# Speculum Anni: SEASON on the SEASONS, For the Year of our Lord 1816; 

 BEING THE BISSEXTILE or LEAP YEAR; Wherein you will find all Things neceffary for fuch a Work; Sun and Moon's Rifing and Setting; Moon's Southing, Planets' Places and Afpects, Eclipres, Judgments on the Weather, and Four Quarters; Remarks about the Sun, Monthly Poetry, and other Novelties.$$
\begin{aligned}
& \hline \text { By HENRY SEASON, } \\
& \text { LICENSED PHYSICIAN }
\end{aligned}
$$

And Student in the Celbstial Sciences, near Devizes. With a particular Judgment of the ECLIPSES, \&c.

Omnis donatio bona, $\mathfrak{F}$ omne integrum bonum Eft. Juperne defcendens à Patre luminum.-Jac. 1. 17.
God hath granted me to fpeak according to my Mind, and to judge worthilyoof the Things that are given me; for he is the Leader unto Wifdom, and the Director of the Wife: How the Times alter, the Change of the Seafons, the Courfe of the Year, and the Situation of the Stars.

WIsd. chap. vii. ver. 15, 19. Phobbus difplay'd his fiery Car And Widdom marfhall'd ev'ry Sev'n Worlds around the Sun He gave their Light, and Moti By fecret, fix'd, attractive Laws,
They all confefs th' Almighty Catrixuxsacs The Author's Eighty-third Impreffion.

## LONDON:

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Once more I venture, tho' I fear in vain, T' invoke my gentle Muse's aid again.
In youth I might not long her abfence mourn,
Bat hardly now expect her kind return.
Since fhe, the poct's beft and chief fupport, With all her train to youthful bards refort.


Firt Quarter the 6th day, at I in the afternoon. Full Moon the 1 gth day, at 12 at noon. Laft Quarter the 20th day, at 4 in the morning. New Moon the 28th day, at 4 in the morning.

SEASON. FEBRUARY, 1816.

Man is the univerfe, in little fhewn, The fcatter'd beauties here are join'd in one; In him the feveral motions are explain'd, Aud the great world is in the lefs contain'd, For as th' Almighty's throne is fix'd on high, Far from thefe lower fpheres, and arched fky .

|  |  | $\left\lvert\, \begin{array}{cc} \text { Ofets } \\ \mathrm{h} & \mathrm{~m} \end{array}\right.$ | s. |
| :---: | :---: | :---: | :---: |
| 17 | 29 | 31 | old women and ignorant friends and ac- |
| 27 | $\begin{array}{ll}7 & 274\end{array}$ | 433 | quaintance they are daily bred among; |
| 37 | $\begin{array}{ll}7 & 2 ; 4\end{array}$ | 435 | alfo poifonous books and novels, put into |
| G7 | 7234 | 437 | their hands to read, for their daily amufe- |
| 57 | 22 | $43^{8}$ | ment, by thofe who are no judges of, and |
| 67 | 7 | 40 | never had a proper education. |
| 77 | $7 \quad 184$ | 42 | As an intance of the great ignorance |
| 87 | $7{ }^{7} 164$ | 444 | and error that have prevailed in all for- |
| 97 | 7154 | 445 | mer ages, and are not yet totally extinct |
| 107 | $7 \begin{array}{ll}7 & 14\end{array}$ | 447 | from among us in the prefent age, you will |
| G7 | 7 114 | 4 | find that great numbers of grown-up per- |
| 127 |  | 51 | fons have not the leaft notion or idea that |
| 137 | 7 | 53 | our dwelling-place is a globe of earth and |
| 147 |  | 455 | water, which is inhabited by Antipodes, |
| 157 |  | 456 | ons walking or ftanding with their |
| 167 |  | 58 | feet oppofite to ours, at the diflance of pur |
| 17 |  | 5 - | globe's diameter. As in molt Roman Ca- |
| G | 58 |  | tholic countries the people are not only |
| 19.6 | 6.56 |  | taught, but are commanded, to believe |
| 206 | 545 |  | (on the peril of a fevere punifhment, |
| 216 | 52 |  | and being put in a horrid Inquifition) that |
| 226 | 50 | 5 | the fun moves round the earth, and not |
| 23 | 48 | $5 \quad 12$ | the earth round the fun; being a doc- |
|  | 46 | 514 | trine inconfiftent with numerous affrono- |
| G6 | 6445 | 5 16 | mical experiments and plain oblerva- |
| 266 | 64225 | 18 | tions. And moft perfons, poffeffed of |
| 276 | 41 | $5 \quad 19$ | what is called a common education, (hav- |
| 28.6 |  |  | ing learned to read and write, conceive |
|  |  |  | the earth and fea together, which we now inhabit, to.be a very large and long extended plain, to which they know no |



The Gad of light fends down his freaming rays On the warm'd earth, and cheers with fmiling days, And thus the central heart the fource contains Of vital heat, and in its cavern frains The bubbling ftreams that ftretch the fwelling veins.

| $\left\lvert\, \begin{aligned} & \mathrm{N} \\ & \mathrm{D} \end{aligned} \mathrm{C}_{\mathrm{C}}\right.$ |  |  | Observations. |
| :---: | :---: | :---: | :---: |
|  |  |  | bounds: And fome have afferted, that |
|  | 3315 | 27 | they have wathed their hands in the |
|  | 315 | 29 | clouds there gathered togethe |
|  | 29.5 | $3{ }^{1}$ | Others have maintained that Admiral |
| 56 | 275 | 33 | Drake fhot the gulph (fuppofed by them |
| 66 | 255 | 35 | to be a vaft whirlpool of collected waters, |
| 76 | $23: 5$ | 37 | running like water through a funnel into |
| 86 | 215 | 39 | a bottle, to the part of the globe oppofite |
| 9 | 195 | 41 | to the place where his thip had arrived) |
|  | 175 | 43 | quite into the oppofite world (making an |
| 11 | 15 | 45 | upper and lower plane of our earth), and |
| 12 | 135 | 47 | founded a trumpet when he was got London Bridge: fo ignorant, confur |
| 136 | 115 | 49 | London Bridge : fo ignorant, confuf and abfurd were and are the ideas |
| 146 | 95 | 51 | and abfurd, were and are the ideas of mof men concerning the nature of our |
|  | 75 | 53 | moft men concerning the nature of earth and fea. |
|  | 55 | . 55 | earth and fea. ${ }_{\text {To remove all which erroneous }}$ |
| 186 | 35 | $57$ | childifh conceptions, our account of |
| 19.5 | 596 |  | graphy, in the conftituent parts of our |
| 205 | 576 |  | globe, is intended; and firft, an account |
| 215 | 556 | 5 | of the celebrated Captain Cook's voyage |
| 22 | 536 | 7 | round the world, in his majefty's fervice, |
| 23 | 516 |  | in the Endeavour, and the places he |
| +5 | 496 | 11 | ouched at, and difcoveries he made, is |
| 25.5 | 476 | 13 | offered for the fatisfaction and improve- |
| 26 '5 | 456 | 15 | ment of our youth, and of all o |
| 275 | 4.36 | 17 | readers. |
| 28.5 | 416 | 19 | A VOYAGE, failed on difcovery, |
| 295 | 396 | 21 | round the world, through, the Atlantic |
| 5 | 376 | 23. | Weftern Ocean, South-Seas, and the |
| 5 | 356 | 25 | Eaftern Ocean, ftill failing wefterly, in |



Still it conveys the fwift returning blood, And reflefs thus maintains the circling flood, The fun, when fummer heats the fpring fücceeds, Changes the tarnifh'd verdure of the meads;
The dry'd up rills no longer murm'ring creep
O'er the fmooth pebbles, and invite to fleep.

| $\bigcirc{ }^{\circ} \mathrm{rifes}$ © fets |  |  | Observations. |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  | 336 | 7 |  |
|  | 316 | 29 | mander of the Endeavour ; with Mr. |
|  | 296 | 31 | Banks, Dr. Solander, attendants, and |
|  | 276 | 33 | feamen, on board, in number 96. Cap- |
|  | 256 | 35 | tain Cook fet fail from Plymouth on the |
|  | 236 | 37 | 26th of Auguft, 1768, proceeding in his |
|  | 216 | 39 | voyage wefterly, through the Atlantic, |
|  | 206 | 40 | to the South Seas; and then, after his |
|  | 186 | 42 | ftay there, keeping his courfe fill weft- |
|  | 5. 166 | 44 | erly, to the Eaft-Indies; meeting, in his |
| 115 | $5 \quad 146$ | 46 | paflage thither, with many furprifing ac- |
| 12 | 126 | 48 | cidents; and he thence fet farl, and returned to England on the 12th of July, |
| 12 | 106 86 | 5 | turned to England on the 12th of July, 1771. In the courfe of this voyage Cap: |
| F | $\begin{aligned} & 86 \\ & 66 \end{aligned}$ | $\begin{aligned} & 52 \\ & 50 \end{aligned}$ | 1771. In the courfe of this voyage Cap: tain Cook has given fundry inftances of |
|  | $5{ }^{5} 46$ | $\begin{aligned} & 54 \\ & 56 \end{aligned}$ | his perfeverance, perfonal courage, and |
| 175 | $5 \quad 26$ | 58 | diligence, in the difcoveries he has made, |
| 185 | $5 \quad 07$ |  | and of his unfhaken intrepidity in the fe- |
| 19.4 | $4 \quad 587$ |  | veral difficulties and hardfips he encoun- |
|  | 4 57 |  | tered; wherein the dangers he efcaped |
|  | 4557 |  | are, at leaft, equal to thofe of any former |
|  | $4{ }^{4} 537$ |  | circumnavigators: So that no perfon, of a |
|  | 4517 |  | lefs enterprifing genius and difpofition, |
|  | $4 \begin{array}{ll}497\end{array}$ | 11 | could ever have brought the Endeavour |
|  | 477 | 13 | rafe back to Old England, after engaging |
|  | $4 \quad 467$ | 14 | with fo many almoft infuperable diffical- |
|  | 4.447 | 16 | ties. Yet it was his happy lot (by his |
|  | 427 | 18 | fready perfeverance in extricating himelf |
|  | 4 4 7 | 20 | from all there difficulties) to arrive with fafety and honour at laft. His real merit |
|  | 387 | 22 | fafety and honour at laft. His real merit in this his firft voyage having recommend- |



But buzzing infects make an uncouth noife, And fulph'rous vapours thunder in the ikies; So when the heart tumultuous paffions move,
If melting in the fofter flames of love,
With quicker ftrokes the halty pulfes beat,
And glowing cheeks confefs the inward heat!



Or if fierce rage provoke, and vengeful ire, The eyes then fparkle with unufual fire;
Ah! foon the flames their rapid fury fpread, And colour all with malignant red; Curfes and oaths th' unthinking wretch repeats, And the tongue falters in helf utter'd threats.

|  | rifes ${ }^{-1}$ |  |  |
| :---: | :---: | :---: | :---: |
| h | m h |  | Observations. |
| $1: 3$ | 538 | 7 |  |
| F | 528 |  | tries, and coafts, where the Endeavour |
| 33 | 518 |  |  |
| 43 | 508 |  | infon alfo collected, by his diligence day |
| 3 | 498 | 11 | and night, vocabularies of the languages |
| 63 | 498 | 11 | fpoken in the lland of Otaheite and is. |
| 73 | 488 | 12 | lands adjoining; alfo of. New-Lealand, a |
| 83 | 478 | 13 | large remote illand, extending from the |
| F | 478 | 13 | North to the South Cape, between latitude |
| 103 | 468 | 14. | 34 and 48 degrees fouth, and from Cape |
| 113 | 468 | 14 | Eaft to Cape Weft, from longitude 181 |
| 123 | 458 | 15 | to 194 degrees; alfo vocabularies for |
| 133 | 458 | 15 | New-Holland, the thand of Savoo, bata- |
| 1 | $44{ }^{8}$ | 16 | via, (a Dutch city and fettlement in the |
| 153 | 448 | 16 | Eaft-Indies, in the voyage round the |
|  | 448 | 16 | globe, the language of which is called Low-Malay; Anjanga, on the Coaft of |
| 173 | 438 | 17 | Malabar, in the Eaft-Indies, called at Ba- |
| ${ }_{18}^{18}$ | 43,8 438 |  | Mavia the High-Malay; the language of |
| 203 | 438 | 17 | the natives of the liand of sumatra in |
| 213 | $43 \cdot 8$ | 17 | the Eaft-Indies; of the natives of Ceram, |
| 223 | 438 | 17 | an inand there, and (failing fill round) |
| F 3 | 438 | 17 | the language fpoken by the people of the |
| 243 | 438 | 17 | large Inand of Madayafcar; the ihip con- |
|  | 438 | 17 | tinuing her courfe itil welterly, that by |
| 263 | 448 | 16 | the natives of the River Gambia in Africa, |
| 273 | 448 | 16 | after paining the Cape of Good Hope, |
| 283 | 448 | 16 | Dutch fettlement. <br> From the time of the Endeavour's de- |
| 29 | 458 | 15 |  |
| F. 3 |  | 15 | parture from England to the South Seas, paffing Cape Horn, wefterly, the natives |



How like the earth mix'd with the watry mafs, Where troubled feas the flimy land embrace, Are man's lefs nobler parts, th' inferiour drain, When forc'd the cruder fediments remain ;
Here ftagnate filth, and acid worthlefs lees,
And noilome heaps from various foods increafe.

| M $¢ \odot$ rifes $\bigcirc^{\circ} \mathrm{fecs}$ |  |  |
| :---: | :---: | :---: |
| D h . | m/n | m |
| 13 | $45^{8}$ | 15 |
| 23 | 46:8 | 14 |
| 33 | 4618 | 14 |
| 43 | $47^{18}$ | 13 |
| 53 | 488 | 12 |
| 63 | 488 | 12 |
| F 3 | 4918 | 11 |
| 83 | 508 | 10 |
| 93 | $5^{18}$ | 9 |
| 103 | 528 |  |
| 113 | 538 | 7 |
| 123 | 538 | 7 |
| 133 | 548 | 6 |
| F 3 | $55^{8}$ | 5 |
| 15.3 | 578 | 3 |
| 163 | 588 | 2 |
| 173 | 598 | 1 |
| 18.4 | 0:8 | - |
| 194 | 17 | 59 |
| 20.4 | 27 | 58 |
| F 4 | 47 | 56 |
| 22.4 | 57 | 55 |
| 234 | 67 | 54 |
| 244 | 77 | 53 |
| 254 | 97 | 51. |
| 264 | 107 | 50 |
| 274 | 127 | 48 |
| $\mathrm{F}_{4} 4$ | 137 | 47 |
| 29.4 | 157 | 45 |
| $30 \cdot 4$ | $16{ }^{1} 7$ | -44 |
| 314 | 187 | 42 |

## Observations.

and country of Terra del Fuego occur ; then the ifland and natives of Utahite in the South Seas; an oblervation of the tranit of Venus there; the digerent rifings and fallings of the thermemeter during the fhip's ftay at Otaheite and the neighbouring iflands; the plants, medical and culinary; the warlike and dometic intruments next occurrin:- Alio views of the headlands, appearances and nature of the rocky cont, country, and favage inhabitants, of New-Zealand, ftill more weiterly; their chiefs, warriors, and war-canoes; picturefque views of tie coaft, fingular head-drefses of the natives, military weapons, houfelaold implements, and perfonal ornaments; alfo a curious map of the coalt of the large Iftand of NewZealand. Then the natives and natural. produce of New-Holland, fiill mere wefterly, and the natives of Savoo, and inhabitants of New-Guinea, their cuitoms, and perfons trading thence to Batavia; the Endeavour's paffage fiom thonce to the Cape of Good liope, and (fill tailing more weiterly) to her arrival in the Englifh Channel, from whence the firlt fet out. All which voyage, being a continual failing on a courie fill wetterly, from the beginning to the end thertof, is an infailible proof that the earth and fea are of a round

is Hence windy fumes, and fudden vapours fpread,
$:$ That:fwell the breaft, and rack the aching head;
: 'Till fore'd by ftronger nature to retreat, They melting fall, and all diffolve in fweat!
Difpers'd in watery drops they pain no more, But work infenfible thro' every pore !


SEASON. SEPTEMBER, $1816 . \quad 19$

And as the fun by his own heat exhales
Clouds from the fea, and fogs from marthy vales; Which (tho' bare born) ambitious higher move, Prevent the light, and hide the worlds above: So from corporeal dregs the mifts condenfe, And intercept the meffengers of fenfe.

|  | -rifes <br> h m |  | Observations. |
| :---: | :---: | :---: | :---: |
|  | 146 | 46 | habitants, ready to board him on feveral |
| 25 | 5166 | 44 | occafions. |
|  | $5 \quad 186$ | 42 | And, probably, the Adventure's men, |
| 45 | 5206 | 40 | who went on fhore fo unguardodly at New- |
|  | 5226 | 38 | Zealand, would not have met with the |
| 65 | $5 \quad 246$ | -36 | fate they did, had they taken the fame |
| 5 | 266 | 34 | wife precautions, with fire-arms, for their |
| F 5 | 286 | 6 | prefervation, on their going on fhore, as |
| 95 | 5, 306 | 6 | the Endeavour's men a! ways did. In New- |
| 105 | 5326 | 6 | Zealand, and other inlands of the South |
| 115 | 5346 | 26 | Seas, there are found very few quadrupeds |
| 125 | 5366 | 24 | either for ufe or food, from which and |
| 13 ; | ; 376 | 23 | the ignorance and favage difpofition, in |
| ${ }^{14}{ }_{5} 5$ | 5396 | 21 | living upon one another, and on fuch |
| F 5 | 5416 |  | ftrangers as they can feize as enemies, is |
| 16.5 | 5436 |  | afigned. And the fame reafon is given |
| 175 | 5456 | 15 | (befides what the favage cuftom war- |
| 185 | 5476 | 13 | rants) for thofe inhabitants reliding in the |
| 195 | 5 49:6 |  | remote parts of Chili, or Peru, in Ame- |
| 20.5 | 5516 |  | rica, and in the interior of Ethiapia, in |
| 215 | 5536 |  | Africa, for devouring each other, like |
| F/5 | ; 556 |  | fithes in the waters, and animals of prey in |
| $23 ;$ | ; 576 |  | the forests, to fatisfy the calls of hunger. |
| $2+5$ | 5596 |  | See Captain Cook's Voyages. |
| 256 | 615 | 59 |  |
| 26.6 | $6 \quad 35$ | 57 | An Introduction to Geography: 'Om. |
| 276 | 6.55 | -55 | et |
|  | 75 95 |  | Courteous Reader |
|  | (rras ${ }^{6} \times 115$ |  |  |
|  |  |  | the infinitely-wife Architedt, this terraque. |



Hence the clogg'd fpirits their confinement mourn, And reafon waits in vain their fwift return. The clouded images their match delay, ' rill the rourd foul, by a fuperior ray, Breaks thro' the fhade, and urges on the day. $\}$

| $\begin{array}{\|c\|c} \hline \mathrm{M} & \odot \\ \mathrm{D} & \mathrm{~h} \end{array}$ |  | $\begin{aligned} & 3 \text { fets } \\ & \mathrm{Cl} \\ & \mathrm{~h} \\ & \mathrm{~m} \end{aligned}$ |
| :---: | :---: | :---: |
| 16 | $6 \quad 13$ |  |
| 26 | $6 \quad 155$ | 45 |
| $3{ }^{6}$ | 6175 | 43 |
| 46 | 6195 | 41 |
| 56 | $6 \quad 215$ | 39 |
| F 6 | $6 \quad 235$ | 仡 |
| 76 | $6 \quad 245$ | 36 |
| 86 | $\begin{array}{lll}6 & 26 & 5\end{array}$ | 34 |
| 96 | $6 \quad 285$ | 32 |
| 105 | 5305 | 30 |
| 116 | 6325 | - 28 |
| 126 | $6 \quad 345$ | 26 |
| F 6 | $\begin{array}{ll}6 & 365\end{array}$ | 24 |
| 146 | 6 385 | 5 |
| 156 | 16405 | 5 |
| 166 | 6425 | 5 |
| 176 | 6.445 |  |
| 186 | 646 |  |
| 196 | 6-485 |  |
| F 6 | 6505 |  |
| 216 | $5 \quad 525$ |  |
| 226 | $6 \quad 535$ | 5 |
| 236 | - 555 |  |
| 246 | 6575 | 5 |
| 256 | 6.5915 |  |
| 267 | 714 | 459 |
| F 7 | $7 \quad 34$ | 457 |
| 287 | $7 \quad 54$ | 455 |
| 297 | $7 \quad 74$ | $4 \cdot 53$ |
| 307 | 7 - 8 | $45^{2}$ |
| 1317 | $1710 \mid 4$ | 450 |

## Obserfations.

ous Globe that we inhabit appears to be made fubject to accidents, changes, and a diffolution, from floods, fubterraneous fires, and earthquakes, (though limited to a long duration, but determined period) like the animals and vegetäbles upon its furface. The land is a fort of a theatre, or garden-fpot ; and the fea and rivers are its circulating fluids, for conveying its neceffary, fupplies, through fubterraneous and fuperficial paffages. The land and water are alfo timilar to the flefh and blood of animals, or the folid and juicy part of vegetables and fruits, with the liquid fupplying the folid parts of each created fubftance, and its attending properties, from the firft formation of every folid and liquid fubftance togethet in the original embryo, through its growth to maturity, (or from its firf completion) and continuance of duration. In the animal and vegetable bodies, the folid parts thereof (during their exiftence) are fup: plied and fupported by the circulating fluids and juices. So likewife, during the exittence of our terraqueous globe, containing all the animal, vegetable, and mineral beings that we know, there is a continual circulation of vapours throaghout the atmofphere, exhaled by the fun, vegeration, and fprings of the earth. This


New paffions, new opinions, ftill excite, And what they like at noon, defpife at night. They gain with labour, what they quit with eafe, And health, for want of change, becomes difeafe. Ah, hopelefs mortal man! Ah, rigid fate!
What cares attend our thort uncertain tate!

|  | $\odot$ rifes $\odot$ fets h m h m | Observations. |
| :---: | :---: | :---: |
| 17 | 7 |  |
| 27 | 77 14.44 <br> 1  | and |
| F 7 | $7 \cdot 1644$ | lies, where the moift vapours lodge and |
| 47 | $7 \begin{array}{llll}7 & 1743\end{array}$ | accumulate, that are required for the ufe |
| 57 | $7 \begin{array}{llllll}7 & 19 & 41\end{array}$ | and fupport of animal and vegetable be- |
| 67 | $7 \quad 21+$ | ings; the overplus of which accumulated |
| 77 | $7{ }^{7} \quad 234$ | vapours returns again, by brooks, rivulets, |
| 87 | 724 | and rivers, into the fea, adminiftering fup- |
| 97 | $7{ }^{7} \quad 264$ | hey pafs, from a fort of chemical |
| F 7 | $\begin{array}{ll}7 & 28 \\ 7\end{array}$ | atory operation between the fun, |
| 117 | $7 \quad 3014$ | the fea, and the atmofphere. The clouds, |
| 127 | $7{ }^{7} \quad 314$ | finf formed by exhalation from the fea, |
| 137 | $\begin{array}{llll}7 & 33\end{array} 4^{27}$ | contribute their aid in this part of the |
| 147 | $7{ }^{7} \quad 344$ | noble and grand fcheme of the univerfal |
|  | $1{ }^{7} \quad 304$ | Creator. This circulation is performed |
| 167 | $7 \quad 37$ | like that of the blood of animals, fent out |
| F 7 | $\begin{array}{ll}7 & 39\end{array}$ | from the heart, by its pulfation through |
| 187 | 740 | the aorta, to the extremities of the body, |
| 197 | 7424 | by the arteries, (veffels lying deep, and |
| 207 | $\begin{array}{ll}7 & 43\end{array}$ | guaaded from injury by the mufcles, as |
| 7 | $7 \quad 454$ | are the nervous organs of fenfation, |
| 227 | $7{ }^{7} 46$ | returning again to the heart, by the |
| 237 | $\begin{array}{ll}7 & 4714\end{array}$ | fuperticial veins, in the conflant round of |
| 7 | $7 \quad 4914$ | on. So likewife the vapour from |
|  | $7 \quad 5 \mathrm{Cl}$ | ea, (like the nutritive juices forming |
| 7 | 751 | the blood, accumulates in rain and iprings, |
|  | $7{ }^{7} 5^{2} 4$ | by falling into the chinks and caverns of, |
| 287 | 7. | earth, and thence, overlowing from |
| 297 | 7 | the fuperficial brooks, rivulets, and rivers, |
|  |  | that circulate to the extremities of the land, and returns the vapours taken from |



| SBASON: | DECEMBER, I 8 I 6. |
| :---: | :---: | :---: |
| How wide a front, how deep and black a rear ? |  |
| What fad varieties of grief and fear, |  |
| Draw in array, exert their fatal rage, |  |
| And gall obnoxious life through every fage, |  |
| From infancy to youth, from youth to age. |  |

A Table fhewing the Moon's Sowching! fion Farmers and others that breed Cattle, but men and others that fail on the Waters.

| $\begin{array}{\|c\|} \mathbf{M} \\ \mathbf{D} \end{array}$ |  | $\overline{\mathrm{Feb}} \underset{\mathrm{hem}}{\mathrm{~h}}$ | $\begin{aligned} & \text { Mar. } \\ & \mathrm{h} \mathbf{~ m} \end{aligned}$ | $\begin{gathered} \text { April } \\ \mathrm{h} \frac{\mathrm{~m}}{} \end{gathered}$ | $\begin{aligned} & \text { May } \\ & \mathrm{h} \\ & \text { ra } \end{aligned}$ | ${ }_{\text {June }}$ | D |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1237 |  |  |  |  |  |  |
| 2 | $2{ }^{25}$ |  |  |  |  | 5.56 |  |
|  |  |  | $\begin{array}{ll}3 & 7 \\ 3\end{array}$ |  |  |  | -3 |
| 4 | 435 |  | $\begin{array}{lll} 3 & 51 \\ 4 & 37 \end{array}$ |  |  | $\begin{array}{ll}7 & 37 \\ 8 & 36\end{array}$ |  |
| 5 | 4 |  |  |  |  | 8.26 |  |
|  | 5 |  |  | 87 | 8  <br> 8 5 | 10 |  |
| $8$ | 3637 | 33 |  | 9 | 944 |  |  |
|  | 7 |  |  | 10. |  |  | 9 |
| $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | ${ }^{8}$ | (10 93 |  | 1115 | 11-27 |  |  |
| 12 |  |  |  |  | ${ }^{\circ} \mathrm{C} 21$ |  | 12 |
|  | 10 | morn |  |  | 117 | 243 |  |
|  |  |  |  |  | 21 |  | 1.4 |
|  | morn |  |  | 2 |  |  | 15 |
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| $\left[\begin{array}{l} 7 \\ 18 \end{array}\right.$ | ${ }^{2} 2{ }^{2}$ |  |  |  |  | ${ }^{5} 28$ | 18. |
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| 20 | ${ }^{4} 3$ | 549 |  |  |  |  | 29 |
| $2 z$ | 5. 28 |  |  |  | 7. ${ }^{56}$ |  | 2 |
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Mön's Soutffing.
ald ther Moatis of the Year, very neceffary: for all efpecially and more worthy of Notice to Sta-

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28 The Georgian Planet, or Herfchet, SEASPA:


30 - SEASON 3.1816.
A TABLE of the Rifing, Southing, and Setting of the Pleiadrs, or Seven Stars, for every 5 th Day in the Year; of excellent Ufe to find the Hour of the Night.

| \& Days |  |  |  | \& Days. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{rll} 0 & 2 & 28 \\ 0 & 6 \\ \text { Inm } & 64 \\ 11 & 23 \\ 10 & 52 \\ 10 & 40 \end{array}$ | $\left[\left.\begin{array}{cc} 8 & 22 \\ 8 & 0 \\ 7 & 37 \\ 7 & 18 \\ 6 & 56 \end{array} \right\rvert\,\right.$ | 5 m 2  <br> 4 38  <br> 4 16  <br> 3 55  <br> 3 34  <br> 3 12  <br>    |  | $\begin{aligned} & 14257 \\ & 10 \\ & 18 \\ & 10 \\ & 10 \end{aligned}$ |  | $\begin{array}{ll} 4 & 80 \\ 4 & 29 \\ 4 & 9 \\ 3 & 49 \\ 3 & 32 \end{array}$ |
|  | $\begin{aligned} & 9 \\ & 9 \\ & 9 \\ & 9 \\ & 9 \\ & 8 \\ & 8 \\ & 88 \\ & 88 \\ & 88 \\ & 889 \\ & \hline \end{aligned}$ | $\begin{array}{ll} 6 & 12 \\ 5 & 52 \\ 5 & 33 \\ 5 & 14 \\ 4 & 55 \end{array}$ | $\begin{array}{ll} \hline 2 & 49 \\ 2 & 38 \\ 3 & 88 \\ 1 & 49 \\ 1 & 30 \\ 1 & 11 \\ \hline \end{array}$ |  |  | 6 49 <br> 6 40 <br> 6 11 <br> 5 52 <br> 5 33 <br> 5 35 <br>  15 | $\begin{array}{ll} 3 & 5 \\ 2 & 46 \\ 2 & 27 \\ 2 & 8 \\ 1 & 89 \\ 1 & 31 \\ \hline \end{array}$ |
| $\left\{\begin{array}{l} 1 \\ 6 \\ 12 \\ 16 \\ 27 \\ 36 \end{array}\right.$ | 8 28 <br> 8 10 <br> 7 52 <br> 7 33 <br> 7 15 <br> 6 57 | $\begin{array}{ll} 4 & 44 \\ 4 & 26 \\ 4 & 8 \\ 3 & 49 \\ 3 & 39 \\ 3 & 31 \end{array}$ | 1 0 <br> 0 42 <br> 0 24 <br> 0 5 <br> II 5 <br> 11 47 <br> 11 29 |  | $\begin{array}{ll} \hline 8 & 37 \\ 8 & 19 \\ 8 & 19 \\ 7 & 43 \\ 7 & 46 \\ 7 & 26 \\ 7 & 8 \end{array}$ | 4 53 <br> 4 35 <br> 4 17 <br> 3 59 <br> 3 42 <br> 3 24 | 1 0 0 0 0 10 1 |
| $\left\{\begin{array}{l} x \\ 6 \\ 32 \\ 76 \\ 21 \\ 26 \end{array}\right.$ | $6_{6}$ 35 <br> 6 17 <br> 5 58 <br> 3 40 <br> 5 21 <br> 5 2 <br> 5 2 | $\begin{array}{lll} 2 & 51 \\ 2 & 33 \\ 2 & 14 \\ 1 & 56 \\ 1 & 37 \\ 1 & 18 \\ \hline \end{array}$ |  | $\pm\left\{\begin{array}{l} 1 \\ 0 \\ 1 \\ 10 \\ 16 \\ 2 x \\ 26 \end{array}\right.$ | 6 50 <br> 6 32 <br> 6 13 <br> 5 54 <br> 5 36 <br> 5 15 <br> 4 54 | 3 6 <br> 2 48 <br> 2 99 <br> 2 10 <br> 1 10 <br> 1 51 <br> 1 31 | 11 22 <br> ri 4 <br> 10 45 <br> 10 36 <br> 10 8 <br> 9 47 <br>   |
|  |  | $\begin{array}{cc} 0 & 40 \\ 0 & 21 \\ 0 & 21 \\ 11 x^{0} & 42 \\ 11 & 22 \end{array}$ | 9 25 <br> 8 56 <br> 8 37 <br> 8 17 <br> 7 58 <br> 7 38 |  | $\begin{array}{ll} \hline 4 & 54 \\ 4 & 34 \\ 4 & 14 \\ 3 & 53 \\ 3 & 28 \\ 3 & 7 x \\ \hline \end{array}$ | 1 10 <br> 0 50 <br> 0 30 <br> 0 30 <br> 11 2 <br> 15 44 <br> $1 x_{1}$ 23 | 9 26 <br> 9 6 <br> 8 46 <br> 8 25 <br> 8 0 <br> 7 39 |
| $\left\{\begin{array}{l} x \\ y^{x} \\ 10 \\ 16 \\ 23 \\ 29 \end{array}\right.$ | 2 41 <br> 2 22 <br> 2 1 <br> 1 43 <br> 1 10 <br> 0 59 | 10 37 <br> 10 37 <br> 10 17 <br> 9 58 <br> 9 38 <br> 9 15 | 7 13 <br> 6 53 <br> 6 33 <br> 6 14 <br> 5 51 <br> 5 35 |  | $\begin{array}{ll} 2 & 46 \\ 2 & 24 \\ 2 & 2 \\ 1 & 40 \\ 1 & 18 \\ 0 & 56 \end{array}$ | $\begin{aligned} & 9 \\ & 2 \\ & 2 \\ & 2 \end{aligned}$ |  |


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| The iz Signs. The 7 Planers, and the Alpeets. |  |  |  |
| $\boldsymbol{r}$ Aries <br> ४ Taurus <br> II Gemini <br> g Cancer <br> $\Omega$ Leo <br> 吹 Virgo <br> $\approx$ Libra <br> I Scorpio <br> 1 Sagittarius <br> is Capricoin <br> 2 Aquarius <br> ※ Pifces <br> © Sun <br> D Moon <br> b Saturn <br> 2 Jupiter <br> 6 Mars <br> 9 Verus <br> \$ Mercury <br> \& Conjunction <br> * Sextile <br> - Square <br> $\Delta$ Trine <br> 8: Oppofition |  |  |  |
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Venus will be a Morning Star till Augult $1 \%$ and then an Eyening. Star for the reft of the Year.
Jupiter will be a Morning Star till April 25 ; then an Evering Star till Nov. 12 : then a Morning Star for the feft of the Year.


## Royal Famieieg.

## BIRTH-DAYS of the ROYAL FAMILY.TA I $\%$

King GrorailiL - ina June, $1738 \mid$ Duke of Cumberland 5 June, $177 x$ Q.Cenrlotte - - 19 May, 1744 Duke of Suffex - - 27 Jan. 1773 Prince of Wales" - 42 Aug. 1962 Duke of Cambrlidge - 24 Feb. 1774 Duke of York - - - 16 Aug. 1763 Princefs Mary - - 25 Apr. 1776 Puke of Clarence - - 21 Aug. 1765 Princefs Sophia - - 3 Nor. 1774 Q. of Wirtemberg - 29 Sept. 1766 Princefs of Wales - - 17 May, 1768 Duke of Kent -- - 2 Nov. 1767 Duchefs of York -- 7 May, 1766 Prs. Augufta Sophia - 8 Nov. $x^{\prime} 68$ Prs. Charlotte of Wales 1 Jañ. $\mathbf{~ I g} 96$ Prs. Elizabeth - - - 22 May, 1770

Sovereigns of Europe, their Acceffion; \&c.
Kingdoms, \&c. To whom fubject.| When born. $\mid$ Began to reign.
England, \&cc. . . - France, \&c. - - - Ruffa - ....... Spain -........ Portugal …... Pruffia -....... Dexmark -:..... Sweden \& Norway Auftria - .-. .-. Francis II. ....Popedom - . . . . . Sardinia - -- - Ottoman Empire - -

|  | une 4; 1738 | O |
| :---: | :---: | :---: |
| Loui | Nov. 7, 1755 | May, |
| Alexand | Dec. 23, 1777 | Mar. 24, |
| Ferdinand |  |  |
| Mary | Dec. 17, 17 |  |
| Frederic Wm. I | Aus 3, 1770 |  |
| Frederick | Jan, 27, 1768 |  |
| Charles | OEt. 7, 1748 |  |
| Fran | Feb, 12, 1768 |  |
| Pius | Aug. 14, 1742 | Jun |
| Vict | July 24, 1759 | June 4, |
|  |  |  |

The Fule Wbight of the Coins, with the Leagt Waicht allowed to pafs of the Gold Coin.


According to the above proportions it appears, that the Value of a $H_{i}$ of
 Aifo that the ox: of Silver is gand. and the os. of Gold 31. rys. to chat utre value of the frandard Gold is 15 times that of the Silver, and $1-14$ th nore.

## 

A Catalog ur of the Moft Reverend, Rigat Reverend, and Reverenid, the Archbifiops, Bithops and Deans, exirrtifand Ecclefiaftical Juriddietion in EngTand, 1816.

## - Irrtabifops.

Hon. Dr. Co Mas. Sutton Dr. Ger. Andrews
Hón. Dr. E. Vernon - Dr. Geor Markhim
Bißsops.
Dr. William Rowtey Bp. Tomline
Hon. Dr. Sh. Barrington Bp. Cornwallis
Hon. Dro Brownl. North Dr. T. Rennell
Hon. Dr. Ja. Cornwallis Dr.Woodhoufe
Dr. Richard Wation - I. Prolyy, Arohia
Dr. George Tomline
Dr. Rd. Beadon
Dr. F. H. W. Cornwall
Dt. John Buckner
Dr. H. W. Majendte
Dr. Gi. 1. Hinntingford JHom. Dr. G. Pelhart
Dr.Themas Burgers
Dr. John Fifher
Dr.H: Bathurf
Dr. Lutmbre
Dr. S. Goodenough
Dr Wh Lefe Matifa
Dr. Walker King
Dr. B. E. Sparke
Dr. W. Jaderon
Dri: Goorge Lavi
Dr. Pariquis
Hon. Dr. Ryder
Dr, Georgo Mfutray

Dr. Gordon
Bp. Ryder.
Dr. Onlow
Mr. Combe Miller
Mr. J. Warrén
Dr. G. Oretton
Di. Garnett

Mr. Talbot
Dr: Jofephr Turner
Mr. W. D. Shiptey
Mr. W. D. Shipfty
Dr. Ifaac Milner
Dr. Beeke
Dr. Bosby
Dr. Thomas Pearce
Dr. C. H. Hall
Ihr. Cholmondeléy
Dr. Thomas Kipling:
Dr. Plumtre
Dr. Wm. Viricent
Hon. Dr. E. Leg'ge.
:Namos of the Sides.
Canterbury
York
London
Durham
Winchefter
Litchfield and Coventry
Ilandaff
Lincoln
Bath and Wells
Worcefter
Chichefter
Bangor
Hereforord
Eteter
Sc. David's
Salisbury
Norbich
\$t. Afaph ${ }^{\text {. }}$
Carlifie
Briftot
Rochéffer
Eiy
Oxfor -
Chefter
Peterborough
Gloucefter
Sodbt-and Mida
Weftininfter
Windfor

Tbe Names of tbe Learned Judges in the Law.
Right Hon. John Lord Eldon, Lord High Chanceltor of Great Britalmo
Right Hon. Sir W. Grant, Knt. Mafter of the Rolls.
Sir Thio. Phumer, Knt
Sir William Garrow, Knt.
Sir Samuel Shepherd, Knt.
Vice Ctancellor.
Attorney General.
Solicitor General.
1I. In the §Rt.Hon.L.Ellenborough,L.C.J. Sir John Bayley, Kat. K. Bench. $\{$ Sit Simon Le Bianc; Kint.

IIL. Th the SSir Vicaty Gibbs, Kntr L. C. J.
Co. Plemo . Cfir Alinh Chismbre, Kots.

Exchequer. $\{$ Sir.Gearge Wood, Knt.

Str H. Bimpier, Knt.
John Heath, Eq;

Six Rich Richarde. Knt.

# A TABLE OF TERMG AND THEIR RETURNS. 

Hilary Term begins.Jzaurryiz3, ends February 12.
Returns or Efoign Days $\quad$ - $E$ R A W In eight Days of St. Hilary - . Jan. 20 23 22 23 Tuesd. In 15 Days of.Sr. Hlary - $\quad 27$ 28 2030 Tuosd. $\begin{array}{llll}\text { On the Mor. of the Parificat. of B:V.M. Feb: } & 3 & 4 & 5\end{array} 6$ Tuesd. In eight Days of thé Purificat. of B.V.M. ...g|ıo| II $/ 22 \mid$ Mond

Eafter Term begins May i, ends May 27.

Trinity Term begins June 14, ends July 3.

On the Morrow of the Holy Trinity June 10 In eight Days of the Holy Trinity In 15 Days of the Holy Trinity From theDay of Holy Trinity in 3 Weeks 30 Jul. $\boldsymbol{I}_{2}$ 2/Wed

## Mịchaelmàs Term begins Nov. 6, ends Nov. 28.


N. B. No Sittings in Weftminfter-Hall on the 2 d of Febfuary, Afcenfion-Day, and Midfummer-Day.

The Exchequer openseight Days before any Term begins, except Trinity, before which it opens but four Days.
( Wote; The-firf and laft Days of every Term are the firt and faft Days of Appearance,

# Commenoing Saptember 1,1815. 

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| 1000 - | 200 - 0 | O |
| 200 - 0 | $3000 \%$ | .......... 0 |
| 300 - 0 | 500 - | 5 |
| 5000 | 1000 |  |

In full of all demands, Ten Shillings.
Persons giving a Receipt without Stamp, or upon one of less value, forfeit rol. if the sum is under rool. and 201. if above that sum.
Persons endeavburing to defraud by giving Reoipt for less than the Sum red ceived, or by separating it into divers sums, \&c. forfeit rol.
Unstamped Receipts may be stamped, within 14 days, on paying 5l. over the duty; after 14 days, and within a month, rol.

## HILLS OT EXCHANGE, PROMISSORT NOTES, \&c.

Not exc. 2 Mos. 1 Above 2 Mos


Bankers' Checke, Bills, \&oc. not duly stamped, are void in'lawk; unléss the 'Trawer be within ten miles of the banker's residence, the place specifed, and is be dated on or before the day it is negociated.

## PROMISSORY NOTEB.



## Speculum Anni :

O.ing

SEASON O~THE SEASONS. ar Por the Year of our Lord, 1816.

4n $\because \because$ THE SECOND PART.

## Of the ECLIPSES of this prefent Year 1816.

IN the courfe of this year, there will be four Eclipfes, and they will happen in the following order, as they were computed by Mr. Andrews, from very correct tables of the Swe' and Moon, founded on the Newtonian fyftem of gravitation; which tables wonderfully agree with obfervations: Of thefe four Eclipfes, there will be two of the Sun, and two of the Moak.

The firf is an Eclipfe of the Sun, on Monday the 27th of Mays, about three o'clock in the morning, confequently invifble, not to us only, but even to all Earope ; but in the unknown fouthern parts of the world, it will be a very great Eclipfe; for in fatitude 58 deg .52 min . fouth, and 138 deg. 26 min. Qat: longitade from London, namely, in the Great South'Sea, the Suy will be centrally eclipfed at noon-day, not total, bit annular, a bright circle will appear round the Sun, like a gold ring, beautiful to behold. This place falls near Captain Cook's track in his voyage round the world in $177 \xi^{\circ}$ and weftward of the Illand of New Zealand. This Ecliple then will be vifible, mose or lefs eclipfed, at. New Zaland, and Nê Holland, and all along the coaft of New South Wales; and therefore vifible at Botany Bay, and Port Jackfon.
-The fecond is a total Eclippe of the Moox, on Trinity Sune day, and Trinity Monday, the gth and 10 th of June, and If the air prave clear and fine, may be feen by us in this kingdom, and not by us only, but alio br the inhabitapts of all the ftates and kingderas in Europe and-Africiz, together with the weftern parts of Afa, and the eaftern parts of America; but in Siamm, Cbina, and Cbinefe Tartary, \&cc. in the eaftern parts of $A$ fia, the fore-part only will be vifible, the Moon fetting. with them before the Eclipie be over. It will be all vifible in Soutb America; but the Moon rifes eclipfed in Nortb Anverica as appears by confidering her pofition, in refpect of thofe parts of the earth, during the time of the Eclipre; for at the beginning the Moos will be vertical, or right over-head at midnight, under $23 . \mathrm{deg} .8 \mathrm{~min}$. of fouth latitude, and 6 deg. 22 min . eaft from London. At the time of the middle, the Mione is vertical under $\mathbf{5 g}$-deg: IW: mini of, South latitade, and 18 deg. 49 min . weft longitude from London. At the end of the Eclipfe the Moon will be vertical under 23 deg. $28-\mathrm{min}$. fouth, in longitude 44 deg. 15 min . weft from London. All: which falls in the great South Sea.
With us in Great Britain, it may be expected nearly to correfpond with the following Type and Calculation.

Ture qtappparent time． Eclípré begins
${ }_{2}$ Mrótal dak．begins 29MITdite
TTatabdarkr ende： ：Find of the Eclipfe

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| :---: | :---: |
| M．M．s． | E．M．s． |
| II 30 | 112547 |
| 12 3926 | 123455 |
| 131526 | 131053 |
| 135126 | $\pm 34655$ |
| 15 O 34 |  |


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Duration of the Eclipfe－．－． 33016
＊Digits eclipled， $14^{\circ} 56^{\prime} 0^{\prime \prime \prime}$ ．
N．E．The time at Oxford will be neariy 5 min ．fooner than at London；at Canbridge the fame as at London．

The third of thefe Fclipfes，is a notable one of the Sur， upan Fimefay the rgth day of November in the morning，vifible in there parts of the Globe．

It will be firft feen to begin upon the San＇s vertical point at his rifing，in the Atlantic Ocean，in latitude 47 deg 55 min ． north，and in 10 deg． 51 min ．weft loagitude from London，which place is about 4 degrees weft of the Inland of Ußant，near the coalt of France．The central Eclipfe begins in 66 deg． 18 min ．of north latitude，in o deg． 15 min. of eatt longitude from London，which falls near the Arctic Circle，and directing its courfe towards the fouth－eaft，it will pals－over fome parts of Norway，the coaft of Sweden，near the Categate，it then croffes the Baltic，and the Illand of Born－ bolm；it enters Pomerania，and paffes over fome parts of Po－ land，Huhgary，European Turkey，and entering the Black Sea，the Sun will there be centrally and totally eclipfed at noon－day，namely，in the meridian，and this will be in lati－ tude 43 deg .24 min ．north，and in 29 deg .42 min ．of longi－ tude eaff from London，which place is about 150 geograph－ ical miles N．N．E．of Confantinople；then leaving the Black Sea，it enters A／atic Tartary，crofles that country into Perfaa，bending its courfe more northerly，it paffes over the northern parts of Hindooftan，into the great Empire of China， where the central fhade quits the earth with a fetting funs； which place falls in the great Defert of Cobz，in latitude 35 deg． 55 min ．north， 83 deg． 10 min ．of eaft longitude from London；through all which track，the fectators will be in－ volved in a kind of gloomy darknefs，even like that at mid－ night．The whole penumbra leaves this terraqueous globe
in 13 deg. 20 min . of north latitude; in 73 deg, 26 mine of longitude, eaft from London; namely, in the Arabian Sea, not far from the coaft of Malabar in the Eaft Indies;: in which place the Eclipfe will be laft feen to end with the féting fun. This Eckipfe will be yifible to all Eaxope, the nerthern parts of. Africa, and the weftern parts of Afia. This Eclipfe where total, will not be of long continuarce, for the Moon's vifible diameter only exceeds that of the Sum's $\mathrm{K}_{\mathrm{y}} \mathrm{y}$; about 46 feconds, at its greatelt altitude, and in the horizon; but about 27 feconds; however, the Ecliprè will be totail all, along the central track, and for fome diftance on each fide of if:m

The following Type, adapted to the City of rork, may, withoat fenfible error, ferve all parts of thefe kingdoms, the guantity of light excepted : and that may be nearly efimated: from the fubrequent calculation.


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| :---: | :---: | :---: | :---: | :---: |
| Begining | 81823 |  |  | (1) 30 |
| Vi | 91949 |  |  | - 335 |
| iddle | 92315 | 918130 | $9 \times 15$ |  |
| End of | 1033,50 | 1029 |  |  |
| Digits eclipfed. | O | - | \% |  |

N.B. At Greenwich and London, the Moon will make the firt impreinion on the Sun's dik at 18 deg. 19 min . from his vere tex on the right hand, and nearly as the above delineation for the City of York, and the Feclipfe begins accordingly, at is min . paft eight o'clock, apparent time. The true ecliptic coujunction at London, Nov. 18th, 22h. 22m. 43s. Sun and Moon's place then. in $27^{\circ} 0^{\prime} 59^{\prime \prime}$; and the Moon's true latitude $50^{\circ} 47^{\prime \prime} \mathrm{N}$. decreafing, femi-diameter of the $\operatorname{Sun} 16^{\prime} 13^{\prime \prime}$, fe-mi-diameter of the Moon 16" $26^{\prime \prime}$; horary motion of Moon from Sun $34^{\prime} 12^{\prime \prime \prime}$; Moon's horizontal parallax $60^{\prime} 16^{\prime \prime}$, and that of the Sun's, $9^{\prime \prime}$. In viewing the Sum, I would advife thofe that have not got proper telefcopes, to ufe a dark glafs, or a piece of window glafs fmoked over the flame of a candle, as the beft fecurity to their eyes. This will be the greateff Eclipfe of the Sun we have had in England, fince that on the 5 th of September, in the year/1793. There was a great Eclipfe of the Sun, on the Ift of April, in the year 1764, which was a very large one, the largeft there has been vifible in England, fince the gieat total one in the jear 1715 . The Eclipfe of $1764, \mathrm{Mr}$. Andrews had the pleafure of obferving, with feveral Gentlemen, at the feat of Sir Chriftopher, now Sir Thomas Whichcot, at Afwar$b y$, near Sleaford, in Lincoln ßire.

The fourth and laft of thefe Eclipfes, is a partial and vifible one of the Moon, upon Wedresday the 4th of December. At the time of the middle or greateft obfcuration, the Moon will be vertical, or directly over head, at midnight, to the great Sandy Defart of Arabia, in Afra, under 22 deg. 53 min . of north latitude, and 48 deg. 52 min . of eaft longitude from London; in this great Defart, the Arabs remove from place to place, partly for the fake of pafture, and partly to lie in wait for the caravans, which they often rob, as they travel over that part of this Defart from Bafsorab to Aleppo, and from Egypt to Mecca, in order to vifit Mahomet's Tomb. This Eclipfe will- alfo be vifible in Africa, the Ifland of Madagassar, and all the leffer iflands of the eaftern or Irdian $S e a$, in

Sumatra, the Mogups Empire, in Arabia, Perfia, all Europe, Iceland, Greenland; but the Meon, will only rifo eclipfed in Newfoundland, and the fame to the eaftera parts of afortb and Soutb Amierica.

In this' our Illand of Great Britain, the time and manner of its appearance may be expected to correfrond with the fotfowing conftruction and calculation. The time of this Eclipfe will be nearly the fame at Cambridge and alfo ar Royfon, as it is at London, both being nearly under the famf freridian. At Oxford, it will be 5 min . fooner than at Lignt dos:

The Type for London and Oxford.


| Des: 4tb, at nigbt, apparent time. | London. <br> н. M. 8. |  | Edinburgb. <br> н. м. ${ }^{\text {s. }}$ |
| :---: | :---: | :---: | :---: |
| Begiming | 71520 | 71049 | 7231 |
| Middle | 84425 | 83954 | 83136 |
| Oppofition | 85125 | 84654 | 83836 |
| End' | 101330 | 10859 | 10.041 |

.. Total duration - . - 23810 Digitś eclipfed - Có o o $0^{\prime \prime}$

## METEOROLOGICAL OBSERVATIONS.

 if :,:… Of fallang statrs; and otber ferig Meteor's. divthe Falling fars, and other fiery meteors, which are frequently feen at a confiderable height $\ln$ the air or atmofphere, and which have received different names according to the variety of their figure and fize, arife from the fermentation of The effliuvia of acid and alkaline bodies, which float in the atthofphere. When the more fubtle parts of the eflluvia are Burnt away, the vifcous and earthy parts become too heavy For the air to fupport, and by their gravity fall to the earth.The difappearance of fiery meteors is frequently accompanio. ed by a loud explofion like a clap of thunder, and heavy ftrong bodies have been obferyed to fall from them to the earth. .

Thefe fony bodiet when foutid, are always hot, and their fize differs from a few ounces to a very gréat weight, even to feveral tons!! They are ufually sound;' and always covered with a black cruft. When broken, they appear of an afh grey coloür, and of a graniular texture, like coarie fand-ftone. Theft fubitances are probably concretions actually formed in the at:mofphere, but in what manner no rational zecount has jet been given.

## Of THE AU̇RORA BOREALIS; of NORTHERK LiGHTS:

There have been varioas opinions and conjectures refpèeting the cauft and properties of thefe extraordinary pheno:ména or appearances; and the mon probable opinion is, shat they arife from exhalarions,' and are produced by a combuftion of inflammable air, caufed by eleetricity. This in'flammable air is generated particalarty between the tropics, (the middle parts of the edrth, where it is always very hot, ) by many natural operations, frech as the putrefaction of animal and vegetable fubiftances, volcanoes, \$sc. and being lighter than any other, rifeends to the upper regions of the atmofphere, and, by the motion of the earth, is urged toward's the potes; for it has been proved by experiments that whatever is tighter, or fwims on a fluid which revolues' on' an axis, is arged towards the extreme points of that axis: hence, there inflanftukbte particlés continually accumblate at the poles, and by meeting with heterogeneous matter, take \& : . .. . . fire,
fire, and caufe thofe luminous appearances frequondyifeco towards the polar regions, as we in England fee it towaods the north, and it fometimes appears fo light there, as ifothe moon was rifing; for in high latitudes the Aurorex Boredies appear with the greateft luftre, and extend over the greater part of the hemifphere, varying their colours from all the tints of yellow to the mof obfcure ruffet. In the'north eaf parts of Siberia, Hudfon's Bay, \&c. they are attended by a continual hiffing and cracking noife through the air, fimilar to that produced by fire-works. To the north of Scodland, they appear very frequently, where they call them the merry dancers.

## Fudicium Afrologicum pro Anno Redemptionis, 1816, \%

 The SUN's ENTRANCE into CAPRICORN, which introduces the WINTER QUARTER.. I mean always now to begin the new year with this quarter, and not with the fpring quarter as formerly, becaufe it all falls within the new year, excepting a few days. The winter quarter begins when the sun according to appearance enters the tropical fign Capricorn, which takes place on Erio daj the 22d of December, at 46 minutes paft 30 o'clock in the afternoon, 18150 At this time, the laft degree of II, is afcending in the eaft, and 24 degrees of an, are on: the midheaven. The Moon is under the earth, departing froman §dxtile afpect of Venus, and a fquare afpect of Marougy " The planet Mars is ftrong in his own domal dignities, locatodin the 1 ith houfe. The planet Saturn is in the gth houfa, ing a fguare alpect of Venus. The $\odot$ is going down in the weft, and the Moon is with 4, 9 , and 8 , under the earches 9 Thefe are the principal configurations of the planet at thisitropicial ingrefs. Of late years, many remarkable things and occurrences have turned up and taken place; and wonderful to relate, amongf the reft, the return of bUONAPARTB to the throne of France, which has excited no little agitation amongtt all the powers of Europe; and indeed, I expect from the planetary configurations at this ingrefs, fome farther remarkable occurrences are likely to take place, and fome have already taken place, and others are now on the anvil of ftate; as many eminent councils, and great confultations, are carrying
an in the various cabinets of Europe; for kings, princes, and osher potemates, are mach perpiexed and diturbed at hie lwos events. The Prench nation has been threatened by the asmiestof theofanturaing powers, which has caufed great diftumbandesin that country; together with eivil brois and contentions antiongt theinfelves-Civll war and difmay in that uthappy country, fomented by foreign powers! Indetd, if they would but confider the great evil there is in war, as it is among the plagues with which God"often threatens finful nations, and is of itfelf a diabolical work, whict ravages the fair face of God's creation, and hurls deftruetion amongit the nobleft of his creatures in this world; the abettors of this evil, be who they 'may, will furely have to andwer for it at the throne of God.-How blind the politics, how infatuated the divinity, that can make even war palatable to the taife! The influences and effects of the planets at this time, together with the 8 of 4 and $\delta$, and the $\square$ of 5 and $\sigma$, now coming forward, will affect feveral parts of Germany, together with France, Holland, Portugal, Spain, and even Italy, Soveral of the Earapeax powersare ltill active, and I retper expect more fo in the Spring following; al prefent they feem to be confulting and contriving fuch ways and means as may bring about. ©omif important event. England, I am affaid, is too much connected - writh continental affairs, which $I$ doubt wilt be to hèr detriment : and lofs; for the will fuffer in fome degree from the infults off: open enemies, and the perfidy of pretended friends, yet the will, I hope, triamph in the end over both, as appears oby the pofition of the planet Mars, who is the proper figniof ficator of England, being ftrong in an aftrological fenfe;' in - the inth houfe of the figure, fet for this tropical ingrefs: In this eafuing winter, there will be as ufual great complaints sof heavy taxation, with murmuring and repining againft men 1.in puthocity.


JEn!

That great luminary, the Sun, is the fountain of light and :. life; to him we chiefly owe the variations of the fealons: He will now crofs the Equinoctial Line, and difplay his genial influence on us in thefe northern regions; by entering into the fign Aries, which he will do this year on Wedmefday, the 20th of March, at 9 min . paft 5 in the afternoon; at " F which time, 21 degrees of .n. afcends the eattern horizons i: m and 18 degrecs of II, culminate. The above fcheme difplays the face of the heavens and planetary pofitions at that time.-The D ad $\quad \odot$, et ad $*$, $\begin{aligned} & \text {, et } * ~ 4 . ~ I ~ n o w ~\end{aligned}$ come to confider from this fcheme, what will probably be tranfacted upon the ftage of Europe, together with our conmection therewith. At this ingrefs, I find all the planets are under the earth, except the Sun and Mars: the: Sum is jin: 2 the weftern angle, viz. the 7 th houfe, and Mars is in the: yth moufe. Hence from this figure, it appears the fame occurrences of moment will take place during this year, and yor are evthnow on'the asvil of fate; many eminent councils and
great confultafiops are fecretly carrying on in the cabiviet of kings, printes, and great potentates of the earth; the powers of Europe, neverthelefs, are much divided anongt themfelves, each power feems to be feeking its own incereft. more than the public interef. The French are till aetive in their councils, and with their fwords too, if it fhouid be neceffary. It alfo feems as if much liberty, both civil and religio"s, are given to the French peopie, fuch as hitherto unknown, under their former kings. It alfo feems to me, that fome of the powers on the continent of Europe, are much inclined to bring about a reconciliation between the Frencb nation and thofe that are and have been hofile againgt her. It alfo appears from the figure, that the people of England have their doubts and fears refpecting fome events that have lately taken place in France, Spain, and Holland, as well as in fome parts of Germany. We fhall affuredly find this, a well as the laft a very bufy year, in which many notable matters will be yigorously tranfacted. It is the influence of Heaven which inftigates and drives on various refolutions in the people in general, and they are ordained by Almighty God, to fhew that kingdoms and commonwealths have both rifings and downfalls in the affections of fubjects, and that no engagements hold fo long, and fo firm in the people's affections, as juftice impartially diftributed, and a feafonable compliance for redrefs of people's grievances. If the Englif a $^{\text {. }}$ nation wifely improve their talents, (as 1 hope they will) then will their fame Spread abroad, and England will flourim again and again. As to America, I think the peace now begun will continue, to the mutual advantage of both countries. England and America fhould always go hand in hand. The Frencb nation, as well as Great Britain, appear very formidable, to the furrounding nations, as there are fill warlike: appedtances. The councils and meetings of great men in divers countries are infeited with divifions and diforders; and this caufed by accufations on one fide, and impeachments on the otheri

The SUN' ENTRANCE into the TROPICAL SIGN CANCER,' which introduces the SUMMER QUARTER.
This quarter begins when the Sun enters the Northern w? tropic, or the lign Canceg i which will, this year, happen on :us; Fridaj the 21 st day of June at 45 min. paff 2 oiclock in the $-\cdots$ aftertoon, at which time, 9 degrees of $\Omega$ is upon the mid-
hearien, añ $2 g$ deg. of $\Omega$, is afcending in the eatt. The
 afcendant, the planet Mars in the gth going to an oppofition of the planet Saturn, the direct oppotition of there two play nets will not take place until the 18th of fuly, yet their influences will foon begin to appear-the Moon is in the 7th houfe departing from a fquare afpett of Mars, and approachi ing to a fextile afpect of Mercury. The planets, fupiter and Mars, have lately been in a fquare afpect. From all which! infer, that this, like the laft, will prove a very bufy quarter, and rumours there will be of fome approaching troubles in foreign countries, but I hope England will flourifh and remain in tranquillity and peace, amidft all thefe changes and alterations ftill taking and likely to take place in Europe.

## The SUN's ENTRANCE into LIBRA, which introduces the AUTUMNAL QUARTER.

This quarter takes place when the $S u n$ according to a ppearance enters the equinoctial fign Libra, which he will do on Monday the 23 day of September, at 43 min . pall 4 o'clock in the morning, when 16 degrees of Virgo, afcends in the eaft, and 12 deg. of Gemini are in the mid-heaven. The $D$ ab $\&$ of $\boldsymbol{q}$, et $\Delta$ of $h$, ad $\underset{\delta}{\otimes}$. The afpects of note in this quarter are a $\square$ of $b$ and $\delta$, and a $\delta$ of 4 and Mars; and on the 2gth of Octcer, there happens a fquare afpect of Saturm and $J u p i t e r$, from $m$ and m. At the time of this ingrefs, the Sus and Mars are in the afcendant, afflicting each other; Venus, the Moon, and Mercury near each other in the fecond houfe; all the planets are under the earth at this ingrefs. This quarter then by thefe configurations of the plariets, will, like the foregging, produce fome particular occurrences both in France, Spain, Italy, and fome parts of Germany alfo; there feems to be a reftlefs party, who will ftir up broils and contentions, if not war. There are a race of men in the world, whe will bear no reftraint or controul, though they be promoting the moft unjuft and illegal attempts; but the time is approaching, when tyrannical governments maft down; when the power of the motley leopard, the dragen, and fuch like beafts of cruelty will no longer prevail-for all things are effablifted in certain periods of time, and we are all rated by the pre-ordained councile of impending fate.

FINIS.

