SETI and Habitable Worlds Observatory (HWO)

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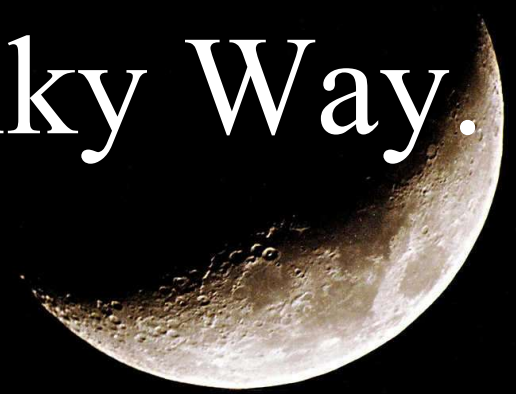
ONLINE PRESENTATION

Friday, July 11th, 2025, at 9:55 h – 10:05 h

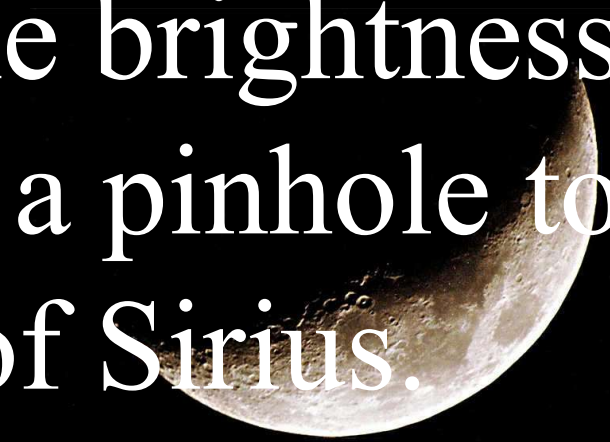
1610

Galileo discovers
the true nature of the Milky Way:
a huge collection of STARS.
As of 2025, we know some 400
billion stars are in the Milky Way.



1698

Christiaan Huygens estimates the distance to Sirius as 27,664 times the Earth-Sun distance, or approximately 0.44 light-years. This was based on comparing the brightness of the Sun's image through a pinhole to the apparent brightness of Sirius.

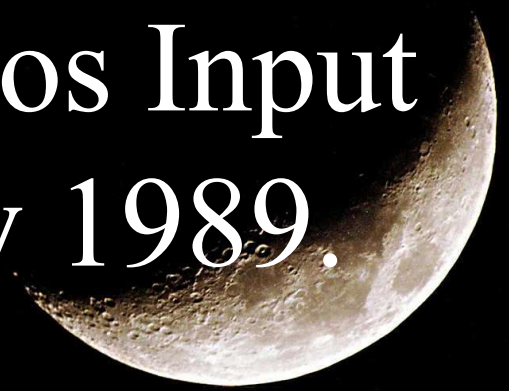


1838

Friedrich Bessel was the first astronomer to successfully measure the distance to a star other than our Sun, using the parallax method. In 1838, he published his findings on the distance to the star 61 Cygni, which he determined to be approximately 10.3 light-years away.

1838 – 1989

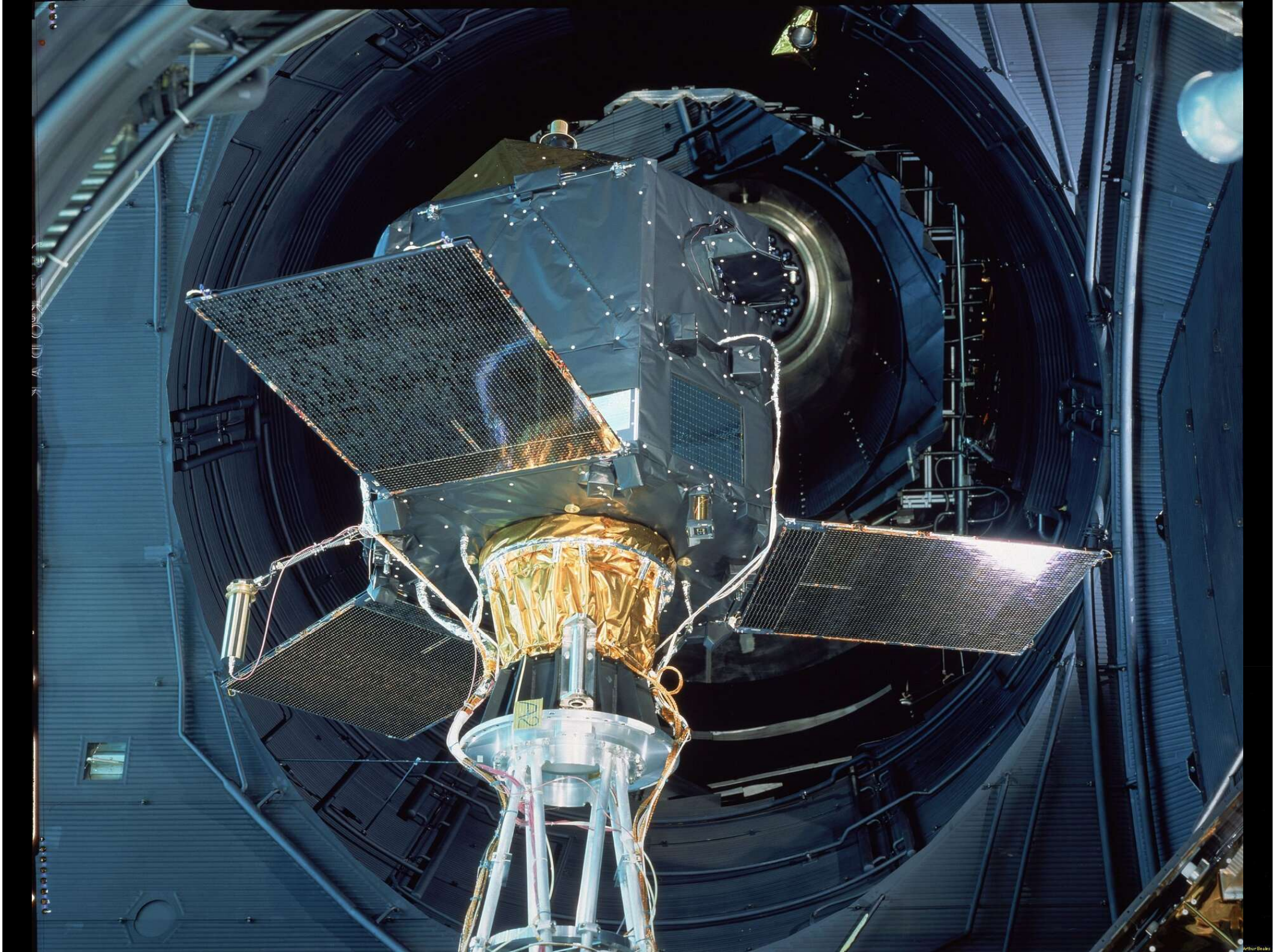
Many more PARALLAXES of nerby stars are determined by astronomers. However, that is a matter of luck since you don't know which stars are close. The results are the Hipparcos Input Catalogue (HIO) ready by 1989.



HIPPARCOS

astrometric space mission by ESA: 1989-2000

Hipparcos catalogue of high-precision measurements of 118,218 stars and the Tycho catalogue with measurements, with less precision, of more than 1 million stars, was produced.



GAIA

astrometric space mission by ESA: 2013-2025

Gaia catalogue of high-precision measurements of over 2 billion stars.

Please see the website:

https://en.wikipedia.org/wiki/Gaia_(spacecraft)

esa

gaia

Crescent Moon (http://www.aoca.org.au)

1959

SETI

(Search for Extra-Terrestrial Intelligence) is started by Giuseppe Cocconi and Phil Morrison).

SETI is the radio astronomical search for signals reaching us from Alien Civilizations in the Milky Way.

NONE was found as of 2025.

FUTURE TASKS:
Years 2025 through 2030:

Reviewing the Gaia Catalogues and tuning them up for SETI research.

Leading Persons involved:

1) Mario G. Lattanzi at INAF in Turin.
2) The U.C. Berkeley SETI group,

Years 2035 through 2040:

Collaboration by NASA-ESA-SETI preparing for launch of the Habitable Worlds Observatory (HWO).

In the meantime, SETI progress will have achieved new technologies by virtue of SKA (Square Kilometer Array in both South Africa and Western Australia).

Thank you.


Crescent Moon (http://www.assa.org.au)
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