0
ncreased. The vapours when they fived through all the celestial re gions, may probably by httle and ty, be attraited down to the passing with their atmospheres.
That for the conservation of the water and moisture of the planets, comets seem absolutely requisite
from whose ondensed vapours and exhalitions, all that $m$ 万isture, which is spent in the process of vegetation ant in be resupplied and

For all vege:ables grow and in rease wholly from fitids, and th tion inta earth again, an earthy slime being perpetually precipitated
to the bottom of putrefying liquors Hence the quantity of dry earth moisture of the globe decrease, an at last be quite ev porate:, if it ha
not a continual supply from som part or other of the univers that the spirit which makes the fines air, and whi the bolutely req site for the life and being o things, comes principally from
comets. So far then from viewin conets with any apprehensions as the harbingers of the mercifuld dis persation of provid
Although comets sive in appearance, they are perma wing and imparting, that essen ial requisite, perhaps so importan our vital existence
The tails of comets are supposed cal light, and to the aurora borealis, ali. is the common cause of them all, is the action of the suns light on
the atmosphere of the comets, its lf, and of the earth. That the stmosphère of comets, may drive some of the finer particles of that
atmosphere, far beyond its limits atmosphere, far beyond its limits
and that this force or impulse, com and that this force or impulse, com whi h would always be ift oppo
sun, if the comet did
But the motion of the
orbit, and about an axis must vary the position and figure o the tail, giving it a curvature, and
a deviation from a line drawn from comet; and that this deviation of of the comet has the greater curvature, and as the motion of the come,
is more rapid. It may rven happen that the velocity of the comet, in its perihelion, may be so great, that the
force of the sun's ravs may produce a new tail, before the old one can
follow, in which case the comet might have two or more tails. by the comet of 1744 , which was it was in its perihelion. The attractive qualities in planets and comets before mentioned, although apparently contradictory, seem to exist, or how are we to reconcile and explain such opposite effects, from one
and the same cause ; for attraction, if the repulsive qualities are admany things in themselves inexplicable That such ideas may, perha;, not have numerous advocates, dou s not satisfactorily prove the nonexistence of those contrary qualities;
bowever, we find no difficulty in believin the theory of positive and negative
electricity, and experince justifies the belief Much has been said and admitted on the subject of attraction, gravitation,
proje tile, centrifugal and centripetal forces; but how are we satisfactorily to explain the immense attractive power the sun, that at the amazing distance of
eleven thousand two millions of miles, attracts so heavy and dense a body as a comet, so that in its approach
to the sun, its velocity is increased according io the square of its distance from the sun; and that in or near its perihe-
lion. it flies at such an astonishing velocity, as almost to stagger credulity -say
880 thousand miles per hour. t It seems \# Those who lived before Aristotle, supposed the heavenly space full of an intice of astronomers.
And a comet according to them, was mpeting together by reason of the inequal.
ety of their notions, and uniting into a
reasomable in the common conception of self in, so that our imaginations can set things, tha. the vast attractive power of
the sun, if it does attract from such vas regions, (of which there remains but little doubt) would attract and draw the comets, in particular, to its own body, by its centripetal force, never more to part, and
the comet would then become a part of the sun. That not being the case, is evident, for all comets, when attracted withmosphere of the sun, fly off into infinite space: which probably may depend on
the materials composing the comet. It is hen not irrational, to suppose, that they are repulsed,for the parpose of performing again the revolutions, prescribed by that unerring first cause, who made and gave
laws to the uni erse. The repulsive qualities of the sun may depend on a certain comet, which may be acted upon, that heat or light, which produces such and the matter in the sun, may contriapproach very near the sun, when in
heir perihelion, while others, perhap prssessing less of this quality, what eve
it may be, are kept at an awful distance it may be, are kept at an awfol distance
No doabt can be entertained but that our system is governed by laws immota-
ble, for it is impossible that the result o chance, however fortuitous, could have
produced, or have compelled; stubborn crude materials, to arrange themselve in such beautiful and exquisite order.
The magnitude of comets, have been satisfactorily noticed, they are ge-
nerally supposed to be much larger than our moon and some of them equal to
some of the primary planets. Helvelius nade the diameter of the comet of 1652 o that of the earth a
atmosphere of comets,
times as great as that of the nucleus measured by Flamstead; it was found to be two minutes, but the diameter of the
nucleus only eleven seconds. The di tance of the sun from us, measured abou be about three timese the diameter of th its nucleus was nearly equal to that If the sun, the plands, and the comet
re all inhabited, (and there is no reason to doubt it, and all the fixed star
be suns, (which ran hardly be doubted, heir immense distance, would exchud The analosy may also be preved very sa-
tisfactorily; the sun revolves on its axis, so does the star Algol, so does Lyrea, Ce
phei, Antinoi, Ceta, and many moreso has the star Algon, and so have thos
already mentioned, and probably ever star in the heavens. On our sun thes
spots are changeable, so they are on the star Ceti, as is evident foom the irregu-
larity of its changeable lustre. While their general periods continue unalterabl
some of their revolations or rotations their own axes, are shorter and some are
longer than our sun. As to the number of fixed stars, they may be considered in-
numerable. Dr. Herschel reckoned in a space, eight degrees stars. On the 2 bread August 1792, he found no less than 258,-
000 stars passed through the field of view
of his Telescope in 41 minutes of time.
The greater perfection Telescopes are brought to, the morestars are discovered
Now, considering those stars to be suns, is $1,384,462$ times larger than the earth,
and that those sun's, have their planets, and comets all inhabited, what a vast fiel If it were possible for the utmost stretch any idea adequte to such prorligious, stu-
pendous, and magnificent works of crea ion-innumerable worlds and systems
all in rapid motion, each parsuing the separate paths prescribe have a powerful tende ecy by contempla-
tion, to exalt our minds above the limited prejudices of superstition, with a pleas ing and certain conviction of the immu-
tability of a supreme all seeing Cre tabiity of a supreme all seeing Creato se should join a sublime author who
says, "The universe is the work of infinite power, prompted by infinite good-
ness, having an infinite space to exert it-
sible mass, which must again disappear as
those stars separated, and each proceeded on its course. But how those stars should thus meet, coalesce, and form a body
which in all positions of the sun, should resemble a tail, and
tally inexplicable.

## tally inexplicable. This opinion,

substituting another in its stead but equal ly as erroneous.
The ancien
The ancient Chanceites aud Atheits,
believed the solar systen to believed the solar systen to be the resul
of chance, and self created. the of chance, and self created; the incor-
rectness of wowich must be evident ; for to say that any one thing is cause of itself, is to say that it exister before it did
ist, which is absurd ; or else, that its istence was necessaay
said of the Deity.

 measurable be contained within the limits of space, or be defined by human
calculation. We also might join the calculation. We also might join the
above author with solemn fervency when-
he says, "How he says, "How great, hov woise, hono
good, must he be, vho made and governs

## ——r

FOREI

## By the ard Phladelpaia, Oct. 2

 at which time it was not known that the
Elorica Troaty was rat fifed by King fer-
 dimanat on by the spanisish government,
titicill be ny the or tusust He twas very sickly at Cadiz when the Fanny sailed.
Angust, represent that the yellow feve had broken out at tlay, alarge town at
bout $\delta$ miles Tom Cadiza and that tappre hensions werfe enterained of itrs reachity
Cadiz. The inhabiants were generally removinys, and all business was ata stand.
Vumerows neighorouthood of Cadizizand it was supposed they would be emiarked fiom some
other point:
Nothing is ssid of fle Treas ty in these letters
Other leters from Cadia state, that the
 ty being ratified.
Extrat of a leter from the Cape of
Good IHpe, dated UCpye Toun, Miny
5.
"The Caftes have broken out, and a
very serious war is caried on ot present






 with treal loss.
witheres then they
wipa

## from buteous ayras.



 divector, according to the forms of the

 but did not overake her. "The Chilan privater Congres

 nos Ayres and Montevideo, on her voy
aze to the later place, with considerab) money on board, was taken by an armed
boat in the nieght and tle pasesners landed on the beach.
ma, of Patiemeren, sacioone risontezn ranes's squadron, on acconnt of having
as Lord
Coclirane stated in lis
lis oficial $r e$ port, munitions of
by Cheval er Onis.

## cursion along the coast of made an ex

 northward, left coast of Peru, to theneater part of the
squadron at Callao, under the command of Admiral Blanco, who, before his re urn, left the station, but put into ${ }^{i} \mathrm{Val}$
paaiso, in want of provisions. The ut most activity prevailed to supply the
fleet, and to renew the blockade, while Blanco was arrested, to be tried by a
court martial. "Lord Cochrane had made several captures, and taken several sums of mo-
ney out of neutral vessels after having
ascertained them to be Spanish per " We have much talk here of the was accounts from Gibraltar respecting the
Spanish expedition from Cadiz. God orbid we should have any fear of them
"Republican principles are very popular here; and young as this country is in
financial concerns, they only owe one mil inancial concerns, they only owe one mil
lion half of dollars. Let them have only ten years more, and they will give
an example to the world of what a people an example to the world of what a people
can do spite of every prejudice, and in spite of internal enemies when with

ut foreign aid.

Ayres is of no value. Pritish Buenos tensively depressed and no spirit of spe

## culation. Oar shops are all flled with active young Creoles, who are getting

 air seme com wion pain carce-prices high.ials-sheep wool 18."

Accounts were received from Buenos Aug. A new director had been appointin place of Puer
Lord Cochrane's squadron had cap-
tured the American Schooner Montazuma of Baltimore on account of having on
board munitions of war contracted for by Don Onis, He had made several other captures, and had taken sums of money
out of the neutral vessels having asscerfrom venezuela

## General Bolivar has had brilliant suc-

 ess in the province of Tunja, in NewGrenada, and the royal force there wasnearly destroyed. When his last despatches were sent off, viz. June the 28th, was preparing to march for the capiHe had previously formed a junction with Gen. Santander in Cassanare.
Paez has obtained another victory over Paez has obtained another victory over
part of Morilo's army, on a branch of the Apure. General Urdenata and Col. English are reported to have been very success-
ful, and were in hopes of reducing Cuma-
na. Col. Elsom had arrived at Angostura Col. Elsom had arrived at Angostura
with the residue of his regiment. It is now 700 strong.
Gen Arismendi was in Angostura, under arrest for disobedience of orders; but
it was believed he would be acquited. Having had scarcely time to form a which in most cases every reader can bes
make for himself.
Balt. Am.
FRQM NEW GRENEDA.
We were, with regret at the moment
the first to cemmunicate the news receiv
ed from the Spanish Maine, concerning
Don Pedro $W$ all: Ietters from himself,
of 20 th A pril, stated that he was ready of 20 th April, stated that he was ready
to embark for Porto Bello : ahd were ap-
prized atterwards that a vessel had sailed prized atterwards that a vessel had sailen
about the beginning of May, wh ch had
tallen into the hands of the Spaniardstallen into the hands of the Spaniards-
the whole on board of which were shot
this vessel sailed from the same port at this vessel sailed from the same port at
which Mr. Wale's letter was previously
written. The account of his death we writen. The account of his death we
received from Washington city-a gen
tleman in office there having stated tha he bad seen the name of Don Pedro
amorig those that had been shot.
It is with great satisfaction that now informed, by a letter of date 12 th o
Aunust, from one one of the West India
Islands, written on that day by himself. Slands, written on that day by himself,
that he still lives a prosperous gentlePy th: same conveyance that las
brought this pleasing information from New Grenada, we learn that Gen. St. An-
der bad penetrated the interior of Apri obtained many advantages over the roy-
alists, and found the inhabitants every where ardent in Savor of the indepen-
dence of Europe. It was believed that
dhe the rity of Santa Fe de Bagota had falle
into his hands. The Vice Roy had foun gave orders to draw 500 men from the garrisons of Carthegena and Santa Mar-
tha, to reinforce him, in order to resist the
pation army. This royal reinforcement pationt army. This royal reinforcemen
had marched, in July, from the sea coast The situation of Nev Grenada may be
appreciated, when succors of men and appreciated, when saccors of men and
money have been required from Cartha
gena and Santa Martha where the great est distress already prevailed, and where for months past, the troops had been sub-
sisied only by daity contributions levied sisted only by daily contributions levied
ces may be therefore expected ever
Had McGiregor npt changed hi
Hation from the plan under which h destination from the plan under which he
was instructed to act, the fate of Newwas instructed to act, the fate of New
Grenada would have been decided in Ju-

Information had reached St Thamas o the 15th of September, of the capture o Santa Fee, the capitol of New Gre
nada, on the 17th, by Bolivar the pat-
riot General.

## DOMESTIC

Scientific Franklin, (mo) avg. 20.
Scientific. Expediton.-By a letter from
one of the officers of the United steam boat Western Engineer, to the ed itors, dated Fort Osage, Aug. 10, we lear that she arrived, there on the 1st inst. and departed on the 10 th. On the 12th she sas, about 40 miles.
Messrs. Say, Jesup, Peale, Seymour
Biddle, and Swift, accompanied by Mr Douqherty, assistant Indian agent and interpreter, left the boat at Fort Usage, and proceeded by land to visit the Kan-
sas Indians, and from thence to the Pawnees, and will join the Engineers at the ng will enable the naturalists tis explore
 Long, Major OF alaon, and Lieut. Graper ham, proveced on ine Enginer.
co. Atkison commander of the ex. pedition for the Yelow stone, leff Frank
ing on the 1 Ith inst. ForFer from thence woild proced immeef and for the Counci Blaffs.
hisco. Chamberi, and the tropss under
The steam boat Expedition, with visions, tropps, \&ृc. was winhin, with miles
 three steam boans belongnn to 0 Col. Jobn Son, that tave ascended the Missour, the
Expedition, either from ter constracition xxpeainion, etiner from her construcion,
or other causes appears to have been the

 bar, her ruder brote ; ind in on a sand
 boas. Jhe Jefereson steam boat, which was manioned miour lass as having been lyin
 up nee iisoun, and has been alam
doned.
Her cargo is to be taken up iil keel boats.

## From a serics ofast observaions, taken at Iromicai and ohber Enginer, hee tololowivg deduationos hare been made <br>  W. from Wastington nityes $\begin{aligned} & \text { seament } \\ & \text { Nagric }\end{aligned}$ Magenetic dip, 69 degrees 25 minutes.  From the Daily Report of the oficier of  Post. Belle. Fontaine is of our the mouth of the Missouri.







17 to July 2
July 3 to 11

| 21 |
| :---: |
| Aug. 1 to 1 to 12 |

Toat rise from Feb. 6 -
Falid Aurings same
 The rise of the Missoni is periotion


## The

 melting of the snows ipon the difierea
tribuary streams, which, from their eew graphical positions, are bound, by thin
Iavs of naure, to brimy donn their tui


1. The Grat Osage-entering t
Missouri 133 miles from its mouib, north latitude 38,22 . Its sources in titude 35,36 , and 37 , Six hundred
miles in length, and 397 yards wiue a miles in len
the mouth.
2. The Kunzas-entering the Mis tude 39,59, 1,200 miles in length; sources between the parallels 38 adi 40 3, The Platte-joining the Missour
600 miles from its mouth, in lat. 41 . 600 miles from its mouth, in lat. 41 .
2,000 miles in length; its sources in the 2,000 miles in length; its sources in th
Rocky Mountains, between parallels 41 and 42.
3. The
4. The Yellowstone-entering the Mis lat. 48; about 1,100 miles mong; its sources in the Rocky M
the latitudes 42 and
5. Rivers which issue directly from the Rocky Mountains, between the latitudes 44 and 49 , and unite their streams above he Falls of the Missouri, from 2,500 . 3,000 miles above its mouth. The priir cipal of these rivers are Gallatin's, Mar
dison's, Jefferson's Medicine, and Jaria. (About 30 rivers from 100 to 56 C miles in length, also joinct ithe Missorr
between its mouth and the iochy hout
