



l'éclipse du 21 Aout 2017 : retour de voyage

Pascal ANDRE



Eclipse totales ou éclipse annulaire (crédit wikipédia)

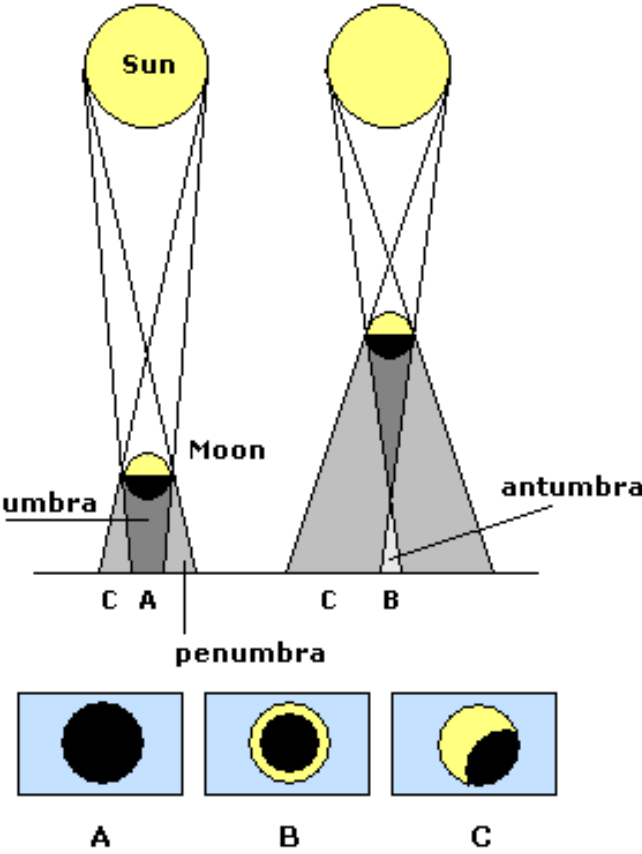
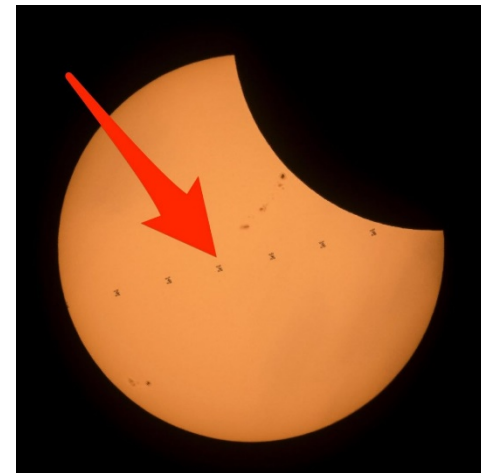
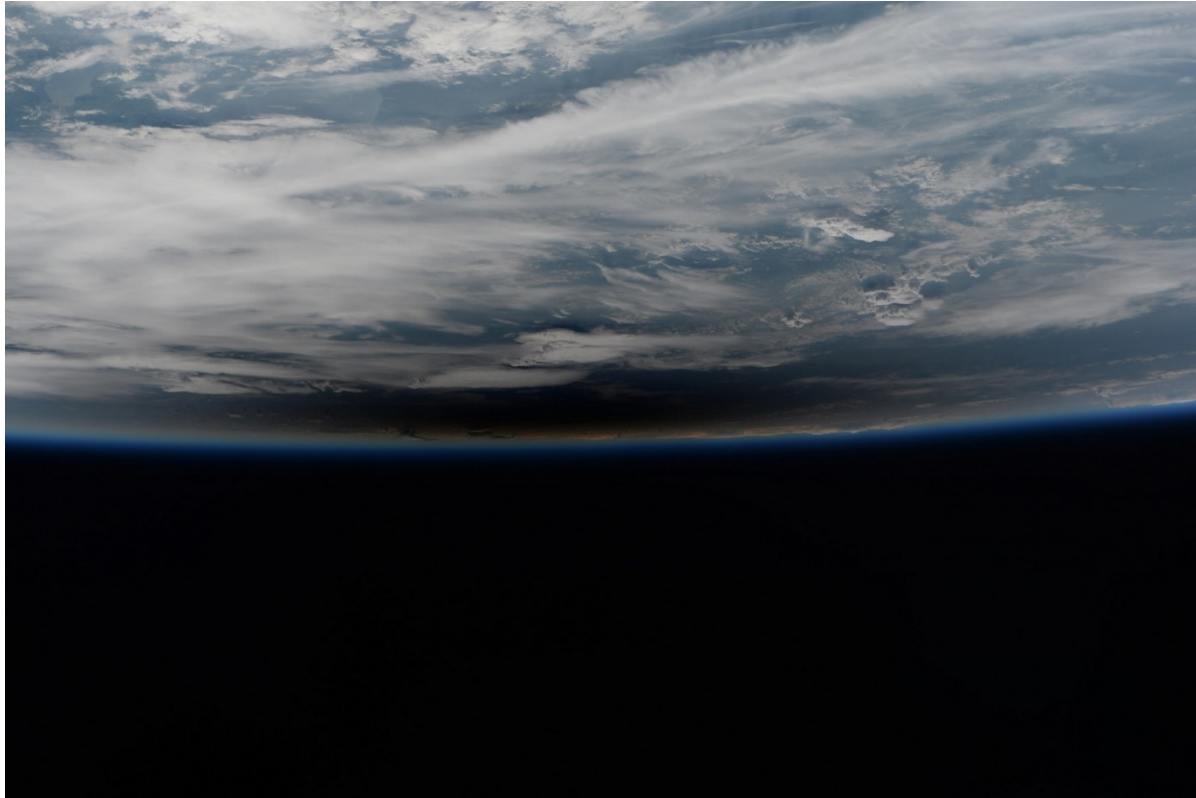


Image prise depuis l'ISS le 21 août 2017 par le spationaute italien Paolo Nespoli. Crédit ESA/ NASA





TOTAL SOLAR ECLIPSE ON AUGUST 21, 2017

National Aeronautics and Space Administration

This unique map shows the path of the moon's umbral shadow—in which the sun will be completely obscured by the moon—during the total solar eclipse of Aug. 21, 2017, as well as the fraction of the sun's area covered by the moon outside the path of totality. The lunar shadow enters the United States near Lincoln City, Oregon, at 9:05 a.m. P.D.T. Totality begins in the United States in Lincoln City, Oregon, at 10:16 a.m. P.D.T. The total eclipse will end in Charleston, South Carolina, at 2:48 p.m. EDT. The lunar shadow leaves the United States at 4:39 p.m. EDT. A partial eclipse will be visible throughout the United States.

EVERYONE IN NORTH AMERICA WILL BE ABLE TO EXPERIENCE THIS ECLIPSE.

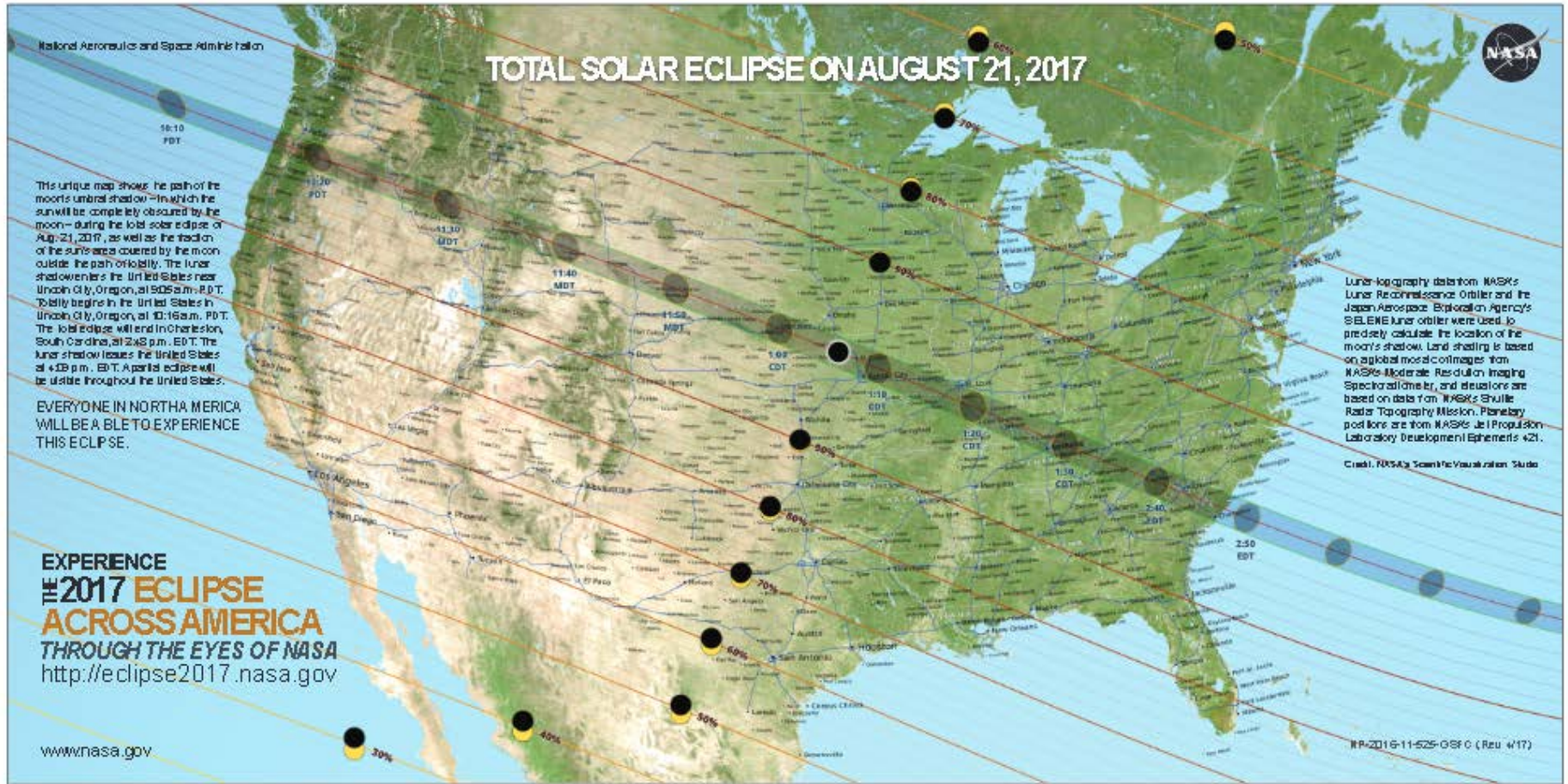
EXPERIENCE
#2017 ECLIPSE
ACROSS AMERICA
THROUGH THE EYES OF NASA
<http://eclipse2017.nasa.gov>

www.nasa.gov

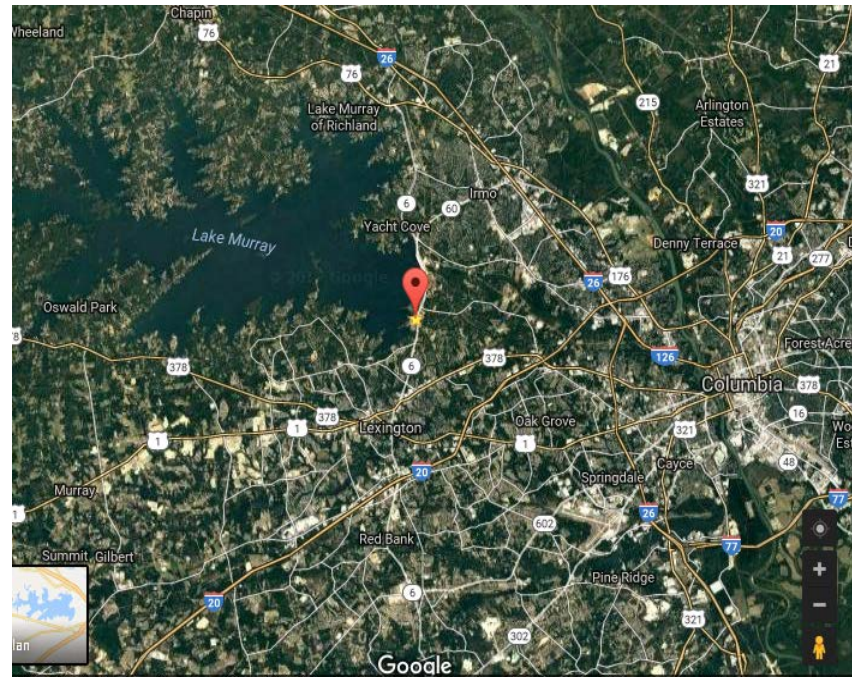
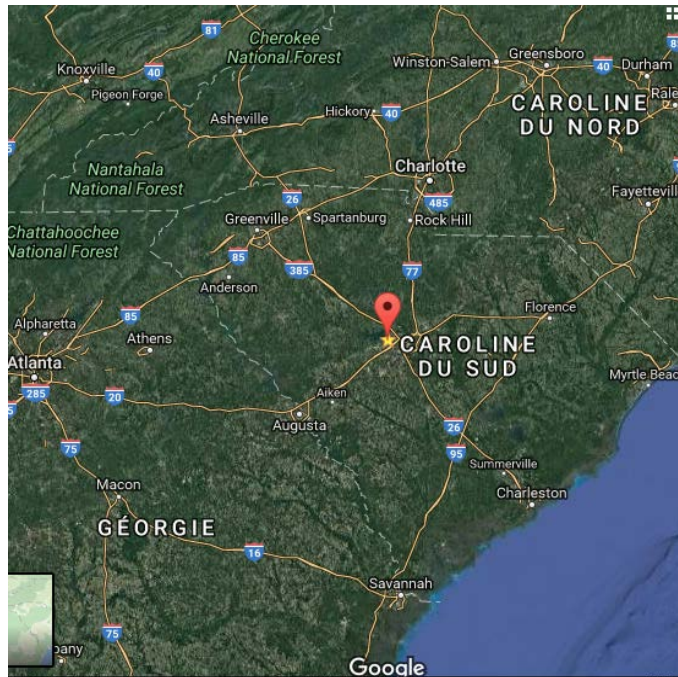
Lunar topography data from NASA's Lunar Reconnaissance Orbiter and the Japan Aerospace Exploration Agency's SELENE lunar orbiter were used to precisely calculate the location of the moon's shadow. Land shading is based on global moderate-resolution topographic data from NASA's Moderate Resolution Imaging Spectroradiometer, and elevations are based on data from NASA's Shuttle Radar Topography Mission. Planetary positions are from NASA's Jet Propulsion Laboratory Developmental Ephemeris 421.

Credit: NASA's Scientific Visualization Studio

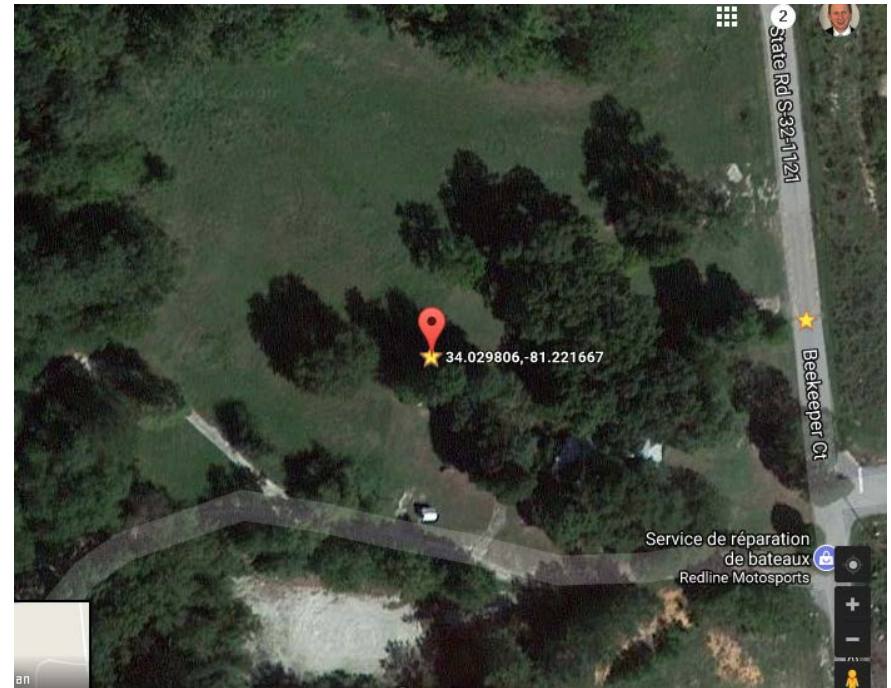
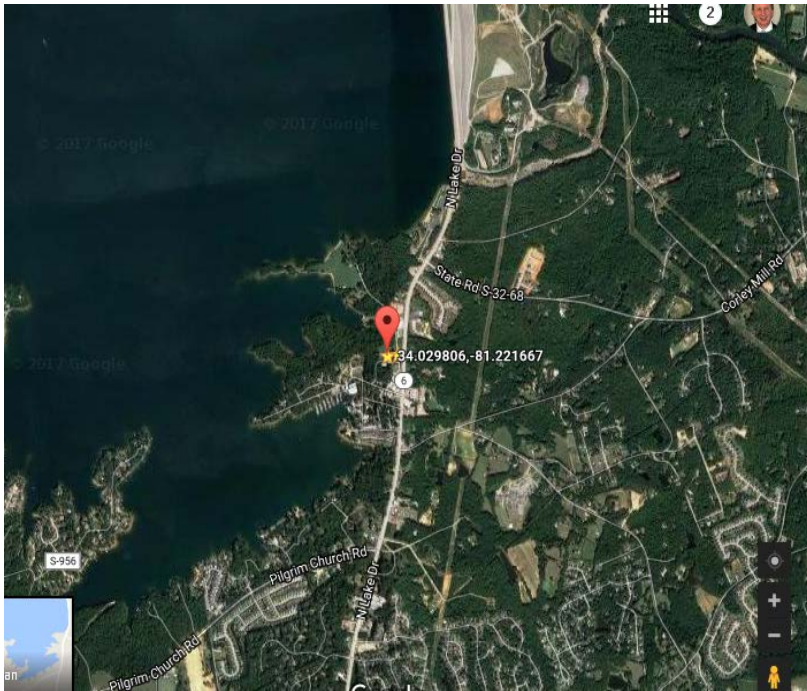
17-2016-11-525-GSFC (Rev. 4/17)



Le choix du spot = centralité et météo
le lac Murray Caroline du Sud



Nous y sommes ...
Une prairie tranquille pour s'installer



Local Circumstances for the 21 AUG 2017 Total Solar Eclipse at Lake Murray of Richland, SC:

Latitude: 34° 07' 20" N	Longitude: 81° 15' 44" W
Duration of Totality*: 2m 29s	Partial phase start: 1:12:29PM (EDT), at "2:00 o'clock" on the sun's disk
Totality Start*: 2:41:12PM (EDT)	
<small>*All times shown are calculated for the lat/long specified above, and are accurate to within a couple of seconds, due mainly to influences of the "edge effects" at the start and end of totality. For a more detailed explanation of this, please see the "About Accuracy" section of this great 2017 eclipse page by Ernie Wright of NASA! Please also note that these times have been converted from UTC; if you see times on other sites that say "UTC"/ "UT", or "GMT", those are NOT the local times for you in Lake Murray of Richland!</small>	

Les Préparatifs



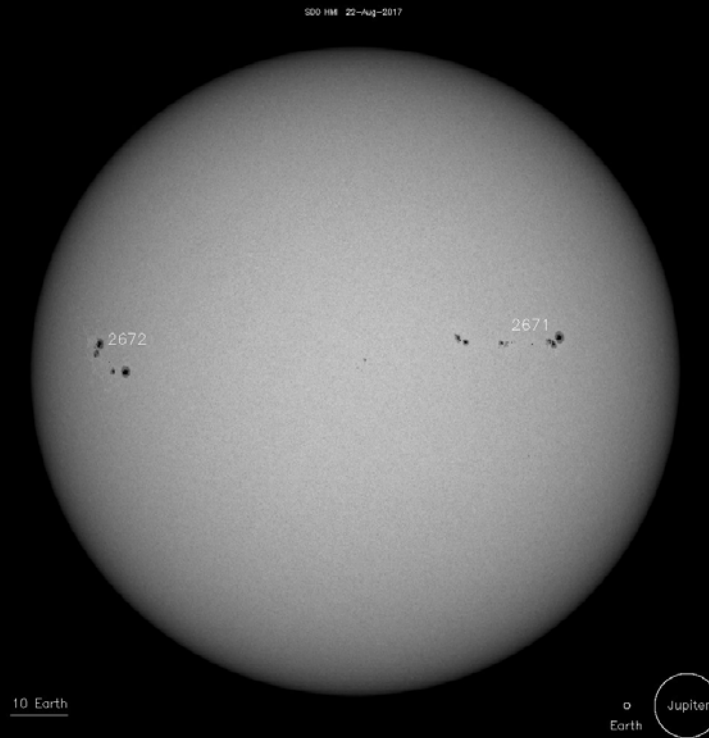
Matériel

Boitier eos100D zoom 55-250 réglé à f8 M sur pied
PC avec logiciel APT pour automatiser la prise de vue durant la totalité (et profiter du spectacle)

Boitier EOS450 + Danubia 500mm M42 en mode TV pour prise de vue à main levée

Filtres ASTROSOLAR sauf totalité – Mode Raw + L

Le soleil avant l'éclipse le 21 aout - satellite SOHO
(Solar and Heliospheric Observatory)



Avant la totalité : à noter les groupes de tâches solaires 2671 et 2672
Photos Pascal ANDRE - EOS450 500mm f8 – Entrée sur le soleil « à 2h »



Totalité 21 aug 2017
Photos Chantal ANDRE - EOS450 500mm f8



Totalité 21 aug 2017
Photos Chantal ANDRE - EOS450 500mm f8



Totalité 21 aug 2017
Photos Chantal ANDRE - EOS450 500mm f8



Grains de Baily « Baily's Beads » (Crédit wikipédia)

- En [astronomie](#), les **grains de Baily**, également connus sous le nom de **perles de Baily**, est un phénomène optique qui peut être observé durant une [éclipse solaire](#) totale. Ce phénomène a été décrit pour la première fois par l'astronome [anglais Francis Baily](#) en 1836.
- Le phénomène est causé par les irrégularités du [relief lunaire](#). Peu de temps avant et après la totalité, la lumière du [Soleil](#) brille à travers les vallées entre les montagnes de la Lune. Pendant quelques secondes, des points lumineux apparaissent sur le [limbe lunaire](#), comme des perles disposées sur un collier. Le **diamant** qui peut être observé juste avant la disparition du disque solaire, ou juste après sa réapparition, est un cas particulier de grain de Baily, lorsqu'il ne reste qu'un seul point lumineux.

Totalité 21 aug 2017 « Diamond Ring »

Photos Chantal ANDRE - EOS450 500mm f8



Totalité 21 aug 2017 « Diamond Ring
Photos Pascal ANDRE – EOS100 250mm f8



Totalité 21 aug 2017 « Baily's Beads »
Photos Chantal ANDRE – EOS450D 500mm f8 – Traitement Photoshop



Fin de l'éclipse : la lune engage sa sortie

Photos Pascal ANDRE - EOS450 500mm f8

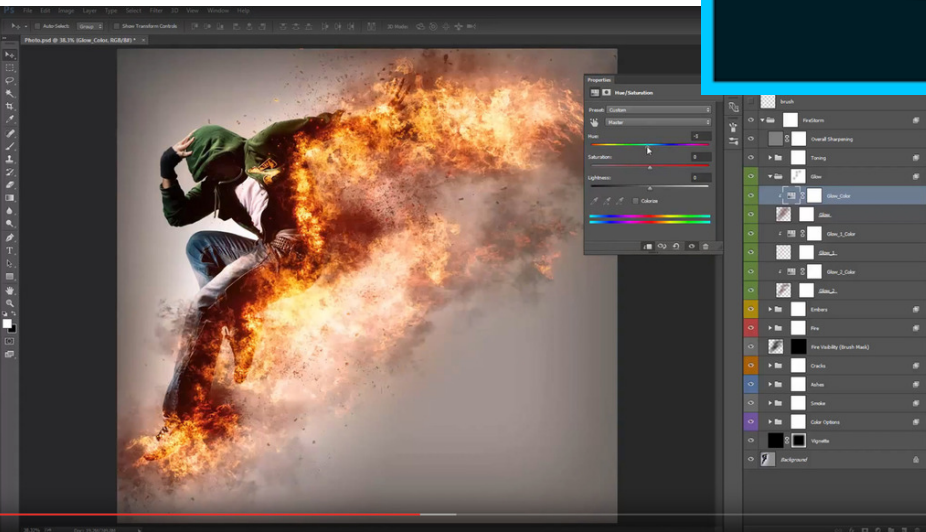


Les autorités redoutaient des perturbations routières



Donald Trump observe
(sans lunettes) l'éclipse au côté de
son épouse Mélanie
(source AFP)

traitement (Photoshop) des clichés pris automatiquement avec APT

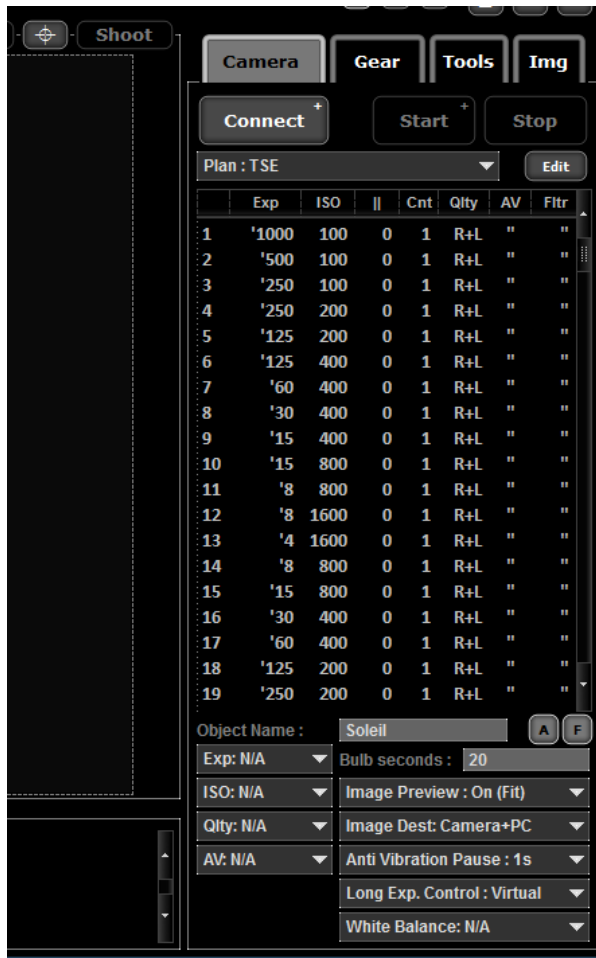


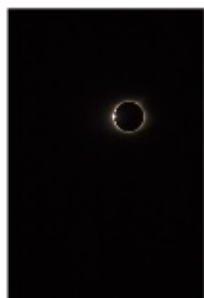
- Mise en calque de 12 images RAW prises à différents temps de pose
- Alignement manuel des photos
- Empilement – Moyenne
- Filtre radial
- (Soustraction filtre flou)

Astronomy Photography Tool (APT)

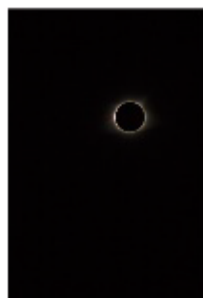
Permet (notamment) d'automatiser une séquence avec choix vitesse, exp, iso, délais relevage miroir

Automatiser c'est pouvoir contempler ce court spectacle de 2 minutes 30 avec nos 5 sens

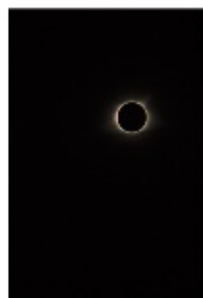




IMG_2078.CR2



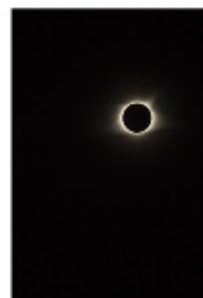
IMG_2079.CR2



IMG_2080.CR2



IMG_2081.CR2



IMG_2082.CR2



IMG_2083.CR2



IMG_2084.CR2



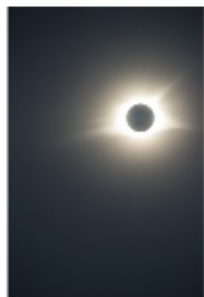
IMG_2085.CR2



IMG_2086.CR2



IMG_2087.CR2



IMG_2088.CR2



IMG_2089.CR2

CORONA

The outermost layer of the solar atmosphere. The corona is made of a tenuous ionized gas called plasma, with temperatures up to many millions of degrees Fahrenheit. It is visible to the naked eye only during a total solar eclipse.

PROMINENCES

Structures in the corona consisting of cool plasma supported by magnetic fields. Prominences are bright structures when seen over the solar limb, but appear dark when seen against the bright solar disk. Prominences seen on the disk are also known as filaments.

HELMET STREAMERS

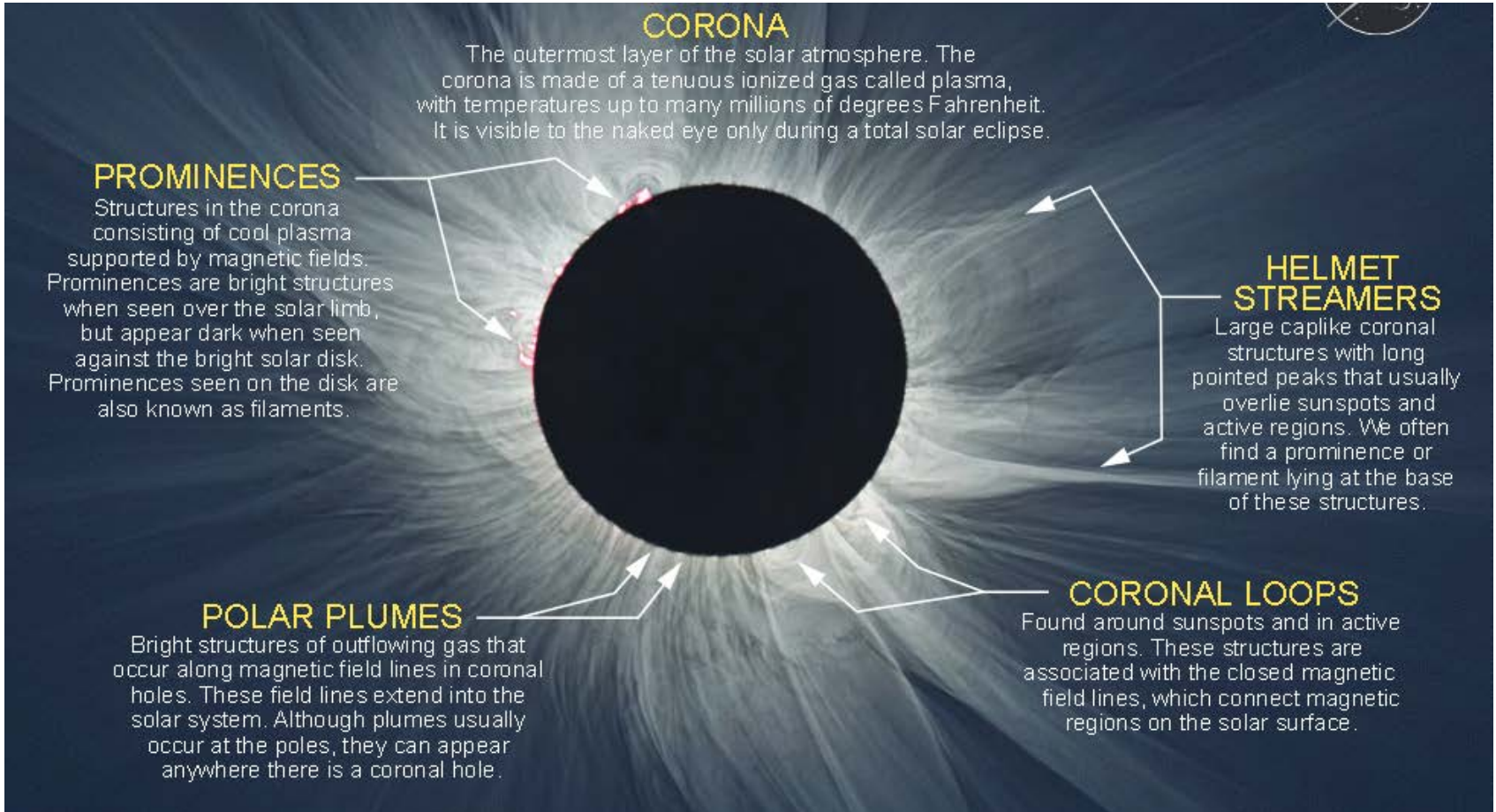
Large caplike coronal structures with long pointed peaks that usually overlie sunspots and active regions. We often find a prominence or filament lying at the base of these structures.

POLAR PLUMES

Bright structures of outflowing gas that occur along magnetic field lines in coronal holes. These field lines extend into the solar system. Although plumes usually occur at the poles, they can appear anywhere there is a coronal hole.

CORONAL LOOPS

Found around sunspots and in active regions. These structures are associated with the closed magnetic field lines, which connect magnetic regions on the solar surface.







Pascal ANDRE -2017



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En dehors des photos

- Une émotion intense durant ce spectacle cosmique
- Les insectes sortent de nulle part
- Les couleurs sont irréelles : herbe devient bleue violette
- On voit les étoiles à 14h et notamment Régulus à côté de la lune
- Les oiseaux se mettent à chanter puis se taisent brusquement
- Silence, sensation de froid
- Clameur d'étonnement de la foule

Eclipses totales passées et futures

