



LE SYSTÈME SOLAIRE POUR DÉBUTANTS DE 7 À 99 ANS



CLAIRE LOUBIÈRE

PROFESSEUR FORMATEUR EN SCIENCES PHYSIQUES

Uranoscope d'Ile de France
Gretz-Armainvilliers (77)

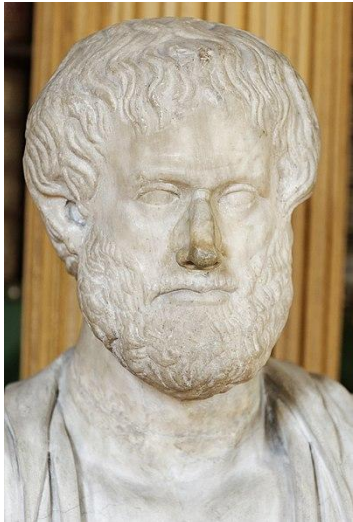
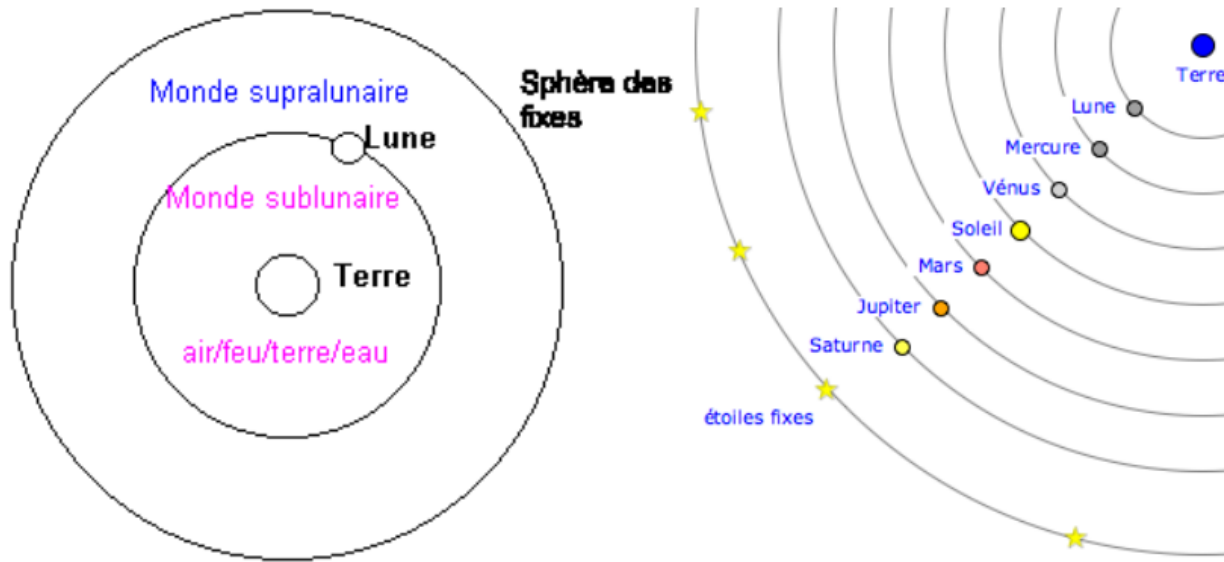


Au 8^e et 7^e s av JC, Thales conçut la Terre comme un disque plat posé sur l'eau.

Les mouvements de l'eau expliquaient selon lui les tremblements de terre.



L'univers aristotélicien



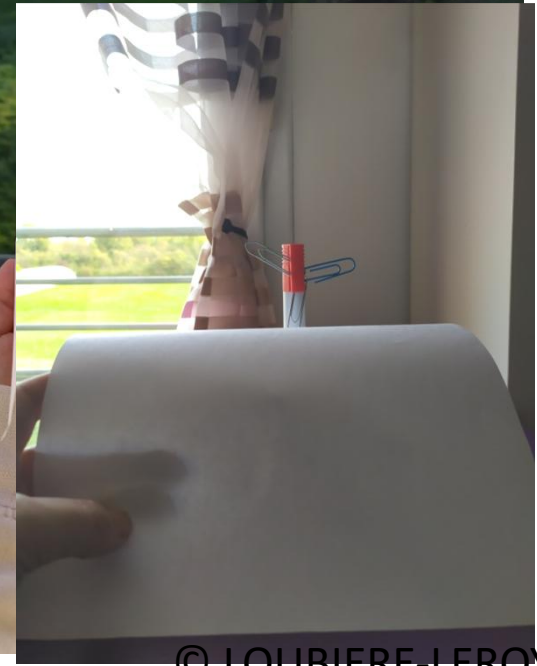
Aristote, au IV^e siècle av. JC, pensait que la Terre était ronde et immobile.

On distinguait: les mondes sublunaire et supralunaire.

La rotondité de la Terre ne fait plus de doute à cette époque.

Que
voya

e sans





**Eclipse du 21 janvier 2019 vue en Seine
et Marne**

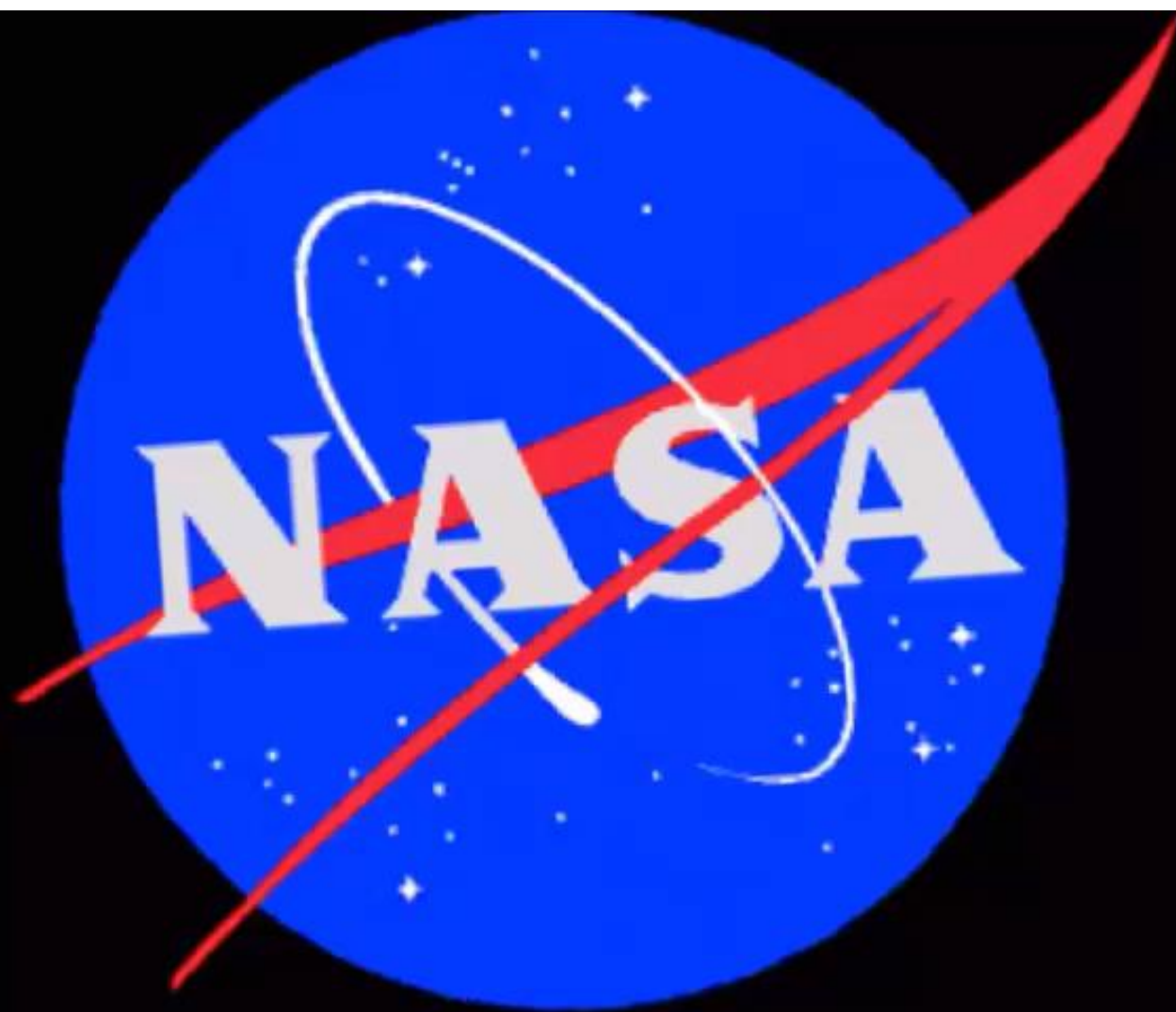


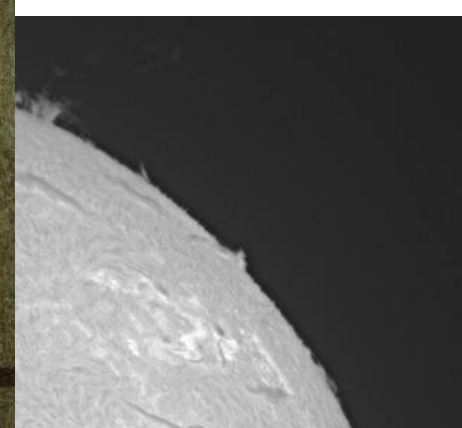


© NASA

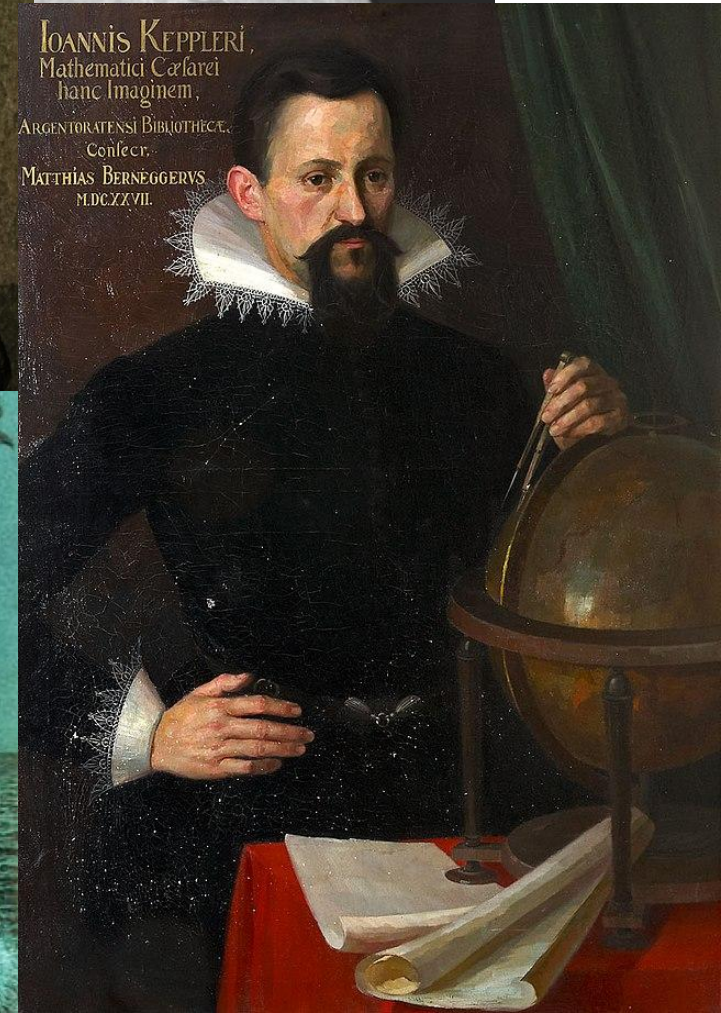
Apollo 8, Noël 1968

« Oh mon Dieu ! Regardez cette photo là-bas ! », s'est exclamé Bill Anders. « Voilà la Terre qui se lève. Que c'est beau ! »

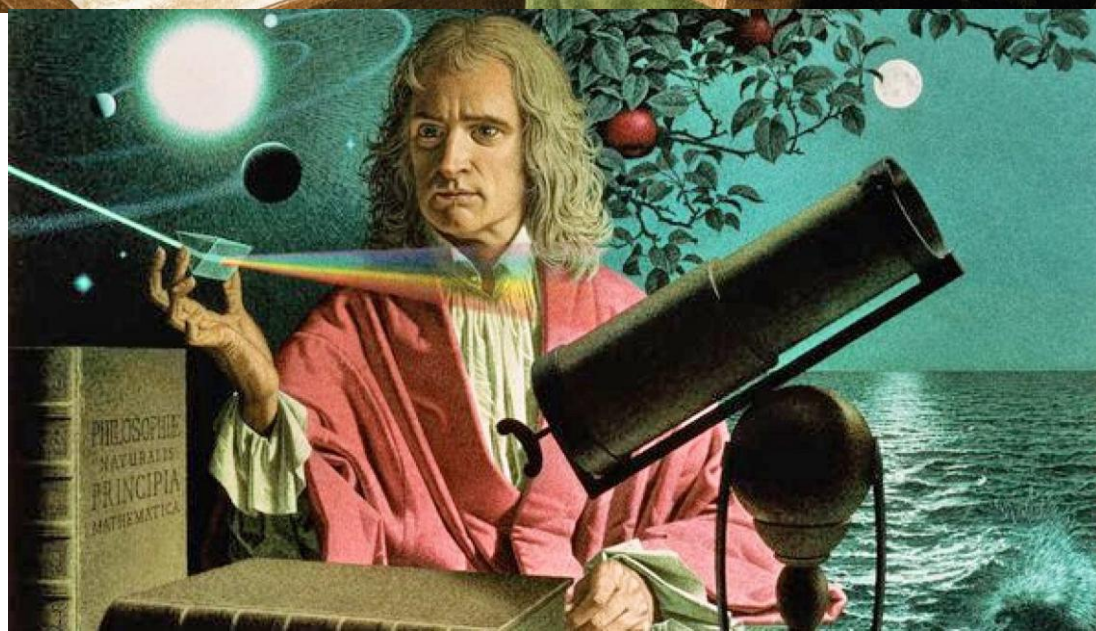


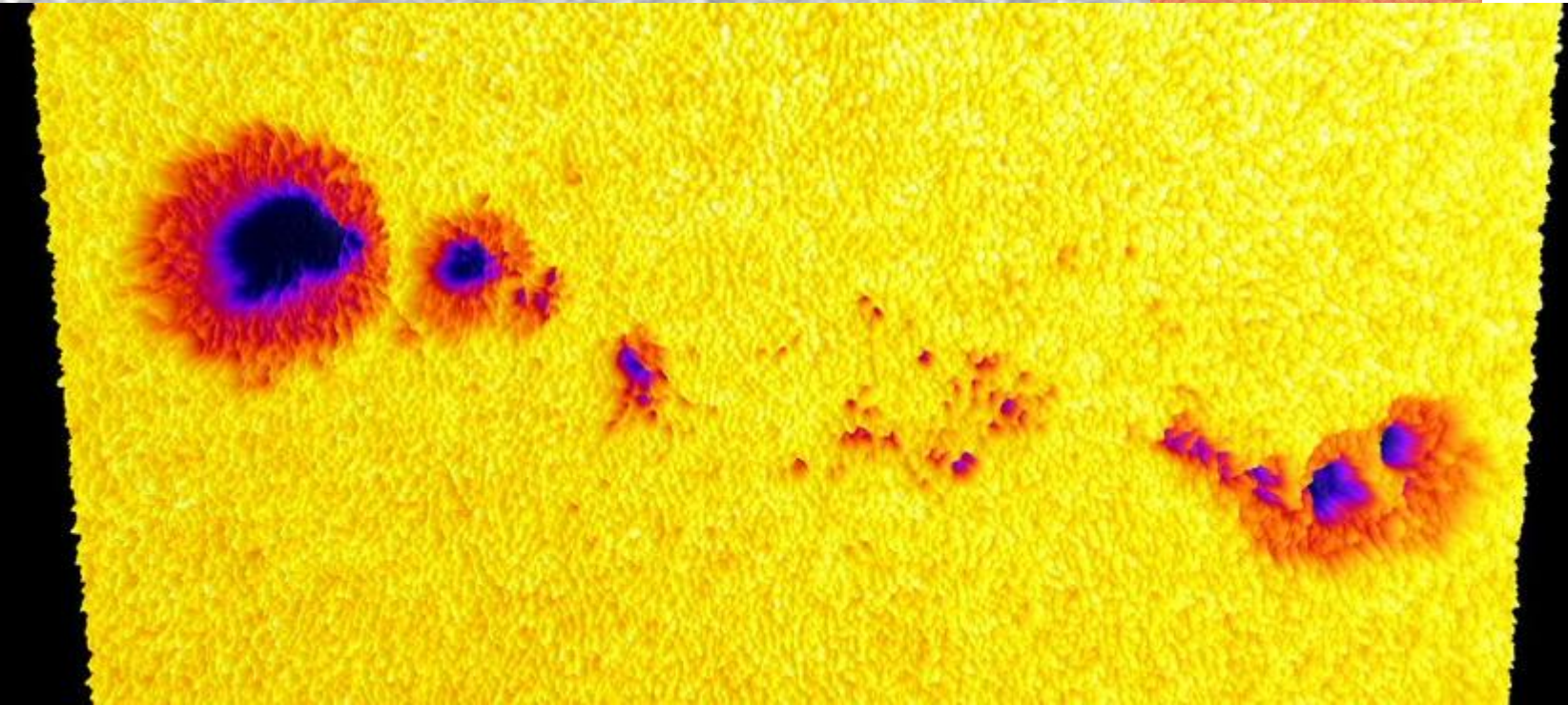
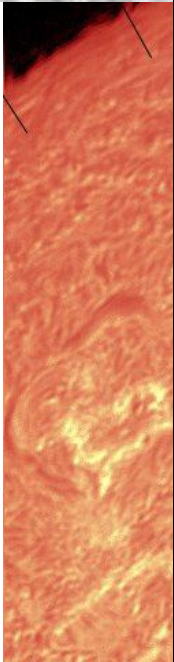
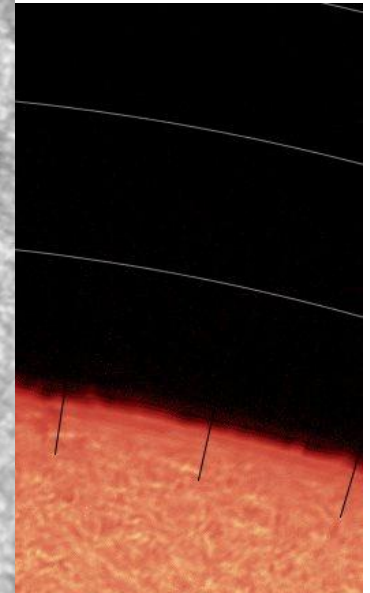
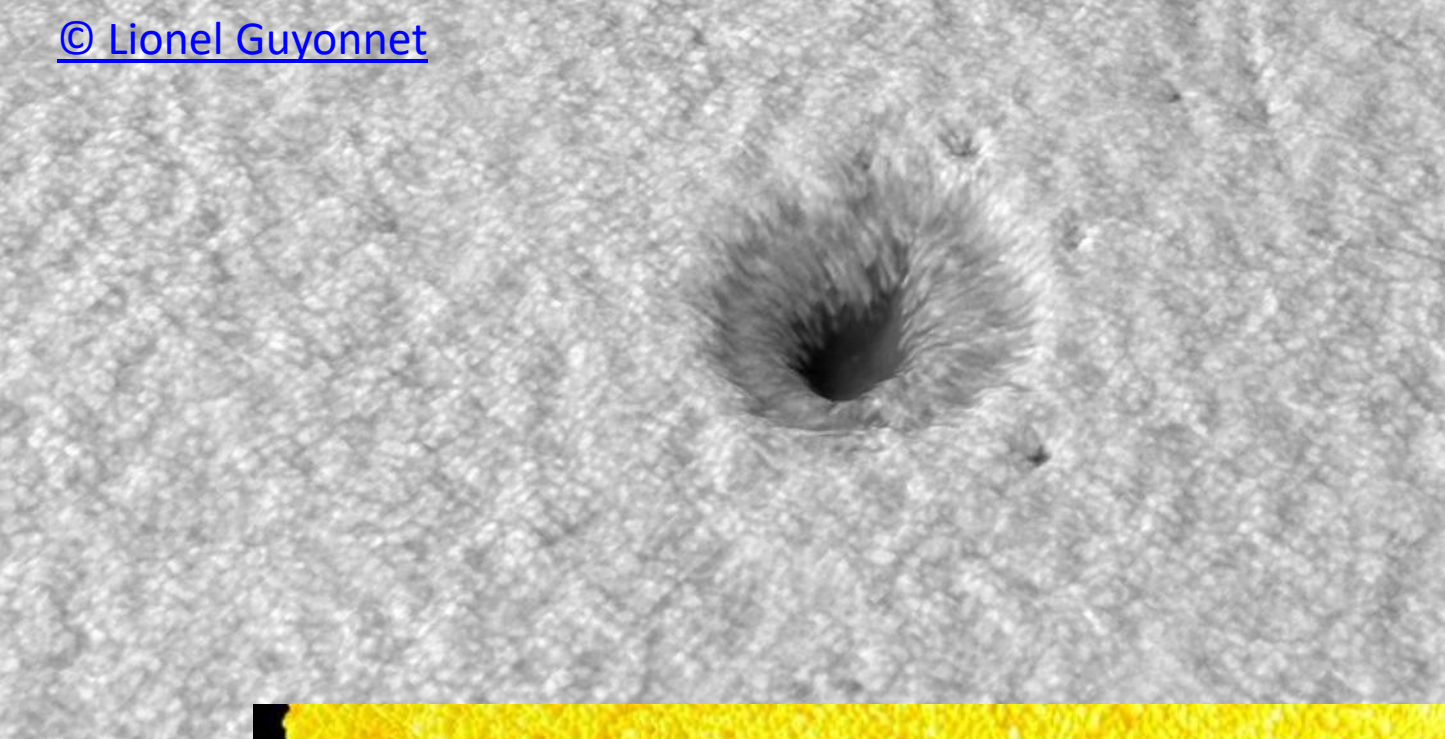


IOANNIS KEPLERI,
Mathematici Cæsarei
hanc Imaginem,
ARGENTORATENSIS BIBLIOTHECÆ,
Conseccr.
MATTHIAS BERNEGGERVS
MDCXXVII.

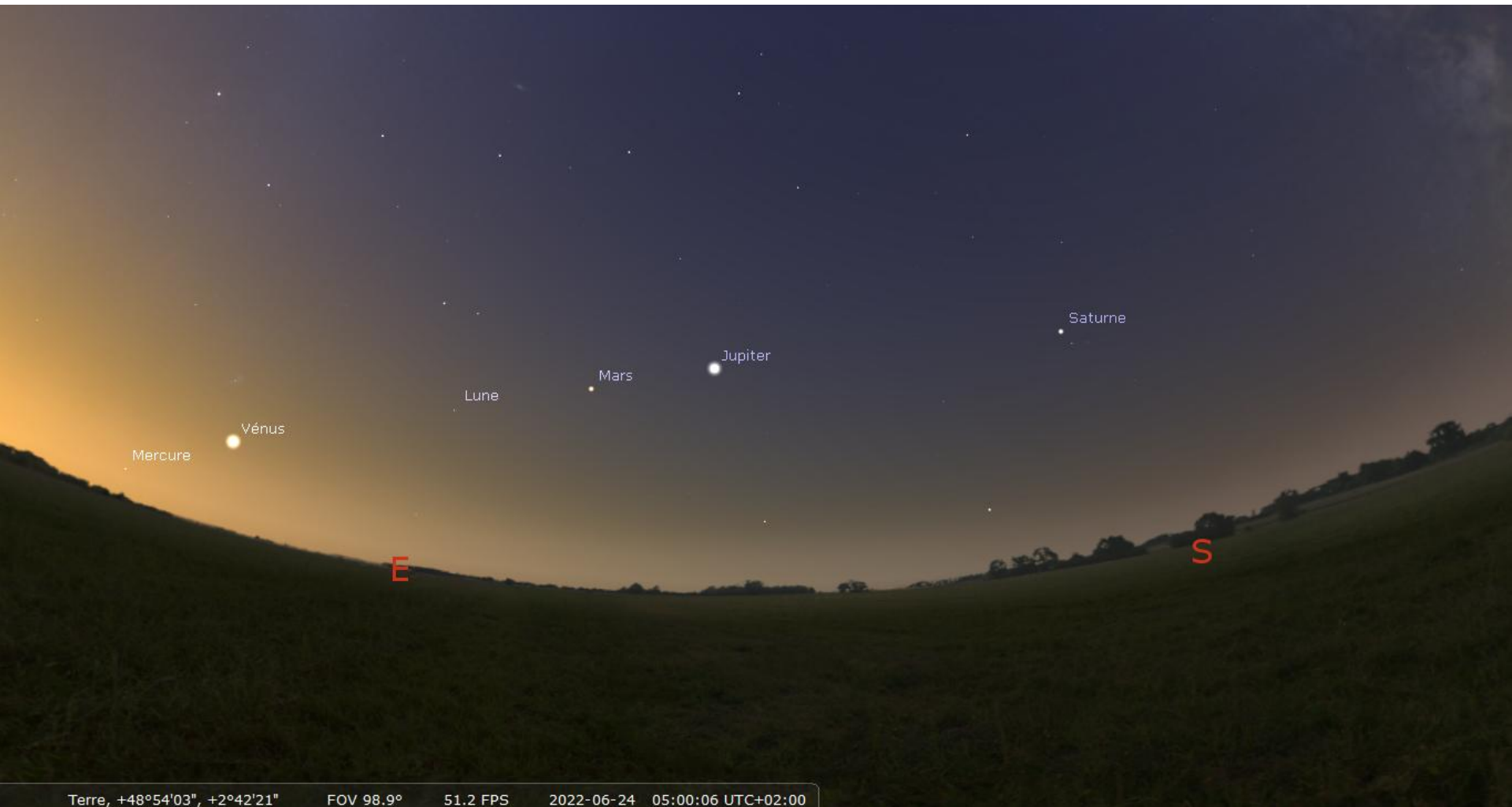


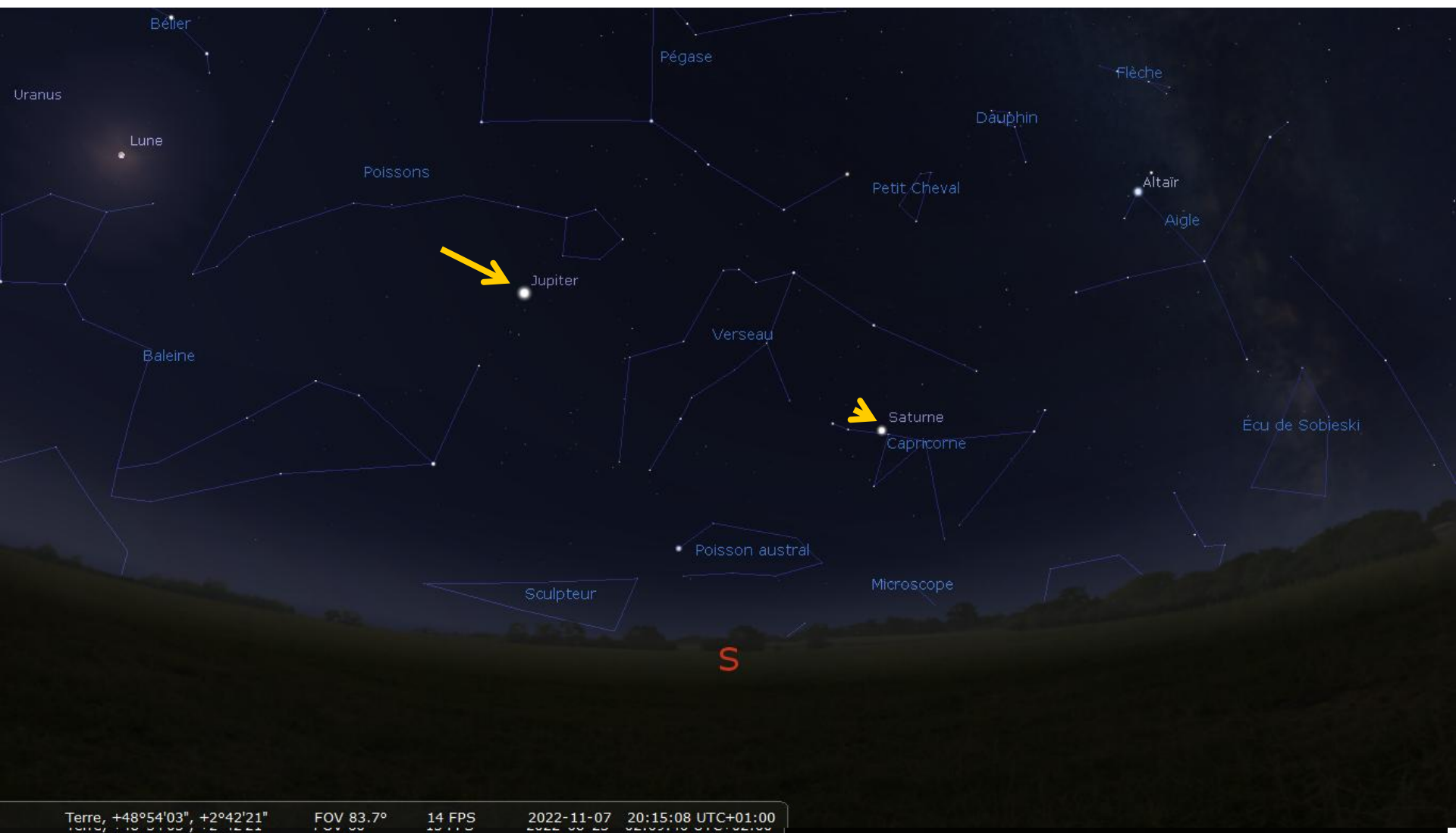
Nationalgeographic.fr

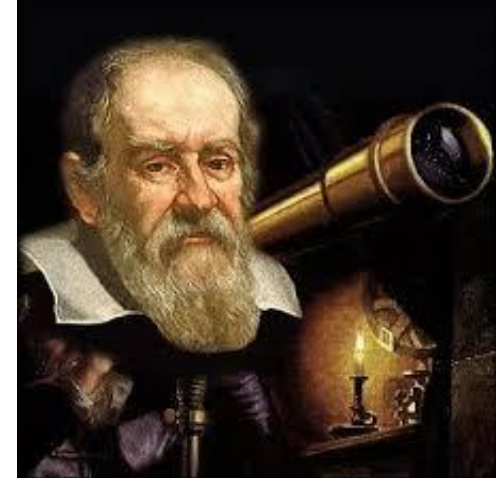
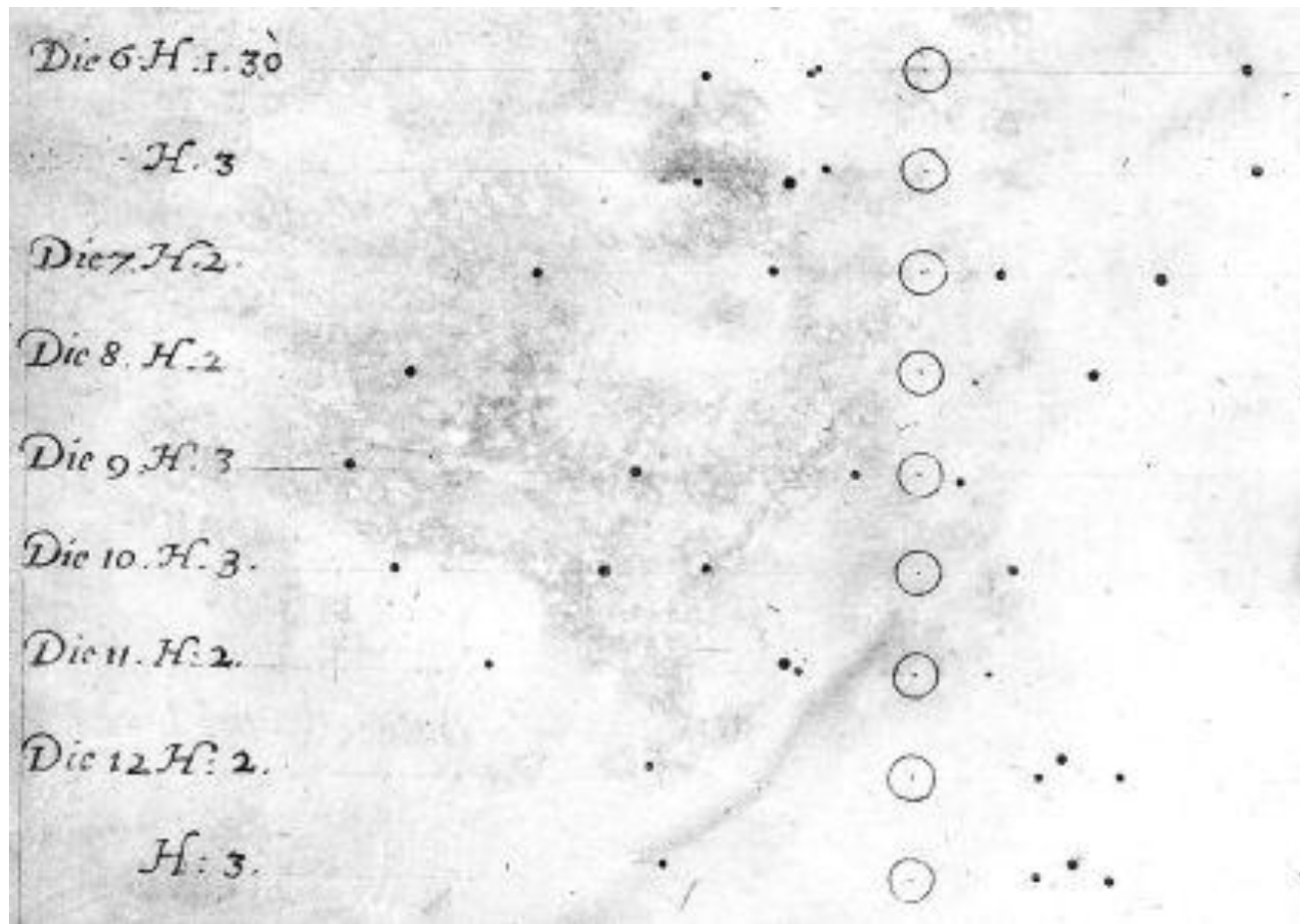




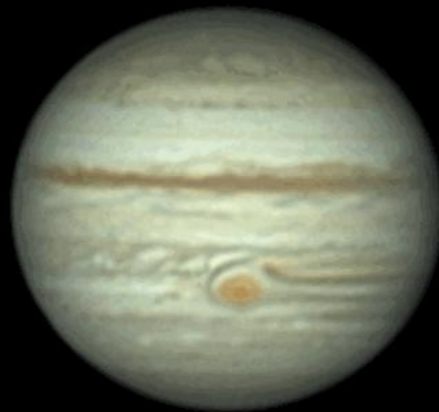
Planète... un mot qui a été inventé il y a fort longtemps







Jupiter avec un télescope amateur © A. Leroy



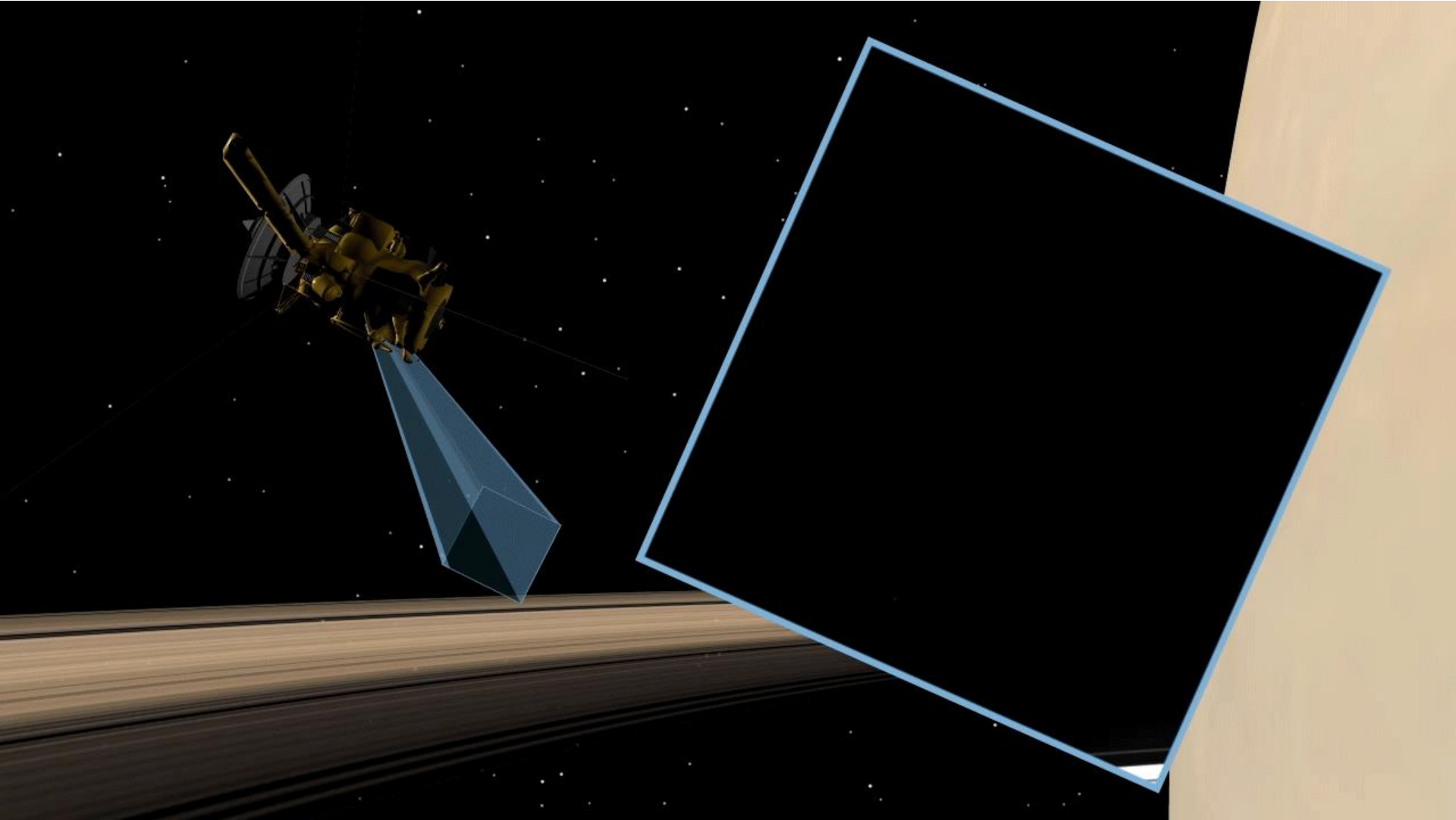


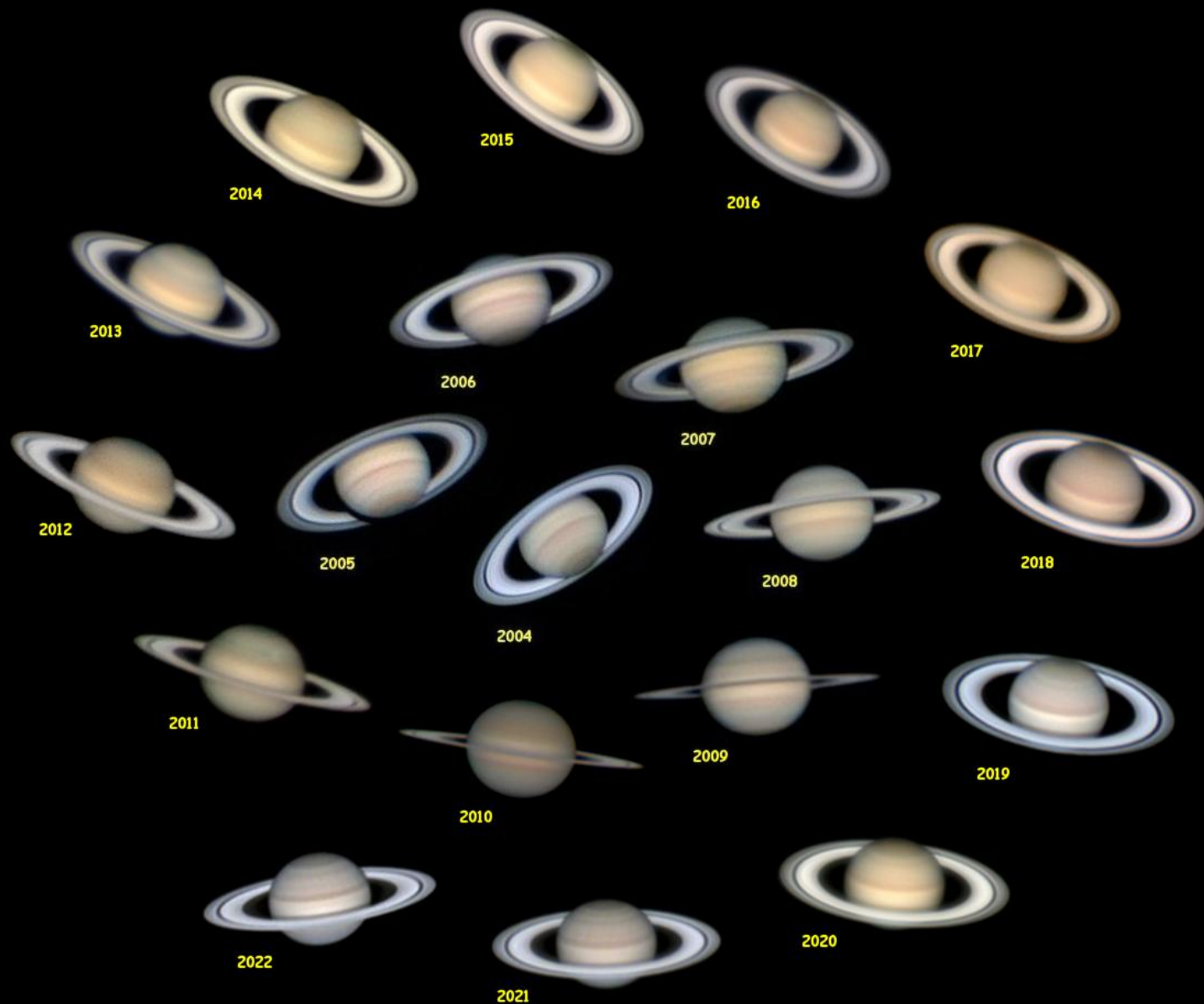
© Nasa, jwt, 2022

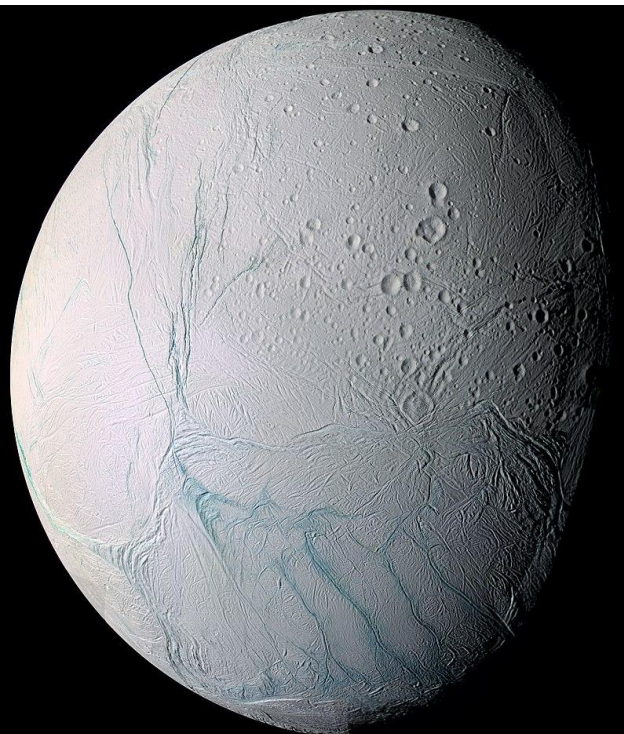
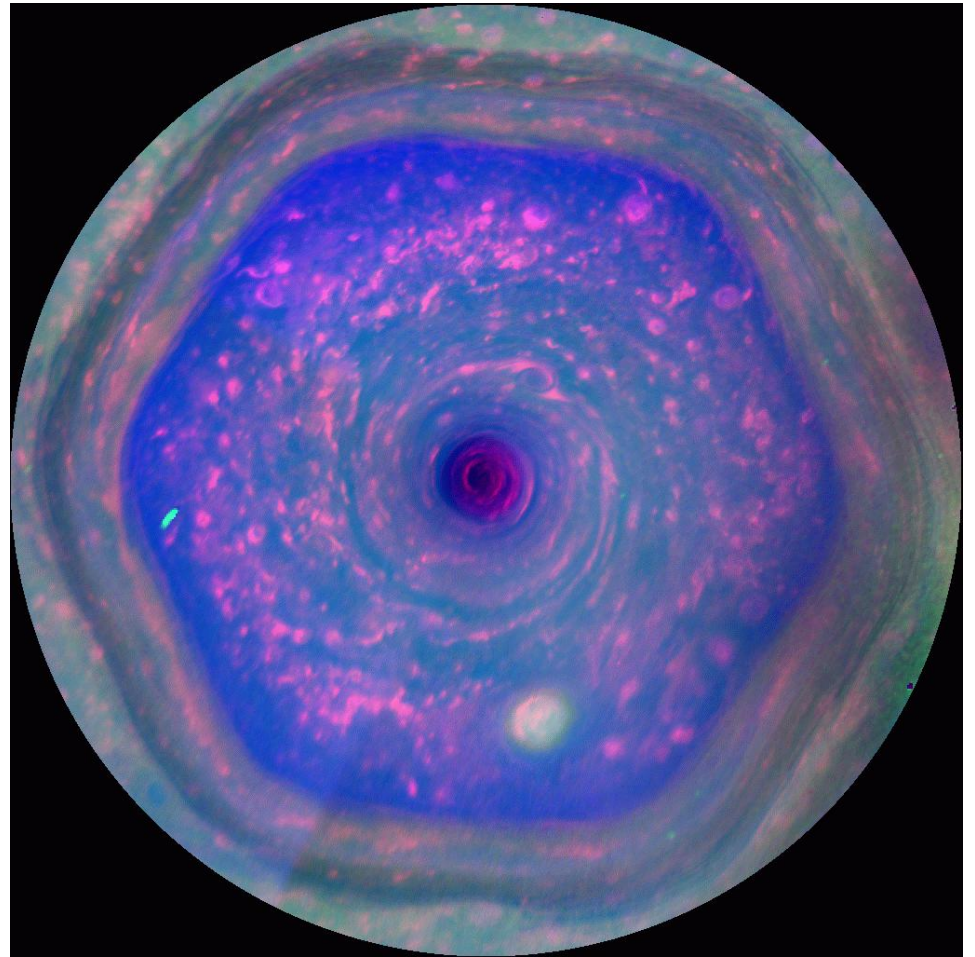
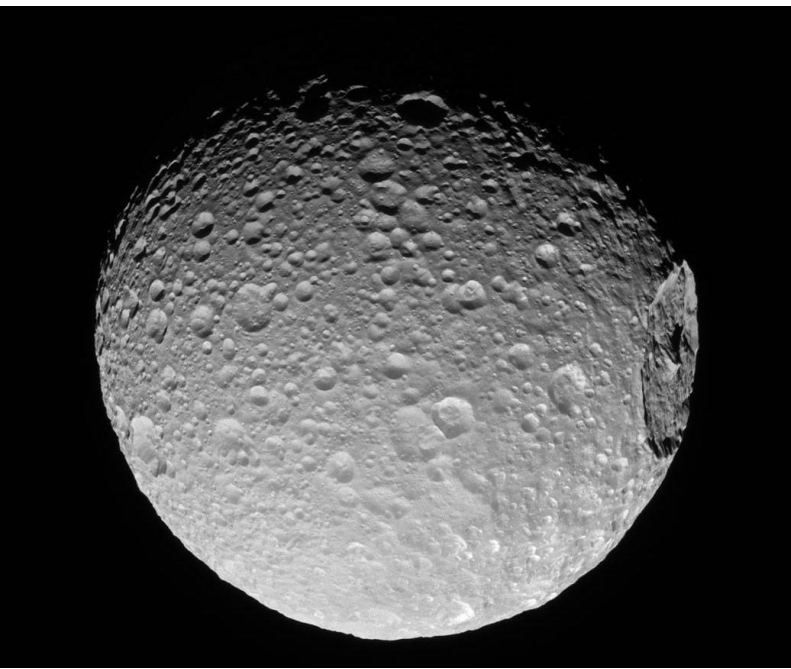
La championne des anneaux

© A. Leroy, 2022









© NASA

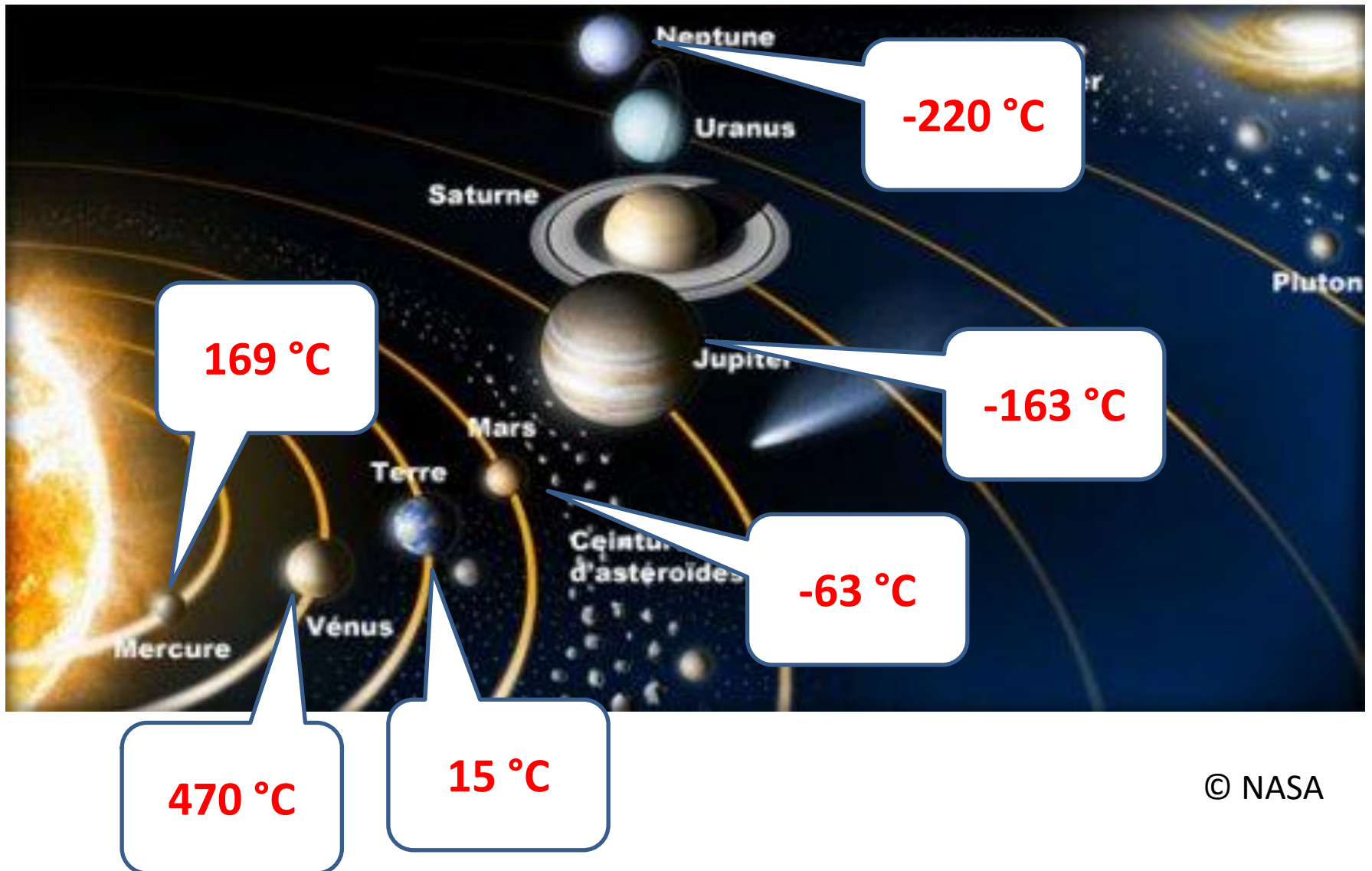


Et finalement, tout ceci n'est qu'une toute petite partie de notre Univers....

Système solaire = le soleil et tout ce qui tourne, gravite, autour.



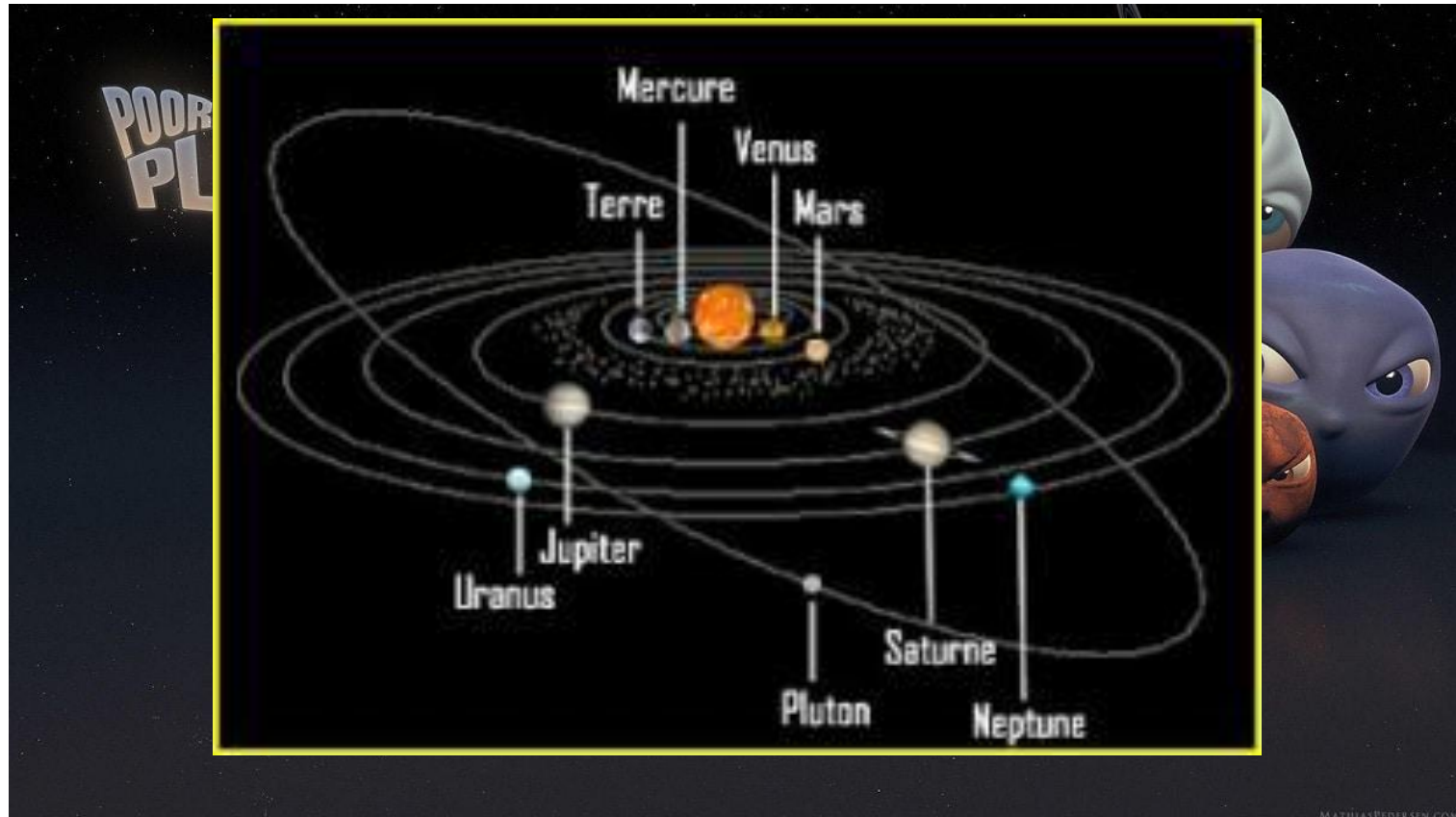
2 grandes familles de planètes





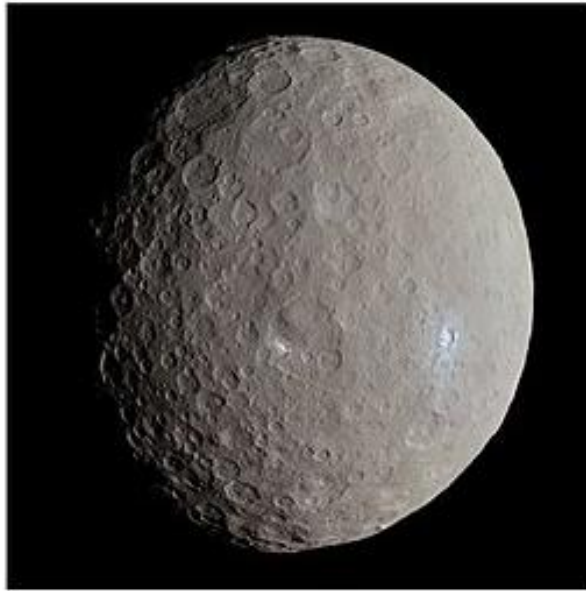
Planète? Corps céleste de forme à peu près sphérique qui tourne autour du Soleil (ou d'une étoile) et ayant éliminé tout corps susceptible de se déplacer sur une orbite proche.

<https://www.publicdomainpictures.net/>

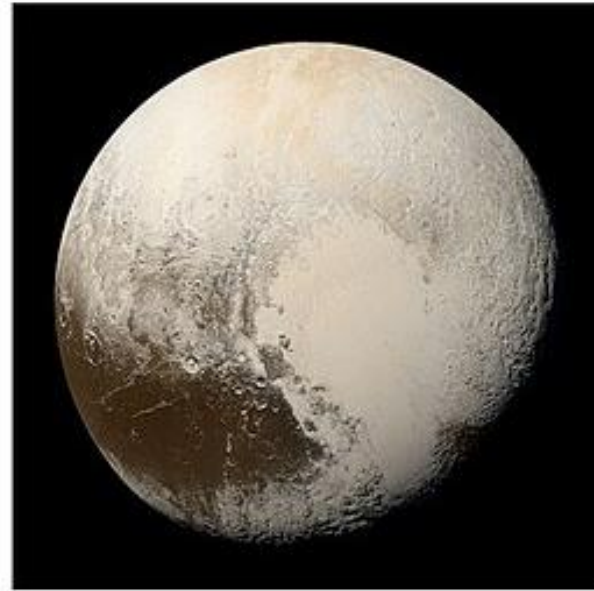


<https://www.meteorologiaenred.com/>

Planètes naines reconnues par l'UAI en 2021



Cérès (1801)



Pluton (1930)



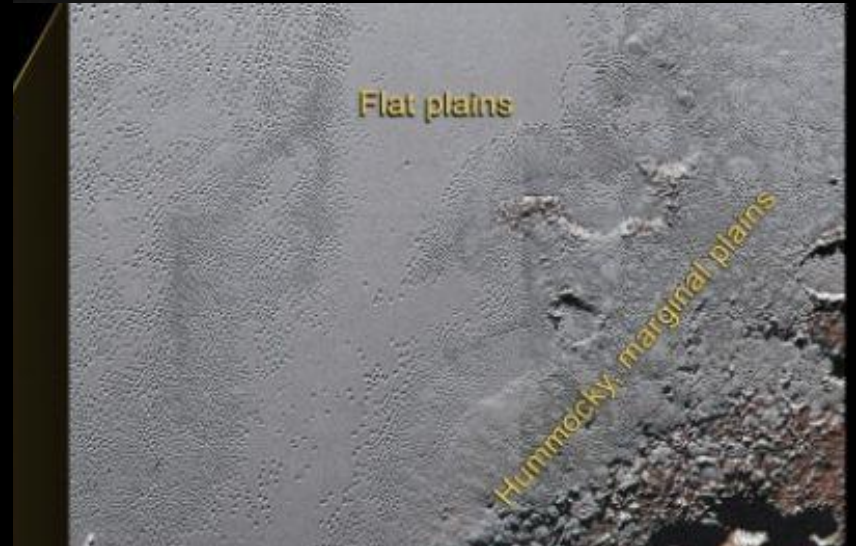
Hauméa (2004)



Éris (2005)

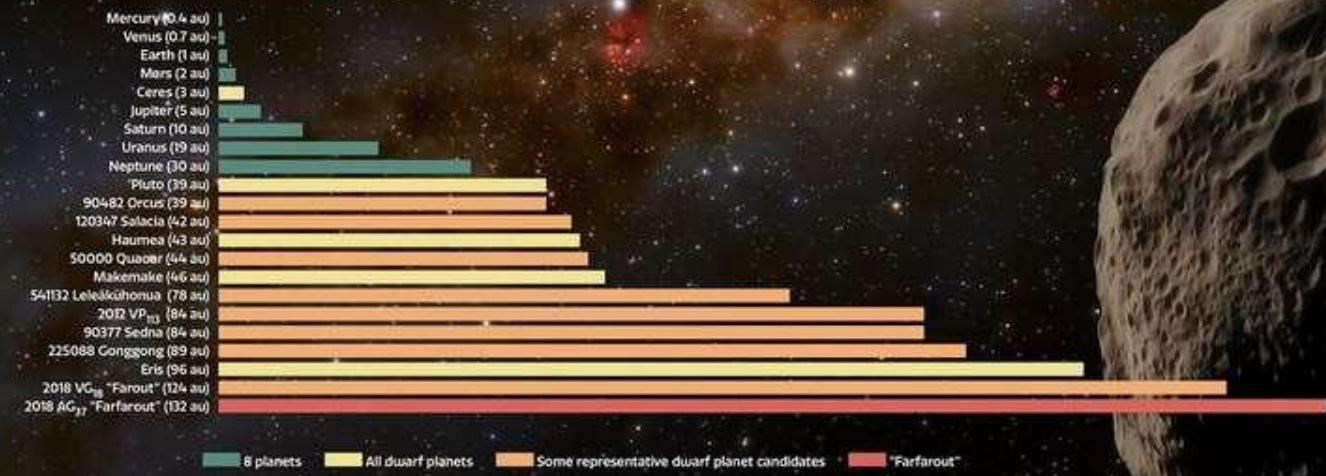


Makémaké (2005)

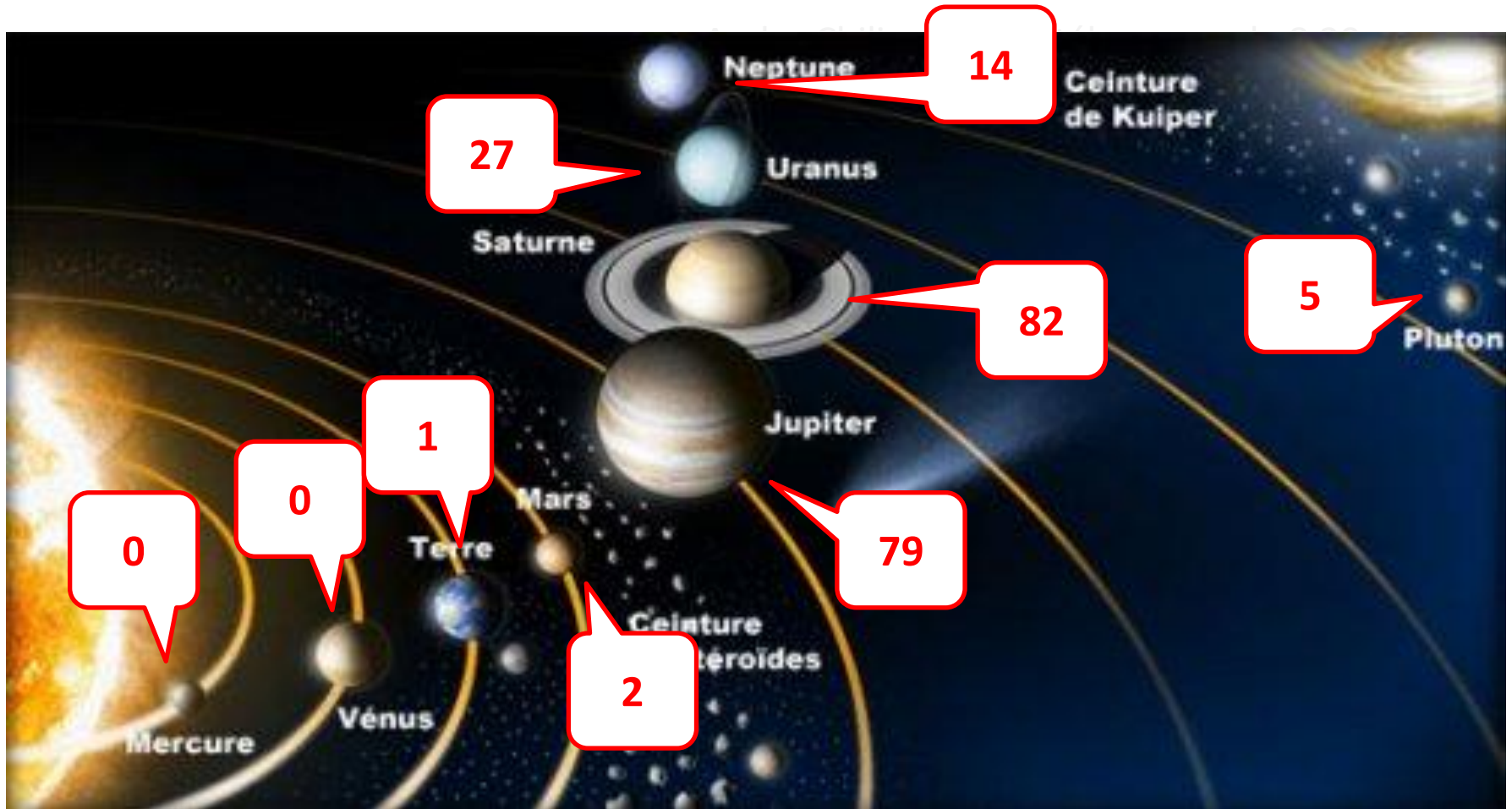


Images de découverte de Farfarout (2018 AG37) prises avec le télescope Subaru les 15 et 16 janvier 2018 (à gauche et à droite respectivement). En comparant les deux photos, on peut voir le déplacement de Farfarout (dont la position est indiquée par les traits bleus) par rapport aux étoiles et galaxies en arrière-plan. © NOIRLab/NSF/AURA, J. da Silva

Most Distant Object in the Solar System



Combien de Lunes??





omparées

aturne

Ura

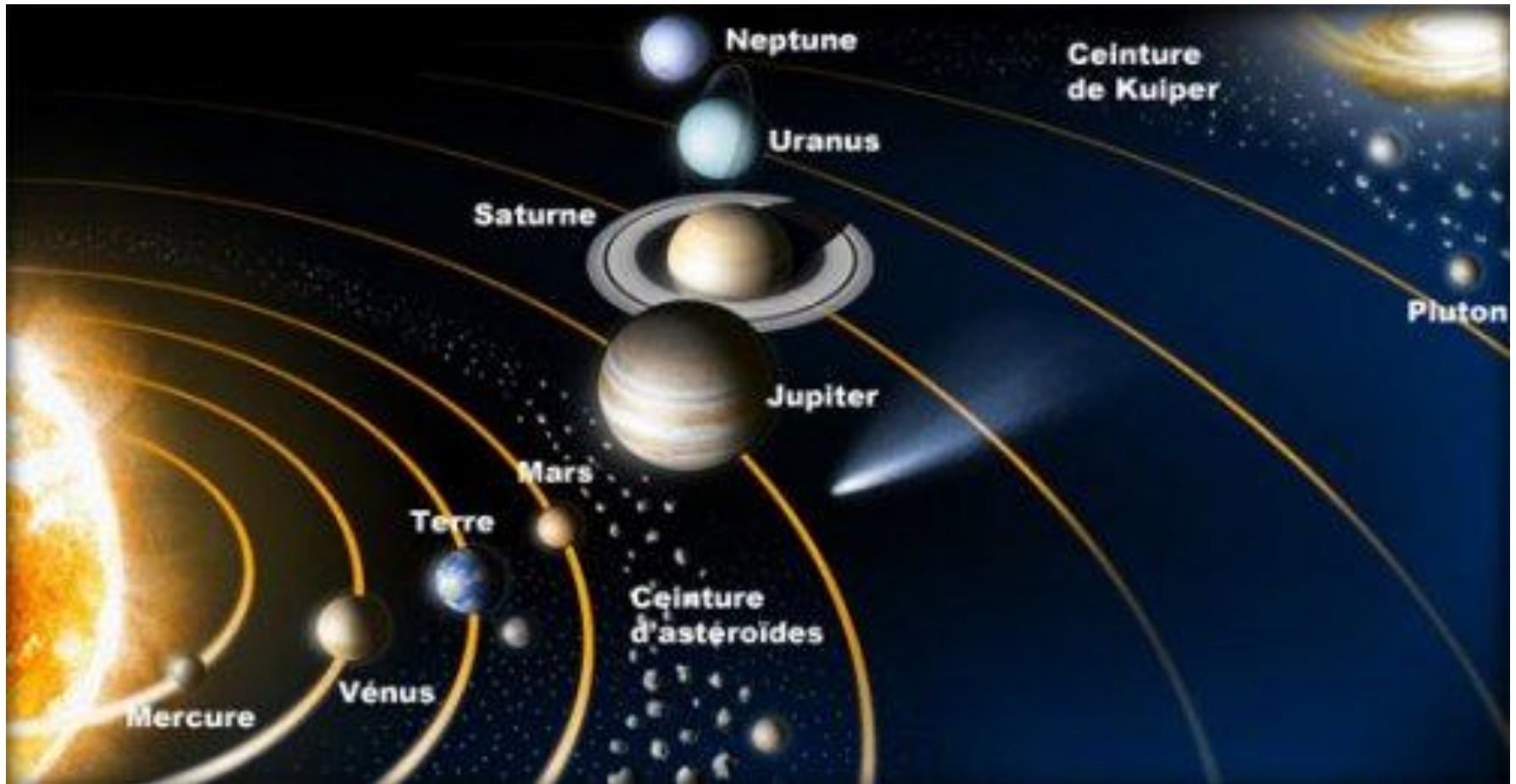
- Mimas
- ncelade
- Téthys
- Dioné
- Rhéal

- P
- Mir
- A
- Um
- Tit



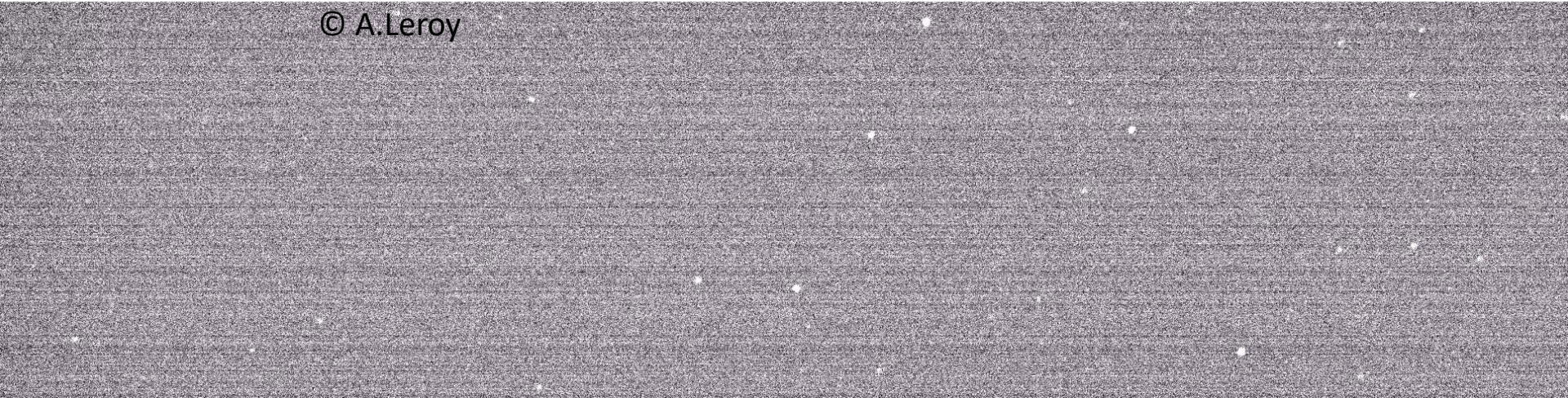
Terre

Et les astéroïdes?

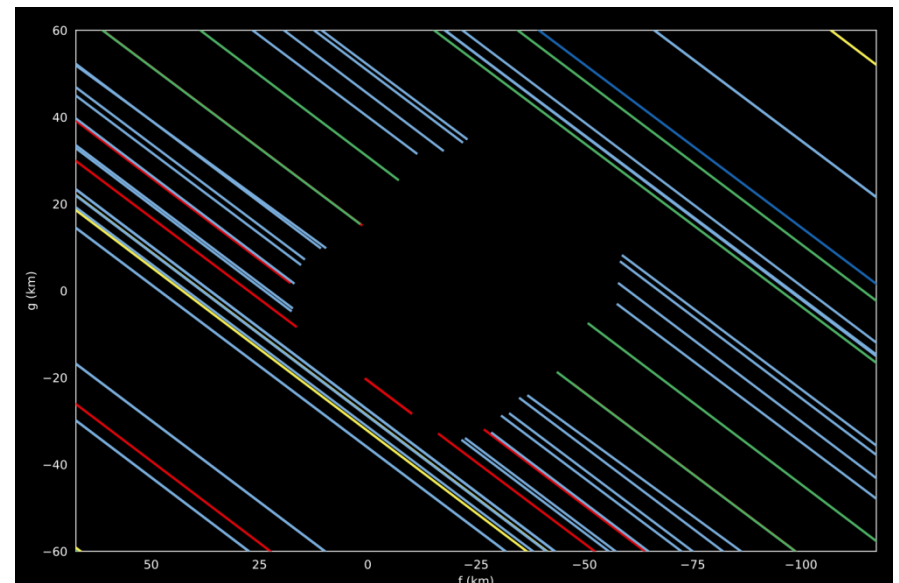


Occultation de Polymèle le 26 août 2022

© A.Leroy



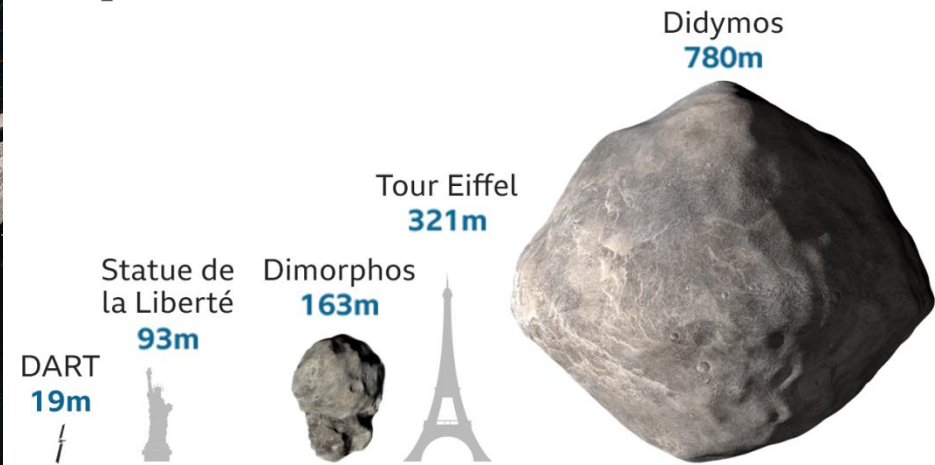
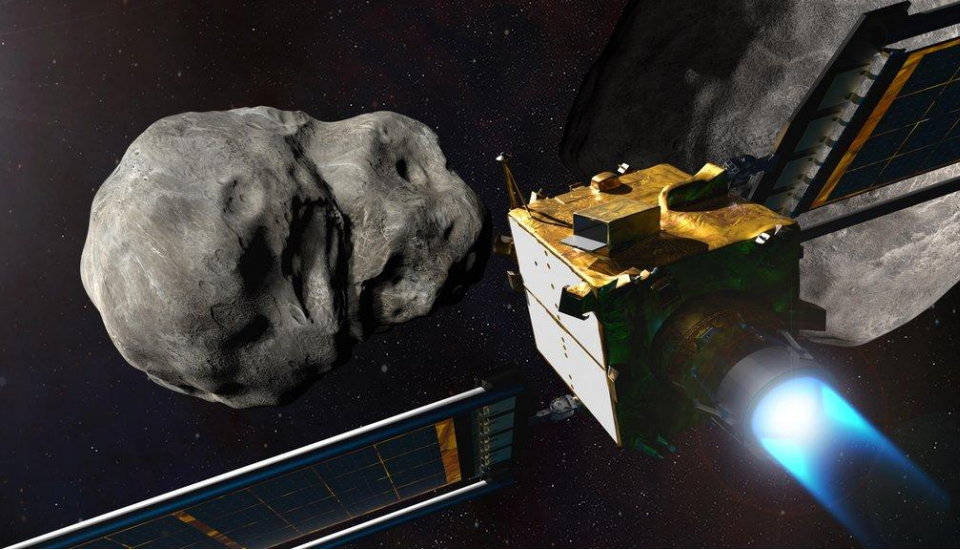
© euraster



Eurybates, 23 octobre 2022

© Lucky Star, J.Desmars

Comparaison avec DART

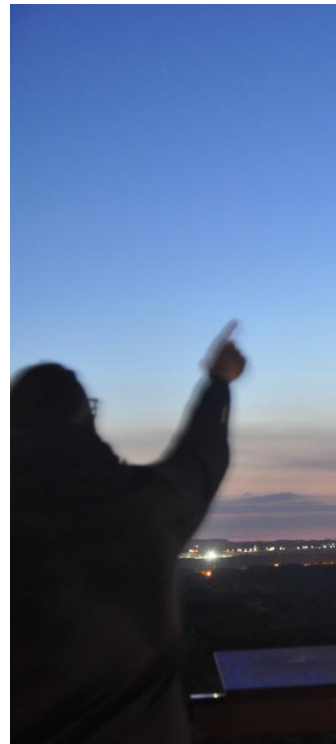
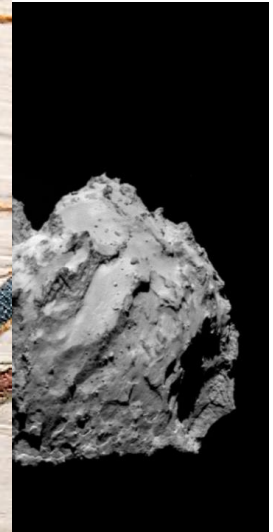


Source : Nasa, Johns Hopkins Applied Physics Laboratory

BBC



Les comètes?



Des notions définies par notre système solaire: le jour et l'année



James O'Donoghue / NASA -- T: @physicsJ IG: jameslikesspace

MERCURY



Your age is

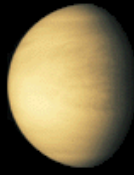
278.2 Mercurian
days

185.3 Mercurian
years

Next Birthday

Tues, Dec 27, 2022

VENUS



Your age is

67.1 Venusian
days

72.5 Venusian
years

Next Birthday

Mon, Feb 6, 2023

EARTH



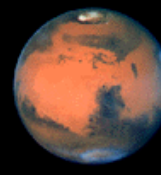
Your age is

16307.9 Earth days
44.6 Earth years

Next Birthday

Sat, Mar 11, 2023

MARS



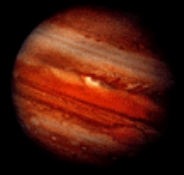
Your age is

15832.9 Martian days
23.7 Martian
years

Next Birthday

Mon, May 1, 2023

JUPITER



Your age is

39775.3 Jovian days
3.76 Jovian
years

Next Birthday

Thur, Aug 21, 2025

SATURN



Your age is

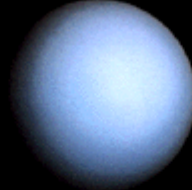
36239.7 Saturnian
days

1.51 Saturnian
years

Next Birthday

Sat, Feb 7, 2037

URANUS



Your age is

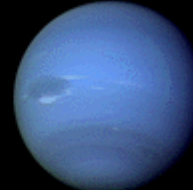
22649.8 Uranian
days

0.53 Uranian
years

Next Birthday

Wed, Mar 15, 2062

NEPTUNE



Your age is

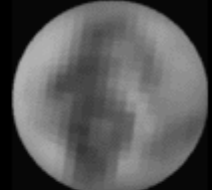
24340.1 Neptunian
days

0.27 Neptunian
years

Next Birthday

Wed, Dec 26, 2142

PLUTO



Your age is

2552 Plutonian
days

0.179 Plutonian
years

Next Birthday

Tues, Oct 17, 2226

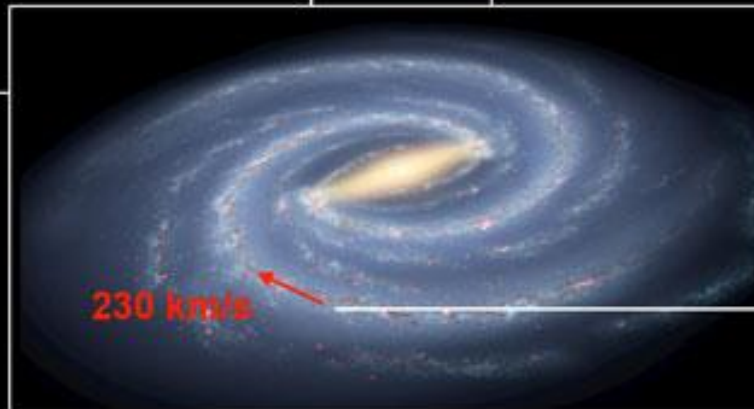
Et c'est gros le système solaire dans l'Univers?



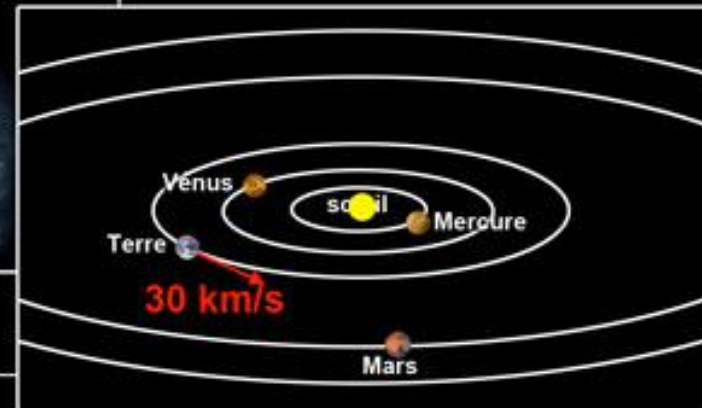
Le Groupe local



superamas d'Hydra-Centaurus

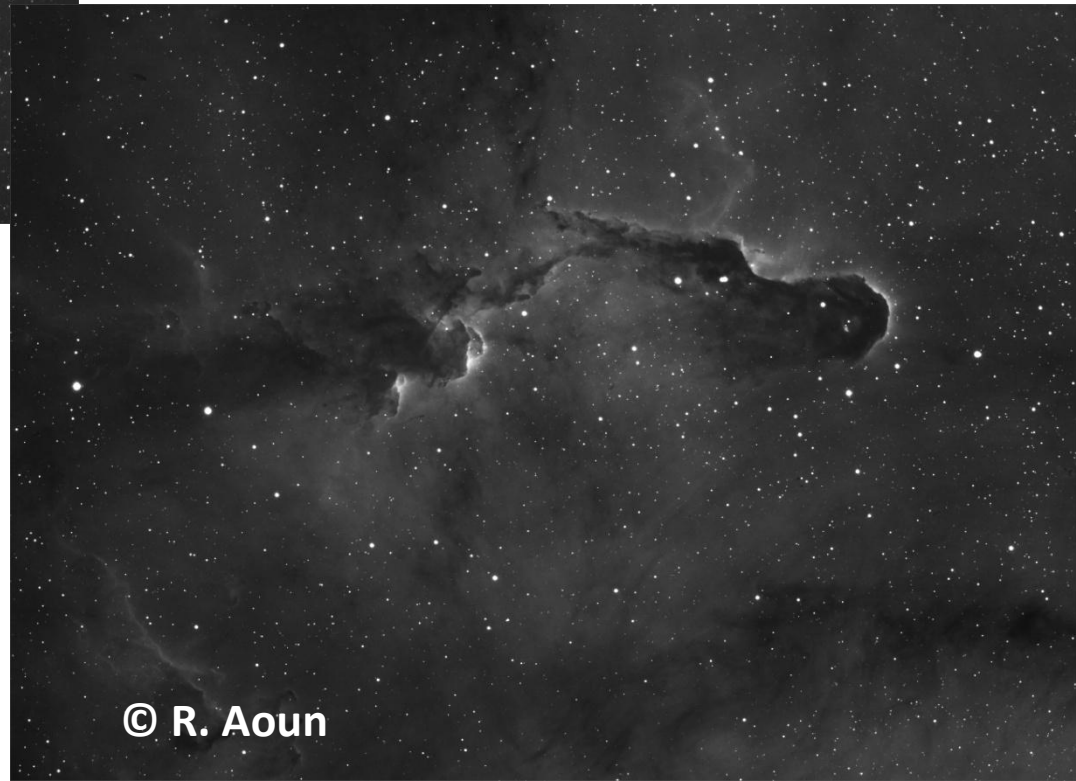
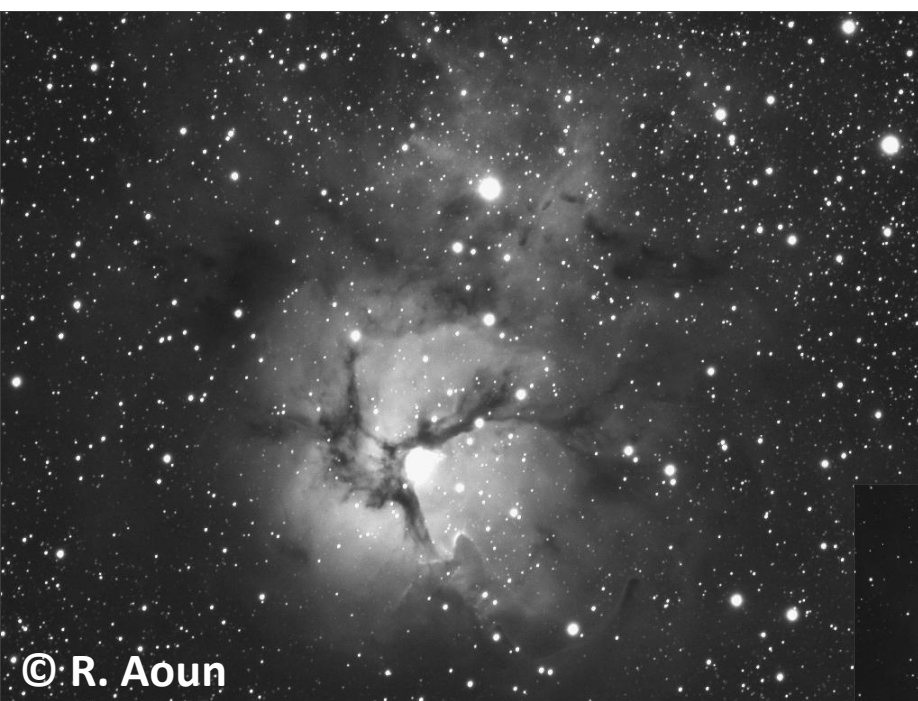


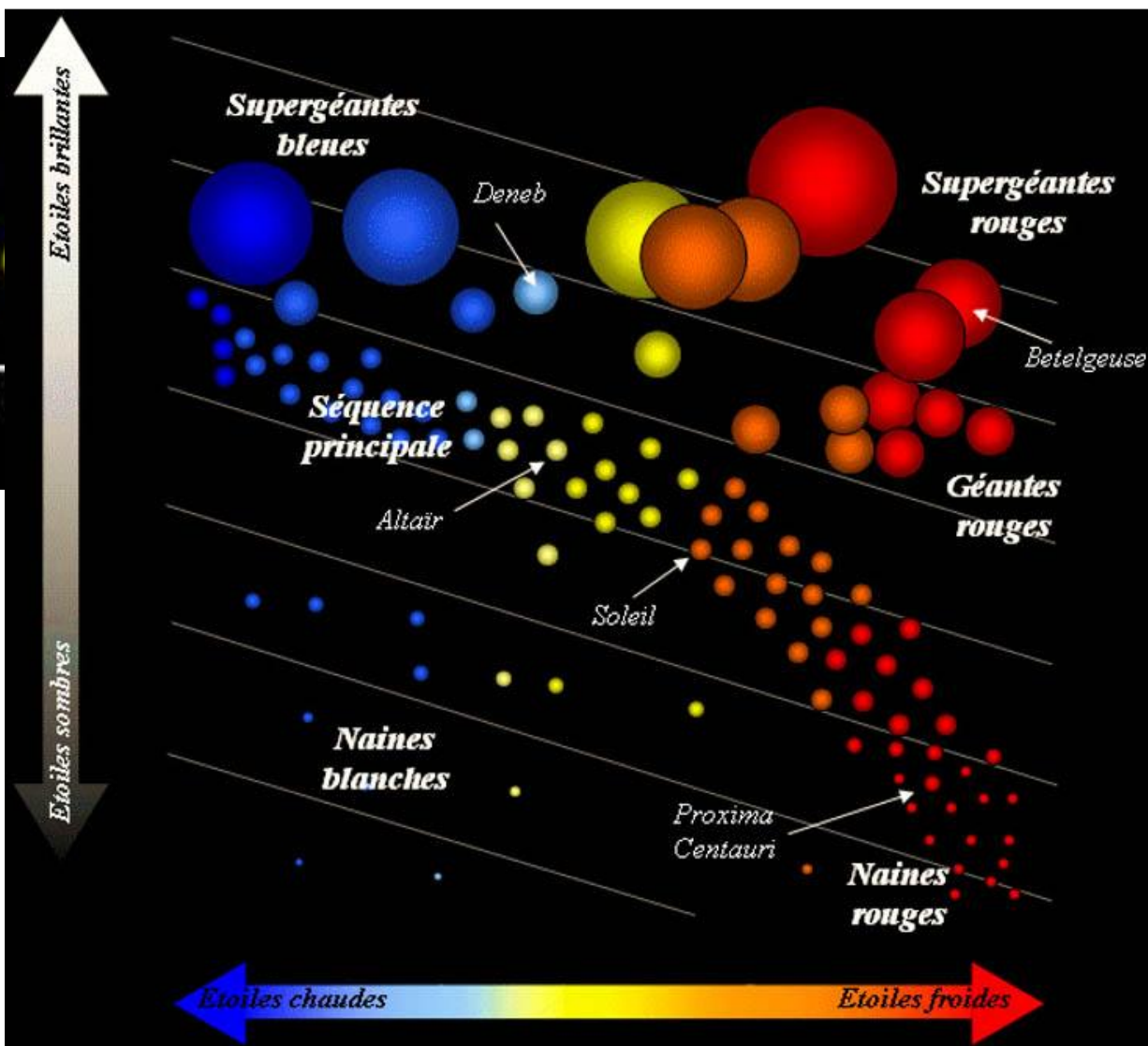
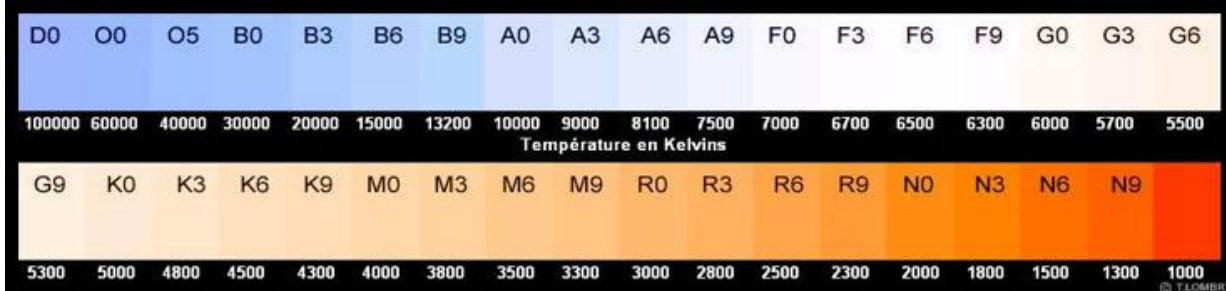
La Galaxie

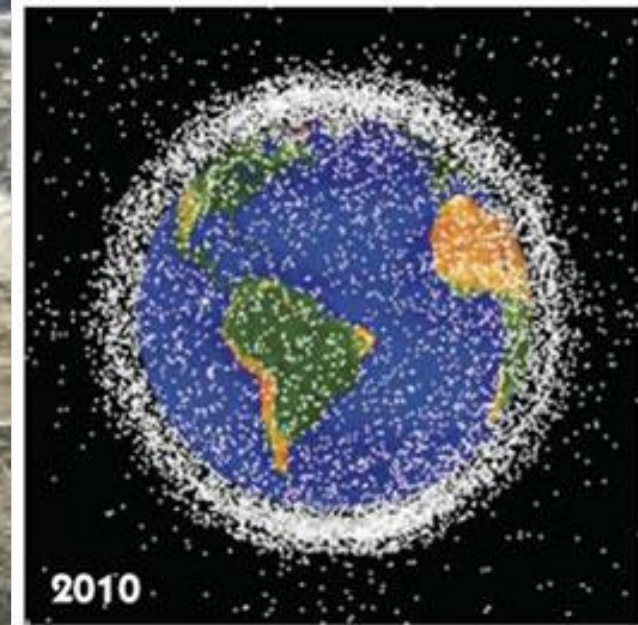


Le système solaire

Et il est né comment le système solaire?







Merci pour votre attention ...

... en attendant les prochaines nouvelles du système solaire

