports- moth.	Redban Aberdē	Graues ende.	Dūdec. S. And.	Age of the Moon	London Timmot Hertle pole.	Ber- wyke.	Erith. Lyeth. Dūbar.	Falmot
South.	Sbw.	SSw.	SwbS		Sw.	Swbw	wSw	wbS.
H. M.	H. M.	H. M.	H. M.	)	H. M.	H. M.	H. M.	H. M.
12 48	1 33	2 18	3 3	1	3 48	4 33	5 18	6 3
1 36	2 21	3 6	3 51	2	4 36	5 21	6 6	6 51
2 24	3 9	3 54	4 39	3	5 24	6 9	6 54	7 39
3 12	3 57	4 42	5 27	4	6 12	6 57	7 42	8 27
4 0	4 45	5 30	6 15	5	7 0	7 46	8 30	9 15
4 48	5 33	6 18	7 3	6	7 48	8 33	9 18	10 3
5 36	6 21	7 6	7 51	7	8 36	9 21	10 6	10 51
6 24	7 9	7 54	8 39	8	9 24	10 9	10 54	11 39
7 12	7 57	8 42	9 27	9	10 12	10 57	11 42	12 27
8 0	8 45	9 30	10 15	10	11 0	11 45	12 30	1 15
8 48	9 33	10 18	11 3	11	11 48	12 33	1 18	2 3
9 36	10 21	11 6	11 51	12	12 36	1 21	2 6	2 51
10 24	11 9	11 54	12 39	13	1 24	2 9	2 54	3 39
11 12	11 57	12 42	1 27	14	2 12	2 57	3 42	4 27
12 0	12 45	1 30	2 15	15	3 0	3 45	4 30	5 15
12 48	1 33	2 18	3 3	16	3 48	4 33	5 18	6 3
1 36	2 21	3 6	3 51	17	4 36	5 21	6 6	6 51
2 24	3 9	3 54	4 39	18	5 24	6 9	6 54	7 39
3 12	3 57	4 42	5 27	19	6 12	6 57	7 42	8 27
4 0	4 45	5 30	6 15	20	7 0	7 45	8 30	9 15
4 48	5 33	6 18	7 3	21	7 48	8 33	9 18	10 3
5 36	6 21	7 6	7 51	22	8 36	9 21	10 6	10 51
6 24	7 9	7 54	8 39	23	9 24	10 9	10 54	11 39
7 12	7 57	8 42	9 27	24	10 12	10 57	11 42	12 27
8 0	8 45	9 30	10 15	25	11 0	11 45	12 30	1 15
8 48	9 33	10 18	11 3	26	11 48	12 33	1 18	2 3
9 36	10 21	11 6	11 51	27	12 36	1 21	2 6	2 51
10 24	11 9	11 54	12 39	28	1 24	2 9	2 54	3 39
11 12	11 57	12 42	1 27	29	2 12	2 57	3 42	4 27
12 0	12 45	1 30	2 15	30	3 0	3 45	4 30	5 15
North.	N b E	N n E	N e b N	)	N E	N e b E	E n E	E b N

Foy Lin. Hüder. weimot. Dertm. Plimot.		Milfo. Bridge water.	Portl. Peter. porte.	Age of the Moone.	Orkn. Pole. Ors wel.	Diep. Lux. Les noys.	Boloig. Douer. Harwich Yarmot.	Calice.
East.	E b S.	E s E	S e b E		S E	S e b S	S s E	S b E
H. M.	H. M.	H. M.	H. M.	)	H. M.	H. M.	H. M.	H. M.
6 48	7 33	8 13	9 3	1	9 48	10 33	11 13	12 3
7 36	8 21	9 6	9 51	2	10 36	11 21	12 6	12 51
8 24	9 9	9 54	10 39	3	11 24	12 9	12 54	1 39
9 12	9 57	10 42	11 27	4	12 12	12 57	1 42	2 27
10 0	10 45	11 30	12 15	5	1 0	1 45	2 30	3 15
10 48	11 33	12 18	1 3	6	1 48	2 33	3 18	4 3
11 36	12 21	1 6	1 51	7	2 36	3 21	4 6	4 51
12 24	1 9	1 54	2 39	8	3 24	4 9	4 54	5 39
1 12	1 57	2 42	3 27	9	4 12	4 57	5 42	6 27
2 0	2 45	3 30	4 15	10	5 0	5 45	6 30	7 15
2 48	3 33	4 18	5 3	11	5 48	6 33	7 18	8 3
3 36	4 21	5 6	5 51	12	6 36	7 21	8 6	8 51
4 24	5 9	5 54	6 39	13	7 24	8 9	8 54	9 39
5 12	5 57	6 42	7 27	14	8 12	8 57	9 42	10 27
6 0	6 45	7 30	8 15	15	9 0	9 45	10 30	11 15
6 48	7 33	8 18	9 3	16	9 48	10 33	11 18	12 3
7 36	8 21	9 6	9 51	17	10 36	11 21	12 6	12 51
8 24	9 9	9 54	10 39	18	11 24	12 9	12 54	1 39
9 12	9 57	10 42	11 27	19	12 12	12 57	1 42	2 27
10 0	10 45	11 30	12 15	20	1 0	1 45	2 30	3 15
10 48	11 33	12 18	1 3	21	1 48	2 33	3 18	4 3
11 36	12 21	1 6	1 51	22	2 36	3 21	4 6	4 51
12 24	1 9	1 54	2 39	23	3 24	4 9	4 54	5 39
1 12	1 57	2 42	3 27	24	4 12	4 57	5 42	6 27
2 0	2 45	3 30	4 15	25	5 0	5 45	6 30	7 15
2 48	3 33	4 18	5 3	26	5 48	6 33	7 18	8 3
3 36	4 21	5 6	5 51	27	6 36	7 21	8 6	8 51
4 24	5 9	5 54	6 39	28	7 24	8 9	8 54	9 39
5 12	5 57	6 42	7 27	29	8 12	8 57	9 42	10 27
6 0	6 45	7 30	8 15	30	9 0	9 45	10 30	11 15
VVest.	wbn	wnw	nwbw	)	nw	nwbw	nww	nbw

When you wil know the ful Sea, seeke out the name of the place, where you desyre the ful water in the head of the tables: Or learne the poyntes of the compasse there noted: Or if you list, know of some Mariner, what Moone maketh a ful sea there: a south west or South Moone. &c. Then the age of the Moone found vnder the place or point of the Compasse sheweth in right order the houre and Minute of the full Water. The Ebbe then is manifest.

Ensample.

I desire to know the Ful water at London bridge, the yere of our Lord 1555. the 6. day of Februarye. I finde by Rules before put forth, the vi. day of Februarye, the yere aforesayde, the Moone to be 14. dayes old. I see also vnder the title wher London is S. W. which letters signify that a South west Moone maketh a full Sea, there, and that is at two of the clocke, and xii. minutes past. This is wel perceived in the first Table before put forth, if you runne downe to the 14. day of the age of the Moone vnder London title.

A Note of the Houre of the day and night.

The ingenious may gather nere about the houre of the day and night by the Moone: consideration had of the points in those Tables of tides before noted. For the hour is orderly put vnder the pointes of the compasse,

Every part or point contayning 11. degrees and this compasse is wel figured nere about the Centre in the instrumente following for the night howze, because ye may by it haue a delectable large vse of these Tables.

How by the first of the tyde Tables, ye may readily know when the Moone commeth vnto the South, when she riseth and setteth: with her continuance on the Earth.

Seeke the age of the Moone (as is opened) then resort to the first Tide table looking out the age there. So vnder the South point in right order the houre appeareth, when she commeth vnto the South. Then hath she spent half the arke, the Sunne would haue had in that signe, which pulled away sheweth the rising that halfe arke also added to her comming in to the South declareth her going downe. The arke then the Sunne would haue had in the signe, is her continuance on the Earth.

A Ta-

A Table at all times plainly and briefly declaring the breke of the day : the hour, & minute of the Sunne ryſing, the juſt length of the day, the length of the night alſo, the very mynute of the Sunne ſetting : and the Twylyght.

Monethes	Days.	Break of	Sunne	Lengthe	Lengthe of	Sunne	Twy-	Days.	Monethes.
		the day.	ryſinge.	of the day	the night	ſettinge.	lyghte.		
		H. M.	H. M.	H. M.	H. M.	H. M.	H. M.		
|| Dec. ||	10	6	08	11 7	37 16	23 3	49 6	0	10
	20	5	58 8	10 7	40 16	20 3	50 6	2	1
|| Janu. ||	1	5	54 8	0 8	0 16	0 4	0 6	6	20
	10	5	44 7	49 8	21 15	39 4	11 6	16	10
|| Febr. ||	20	5	35 7	34 8	52 15	8 4	26 6	25	1
	1	5	15 7	13 9	34 14	26 4	47 6	45	20
|| Mar. ||	10	5	0 6	56 10	8 15	52 5	4 7	0	10
	20	4	50 6	36 10	47 13	13 5	24 7	10	1
|| Apr. ||	1	4	20 6	19 11	22 12	38 5	41 7	40	20
	10	4	0 6	1 11	58 12	2 5	59 8	0	10
|| May. ||	20	3	40 5	41 12	37 11	23 6	19 8	20	1
	1	3	8 5	18 13	23 10	37 6	42 8	52	20
|| Ju- ||	10	2	40 5	1 13	57 10	3 6	59 9	20	10
	20	2	10 4	43 14	33 9	27 7	17 9	50	1
|| Jul. ||	1	1	30 4	25 15	9 8	51 7	35 10	30	20
	10	0	30 4	12 15	35 8	25 7	48 11	30	10
|| Aug. ||	20	Cōtinu-		4	0 15	59 8	1 8	0	1
	1	all day.		3	51 16	17 7	43 8	9	20
|| Sept. ||	10			3	48 16	23 7	37 8	12	10
		H. M.		H. M.	H. M.	H. M.	H. M.		

The vſe of this table.

Conſider the Moneth and day, that ye require any of the toforeſayd : and ſeke in this Table that ſame under the title: proceſſe in ryght ordre, ſo ye haue your purpoſe. If the uery day be not founde, take the neareſt of your table. Or by proportion the trueth is geuen: whiche all by Enſample ſollowyng ſhall playnly be declared.

Minutes to be added to the Length

Ensample.

The first day of January. I desyre all the aforesayd: *is*, the breake of the day: the very minute of the Sunne rising, the length of the day, & also of the night, the Sunne going downe and the twilight. I finde on the right hand of January, these numbers running downe. 1. 10. 20. which declare the first day, the 10. day, and twenty of *y* Moneth, Now to my purpose, I requyre the breake of the day, &c. The first of January, in *y* table vnder *y* title, on the right hand of this figure. 1. I see. 5. houres and. 54. minutes *is*. 6. of the clocke wanting. 6. minutes: the rising of the sunne in *y* order, is iust at 8. as this figures 8. there declareth vnder that title in the rowe. The length of the day. 8. houres, the length of the night. 16. houres, the Sun setting is at. 4. the twilight, at. 6. & 6. minutes. Euen thus for the tenth day, and also for the twenty of that Moneth, in the rowes according to their titles in the head of my tables.

How to worke by proportion, when the day is not founde,

I would know alth' aforesaid, *y* first day of January. I take for ensample the breake of the day Remēber the first day of January, I did finde the breake, to be at. 5. of *y* clocke, and. 54. minutes: and the tenth day I may finde the break of *y* day to be at. 5. & 44. minutes, *y* is. 10. minutes lesse. I see now 10 daies do geue me 10 minutes lesse. I say therefore by proportion *y* fifth day must giue 5 minutes lesse thē 5 houres 54. minutes whych is 5 houres 49 minutes my request. Thus for al *y* other titles.

The houre of the night, by the Moone, is etherwise founde then before, and that diuersly.

The houre of her rising known as is opened & a marke thē made wher she shadoweth in any true fixed or mouable sun Dial, *y* houres and minutes from that marke al the Night after, are to be added to her rising. If more thē, 12. surmount on. *y* above. 12. sheweth the true houre and minute. If at the rising she may not be sene, thē by the Sunne rising, in *y* very Signe (with *y* help of this Almanack) you may perceiue what houre she would note at hir rising. Therfore let *y* mark con:

Howe by the Moone the night houre is founde.

Profitable Rules.

An other waye.

When the Moone is at the ful, loke what houre her shadow sheweth in any Dial, that is the houre of $\frac{1}{2}$ night. After she be past the ful, 28. houres, ye must adde one houre. But afore the ful, pul one from $\frac{1}{2}$ ye find in the dial. If twice 28, two houres &c. So haue ye the houre of the night.

Howe the houre of the day by Right shadow, that is by any thing directly standing vp is knowne and by squire shadowe also.

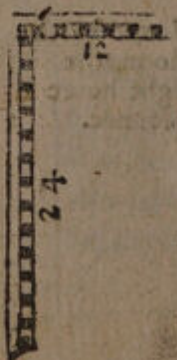
First it behoueth you to haue a staffe, or any other thing deuised in 12. equal parts. When ye list to haue the houre set vp directly your deuised staffe, on a plain leuel ground or boue &c. Note the iust length of that shadow, what parts it containeth. With those entre your Moneth in the Peculiar Kalendar folowing, beholding diligently vnder the name of $\frac{1}{2}$ moneth the smal enclosed tables: considering wel, which of those smal tables are nerest vnto your day: & that iudge by $\frac{1}{2}$ signe or day ther noted. That table serueth your purpose: where you must looke out the parts of the shadow afore found, or neare vnto it vnder or ouer the which the hour is set, before or after noone. Note $\frac{1}{2}$ two prickes ther signify half a part more the is noted: one pricke, half a part lesse. Here it is also to be noted, $\frac{1}{2}$ euery table hath within two rowes of figures, the vpper is for the staffe, the other for the squire shadow. And whatsoeuer is before sayd of the one that same is ment here of the other, sauing of the composition. The squire must be deuised from the inward angle to the end of one side, in 12. equal parts, euen so frō that angle the other side into 24. like parts as this figure sheweth.

These to the witty suffice.

The Composition of an Instrument for the hour of the night which is also a perfect Dial for the day and excellent for the Mariner.

The taking of an altitude supposed I could exactly in few (and that without an Instrument) satisfy. For want of that knowledge make vpon a plain board or rather fine plate a circle the bigger the better, part it into 360. portions.

The



The Circle made diuide it in 6. not mouing the cōpasse : then euery of the in. 6. and ech of those last in. 10: so haue you. 390. parts. Then character, it beginning at the North thus 10, 20. 30. &c as in the figure going to ward the East, & ending at the North with 260. Now lay a Ruler on the centre, euen with some diuisions, drawing chozow to the exteemes of the circle a line. Then crosse it with an other. These two must deuyde your circle in. 4 equal partes: which lines sheweth very East West: North and South, when by a Perfoliane or square Dial, with a needel rectified, they are placed.

Now to end set a smal streight wire, a foote or more long to a Plane in the toppe, plumbpyght in the centre, & ther fasten it.

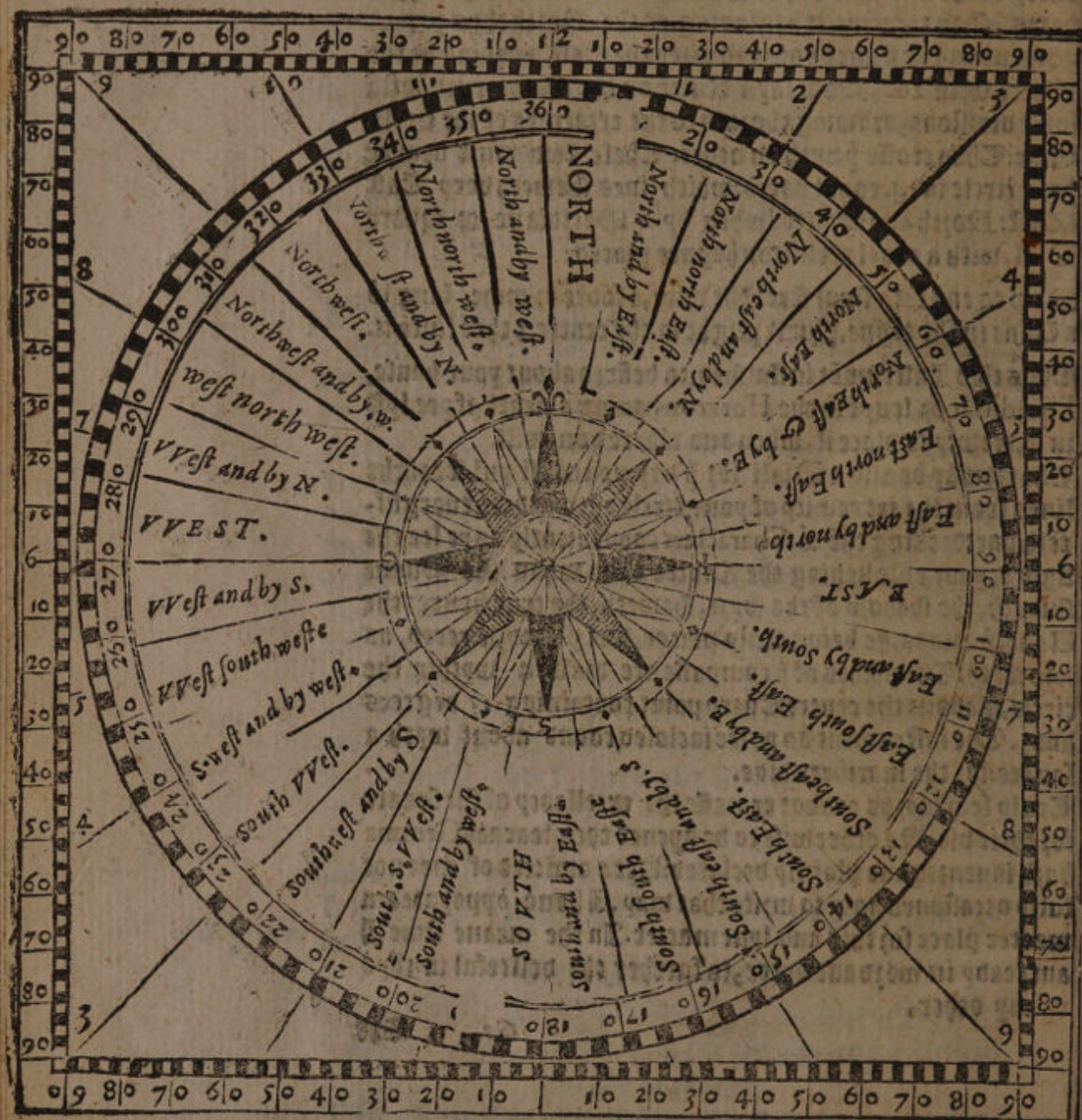
Thus this Instrumēt is finished, to be fixed about your house, Equidistant or leuyl to the Horizon hauing a needel if yee lyst in it, trewly to place it, when and where you will.

That it may be also a Diall for y day, you must pul straight lines from the ext remity of your circle outward, to enery fiftēth part decking the w Characters conueniently as ye see the figure, your rule keeping the Centre thus when the Sunne shineth, the shadow of the wyre, sheweth the true houre: the Plane, y winds, &c being truly placed, wel placed, & rered, as foloweth. The points of y compasse are drawn wythin the circle, & about the centre Euery point containing. 12 degrees and 1/2. The instrument as ye see inclosed round about wyth a square: for the mariners aide.

Truly few words cannot expresse the excellency of the square for their vse. No other wise to be opened then learned Gemma hath inuented and plainly declared: Here omitted of mee not fully occasioned now to write that way. I haue appoynted a meeter place for this and lyke matter. In the meane time I am ready in word and deede, to further the desireful in thys or any other.

G2. The

Profitable Rules.



Beholde this Instrument for navigation most commodious,
the use of which is here onely put forth accordyng
to my Invention.

*The right rering and placing of the
Dial tofore mencioned*



Ift by handfomely your Instrument oz Dial to- ward the North in fome mete place, the fide of a fquare lyeing on it, vntil the plūmet & line, cē- tred in the extreme upper part of the other fide of your fquare like longe, cut al þ fquare fide, which lyeth on your Instrument, the fifth parte onely except: Then moue your Instrument, hither & thither, this oz that waye, vntill the shadowe at the wyze fall vpon the houre of the day, keeping diligently your height befoze: your dial thus fixed de- clareth al the yere long, the exact houre & parts thereof. No Dial in truth excelleth this. Haue in remēbrance, that thys instrument muſt lye leuell, nothing at all rered, for the houre of the night by ſtarre.

In vvinter the contrary ſu- perſicies or plain ſheveth the day houre from α to γ .

To get the exact houre by two Starres of the firſt light, with an Instrument or Circle, to fore deuised, arſt. of me inuented, calculated and practiſed.

The instrument, equidistantly ſet & placed, as is declared in the compoſition, ye ought to lay the edge of a ruler vnto þ wyze, the other neither end touching the Instrument, mo- uing here and there, ſtil touching the wyze, vntil either Star doeth offer it ſelfe with that edge, and þ by the Iudgement of the eye. Then put downe diſcretly your ruler (euer touchinge þ wyze) the hinder end not moued, obſeruing how many parts are cut from the North, to the edge of the ruler, Enter wyth them the Peculiar Kalender following: ſeeking ioute your Moneth, placed in the middes of euery Table: then the day of that moneth muſt be there found.

Fit filo aut dis- gito, abſque regula exactiſſime.

Note that euery table hath on the ſides, the daies thus orde- red, 1, 5, 10, 15, 20, 25, 30. Know þ order oz row of figures which is right againſt, oz nereſt your day ſerueth the turn. The nu- bze oz parts befoze cut by the Ruler, and now found in þ row of your table, ſheveth the pꛛeciſe houre. If it be to little, þ houre ouer the head oz vnder is not yet come: if contrary, it is paſt.

Profitable Rules

¶ How these two bright starres being of the first light
are founde the one called *Aldebaran* or *oculus*
Tauri, the other *Alramech*

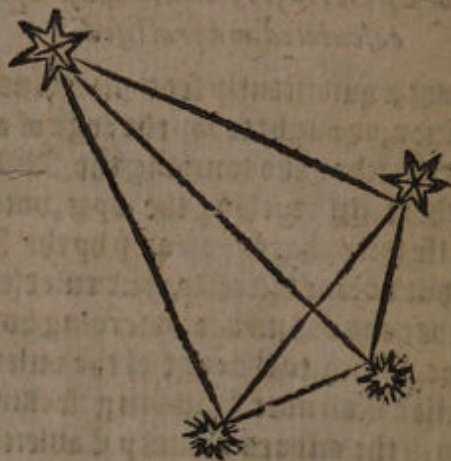
By what mea-
nes these Star-
res are
knowen:

The best way is thus. The Night and day knowne with the
true howze of the night, entre your Table considering that
Night and day obserue what partes belongeth there to that
Starre & howze. Then resort to your Instrument, laying the
edge of your ruler, as many partes fro the North. Eastward
circumspectly lifting vp the edge close by the wyze so the sayde
shineth euen with that edge.

Or thus Grofely

Another vway
to finde them.

Oculus Tauri is euer a meate rodde and a halfe to the eye
vnder the 7. Starres & somewhat North of them in the ri-
sing *Alramech* is contrary to him placed accompanied with 3
litle dimme Starres a rod from him by the iudgement of the
sight in the forme of a Triangle thus.



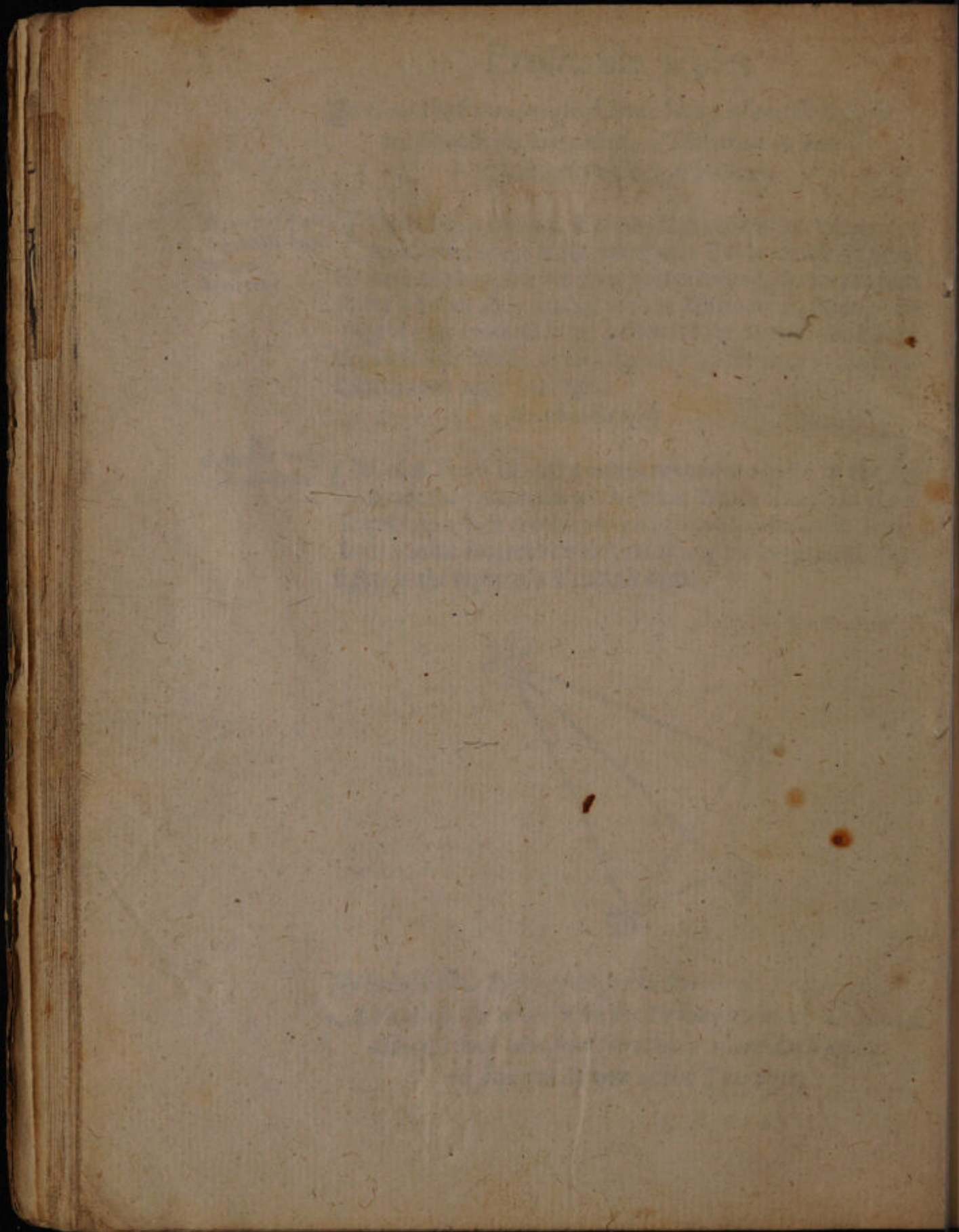
¶ Behold this Figure, the great Starre doth represente
Alramech, the other thre the Triangle which is placed
alwayes with him, but commonly there doth appea-
re but one Starre of the Triangle.

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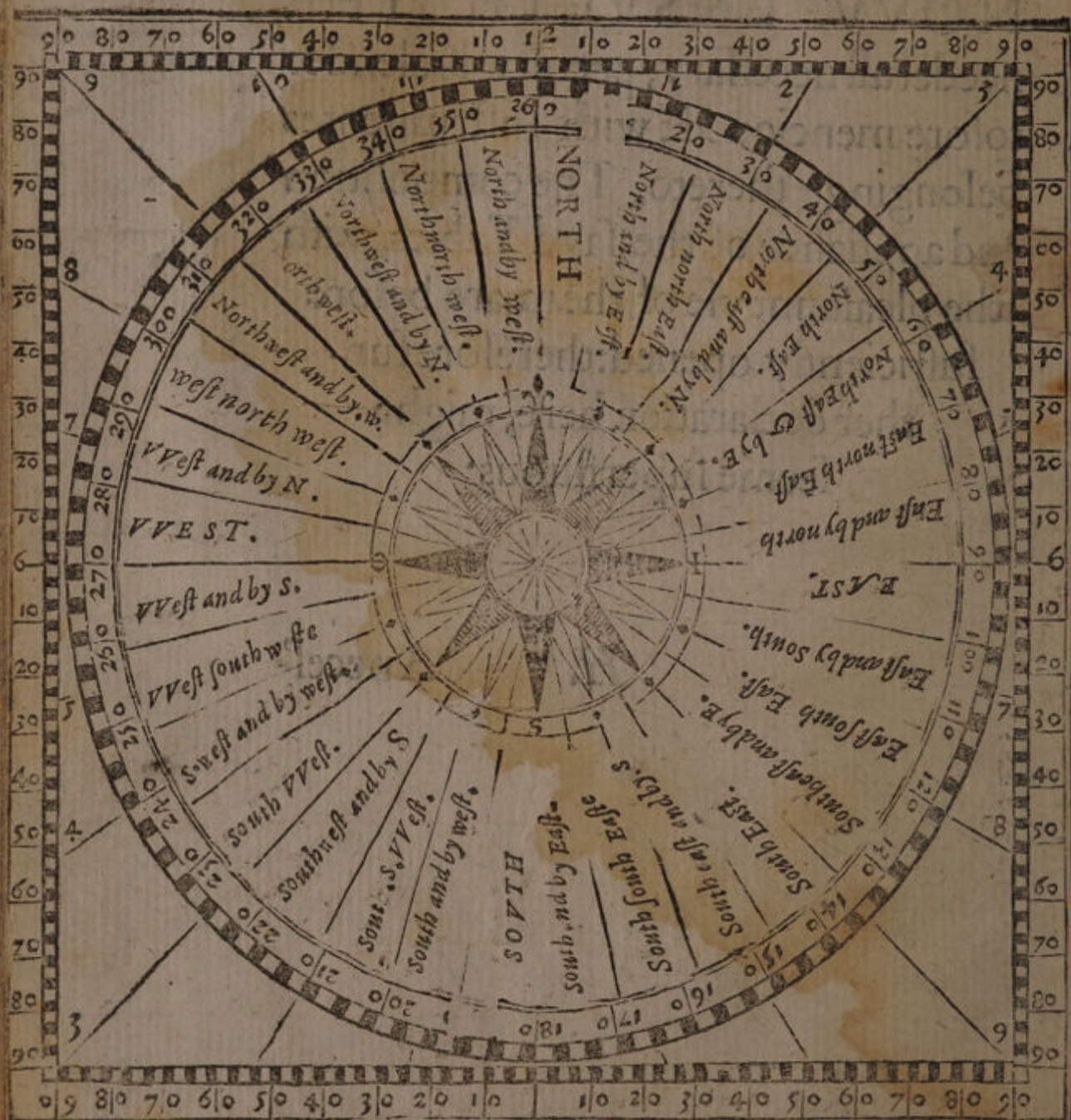
N
ne
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th

NOVV ENSVETH THE
needefull necessary, peculiar Kalender
tofore mencioned: with Instrumentes
belonginge thereto. The composition
and appliance of the sayd Tables, with
the pleasaunt vse of them, are before
sufficiently opened: therefore fur-
ther declaration here, might
seeme superfluous:

H.

A neces-

28 A Necessary Instrument, to finde exactly, the houre
of the day, and night diuers wvayes, wyth
with helpe of this Peculiar Kalender.



	5	6	7	8	9	10	11	12
1	108	113	143	165	190	213	59	79
5	112	129	150	172	197	220	63	74
10	118	135	158	181	206	227	68	78
15	123	144	166	192	214	233	71	81
20	130	151	173	197	220	239	75	85
25	137	158	181	207	223	244	79	90
30	144	165	191	213	233	249	82	93
January hath xxxj. dayes.								
81	93	105	121	143	168	195		
86	9	110	127	153	177	205		
89	11	116	135	160	189	214		
93	105	122	143	169	198	223		
95	111	123	152	179	207	230		
101	116	135	159	190	216	236		
190	121	144	198	158	222	242		
1	2	3	4	5	6	7		

From evening to midnight.

Oculus
Tauri.

Almarech.

From midnight unto day.

	12	11	10	9	8	7	H
10 { Staffe	36	39	49	83	155	01	{ fbad. }
{ Squire	4	4	13	12	0	0	{ fbad. }
H	0	1	2	3	4	5	

	12	11	10	9	8	7	6	H.
20 { Staffe	32	34	42	65	209	0		{ fbad. }
{ Squier	4	4	14	2	1	0		{ fbad. }
H	0	1	2	3	4	5	6	

	12	11	10	9	8	7	6	H.
30 { Staffe	27	29	35	152	209	0		{ fbad. }
{ Squier	5	5	14	3	1	0		{ fbad. }
H	0	1	2	3	4	5		

For the day.

10 grs

	9	10	11	12	
1	92	104	113	133	164
5	94	107	123	143	171
10	98	111	129	153	183
15	101	117	135	160	189
20	106	122	144	168	198
25	111	128	151	178	207
30	117	135	159	189	215
<div> <div>For the night.</div> <div>From midnight unto day.</div> <div>Aprill hath xxx. dayes.</div> </div>					
1	193	208	232	255	
5	199	225	244	258	
10	207	235	248	262	
15	215	236	253	266	
20	223	243	257	270	
25	230	248	262	274	
30	235	252	266	278	
	1	2	3	4	5

Alramech.

	H	12	11	10	9	8	7	
8	Staffe	10	11	13	16	23	36	76
	Squire	14	13	11	9	6	4	2
	H	0	1	2	3	4	5	6
	H	12	11	10	9	8	7	6
18	Staffe	9	9	11	3	58	267	
	Squire	16	15	12	9	7	4	2
	H	0	1	2	3	4	5	6
	H	12	11	10	9	8	7	6
28	Staffe	8	8	10	14	23	42	139
	Squire	18	17	14	10	7	5	3
	H	0	1	2	3	4	5	6

For the day.

8 9 10 11 12

1	117	136	160	190	216			
5	120	142	163	196	222			
10	128	152	178	210	230			
15	134	159	188	214	235			
20	143	163	189	222	241			
25	151	177	206	230	248			
30	160	189	215	236	253			

May hath xxxj. dayes.

27	253	267	278					
241	256	269	280					
247	261	273	285					
252	266	278	288					
257	270	281	292					
262	274	285	296					
266	273	288	300					

1 2 3 4 5

From evening to midnight.

Alrameck.

For the night.

From midnight unto day.

12	11	10	9	8	7	6	5	H
Staffe	7:	8	10	13	17	26	43	100
Squire	20	18	15	11	8	5	3	1
H	0	1	2	3	4	5	6	7

(bad.) gr. II.

For the day.

12	11	10	9	8	7	6	5	4	H
Staffe	7:	7	9	12	17	24	39	82	258
Squire	21	19	15	12	8	6	4	2	
H	0	1	2	3	4	5	6	7	8

(bad.) 10

	12	11	10	9	8	7	6	5	H
Staffe	6:	17	2	12	16:	23	37	74	565
Squire	22	20	16	12	9	6:	4	2	
H	0	1	2	3	4	5	6	7	

(bad.) 20 gr. II

	8	9	10	11	12			
1	219	229	255	268	280			
5	225	244	259	272	283			
10	233	250	264	275	286			
15	238	254	279	279	290			
20	243	258	271	283	293			
25	249	262	275	286	297			
30	254	267	279	290	300			

Iuly hath xxxij. dayes.

	1	2	3	4	5			
290	302	83						
293	304	86						
297	79	90						
301	82	93						
304	86	98						
308	89	101						
382	93	106						

From evening to midnight.

Alramech.

1
5
10
15
20
25
30

Alramech

Oculus
Tanri.

For the nyght.

	12	11	10	9	8	7	6	5	4	H
Staffe	7	7	9	12	16	24	39	82	2580	shad.
Squire	21	19	15	12	8	6	4	2		shad.
H	0	1	2	3	4	5	6	7	8	

For the day.

	12	11	10	9	8	7	6	5	H
Staffe	7	8	10	13	17	26	43	100	shad.
Squire	20	18	15	11	8	5	3	1	shad.
H	0	1	2	3	4	5	6	7	

	12	11	10	9	8	7	6	5	H
Staffe	8	8	10	14	19	28	49	139	shad.
Squire	18	17	14	10	7	5	3	1	shad.
H	0	1	2	3	4	5	6	7	

gr. 1 Ω

Alramech.

Oculus
Tauri.

Oculus
Tauri.

	8	9	10	11	12			
1	251	267	279	291	302			
5	259	272	284	294	304			
10	263	275	286	297	307			
15	267	279	290	300	311			
20	270	282	292	303	313			
25	274	285	296	306	316			
30	278	288	299	309	319			
August hath xxxj. dayes.								
	82	94	107	122	141			
	86	98	111	126	146			
	89	102	116	132	154			
	93	105	119	138	160			
	96	110	125	144	167			
	100	114	130	152	174			
	104	118	136	158	183			
	1	2	3	4	5			

For the night.

From midnight unto day.

From evening to midnight.

	H	12	11	10	9	8	7	6	5	
3	Staffe	9	9	11	15	21	31	58	207	{shad.}
	Squire	16	15	12	9	7	4	2	0	{shad.}
	H	0	1	2	3	4	5	6	7	
										gr. 8
	H	12	11	10	9	8	7	6		
14	Staffe	10	11	13	16	23	36	76		{shad.}
	Squire	14	13	11	9	7	4	2		{shad.}
	H	0	1	2	3	4	5	6		
										10
	H	12	11	10	9	8	7	6		
24	Staffe	11	12	14	18	20	43	111		{shad.}
	Squire	12	12	10	8	5	3	1		{shad.}
	H	0	1	2	3	4	5	6		
										20 gr. 17

For the day.

	7	8	9	10	11	12
1	267	279	290	301	82	93
5	270	281	292	303	85	96
10	273	285	296	307	88	100
15	276	287	298	80	91	104
20	280	291	302	83	94	108
25	284	295	305	87	99	112
30	287	287	80	91	103	117

September hath xxx. dayes.

	106	120	139	161	186	
109	124	144	166	192		
113	129	150	173	199		
117	135	155	180	204		
123	142	164	189	212		
128	149	171	196	219		
134	155	180	204	225		
1	2	3	4	5		

From evening to midnight.

Alramech

Oculus
Tauri,

1
5
10
15
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25
30

Oculus
Tauri.

12	11	10	9	8	7	6	H
13	14	16	21	30	54	221	shad. 20 gr. ny.
11	10	9	7	5	13		shad.
H	0	1	2	3	4	5	6

12	11	10	9	8	7	H
15	16	19	24	37	73	shad.
9	9	8	6	4	2	shad.
H	0	1	2	3	4	5

12	11	10	9	8	7	H
17	18	22	29	45	112	shad. 10
8	8	6	5	3	1	shad.
H	0	1	2	3	4	5

gr. 10

34

For the nyght.

From midnight unto day.

For the day.

Alramech.

*Oculus
Tauri.*

*Oculus
Tauri.*

For the night.

From midnight unto day

6 7 8 9 10 11 12

1	277	288	298	80	92	104	117
5	279	290	302	82	94	107	122
10	284	294	305	86	98	111	127
15	286	68	79	90	102	116	131
20	290	71	82	93	106	121	140
25	294	75	86	98	111	126	146
30	297	79	90	102	116	131	154

October hath xxxj. dayes.

135	157	181	205	226	243		
141	162	188	210	231	247		
147	170	195	218	237	252		
154	178	202	225	242	256		
162	186	210	230	246	260		
169	194	217	235	251	264		
177	202	224	241	255	268		
1	2	3	4	5	6		

From Evening to midnight

1
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30

For the day.

	12	11	10	9	8	7		H
4	Staffe	20	21	25	34	61	226	shad.
	Squire	0	1	2	3	4	5	shad.
	H	0	1	2	3	4	5	
	12	11	10	9	8	7		H
14	Staffe	23	25	30	42	79	6896	shad.
	Squire	6	6	5	3	2	0	shad.
	H	0	1	2	3	4	5	
	12	11	10	9	8			H
24	Staffe	27	29	35	52	9	11	shad.
	Squire	5	5	4	3	1		shad.
	H	0	1	2	3	4		

gr. m.

Almarech.

Oculus
Tauris

Oculus
Tauris

From evening to midnight.

	5	6	7	8	9	10	11	12
1	287	298	80	91	104	117	135	156
5	290	302	82	94	107	122	140	163
10	294	305	87	98	111	127	147	171
15	293	85	91	103	117	135	156	180
20	301	83	95	108	123	142	165	189
25	307	88	100	113	129	150	173	198
30	81	92	104	119	136	158	183	206

Nouember hath xxx. dayes.

182	215	225	243	257	270	281	292
188	211	231	248	261	273	285	296
195	218	237	252	265	277	288	000
204	225	243	257	269	281	292	000
213	232	248	261	274	285	297	000
220	238	253	266	278	290	297	000
227	244	258	270	282	293	295	000
1	2	3	4	5	6	7	8

	12	11	10	9	8	7	H
Staffe	32	34	42	12	65	209	
Squire	4	4	13	12	0	7	
H	0	1	2	3	4		

	12	11	10	9	8	H
Staffe	36	39	49	83	155	0
Squire	4	4	13	12	1	0
H	0	1	2	3	4	

	12	11	10	9	H
Staffe	40	45	57	104	
Squire	3	3	12	1	
H	0	1	2	3	

For the night.

From midnight unto day.

For the day.

Almarech.

Oculus
Tauri.

Oculus
Tauri.

	5	6	7	8	9	10	11	12
1	81	92	105	119	136	153	183	207
5	84	96	109	124	144	166	192	214
10	89	101	115	132	153	175	201	222
15	93	105	120	139	161	186	209	230
20	98	111	127	147	169	195	217	235
25	103	116	133	154	177	202	224	242
30	107	122	141	163	188	211	231	248
December hath xxxj. dayes.								
1	228	244	258	271	283	293	315	
5	234	249	263	275	286	297	319	
10	240	255	267	279	291	302	324	
15	246	260	272	284	295	307	329	
20	251	264	276	287	299	310	332	
25	256	268	280	291	303	314	336	
30	261	273	285	296	308	319	341	
	1	2	3	4	5	6	7	

From evening to midnight.

For the night.

From midnight unto day.

For the day.

	12	11	10	9	8	7	6	5	4	3	2	1	H
1	Staffe	43	47	62	112	1							shad.
2	Squire	3	3	12	1	1	1	1	1	1	1	1	shad.
12	Staffe	45	49	65	131								shad.
12	Squire	3	3	2	1	2	1	1	1	1	1	1	shad.
22	Staffe	43	47	62	112								shad.
22	Squire	3	3	12	1	1	1	1	1	1	1	1	shad.
31	Staffe	40	45	57	104								shad.
31	Squire	3	3	12	1	1	1	1	1	1	1	1	shad.
	H	0	1	2	3								

gr. 27

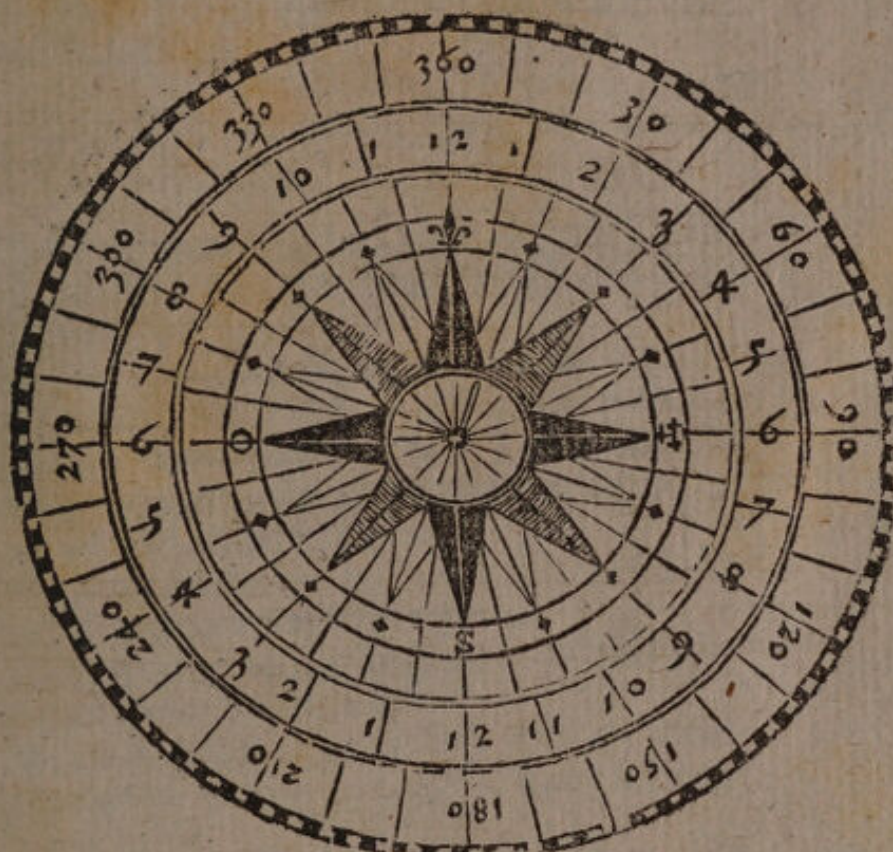
gr. 3

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North



West

East

South

¶ Thus endeth the Peculier Kalender, very commodious for the day and night booke, I haue here adioyned the Instrument without the Square, which may suffice, for the whole vse of the tolozelsaid Kalender, with the help of the Squire and Staffe.

Fol.

Kalendar



1511

1511

1511

It is to be noted that the first of the month of January is the day of the year when the sun is in the sign of the zodiac called Capricorn. And this day is the day of the year when the sun is in the sign of the zodiac called Capricorn. And this day is the day of the year when the sun is in the sign of the zodiac called Capricorn.

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A general Prognostication Fol. 35

I may not here omit a Kalender generall deuised in ii. part
wherof the fyrst containeth six Monethes, from Ianuarie
to Iune. The second other six Monethes from Iulie to De-
cember. In this Kalender are set forth the Festiual dayes, the
entryng of the Sunne in the Signes Celestial, the euil dates
noted with one Picke. For a further declaration of those euil
dayes, reade this following.

*The yeare hath xxxiii. euil dayes gene-
rall for euer*



I Anuary hath eight such dayes, the i. the ii. & iiii.
the v. the x. the xv. the xvi. the xix. Dyrinke white
wyne this Moneth.

February hath thre dayes, the viii. the x. the
xvii. these not so euil, the xvi. & xviii. the xxviii
Eate no pottage of Dikes or Hallowes: They are venemous.

March thre dayes, the xv. the xvi. the xix, these not so euil, the
xxviii. day. This month, all sweete meates are good.

April two dayes, the xvi. the xxi. these not so euil, the vii. the
viii. the x. the xx. Use hote meates of light digestion.

Maye thre dayes, the vii. the xv. the xx. these not so euil, the
iii. the vi. Rise Early, and use breakfast.

Iune two. the iiii. the vii. these not so euill, the x. the xi. the
xxii. Sage and lettuce are good to eate, Colde water fastinge
hurteth not.

Iuly two dayes, the xv. & xx. abstayne from carnallitey.

Agust two dayes, the xix. the xx. These not so euil the firste
the xxix. the xxx. It hurteth not to abstayne from pottage, and
all hote meates and drynkes of spicerie.

September two dayes, the vi. the vii. these not so euil, the. iiii.
the iiii. the xxi. eate good fruite.

October one day, the vi. these not so euil, the iiii. the xvi. the
xxiii. Good wyne is holesome this Moneth.

Nouember two dayes, the xv. the xix. these not so euil, the v. &
vi. the xxviii. the xxix. Bleepe not.

December thre dayes, the vi. the vii. the ix. these dates not so
euil, the xv. the xvii. the xxii. Bleepe not ouer much. Warm not
thy legges at the fyre,

☞ The first part of the generall Kalendar from Ianuarie to Iune.

Ianuarie.	Februarie.	March.	Dates	April.	May.	Iu. e.
:A Circūci.	d	d	1	g	h Phl. lac.	e
:b	e Purifi.	e	2	A	c	f
c	f	f	3	b	d	g
:d	g	g	4	c	e	:A
:e	A	A	5	d	f	b
f Epiph.	b	b	6	e	g	c
g	c	c	7	f	:A	:d
A	:d	d	8	g	b	e
b	e ☉ in X	e	9	A	c	f
:c	:f	f	10	b	d	g
d ☉ in ♊	g	g ☉ in V	11	c ☉ in ☊	e	A Barna.
e	A	A Spring.	12	d	f ☉ in ♋	b ☉ in ♎
f Hilar.	b	b	13	e	g	c Summer.
g	c Valen.	c	14	f	A	d
:A	d	:d	15	g	:b	e
b	e	:e	16	:A	c	f
:c	:f	f	17	b	d	g
d	g	g	18	c	e	A
e	A	:A	19	d	f	b
f	b	b	20	e	:g	c
g	c	c	21	:f	A	d
A	d	d	22	g	b	e
b	e	e	23	A Georg.	c	f
c	f Matb.	f	24	b	d	g Ioāhap.
d Cō. Pau.	g	g Annū.	25	c Marc.	e	A
e	A	A	26	d	f	b
f	b	b	27	e	g	c
g	c	c	28	f	A	d
:A		d	29	g	b	e Pe. Pa.
b		e	30	A	c	f
c		f	31	d		

The seconde part of the generall Kalendar: from Iulie to December.

Iuly.	August.	Septemb.	Dayes	October.	Nouem.	Decem.
g	c Pet. Vin.	f	1	A	d Om. /a.	f
A	d	g	2	b	e Om. au.	g
b	e	.A	3	.c	f	A
c	f	.b	4	d	g	b
d	g	c	5	e	.A	c
e Dog beg.	A	d	6	f	.b	d Nicol.
f	b	.e	7	g	c	.e
g	c	f Na Ma.	8	A	d	f Cō. ma.
A	d	g	9	b	e	g
b	e	A	10	c	f	A
c	f	b	11	d	g	b
d	g	c	12	e	A	c ⊙ in 7
e	A	d	13	f	b ⊙ in 4	dwynter.
f ⊙ in 8	b ⊙ in 11	e ⊙ in 9	14	g ⊙ in 11	c	e
g	c	f Heruest.	15	A	d	f
A	d	g	16	b	e	g
b	e Dog end	A	17	c	f	.A
c	f	b	18	d Luc.	g	b
d	g	c	19	e	.A	c
e	A	d	20	f	b	d
f	b	.e Mathe.	21	g	c	e Tho. ap.
g Ma. mag.	c	f	22	A	d	f
A	d	g	23	b	e	g
b	e Bartho.	A	24	.c	f	A
c Luc. Apo.	f	b	25	d	g	b Na. do.
d	g	c	26	e	A	c Steph.
e	A	d	27	f	b	d Io. euā.
f	b	e	28	g St. Iud.	.c	e Imoce.
g	.e decol. lo.	f Micha.	29	A	d	f Tho.
A	d	g	30	b	e Andre.	g
b	e		31	c		A

The Generall Kalender

Lo the Brieve vse of this General Kalender.

EHere the columpne wher your Moneth is noted in the head, yee shall there fynde runnynge downe the columpne the Festiual dayes of that moneth, the entry of the Sunne in the Celestiall signes, the euil dayes pricked. &c.

I would haue placed in this Kalender the Fayres and Termes also, but that cannot remayne continual true: For those that ensue moueable Feastes are moueable, and therfore may haue no certayne place, For the Termes, note these preceptes following. The Fayres shalbe declared by two Tables immediately ensuing this Kalender general.

How to know the Termes.

KNow therfore, that Easter Terme alwayes beginneth the 18. day after Easter, reckning Easter day for one, and endeth the Monday next after the Assention day

Trinity Terme beginneth the Fryday next after Corpus Christi day, and endeth the Wednesday fortnight after.

Michaelmas Terme beginneth the 9. or 10. day of October, and endeth the 28. or 29. of Nouember.

Hillary Terme beginneth the 23. or 24. day of Ianuary: and endeth the 12. or 13. day of February.

FINIS.

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Generall Faires Fol 37

A Table containyng the Moneth, day, and
Place of the principal Fayres of England
to be augmented at pleasure in order,
following.

The 6 at Wyllow, at Salisbury. The first of Lente at January.
Exeter.

The 2, day at Bath at Maydstone. The 14 at Feuer-
same. On Ashwednesday, at Lichfeelde, at Ropston at Cam-
worth. The first monday in Lent, at Cister, at Abington. The
24. at Wenley vppon Thames, at Teukelbury.

The 4. Sunday in Lene at Stanfords, at Sudbery. The 5 Marche
Sunday at Grantam, at Salisbury, the Monday before our La-
dy day at Wilsbych Palme quen. The 13. at Wipe. The 25. at
Nozchamptō, at Great Chare, at Waulden.

The 5 day at Walingford. The. 7. at Darby The. 9. at Bic-
kellworth, at Billingworth at Casam the Monday after. The
3 Sunday after Easter at Louth. The. 23 at Charinge, at Ip-
swiche at Antell, at Winingam, at Gilsforde. The 25. at Darby.
The 26. at Tenterden.

The 1. dayes at Scowe the olde at Reading, at Maydstone
at Leicester, at Chensford. The 8 day at Benerley, Ascension
day, at Birmingham, at S. Eoes, at Bishops Statford. The
sonday, at Kingstone vppon Thames. Trinity Sunday at Ro-
well, at Cranebooke, the 16 daye. The 27. day at Lennam.

On Corpus Christi day, at Couentry S. Eoes, at Bishop
Stanford, at Rosse the 9 at Maidstone. The 11 at Okingant.
The 21. at Wyowbury, at S. Albons. The 24. at Cambridge,
at Gloucester, at Lincolne, at Windsor, Colchester. The 29.
at Wollerhampton, at Peterborough. The 17 at Foll. stone. The
24. at Werrham. The 28 at H. troyne.

A table

Generall Faïres

A Table containyng the Moneth, day, and
Place, of the principal Fayres of England
to be augmented at pleasure in order
following.

July.

The 11. day horsefayre at Partney, at Nabor, at Felix: the
12. day at Lpd, The 2. at Pinchbacke. The 17. at Winch.
com. The 20. at Uxbridge, at Cattelby. The 22. at Par-
borow, at Winchester, at Colechester, at Tetbery. The 25. at
Bristol, at Dover, at Chilham, at Ipswich, at Northham-
ton, at Darby, at S. James by London, at Reading, at Louth
at Haellbery.

August.

The 1 day at fenerfame, at Donstable at S. Edes at Bud-
fozch at Parrā Church, at Wilsbith. The 9. at Rummey. The
10. at Bedford at Fernā, at Strodes, at Blakamoze. S. Lau.
at Walton. The 24. at London, at Telwylbery, at Sudbery, at
Norwich, at Northalerton, at Dover, at Ric. The 28. at Ash
fozd.

September

The 8. day at Cambridge, at Sturbidge, at London in
Southwarke at Smide, at Recoluer, at Partnope iii. Ladye
dapes. The 14. at, Maltam Abbeye, at Motton vnder hedge
at Smalbing. The 21 at Croydon, at Hulden in Holdernes, at
S. Comondsbery, at Paulton, at S. Iues, at Halby Lanam
at Wilemal, at Sickingbozow, at Dover, at Ekrie. The 29.
day at Canterbury.

October.

The 6. day at S. Sithes besydes Norwiche, the 13. at Gra-
ues end, and at Windsor at Marchfeld. The 18 at Elie, at Sta-
fon, at Charing. The 23. at Harfozde, at Ciciter, at Newmar-
her.

November

The 2. day at Kingstone, at Blechingly. The 6. at Newpore
pond, at Standly. The 11. at Dover. The 13. at S Comond-
bery. The 20 at Wyeb. The 23. at Sandwich. The 30. at Ro-
chester, at Haydenhead.

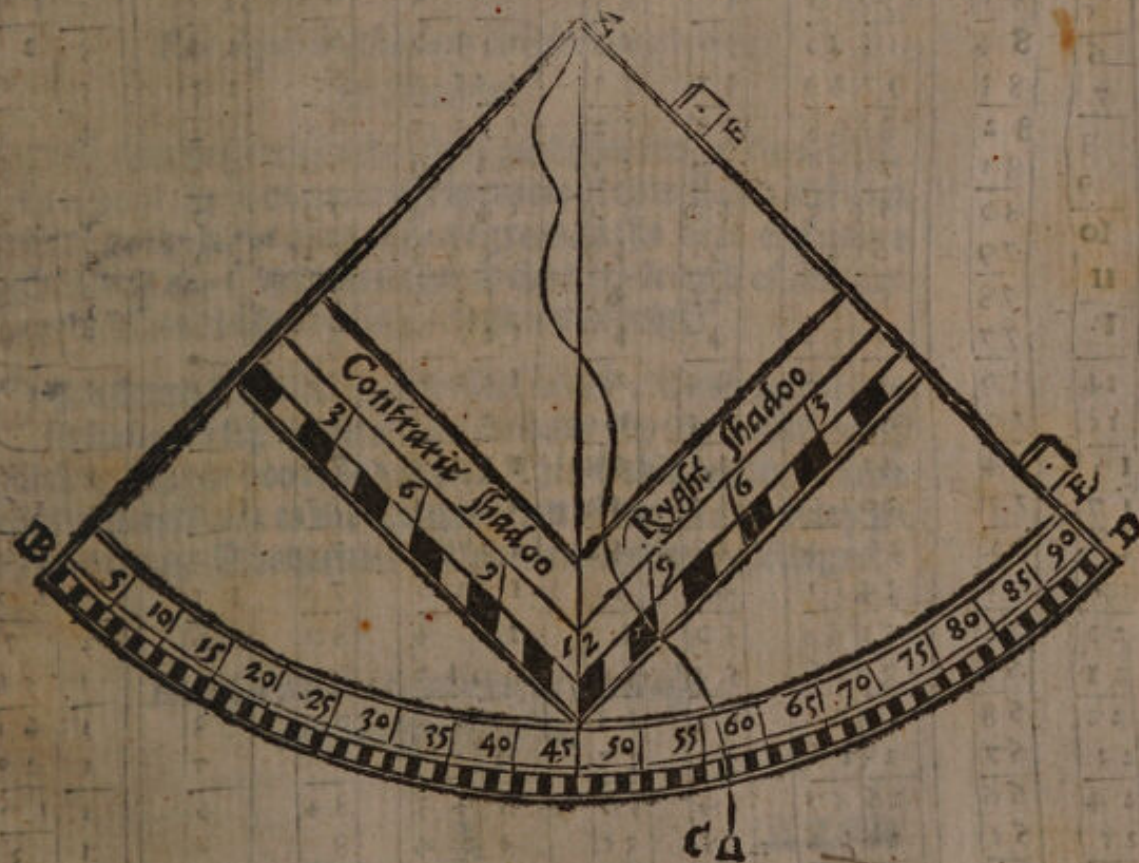
December

The 29. at Canterbury. The 5. at Pluckley. The 6 at Spal-
ding. The 7. at Sanderst.

Because I understand many are desirous how to get exactly Fol. 38.
the iust length of Staffe & Squier shadow before treated of.

Upon vnleuell groundes, or other wayes, wheresoeuer it be,
yea without either Squier or Staffe I haue calculated a ta-
ble folowing, shewly satisfiing them, so y they get the height
of the Sunne any way, or as I shall now instruct.

Beholde this instrument called a Quadrant the iust fourth
parte of a circle euen such a circle as I taughte you before to
make for y night Diall containyng the fourth part of his diui-
sions, y is 90 degrees onely ii sightes and a plume line added,
to be placed at the beginning of this booke, as ye maye there
& here see. I haue here also put the Scale to the Quadrant,
which serueth wel for shadows, and aswel for heightes. The
Use of this Scale is declared in my booke called Tectonicon.



Let by handsonly your Quadrant & Sunne beains persling y
heights. The Plumet & Line then at liberty falling, notech
ther obs degrees of heighte at that present, with the which yee
Valenter this table immediately folowing, to get theu and in
like maner at al other times y iust shadow of y Staffe or Squier
How by this
Instrument to
get the height
of the Sunne
at any times.
A Table

*A Table generall of Shadowes, right and contrary: for
every grade of the Sunnes height: The thinge cau-
sing Shadowe, supposed 12 partes.*

Height of the Sunne.	Staffe. Shadow.	Height of the Sunne.	Staffe. Shadow.	Height of the Sunne.	Staffe. Shadow.
G	g	P. M	G	G	P. M
0	90	Shadow.	30	60	20 4 7
1	89	537 3 4	31	59	19 5 8
2	88	343 4 3	32	58	19 1 2
3	87	222 5 9	33	57	18 2 9
4	86	171 3 7	34	56	17 4 7
5	85	137 10	35	55	17 8
6	84	114 10	36	54	16 3 0
7	83	97 4 9	37	53	15 5 2
8	82	85 28	38	52	15 2 1
9	81	75 4 5	39	51	14 4 9
10	80	68 3	40	50	14 1 8
11	79	61 4 4	41	49	13 4 8
12	78	56 2 7	42	48	13 2 0
13	77	51 5 9	43	47	12 5 2
14	76	48 8	44	46	12 2 6
15	75	44 4 7	45	45	12 2
16	74	41 5 1	46	44	11 3 5
17	73	39 1 5	47	43	11 1 1
18	72	36 4	48	42	10 4 3
19	71	34 5 1	49	41	10 2 6
20	70	32 5 8	50	40	10 4
21	69	30 2 6	51	39	9 4 3
22	68	29 4 2	52	38	9 2 2
23	67	28 1 6	53	37	9 2
24	66	26 5 7	54	36	8 4 3
25	65	25 4 4	55	35	8 2 4
26	64	24 3 7	56	34	8 6
27	63	23 3 3	57	33	7 4 8
28	62	22 3 4	58	32	7 3 0
29	61	21 4 0	59	31	7 1 3
30	60	20 4 2	60	30	6 5 6
31	59	19 4 7	61	29	6 3 0
32	58	18 5 2	62	28	6 2 3
33	57	17 5 7	63	27	6 1 7
34	56	16 6 2	64	26	6 1 1
35	55	15 6 7	65	25	6 0 6
36	54	14 7 2	66	24	6 0 1
37	53	13 7 7	67	23	5 5 6
38	52	12 8 2	68	22	5 5 1
39	51	11 8 7	69	21	4 5 1
40	50	10 8 8	70	20	4 3 6
41	49	9 8 9	71	19	4 2 2
42	48	8 9 0	72	18	4 2 2
43	47	7 9 1	73	17	3 5 4
44	46	6 9 2	74	16	3 4 0
45	45	5 9 3	75	15	3 2 6
46	44	4 9 4	76	14	3 1 1
47	43	3 9 5	77	13	3 0
48	42	2 9 6	78	12	2 4 5
49	41	1 9 7	79	11	2 3 2
50	40	0 9 8	80	10	2 2 0
51	39	0 9 9	81	9	2 7
52	38	0 10 0	82	8	1 5 4
53	37	0 10 1	83	7	1 4 1
54	36	0 10 2	84	6	1 2 0
55	35	0 10 3	85	5	1 1 5
56	34	0 10 4	86	4	1 3
57	33	0 10 5	87	3	0 5 0
58	32	0 10 6	88	2	0 3 8
59	31	0 10 7	89	1	0 2 5
60	30	0 10 8	90	0	0 1 2
61	29	0 10 9	91	0	0 0 0
62	28	0 11 0	92	0	0 0 0
63	27	0 11 1	93	0	0 0 0
64	26	0 11 2	94	0	0 0 0
65	25	0 11 3	95	0	0 0 0
66	24	0 11 4	96	0	0 0 0
67	23	0 11 5	97	0	0 0 0
68	22	0 11 6	98	0	0 0 0
69	21	0 11 7	99	0	0 0 0
70	20	0 11 8	100	0	0 0 0

Height of the Sunne. Staffe. Shadow. Height of the Sunne. Staffe. Shadow. Height of the Sunne. Staffe. Shadow.

*The vse of this Table, and Staffe Shadowe,**Ensample.*

I Suppose the height of the Sunne taken by the Quadrant 34 degrees, now I require the exact length of Staffe & Squire Shadow. For right shadowe, first seeke out the degrees in the left parte of the Table, and vnder this title the heighte of the Sunne: if they be not in that left rowe downewards, resort to the next rowe and like title, vntill ye find the degrees: then in righte order towarde the righte hande, in the nexte columnne vnder the title of Staffe Shadowe, are 17, partes, and 47. minutes, your desire.

For Squier Shadow, titled contrary Shadowe.

Seeke your degrees in the right part vppward, at thys title, Height of the Sunne, in the bottome of this Table, the shal ye finde on the right hand of 34. degrees, in the next Columnne eight partes and 6, Minutes: that is the very length of Squier Shadow, when the Sunne is 34. degrees in height.

Occasioned I cannot here omitte another Table falschfully supputated for the Sonnes Altitude, by the which wyth quick speede the houre is knowen. This Table conducteth many folde wayes, vea to the Composition of diuers and many Instruments: as Quadrantes, Hauicles, Cylindres, Ringes. &c.

*Beholde now' it doth ensue, and also
the bricfe vse of it.*

L

A Table

A Table of the Sunnes altitude, for every houre the Pole mounted, 51. degrees
30. Minutes, exactly calculated.

Houres before n. Houres after n.				12	11	10	9	8	7	6	5	4									
					1	2	3	4	5	6	7	8									
St.	G	S	C	G	M	G	M	G	M	G	M	G	M								
30	59	0		62	0	59	43	53	45	45	42	36	42	27	23	18	11	9	28	1	31
25		5		61	54																
20		10		61	37	59	21	53	26	45	24	36	25	27	6	17	54	9	9	1	13
15		15		61	9																
10		20		60	30	58	17	52	28	44	32	35	35	25	16	17	3	8	16	0	16
5		25		59	41																
0	82	0		58	42	56	34	50	55	43	6	34	13	24	56	15	41	6	50	0	0
25		5		57	34																
20		10		56	17	54	15	48	48	41	10	32	22	23	6	13	50	4	55	0	0
15		15		54	52																
10		20		53	21	51	26	46	12	38	46	30	6	20	52	11	34	2	34	0	
5		25		51	43																
0	87	0		50	0	48	11	43	11	35	58	27	27	18	10	8	59	0	0		
25		5		48	12																
20		10		46	20	44	37	39	51	32	53	24	32	15	27	6	8	0	0		
15		15		44	25																
10		20		42	23	40	51	35	18	29	34	21	24	12	25	3	6	0			
5		25		40	20																
0	92	0		38	37	36	58	32	37	26	7	18	8	9	16	0	0				
25		5		36	30																
20		10		34	32	31	4	28	55	22	38	14	51	6	7	0	0				
15		15		32	35																
10		20		30	40	29	15	25	18	19	14	11	33	3	2	0					
5		25		28	4																
0	97	0		27	0	25	40	21	51	15	57	8	34	6	0						
25		5		25	17																
20		10		23	39	22	22	18	42	13	1	5	45	0	0						
15		15		21	8																
10		20		20	43	19	29	15	55	10	23	3	17	0							
5		25		19	26									0							
0	102	0		18	18	17	6	13	38	3	13	1	15								
25		5		17	19																
20		10		15	30	14	48	11	55	6	35	0	0								
15		15		5	51																
10		20		15	25	14	13	10	52	5	36	0									
5		25		15	6																
0	107	0		15		13	51	10	20	5	15										

When the Sunne entereth the 22 grade of 60 he toucheth our Horizon
 4. in the morning Entering the 22 of 26 he reacheth at 8 in the first
 at 5 in the first of May at 7. Note in all my tables, one pteke
 following the Minutes, di miniffeth: two augmenteth
 some fmae quantitie.

V When the Sunne entereth the 22 grade of 99 he toucheth our Horizon
4. in the morning Entering the 22 of 26 he yseth at 8 in the syfte of
day in the syfte of 7. Note in all my tables one prick
showing the Minutes di minisheth: two augmenteth
some small quantities.

[The brieve vse of this Table.

Suppose the height of the Sunne taken by the Quadraunte, eight degrees and 13. Minutes, the Sunne being in the beginning of Aquary, or Sagittarie. I seeke and find in this Table and in the Row which directly answereth \approx and \times . 8 Degrees and 13. Minutes: that is agreeable to 9. or 3. of the clocke in the head of this Table. Therefore I pronounce that when the Sunne was 8. degrees and 13. Minutes in height, entering \approx or \times it was precise 9. of the clocke in the morning, or 3. at after Noone. Thus at all times yee may knowe the iuste houre.

We may also conclude the height of the Sunne at al tymes, the place of the Sunne known, and the houre. Note whē the precise numbers either of height, or degree of the Sunne are not found in the Table, then make proportion according to the difference. &c. Practise better then many words openeth this. Now to ende this matter, this following to him that hath taken these knowledges I write.

Dato loco Solis & eius Altitudine, horam ipsam calculare.

De sinum inuente solaris Altitudinis, in sinum arcus semidiurni, & productum diuide per sinū Altitudinis Meridianæ eiusdem Solis, & prouenientis inde partium numeri sumito arcum, quem tandem in horas vertas: Collectus horarum numerus quesitam indicabit horam: ab ortu quidem Solis, si altitudo fuerit ante meridianam, vel ab occasu, si eadē Solis Altitudo acciderit post Meridiem.

Nowe hauing some occasion I could here adioyne a briefe Supputacion Sinicall, touching most workings Astronomical, but howe farre that passeth the capacity of the common sorte of men, they that be traupled know. For this cause I leaue to giue any preceptes this way: desiring promotion meete to haue to doe in the like: then God suffering my penne

L 2, That

Briefe.

Shall not stay to open ready chosen generall wayes, for pleasure
Astronomicall operation.

Here shall now follow briefly collected certaine rules per-
formed befoze by Tables: but now don by quicke supputa-
tion, to be had in memozy, by that auoyding carpage of burde
of bookes.

*A way to get the Golden number for
Prime without a Table.*

Adde vnto the yeare of our Lord .i. then deuide that summe
by 19. the remayne is the Prime or Golden number.

The Epact is thus euery founde.

Multiply the Prime by 11: deuide by 30. the remain is your
desire. These two numbers begin at March, their vse is
chiefly to finde out the Chaunge, Quarters, and full Moone as
ensueth.

*A Rule for the Chaunge, Full and Quar-
ters of the Moone.*

Put vnto the Epact al the monethes from March, including
the Moneth of Marche: pull then that summe from 30. the
remayne sheweth the day of the chaunge.

Here note the full Moone is the 15. day after the chaunge.
Also if the remain be lesse then 15. subtract that lesse from 15,
the rest is the full Moone.

If the remayne passe 30. subtract it fro 45. then the full doth
also appeare.

To conclude, if fro the full Moone ye pul 15. dayes, you haue
the chaunge going befoze. The chaunge had, the Quarters are
known by adding or pulling away 7. dayes.

For the

*For the age of the Moone, worke
thus for ever.*

A Due to the dayes of your moneth the Epacte, and also as
manye dayes more as are Monethes from Marche to the
Moneth, including both Moneths. Now subtract 30. if ye may
the age then remayneth.

*Now shalbe declared what Signes and
degrees the Moone differeth from the
Sunne, by which is gathered at all ti-
mes the Signe and Grade wher-
in shee is.*

Multiplye the age of the Moone by 4. deuide by 10. the
Quotiente sheweth the Signes that the Moone dif-
fereth from the Sunne. The remaine augmented by
three bringeth degrees to be added. Ye must put these
Signes and degrees to the place of the Sunne: the product, I
meane the increas or ende of al these Signes and Degrees,
in order counted from the Sunne, declare the place of the Moone
in the Zodiacke.

*The place of the Sunne in the Zodiacke
is thus found.*

First know that the xi. day of January, the Sunne is
entred \approx the x. day of February \times . The xi. of March
 \vee . The xi. of Aprill. δ The xi. of May Π , The xi.
of Iune ζ . The xi. of Iuly η . The xi. of Auguste
 ν . The xi. of September $\underline{_}$. The xi. of October m . The
13. of Nouember \times . The xi. of December. \propto

This knowen, the place of the Sunne is wel found, addyng
for every day past any entry 1. degree.

Ensam-

Briefe.

Ensample.

I Require the place of the Sunne the 21. day of August. I find that the Sunne is entered in $\eta\gamma$. the 14. day of the Planet. I must for every day past any entrey adde 1. degree. There are 7. dayes past that entrey, then I conclude the Sunne readye to haue place in the 8. degree of $\eta\gamma$ the 21. of August.

To know how long the Moone shineth.

For his shining, in the encrease multiply the age of the Moone by 4. In the same augment the rest of the age whereby she lacketh of 30. by 4. and deuide by 5. the Quotiente sheweth the houres: the remaines if ther be any, multiplied by 12. bringeth minutes to be added.

Howe the mouable Feastes are found readily.

Seeke the chaunge of the Moone in February, for that peare yee require these Mouable Feastes. Note what day it falleth on the next tuesday is Shrouetuesday. But if y^e chaung be on tuesday, then the next tuesday ensuinge is it. The nexte Sunday is the first Sunday of Lent. Sixe Sundayes after is Easter daye. Adde 35. dayes or 5. weekes to Easter daye, yee haue Rogacion Sunday. To that adde 4. dayes, so haue yee Ascention daye. Then haue ye 10. dayes to Whitsontyde. Seuen dayes after is Trinity Sunday. And foure dayes after is Corpus Christi day.

Without Tables at all times to know the Tydes.

Learn as is declared the age of the Moone, also remember the houre of the full, or chaung for your place or point which doth neuer vary, these knowen, worke thus,

Ensam.

Ensample.

Vhen the Moone is 10. dayes olde. I desyre to know at
what of the clocke it is ful Sea at Londo brydge, Multi-
plye 10. by 48. so haue yee 480. deuide that by 60. yee haue 8.
houres. To that adde 3. which is the houre of the ful or chaunge
appointed for that place. Al then commeth vnto 11. of the clock
high water at London brydge. If any thing remaine they
are Minutes of an houre. If the houres amount a-
boue 12. cast the twelues away, the rest
is your requeste.

FINIS.

A Perfit



To the Reader.



*H*aving of late (gentle Reader) corrected and reformed sondry faulces that by negligēce in printing haue crept into my fathers Generall Prognostication: Among other things I founde a description or Modill of the world and situation of Spheres Caelestiall and Elementare according to the doctrine of Ptoleme, whereunto al Uniuersities (led there to chiefly by the auctority of Aristotle) sithe haue consēred. But in this our age one rare witte (seeing the continual errors that from time to time more & more haue bin discovered, besides the infinite absurdities in their Theorickes, which they haue bin forced to admit that would not confesse any mobility in the ball of the Earth) hath by long studie, painful practise, and rare inuention deliuered a new Theorick or model of the world, shewing that the earth resteth not in the Center of the whole world, but only in the Center of this our mortal world or Globe of Elementes which environed and enclosed in the Moones Orbe, and together with the whole Globe of mortalitie is caried yearly round about the Sunne, which like a king in the midst of all raigneth and goeueth lawes of motion to the rest spherically dispersing his glorious beames of light through al this sacred Caelestiall Temple. And the earth it selfe to bee one of the Planets hauing his peculiar & straying courses rourning euerye 24 houres round vpon his owne Center whereby the ☉ and great Globe of fixed starres seeme to swey about and turne, albeit in deede they remaine fixed. So many wayes is the sense of mortall men abused, but reason and deepe discourse of wit hauing opened these things to Copernicus, & the same being with demonstratiōs Mathematicall most apparantly by him to the world deliuered, I thought it conuenient together with the olde Theorick also to publish this: to the end such noble English mindes (as delight to reach aboue the baser sort of men) might not be altogether defrauded of a noble part of Philosophy. And to the end it might manifestlye appeare that Copernicus ment not as some haue fondly excused him to deliuer these grounds of the Earths mobility onely as Mathematicall principles, sayned & not as Philosophical truth.

To the reader.

red. I haue also from him deliuered both the Philosophicall reasons by Aristotle and others produced to maintaine the Earths stability, and also their solutions and insufficiency, wherein I cannot a litle commend the modestie of that graue Philosopher Aristotle, who seeing (no doubt) the insufficiency, of his own reasons in seeking to confute the Earths motion, useth these wordes. De his explicatum est ea qua potuimus facultate hominū his discipulis haue not with like sobrietye maintayned the same. Thus much for my owne parte in this case I will onely say. There is no doubt but of a true grounde truer effecte maie be produced then of principles that are false, and of true principles falshood or absurditie cannot be inferred. If therefore the Earth be situate immouable in the Center of the world, why finde we not Theorickes vppon that grounde to produce effects as true and certaine as these of Copernicus? Why cast we not away those Circulos Aequantes & motions irregulare, seinge our owne Philosopher Aristotle himselfe the light of our Vniuersities hath taught vs; *Simplicis corporis simplicem oportet esse motum.* But if contrary it bee founde, impossible (the Earths stability being graunted) but that we must necessarilie fall into these absurdities, and cannot by any meane auoide them. Why shall we so much dote in the apparance of our senses, which manie waies maie be abused, & not suffer our selues to be directed by the rule of Reason, which the greate GOD hath giuen vs as a Lampe to lighten the darcknes of our vnderstandyng and the perfit guide to leade vs to the golden braunche of Veritye amidst the forest of errors.

Beholde a noble question to be of the Philosophers and Mathematicians of our Vniuersities argued not with childish Inuettices but with graue reasons Philosophicall and irreproueable Demonstrations Mathematicall. And let vs not in matters of reason be ledde away with authority and opinions of men, but with the Starryed Poet let vs say.

Non quid Aristoteles vel quiuis dicat eorum
Dicta nihil moror, à vero cum forte recedunt,
Magni sæpè viri mendacia magna loquuntur,
Nec quisquam est adeo sagax, quin sapius erret.

Ratio dux fida Sophorum,

THE

To the reader.

THE Globe of Elements enclosed in the Orbe of the Moone
I call the Globe of Mortality because it is the peculiar
Empire of death. For above the Moone they feare not his
force but as the Christian Poet sayeth,

Omne quod est supra lunam, æternumq; bonumq;
Esse scias nec triste aliquid Cælestia tangit.
Quicquid verò infra Lunæ conuexa creauit
Omniparens natura, malum est, mortisq; seueras,
Perpetitur leges & edaci absumitur æuo.

Again.

Omne malum est infra lunam, nox atra, procellæ
Terribiles, frigus, calor, importuna senectus,
Pauperies malesuada, labor, dolor, improbitas, Mors.
Supra autem lunam, lucis sunt omnia plena.
Nec non letitiæ & pacis, non tempus & error
Et MORS & senium est illic & inutile quicquam,
Fœlix ô nimium fœlix, cui sedibus illis
Tam pulchris & tam iucundis tamq; beatis
Vivere concessum est, supremi munere Regis.

And againe.

Singula nonnulli credunt quoq; sydera posse
Dici Orbes, TERRAMq; appellant sydus opacum
Cui minimus Diuum præsit &c.

*In the midst of this Globe of Mortality hãgeth this darck starre
or ball of earth and water balanced and sustained in the midst of
the thinne ayer onely with that propriety which the wõderful work
man hath giuen at the Creation to the Ceter of this Globe with his
magneticall force vehemẽtly to draw and hale vnto it self al such
other Elementall thinges as retaine the like nature. This ball
euery 24. houres by natural, uniforme and wonderful slie & smoth
motion rouleth rounde, making with his Periode our naturall day,
whereby it semeth to vs that the huge infinite immoueable Globe
should stay and turne about.*

Mr.

The

To the reader.

The Moones Orbe that enuironeth and containeth this darcke
flarre and the other mortall, changeable, corruptible Elements &
Elementate things is also turned round euery 29. dayes 31. minu-
50. seconds. 8. thirds, 9. fourths, & 20. fiftes, and this Periode may
most aptly be called the Meneth. Therest of the Planets motions
appeare by the picture and shal more largely be hereafter spokē of.

HEREIN good Reader, I haue made farther then the vul-
gar sorte Demonstratiue & Practicē, & God sparing life I meane
though not as a iudge to decide yet at the Mathematicall barre in
this case to pleade in such sort, as it shall manifestly appeare to the
VVorld whether it be possible vpon the Earthes stabilitie to deli-
uer any true or probable Theorick, & then reserre the pronouncing
of sentence to the graue Senate of indifferent discretie Mathema-
ticall Readers.

Farewell and respect my trauaile as thou shalt see them tend to
the aduancement of truth and discovering the Monstrous loth-
some shape of error.

A Perfit

A PERFITE DESCRIPTI

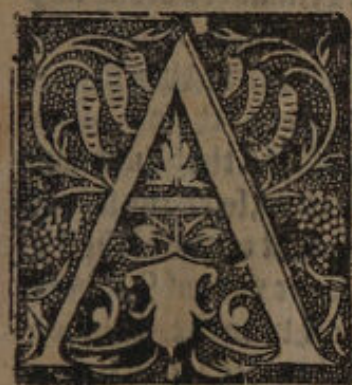
on of the Cælestiall Orbes according

to the most auncient doctrine of the Pythagorians,

latelý reupued by Copernicus and by Geome-

tricall Demonstrations ap-

prooued.



Although in this most excellent and dy-
ficile parte of Philosophye in all ti-
mes haue bin sondry opiniōs touchyng
the situacion & mouing of the bodies
Celestiall, yet in certain principles al
Philosophers of any accompt of all
ages haue agreed & cōsented. Firste
that the Orbe of the fixed stars is of
al other the most high, the fardest dis-

tant, and comprehendeth all the other spheres of wandringe
starres. And of these straying bodies called Planettes M olde
philosophers thought is a good ground in reason M the highest
to the Centre should swiftest moue, because the circle was
least and thereby the sooner overpassed and the farther distant
the moze slowly. Therefore as the Moone beyng swiftest in
course is founde also by measure highest, so haue all agreed M
the Orbe of M being in mouing the slowest of al the Planets,
is also the highest. M the next, and then M , but of M & M ther-
hath ben great controuersy, because they stray not euery way
from the Sunne as the rest doo. And therefore some haue placed
them aboue the Sunne as Plato in his Timæo: others beneath
as Ptolomy and the greater part of them that followed him.
Alpetragius maketh M aboue the Sunne and M beneath, and
sundry reasons haue ben of al sides alledged in defence of their
opinions. They that follow Plato (supposyng that al starres
should haue obscure & darke bodies shyninge with borrowed
light like the Moone) haue alledged that if those Planets wer
lower then the Sun, then should they sometime obscure som

partes

partes

The Addition.

and opposite are much greater in light & nigher to vs, wherby it cannot be but the centre of them is rather to the ☉ the to y^e earth to be referred: as in the Dybes of ♀ and ☿ also. But if al these to the Sunne as a centre in this manner be referred, then must there needes betwene the conuex Dybe of ♀ and the concave of ☿ an huge space bee left wherein the earth & Elementare frame enclosed with the Lunary Dybe of ☾ must be situate. For from the earth the Moone may not be farre remooued, beyng without controuerſie of al other nigher in place and nature to it: especially cōsidering betwene the same Dybes of ♀ and ☿ there is roome sufficient. Therefore neede we not to be ashamed to cōfesse this whole globe of Elements enclosed with the Moones sphere together with the earth as the Centre of the same to bee by this great Dybe together wth the other Planets about the Sun tourned making by his reuolution our yeare. And what soeuer seeme to vs to proceede by the mouing of the Sunne, the same to proceede in drede by the reuolution of the earth, the Sunne still remayning fixed & immouable in the midst. And the distance of the earth frō the Sunne to be such as being compared with the other Planets maketh euident alterations and diuersity of Aspects, but if it be referred to y^e Dybe of starres fixed, the hath it no proportion sensible, but as a point or a Center to a circumference which I should farre more reasonable to be graūted, then to fall into such an insynpte multitude of absurbe imaginations, as they were faine to admit that wil needes wilfully mayntaine the earthes stability in the Centre of the world. But rather herein to direct our selues by that wisdom we see in al gods naturall workes, where we may behould one thing rather endued with many vertues and effectes, then any superfluous or vnnecessary part admitted. And all these thinges althoughe they seme hard, straunge & incredible, yet to any reasonable mā y^e hath his vnderstanding ripened with Mathematicall demonstration, Copernicus in his Reuolutions accordinge to hys prouise hath made them more euident and cleare then y^e Sun beames. These grounds therefore admitted which no man reasonably can impugne, that the greater dybe requirreth the longer time to run his Periode: The orderly and most beautifull frame of the Heauens doeth ensue. The

The Addition.

The first and bigbest of al is the immoueable sphere of fixed starres containing it selfe and al the rest, and therefore fixed: as the place vniuersal of rest, whereunto the motions and positions of al inferiour spheres are to be compared. For albeist sundry Astrologians finding alteration in the declination and Longitude of starres, haue thought that the same also should haue his motion peculiere: Yet Copernicus by his motions of the earth salueth al, and venterly cutteth of the ninth and tenth spheres, whych contrary to all sence the maynteyners of the earthes stability haue bin compeller to imagine.

The first of the moueable Orbes is that of H , which being of all other next vnto his infinite Orbe immoueable garnished with lightes innumerable is also in his course most slow, & once only in thirtie yeares passeth his Periode.

The second is J , who in 12. yerres perfourmeth his circule.

Mars in 2. yeares runneth his circular race.

Then followeth the great Orbe wherein the globe of mortallty inclosed in the Moones Orbe as an Epicycle and holdinge the earth as a centre by his owne waight resting alway permanente, in the middest of the ayre is carped rounde once in a yeare.

In the fift place is V making his reuolution in 9. moneths.

In the 6. is M , who passeth his circuite in 80. dayes.

In the middest of all is the Sunne.

For in so statelie a temple as this who would desyre to set his lampe in any other better or more conuenient place then this, from whence vniformely it might distribute light to al, for not vnfitly it is of some called the lampe or light of the worlde, of others the mynde, of others the Ruler of the worlde.

Ad cuius numeros & diu moueantur & Orbes

Accipiant leges prescriptaq; fadera seruent.

¶ Trismegistus calleth hym the visible God. Thus doth the Sun like a king sitting in his throner gouern his courts of inferiour

The Addition.

our powers: Neither is h Earth defrauded of the service of h Moone, but as Aristotle sayth of all other the Moone wth h earth hath highest alliance, so heere are they matched accordingly.

In this fourme of frame may we behold such a wonderful Symetry of motions and situations, as in no other can be proposed: The times whereby we the Inhabitants of the earth are directed, are constituted by the reuolutions of the earth & circulation of hir Centre causeth the yeare, the conuersion of hir circumference maketh the naturall day, and the reuoluc^{ion} of the L produceth the moneth. By the onely vie we of thys Theorick the cause & reason is apparante why in L the progressions and Retrogradations are greater then in h , and lesse then in S , why also in L they are more then in Q . And why such chaunges from Direct to Retrograde Stationarie, &c. happeneth notwithstanding more rife ly in h then in L & yet more rarely in S why in Q not so commonly as in Q . Also why h L and S are nigher the earth in their Acronicall then in their Cosmicall or Heliocall rising. Especially S who rising at the Sunne set, he wth in his ruddy fier, followeth equal in quantity with Iupiter, and contrarywise setting little after h Sunne, is scarcely to be discerned from a Starre of the second lyght. All which alterations apparantly folowe vpon the Earthes motion, And that none of these do happen in h fixed Starres, it playnly argueth this huge distance and immeasurable Altitude, in respect whereof this great Orbe wherein the earth is carryed is but apoynt, and vnderly without sensible proportion being compared to that heauē. For as it is in perspective demonstrate. Every quantity hath a certaine proportionable distance wherein to it may be discerned and beyond the same it may not be seene, this distance therefore of h immovable heauen is so exceeding great, that the whole Orbis magnus vanisheth away, if it be conferred to that heauen.

Herein can wee neuer sufficiently admire thys wonderfull & incomprehensible huge frame of goddes woorkes proponed to our senses, seing forst this baul of h earth wherein we moue, to the common sorte seemeth greate, and they in respect of the Moones Orbe is very small, but compared with Orbis mag-

nus

The Addition.

thus wherein it is caried, it scarcely retaineth any sensible proportion, so meruellously is that Dybe of Annual motion greater then this litle darke starre wherein we liue: But y Orbis magnus being as is befoze declared but as a point in respect of the immensity of y immoueable heauen, we may easily consider what litle portson of gods frame, our Elementare corruptible world is, but neuer sufficiently be able to admire the immensity of the Rest, Especially of that fixed Dybe garnished with lightes innumerable & reaching vp in Sphaericall altitude without ende, Of which lightes Celestial it is to bee thought that we onely behoulde such as are in the inferiour partes of the same Dybe, & as they are higher, so seme they of lesse and lesser quantity, even til our sight being not able farther to reach or conceyue, y greatest part rest by reason of their wonderful distance inuisible vnto vs. And this may wel be thought of vs to be y glorious court of y great god, whose vnsercheable works inuisible we may partly by these his visible cōiecture, to whose infinit power & maiesty such an infinit place surmounting al other both in quantity and quality only is conuenient. But because the world hath so long a tyme bin carryed with an opinion of the earths stability, as the contrary cannot but be now very imperiswable, I haue thoughte good out of Copernicus also to geue a tast of the reasons philosophical alledged for the earths stability, and theyr solutions, that such as are not able with Geometrical eyes to behoulde the secrete perfection of Copernicus Theoricke, may yet by these familiar natural reasons be induced to serch farther, and not rashly to condemne for phāstical, so auncient doctrine reuiued, and by Copernicus so demonstratiuely approued,

What reasons moued Aristotle and others that followed him to thincke the earth to rest immoueable as a Centre to the whole world.

The moste effectuall reasons that they produce to proue the earths stability in the middle or lowest part of the world,

The Addition.

that of Grauitie and Leuitie. For of all other the Elements of the earth say they is most heauy, and al ponderous thinges are carryed vnto it, struiuing as it were to swape euen downe to the inmost part therof. For the earth being round into y^e which all waighty thinges on euery syde fall, making righte angles on the superficies, passe to y^e Centre, seing euery right line y^e falleth perpendicularly vppon the Horizon in y^e place where it toucheth the earth must nedes passe by the Centre. And those thinges that are carryed toward that Medium, it is likely y^e ther also they would rest. So much therefore the rather shal the Earth rest in the middle, and (receyuing all thinges into it selfe that fall) by his owne wayghte shall bee most immoueable: Agayne they seeke to proue it by reason of motion and his nature, for of one and the same a symple body y^e motion must also be symple sayth Aristotle. Of symple motions there are two kindes right and circular, Right are either vpp or downe: so that euery symple motion is either downward toward the Centre, or vppward from the Centre, or circular about the Centre. Now vnto the earth and water in respecte of their weyght the motion downward is conuenient to seeke the Centre. To ayre and fyre in regarde of their lightnes, vppward and from the Centre. So is it meete to these elements to attributes the ryght or streight motion, and to the heauens only it is proper circularly about this meane or Centre to be turned round. Thus much Aristotle. Of therfore sayth Ptolomy of Alexandria the earth shoulde turne but only by y^e dayly motion, thinges quite contrary to these shoulde happē. For his motion shoulde be most swift and violēt that in 24. howres shoulde let passe the whole circuite of the earth, & those thinges which by sodayn turning are stirred, are alsogether vnmete to collecte, but rather to disperse thinges vnited, vnlesse they shoulde by some fyne fasteninge be kept togeather. And lōg ere this the Earth being dissolued in peeces shoulde haue byn scattered throughe the heauens which were a mockery to think of, and much more beastes, & al other waightes that are loose coulde not remayn vnshaken. And also thinges falling shoulde not light on the places perpendiculare vnder theym, neither

shoulde

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Should they fall directly thereto, the same beinge violently in the meane carryed rwaie. Cloudes also and other thynges hanginge in the ayre shoulde alwayes seeme to vs to be carryed toward the West.

The Solution of these Reasons. with their insufficiencye.

These are y causes, & such other wherewith they approue the Earth to rest in the middle of the world and that out of all question: But hee that will maintein the Earthes mobility may say that this motion is not violent but naturall. And these thynges whych are naturally mooued haue effects contrary to such as are violentlye carried. For such motions wherein force and violence is vled, muste needes be dissolued and cannot be of long continuance, but those which by nature are caused, remaine still in their perfit estate and are conserued and kepte in their most excellent constitution. Without cause therefore did Ptolomey feare least the Earth and al earthly thynges shoulde bee tozne in pces by this reuolution of the Earth caused by the working of nature, whose operations are farre different from those of Arte or such as humaine intelligence may reach vnto. But whye shoulde hee not mutch more thincke and misdoubt the same of the world, whose motion muste of necessity be so mutch more swift and vehemente then this of the Earth, as y heauen is greater then y Earth. Is therefore the Heauen made so hygge in quantite that it might wrych vnspeakable vehemencye of motion bee seuered from the Centre, least happily resting it shoulde fall, as some Philosophers haue affirmed: Surely yf this reason shoulde take place, the Magnitude of the Heauen shoulde infinitely extend. For the more this motion shoulde violentlye bee carried higher, the greater shoulde the swiftnes be, by reason of the increasing of the circulerce which muste of necessity in 24. hours bee past ouer, and in lyke manner by increase of the motion the Magnitude muste also necessarilye bee augmented: Thus shoulde the swiftnes increase the Magnitude and the Magnitude the swiftnes infinitely: But according to that ground of

The Addition:

nature whatsoeuer is infynite can neuer be passed ouer. The Heauen therefore of necessity must stand and rest fixed. But say they without the heauen ther is no body, no place, no empynes, no not any thing at al whether heauen should or could farther extende. But thys surely is very straunge that nothyng should haue such effyciente Power to restrayne some thyng the same haupng a very essence and beyng Yet yf wee would thus confesse that the Heauen were in deede infinity ward, and onely fynite downeward in respect of his spherycall concauety, That more perhappes myght that saying bee verified, that without the Heauen is nothyng, seepng euery thyng in respect of the infinitenes thereof had place sufficient withyn y same. But then must it of necessity remaine immouable. For the chyeftest reason that hath moued some to thinck the heauen lymted was Motion, whych they thought without controuerlie to be in deede in it. But whether the world haue hys boundes or bee in deede infynite & without boundes, let vs leaue y to be discuffed of Philosophers, sure we are y the Earth is not infynite but hath a circumference lymitted, seepng therefore all Philosophers consent y lymitted bodies may haue Motion, and infynite cannot haue anye: Whye do we yet stagger to confesse motyon in the Earth being most agreeable to hys forme and nature, whose boundes also and circumference wee knowe, rather then to imagyne that the whole world should sway and turne, whose end we knowe not ne possyibly can of any mortall man be knowne, And therfore the true Motion in deede to be in the Earth, & the apparace only in the Heauen And that these apparances are no otherwyle then if the Virgilian *Aneas* should say.

Prochimus portu, terraeq; urbescq; recedunt.

For a shipp caryed in a smoothe Sea with such tranquillitye doth passe away, that al things on the shores and the Seas to the saylers seeme to moue and themselves only quyetly to rest with al such thinges as are aborde them, so surely may it bee in the Earth whose Motion being natural and not forcible

The Addition.

cible of al other is most vniforme and vnperceauable, wher-
by to vs that sayle therein the whole world maye seeme too
roule about. But what shall wee then saye of Cloudes and
other chynges hangyng or resting in the ayre or tendinge bp-
ward, but that not only the Earth and sea making one globe
but also no smal part of the ayre is likewise circularly caried
and in like sort all such thinges as are deriued from them or
haue any maner of alliance with them. Either for that y lower
Region of the ayre being mixt with Earthlye and watry
vapours folow the same nature of the Earth. Eyther that it
be gayned and gotten from the earth by reason of Vicinity or
Contiguity. Which if any man merueyle at, let him consider
how the olde Philosophers by yelde the same reason for the
revolution of the highest Region of the ayre, wherein we may
sometyme behoulde Comets carryed circularly no otherwise
then the bodies Celestial seeme to be, and yet hath that Regi-
on of the ayre, lesse conuenience with the Orbes Celestial, then
this lower part with the earth. But we asseyme that part of
the aire in respect of his great distance to be destitute of chys
motton Terrestrial, and y this part of the ayre y is next to the
Earth doth appeare most still and quyet by reason of his v-
niforme naturall accompanying of the Earth, and lykewyse
thinges that hange therein, onelesse by winds or other violēt
accident they be tossed to and fro: For the wynd in the ayre is
nothing els but as the wawe in the Sea: And of thinges ascē-
ding and descending in respect of the world we must confesse
they to haue a mixt motion of right & circular, albeit it seems
to vs right and streight, No otherwise then if in a ship vnder
sayle a man shoulde softly let a plummet downe from the top a-
longe by the masse euen to the decke: This plummet passinge
alwayes by the streight masse, seemeth also to fal in a ryghte
line, but bring by discours of reason wayed his motion is fo-
und mixt of right and circular. For such thinges as natural-
ly fall downward being of earthly nature there is no doubte
but as partes they retayne the nature of the whole. No other
wise is it of these thigs that by fierp force are caried bpward.
For the earthly fier is chiefly nourished with earthly matter,
and flame is destined to be nought els but a burning fume or

The Addition.

Smoke and the property of fyre is to extend the subject where unto it entereth, the which it doth with so great violence as by no meanes or engines it can be constrayned but that with breache of bandes it wil perfourme his nature. This motion extensive is from the Centre to the circumference, so that if any earthly part be fiered, it is caried violently upward. Therefore whereas they say that of simple bodies the motion is altogether simple, of the circulare it is chiefly verified, so long as the simple body remaineth in his natural place and perfitt unity of composition, for in the same place there can be no other motion but circulare, which remainyng wholly in it selfe is most like to rest and immobility. But right or streight motion only happen to those things that stray and wander or by any meanes are thrust out of their natural place. But nothing can bee more Repugnaunte to the forme and Ordinaunce of the world, then that things, naturally should be out of their natural place. This kinde of motion therefore that is by right line is only accident to those things that are not in their right state or perfection naturall, while partes are disioyned from their whole body, and couet to retourne to the unity thereof agayne. Neither do these things which are carryed upward or downward besides this circular movinge make any simple, vnyforme, or equal motion, for which their leuity or ponderosity of their body they cannot be tempered but alwaies as they fall (beginninge slowly) they increase their motion, and the farther they move swiftly, whereas contrariwise this our earthly fier (for other we cannot see) we may behold as it is carryed upward to vanish and decay as it were confessing the cause of violence to proceede only from his matter Terrestriall. The circulare motion alway continueth vnyforme and equall by reason of his cause which is insufficient and alway continuing. But the other hasteneth to ende and to attayne that place where they leane longer to be heauy or light, and hauing attayned that place, the motion ceaseth. Seing therefore this circulare motion is proper to the whole as streight is only vnto parts, we may say that circulare doth rest with streight as Animal cum Agro. And whereas Aristotle hath distributed Simplicem motum into these thre kyndes A medio ad medium, and

The Addition.

and *Circa medium*, it must be onely in reason, and imagination, as wee likewise seuer / in consideration Geometricall a poynt, a line, and a superficies, whereas in deede neither can stand without other, ne any of them without a body.

Hereto we may adioyne that the condition of immobility is moze noble and diuine then γ of change, alteration, or instability, & therfore moze agreeable to heaven then to this earth where al things are subiect to continual mutability. And seeing by euident prooue of Geometricall mensuration wee finde that the Planets are sometimes nigher to vs and sometymes moze remote, and that therfore even the maintainers of the Earths stability are enforced to confesse that the Earth is not their Dybes Centre, this motiō *Circa medium* must in moze general sort bee taken and that it may bee vnderstande that euery Dybe hath his peculiar Medium and Centre, in regard wherof this simple and vniforme motion is to be considered. Seeing therfore that these Dybes haue seuerall Centres, it may be doubted whether the Centre of this earthly Grauity be also the Centre of the world. For Grauity is nothinge els but a certaine proclivity or natural coueting of partes to bee coupled with the whole, whych by diuine prouidence of the Creator of al is giuen & impressed into the parts, γ they should restore themselves into their vniity and integrity concurrng in spherical forme. which kind of propriety or affection it is likely also that the Moone and other glorious bodies wante not to knit & combine their partes together, and to maintein them in their round shape, which bodies notwithstanding are by sundry motions, sundry wayes conueighed. Thus as it is apparant by these natural reasons γ the mobility of the earth is moze probable and likely then the stability. So if it bee Mathematically considered and with Geometrical Mensurations euery part of euery Theoricke examined: the discrete Student shall fynde that Copernicus not without great reason did propone this ground of the Earthes Mobility.

A short Discourse touching the Variation of the compasse.

Heruel-

The Addition.

MTrueplous no doubt is that naturall propriety of the Magnes whereby y needle touched immediatly tourneth to some one certayn poinct of the heauens, and after sundry motions hither and thither findeth rest onely in one place and poynct. And alvett this poinct in seuerall Horizons be dyfferent, yet in any one Horizon it remaineth alway permanent, and therefore it playnly appereth that the same proceedeth of some constāt permanent cause naturall, and not of any mutable uncertayne cause accidentall. But what this cause should be, no man hitherto hath trulye discovered. To omit apparant absurd opinions, the most probable of those that haue ben gyuen and generally best allowed is the Poinct Attractive, which should be of such vertue as to draw the needle touched alway toward the same poinct, but whether this poinct should be in the Heauens or Earthe is another controuerſie. Such as wil haue it in the Earthe asſyume it to be a huge mountayne or rocke of Magnes Stone, distant from the Pole certayne grades, which drawing the needle to it selfe alwayes cauſeth it to make an angle of Variation from the pole of the world ſalue onely vnder the Meridiane that passeth by the same Attractive poynct. But the error of this opinion wil ſone be found of them that ſhall vpon this ſuppoſition and two different angles of variation ſearch out the place of that Poynct Attractive (the ſame being in y Interſection of the two circles of poſitiō by the variations determined) and then conferre that with ſome third angle of variation: whereby it ſhal plainly appeare that in the Earthe no ſuch one Attractive Poinct can be imagined, as ſhall by circle of poſition produce ſuch variations as in Nauigatiō haue bin diſcovered. And to place this Poynct Attractive in any of the Heauens, it would appeare more abſurde for whether the Heauens mooue and the Earthe reſts immooueable, or the Earthe mooue and the great Dybe of ſtarres be permanent, as of neceſſity the one or the other muſt bee true (conſidering a motion is apparant) it muſt neceſſarily ſolow that bys alteration ſhould bee in continual alteration euerye howe and moment of the day, but by experience we ſynd the contrary, and therefore may neceſſarily be inferred, no ſuch Attractive Poyncte

The Addition:

Supposition I could easely determine if ther were anye trust to the obseruation of Mariners, but, hauing found by experience their grosse blage and aud homely instrumentes, where halfe a point commonly breakes no square, and also their repugnant tales that haue trauelled the selfe same voyadges I cannot yet resolue.

Vpon due examination of this Hypothesis there may happily fall out a straunge Paradoxe not thought of hitherto that these vulgare marine Charters delineate with Parallele meridianes, and right lined Rumby beinge of themselves apparently false and erroneous, yet vled without rectification of the compas may bring forth true effectes, and so two errors concurring produce a veritye.

Errours in the art of Nauigati- on commonly practized.

In all their Chartes are described with streight Meridian lines running equidistant or Parallele which error is most manifest to any that hath tasted but the fynde Principles of Cosmographie considering they are all great circles & concur in the Poles.

Secondly they suppose that running vpon any of these pointes of their compasse they should passe in the circumference of a greate circle and therfore in the plaine Chartes describe those windes with streight lines, but therein are they greatly abused, for the shippe skening the North and the South onely maketh her course in a great circle East or West she describeth a Parallele and beinge stirred on any other meane poynts (the compasse beinge truely rectified) she delineateth in her course a curue or Helicall line, neither straight nor circulare but myxt of both, and therfore to sette forth these wyndes in Chartes with streight lines is most erroneous.

The Addition.

Thirdly their rule to know φ Latitude by the Pole Starre adding or subtracting from his Altitude according to the situation of the Guardes, is also false, and that worst is cannot not bee amended, but bee it neuer so well rectified to one Climate, yet is it false in al other.

Furtherly their taking of the Sunne with their Balestile (as they terme it) is most false, and whereas some fyndinge the error therof haue gone about to remedy the same by cutting of a part at the end thinking thereby it might approche to the Centre of the eye, they encrease thereby the error and make it more false. For *visus non fit à puncto*. as they suppose. And this error is muche like the other of the Pole Starre and situation of the Guardes, for be it neuer so wel corrected by section to any one Altitude then shal it be false for all other, as to any skillful in Perspective, it is easily demonstrate.

This Error I haue already reformed Demonstratiue, & Practicē in my booke latelpe published entituled *Alasens Scale Mathematica*.

Also the Rules they haue to know howe manye leagues they shal runne vppon euery poynt to raise one degree in Latitude, are also meere faulse. For they serch that Arcke Itinerall as though it were the Hypothenusa to a right angled trian-gle whose sides are circles of contrary nature φ one a Parallele the other greate Circle, and therefore without all sense seeke they by proportion of right Lines to deliuer their quantity.

But besides these errors they haue one great imperfection yet in their art, and byether too by no man supplied, and that is the want of exact rules to know the Longitude or Arckes Itinerall, East and West, without the which they can neither truly geue the place of situation of any Coast, Harborough, Rode or Towne, ne yet in sayling, discern how the place they sayle vnto beareth from them, or how farre it is distant, where by they are enforced longe before they come at any Coast all night to styeke saile, no other wayes then if they were vpon it, thereby

either by loosing the benefite of prosperous winde, in such sorte
sometime, that whereas keepinge a true course they mighte
haue bene quietly at Roade, they are by contrary and aduerse
tempestes caried farre of, and so not withoute greate charge
to the owner, paine to the company, and peril to the vessel, are
enforced to wast their time, which groweth of their ignorance
that they neither haue true Rules to direct themselves, the
highest course, ne yet treadinge their beaten pathes can as-
suredly dicide of their certaine place. For reformation of these
errours and imperfections, new Chartes, newe instrumentes
and newe Rules muste bee prescribed. Wherein I haue
prepared in a peculier volume for that purpose to en-
treate, wishinge in the meane time that such as
are not able to reforme these faulter
wil abstayne to teach ours
Country men more
Errours.

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