

The image shows the Hubble Space Telescope in orbit above Earth. The telescope is a large, cylindrical structure with two large solar panel arrays extending from its sides. It is positioned diagonally across the frame, pointing towards the upper right. The Earth's surface is visible below, showing a mix of blue oceans, white clouds, and brownish-green landmasses. The horizon of the Earth is a bright, glowing line. The background is the deep black of space. The text 'HUBBLE' is written in large, white, bold, sans-serif capital letters across the middle of the telescope. Below it, the text 'MAIS DE DUAS DÉCADAS DE DESCOBERTAS' is written in smaller, white, bold, sans-serif capital letters, arranged in three lines.

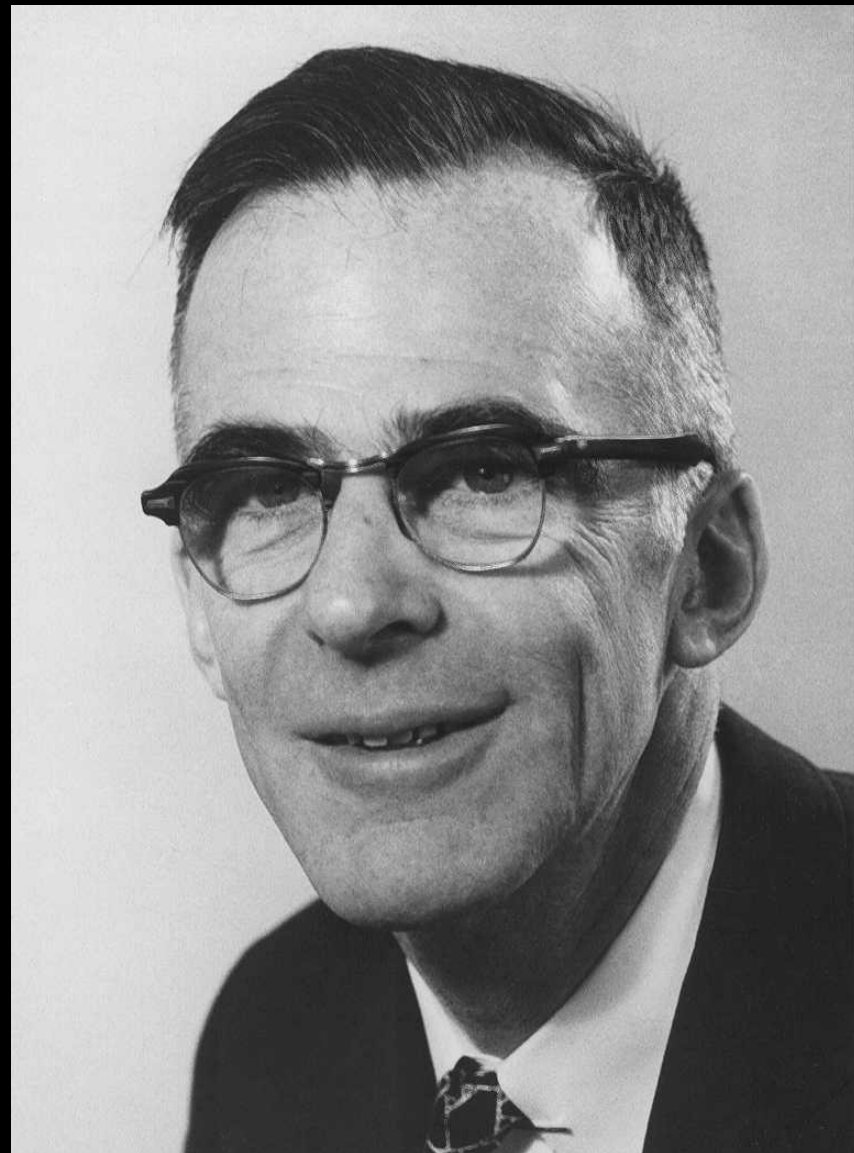
HUBBLE

MAIS DE DUAS
DÉCADAS DE
DESCOBERTAS

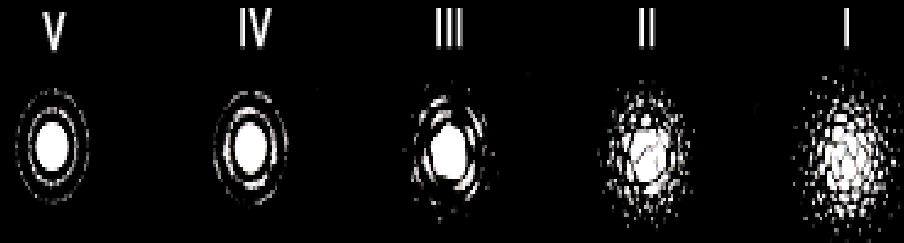
1923, HERMANN OBERTH



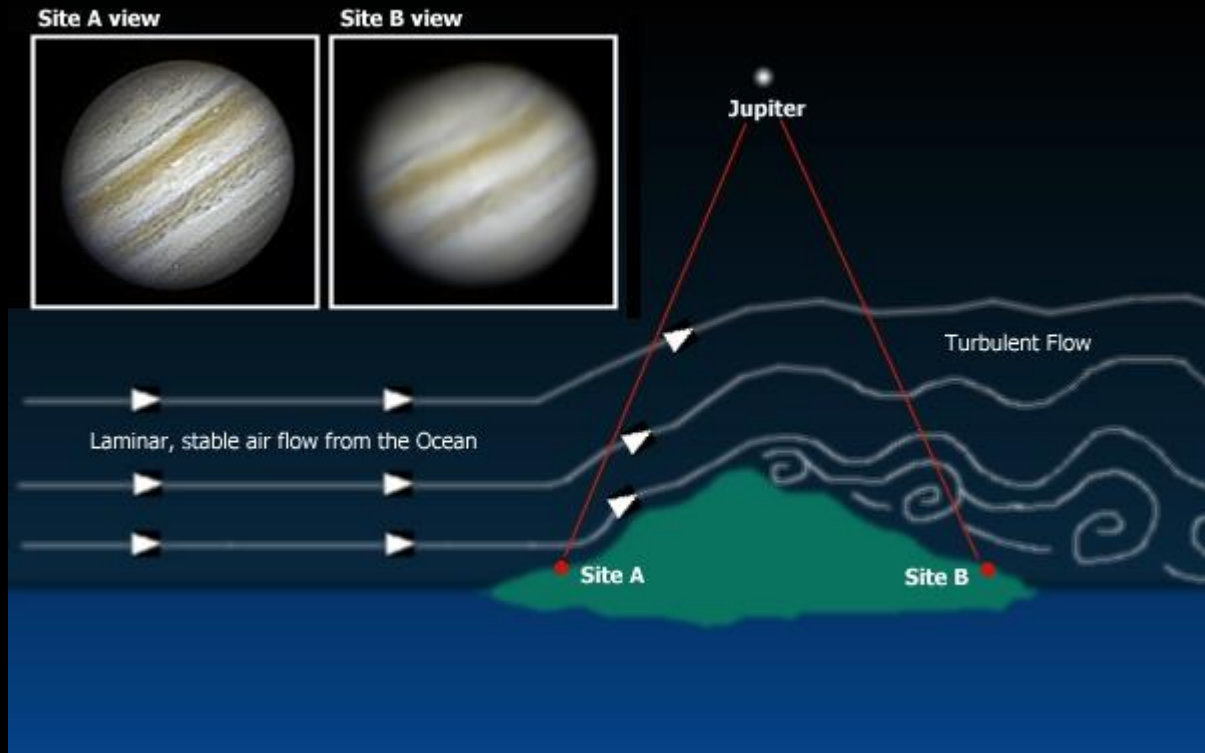
1946, LYMAN SPITZER



RESOLUÇÃO ANGULAR



The Danjon scale for atmospheric turbulence.



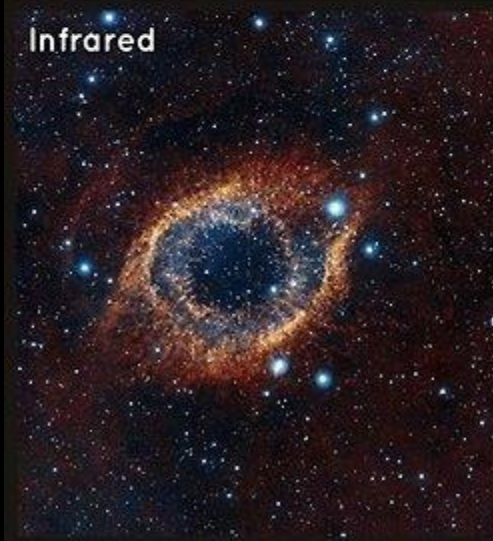
COMPARAÇÃO OBSERVANDO A NGC 1300



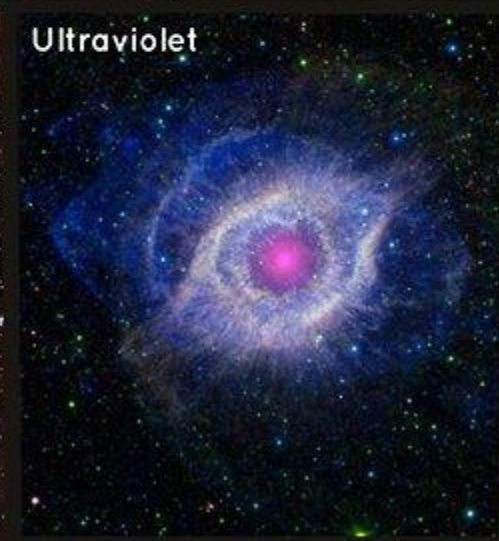
Optical Light

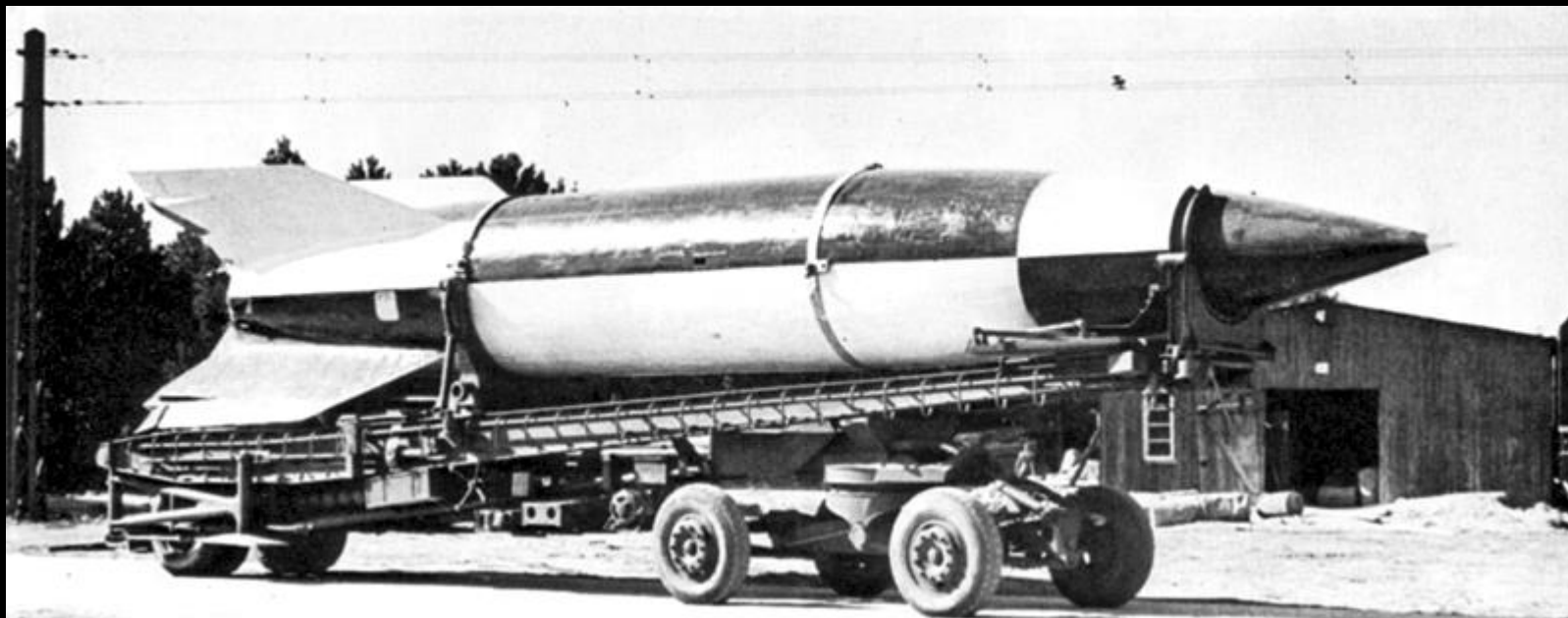


Infrared

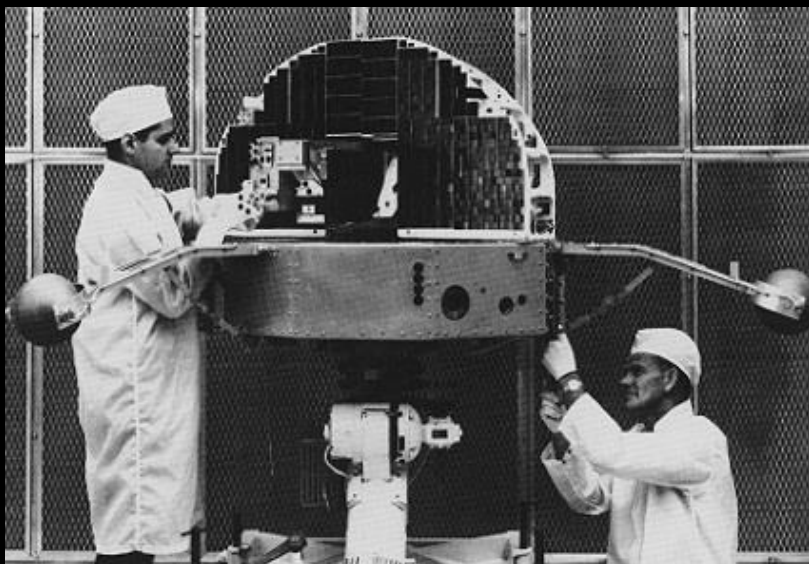


Ultraviolet





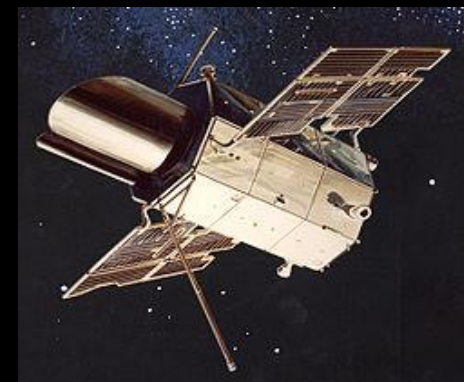
FOGUETE V-2, II GUERRA MUNDIAL



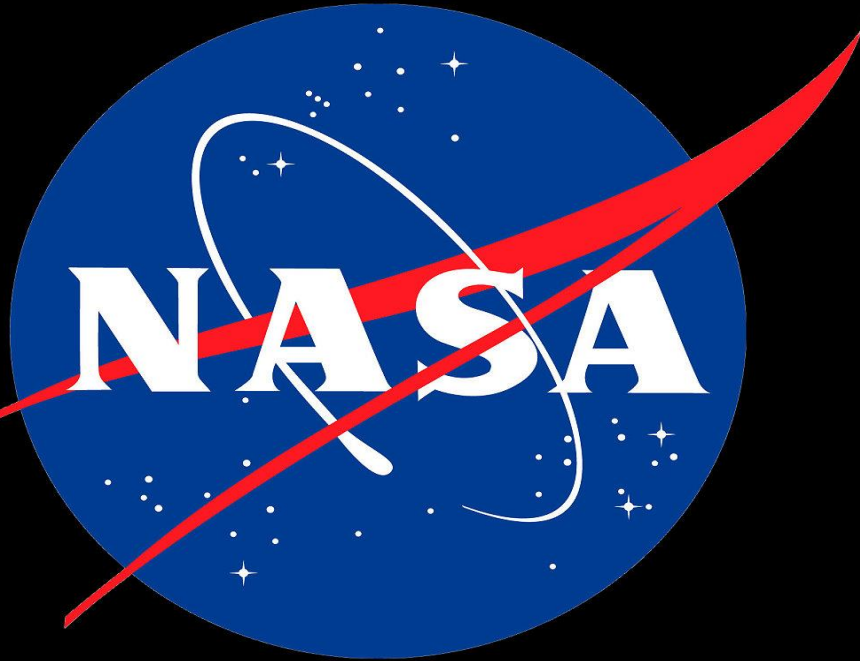
1962, ORBITING SOLAR OBSERVATORY (OSO)



**1962, ARIEL
SPACE PROGRAM**



**1966-1968, ORBITING
ASTRONOMICAL
OBSERVATORY (OAO)**



EDWIN HUBBLE

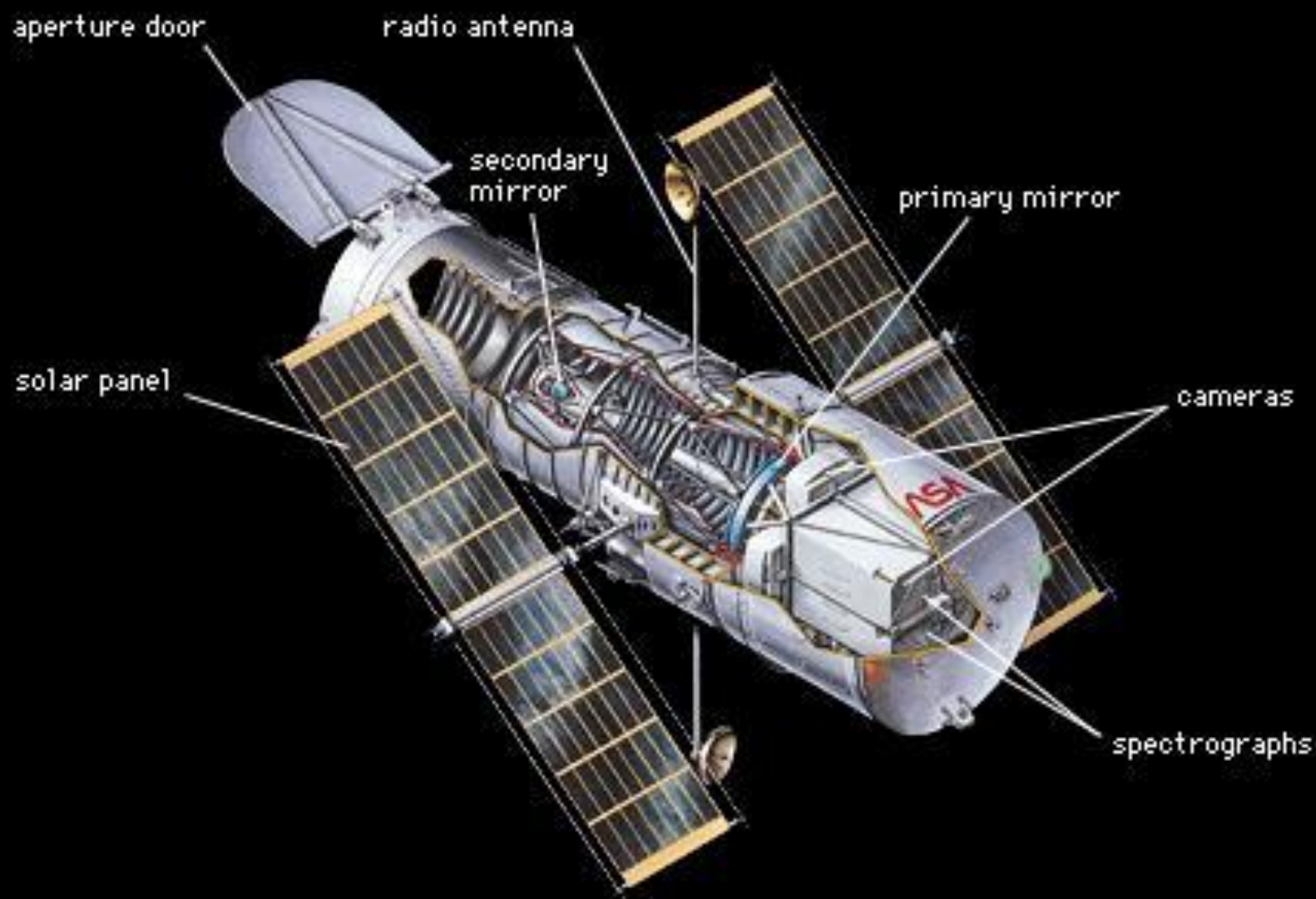


MONTAGEM



ASPECTOS TÉCNICOS







CHALLENGER- 28 DE JANEIRO, 1986

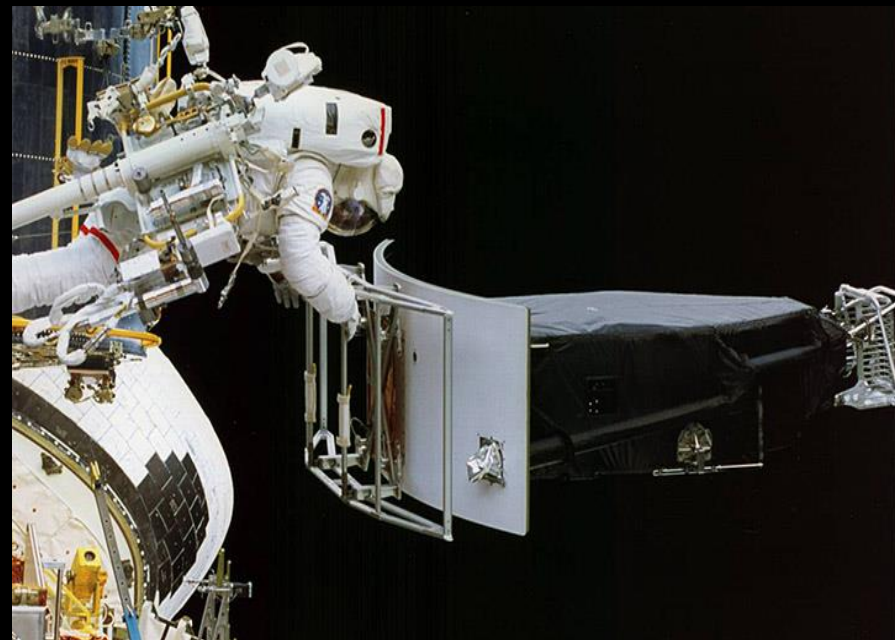
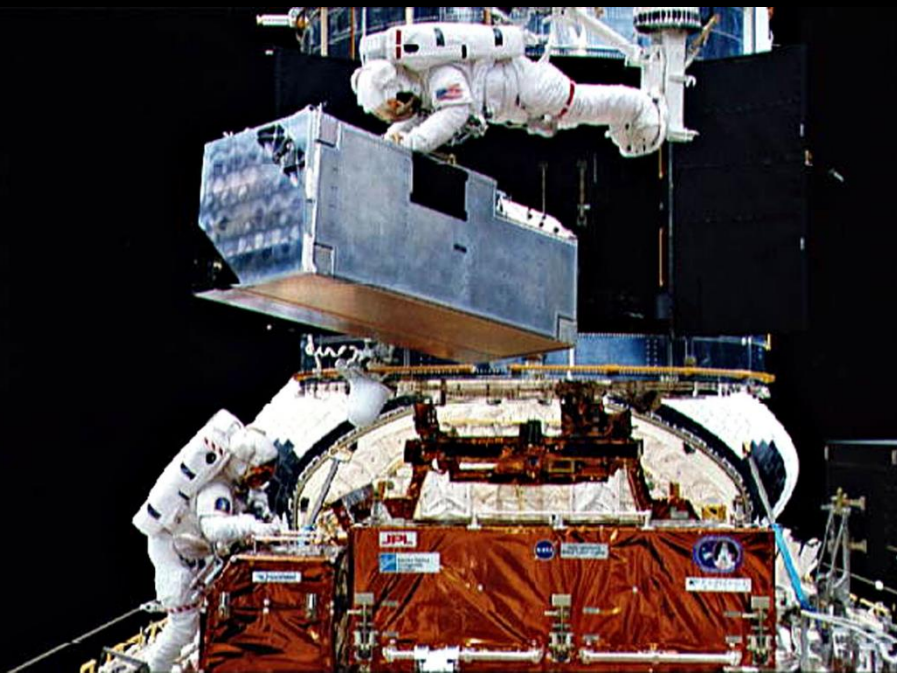
24/04/1990-SPACE SHUTTLE DISCOVERY

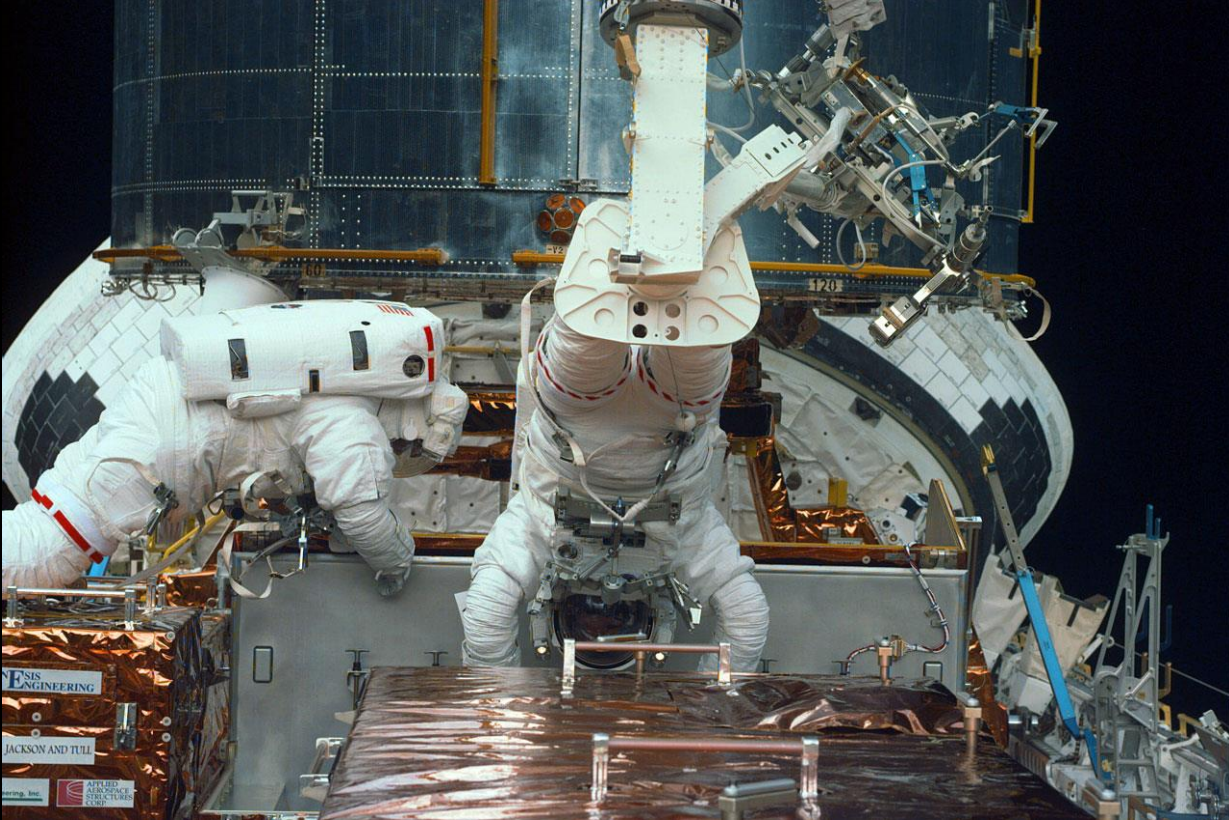


M100 ANTES E DEPOIS

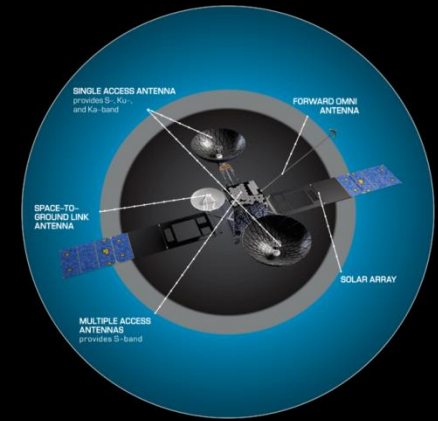


MANUTENÇÃO E MELHORIAS

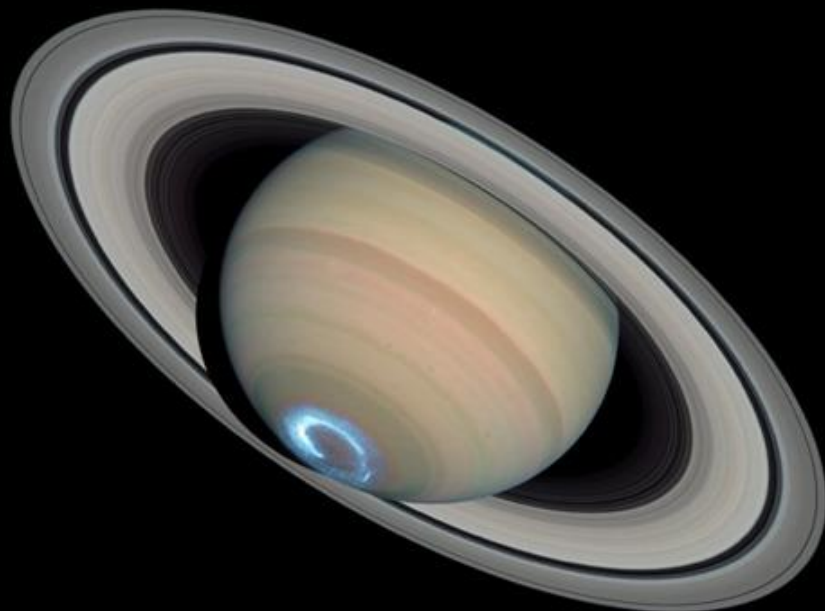




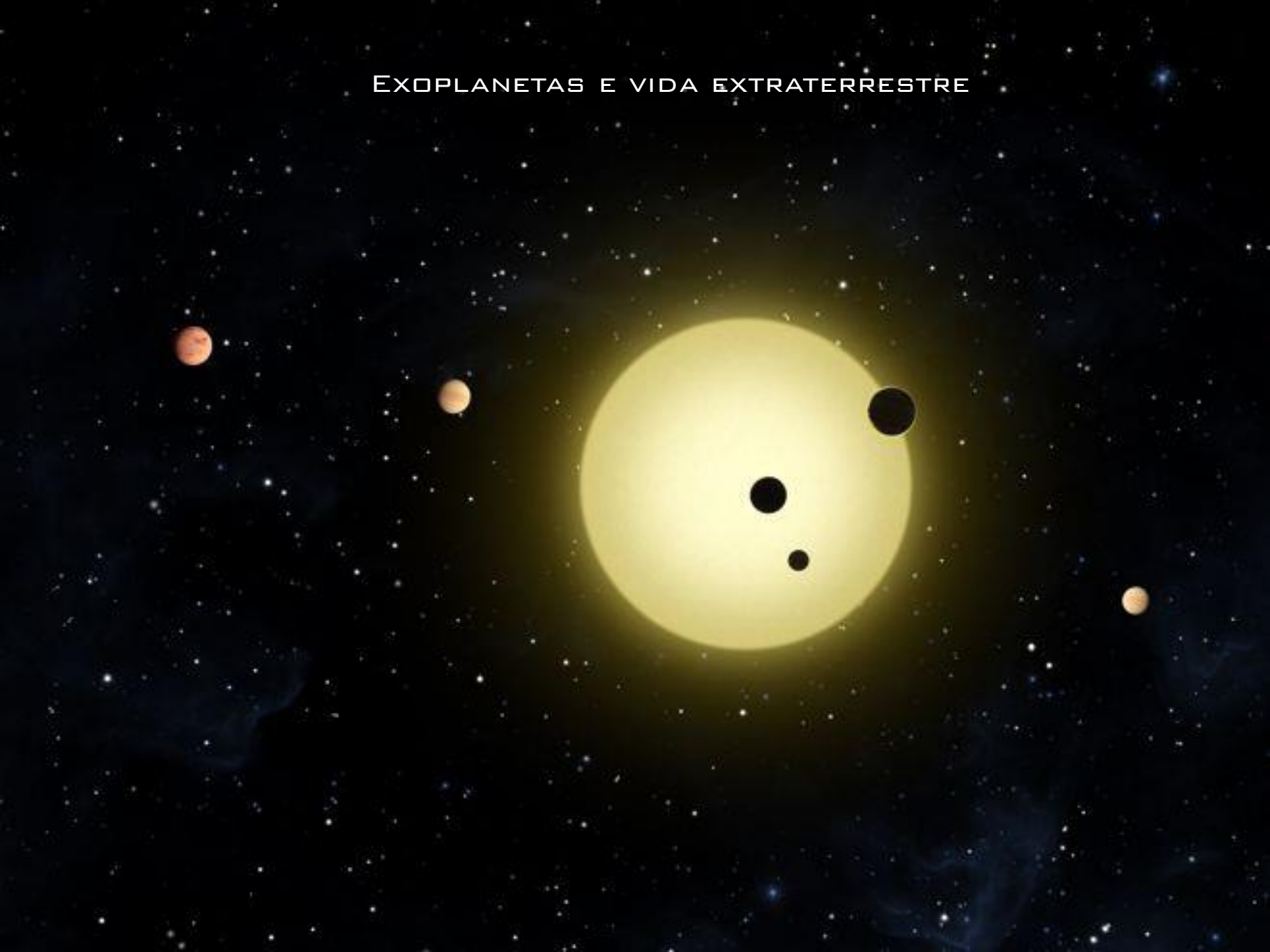
SUPOORTE EM TERRA



DETALHES NO NOSSO SISTEMA SOLAR



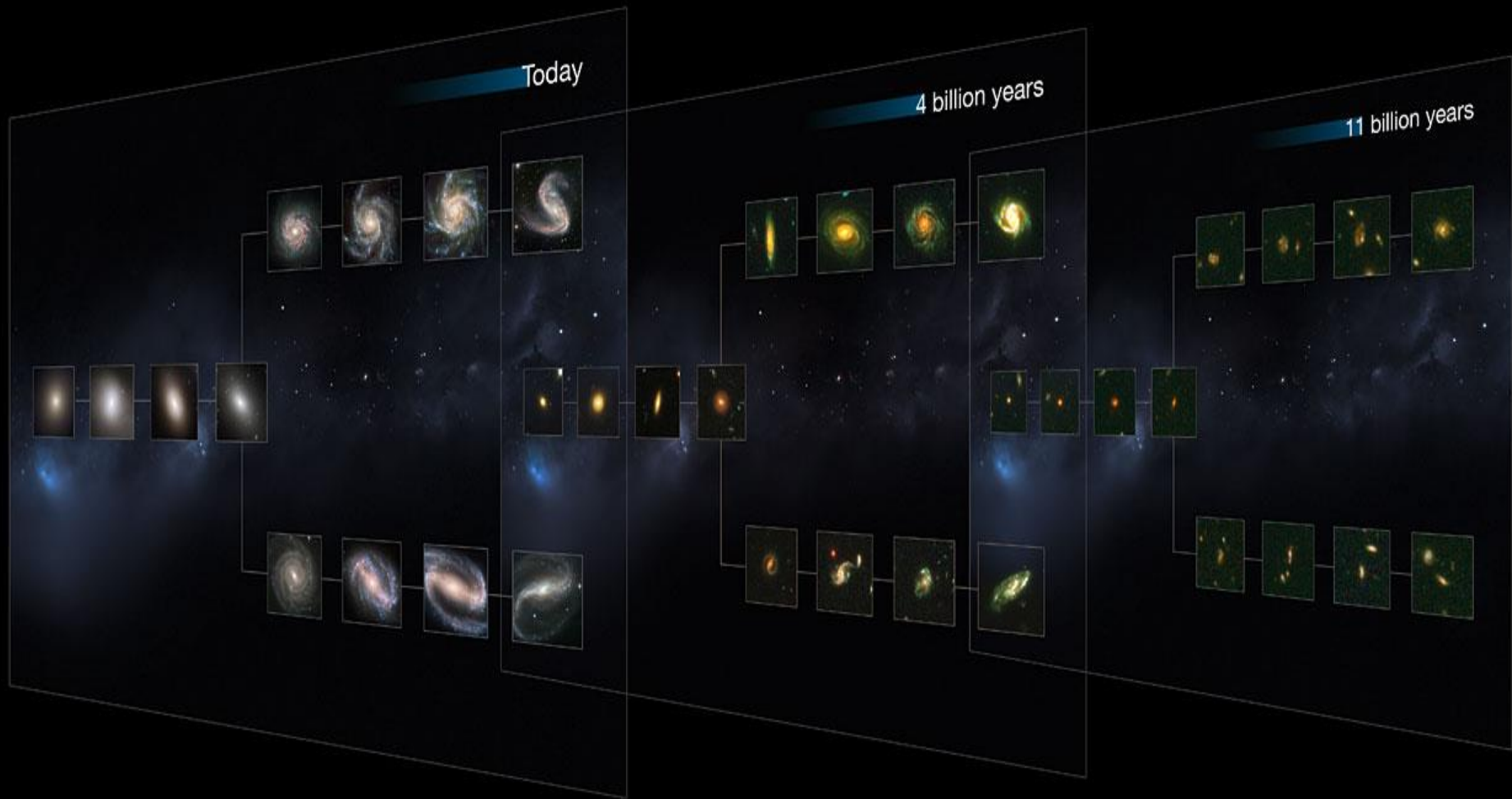
EXOPLANETAS E VIDA EXTRATERRESTRE



HUBBLE DEEP/ULTRA-DEEP/EXTREME DEEP FIELDS



CANDELS (COSMIC ASSEMBLY NEAR-INFRARED DEEP EXTRAGALACTIC LEGACY SURVEY)



Hubble Probes the Early Universe



1990

Ground-based observatories



1995

Hubble Deep Field



2004

Hubble Ultra Deep Field



2010

Hubble Ultra Deep Field-IR



FUTURE

James Webb Space Telescope



Redshift (z):

**Time after
the Big Bang**

Present

1

6
billion
years

4

1.5
billion
years

5

6

7

800
million
years

8

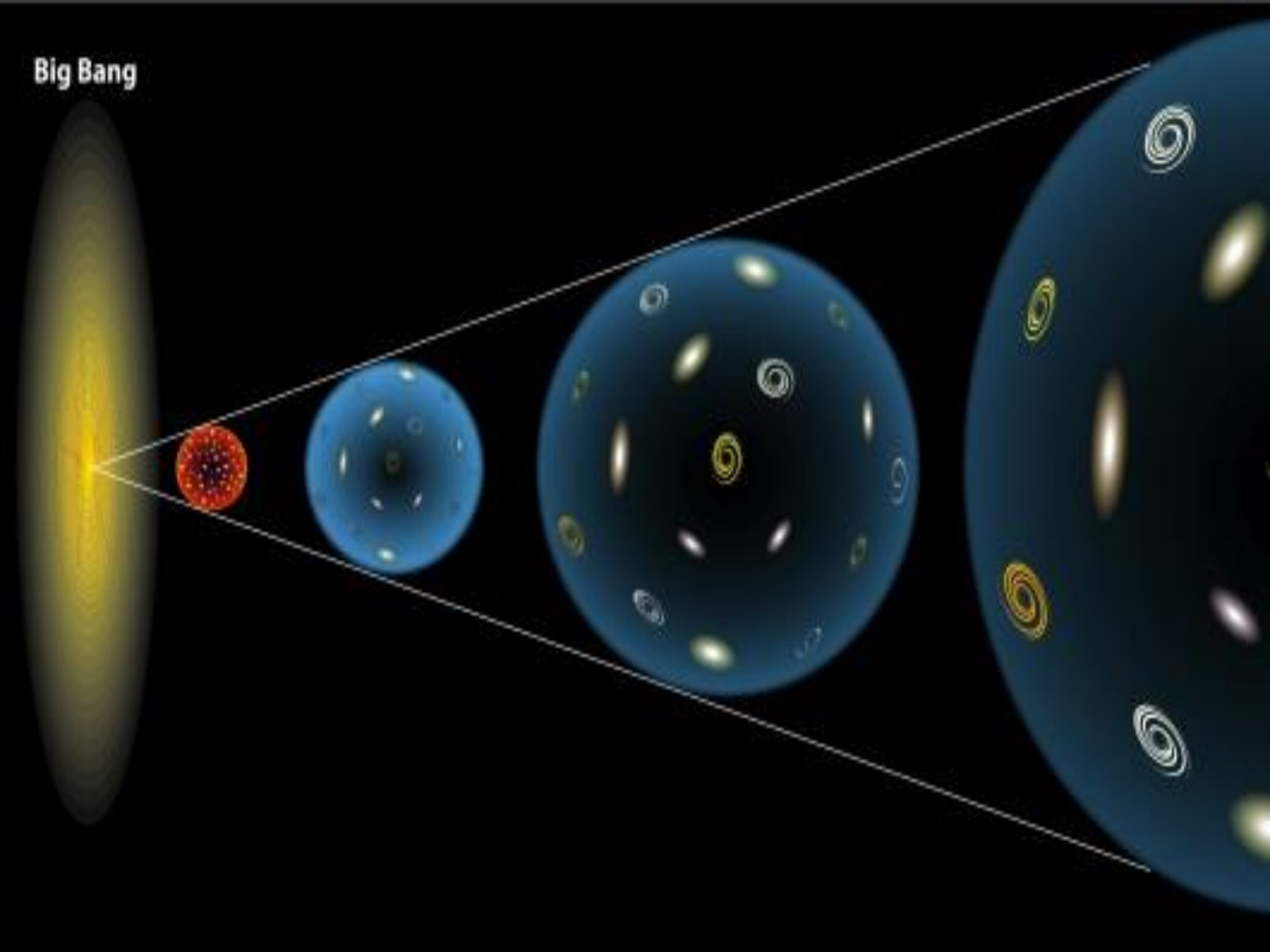
10

480
million
years

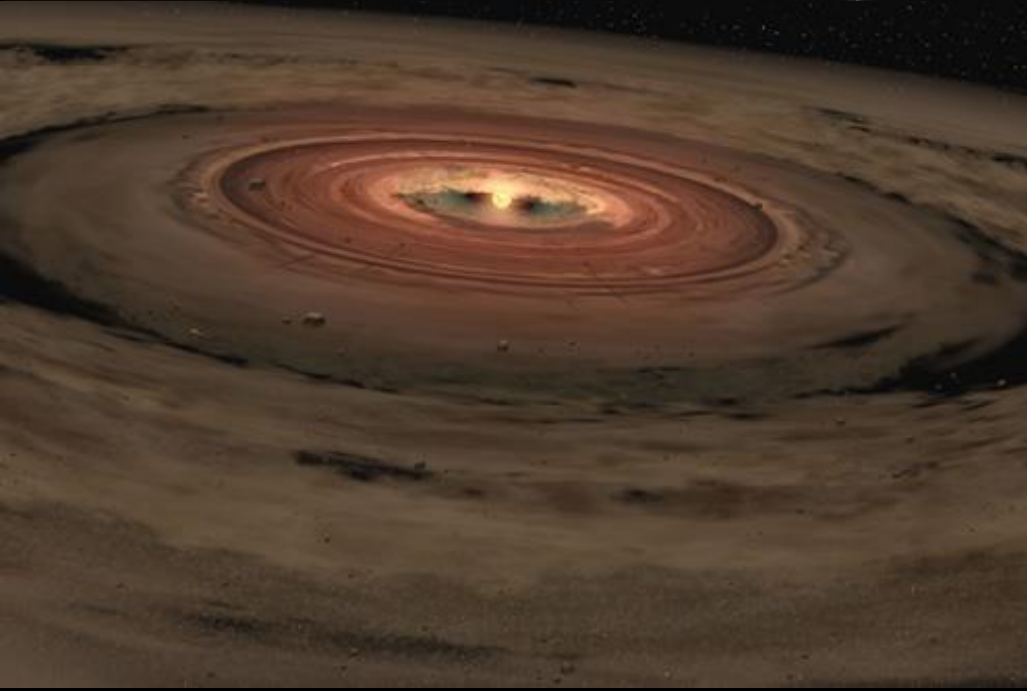
>20

200
million
years

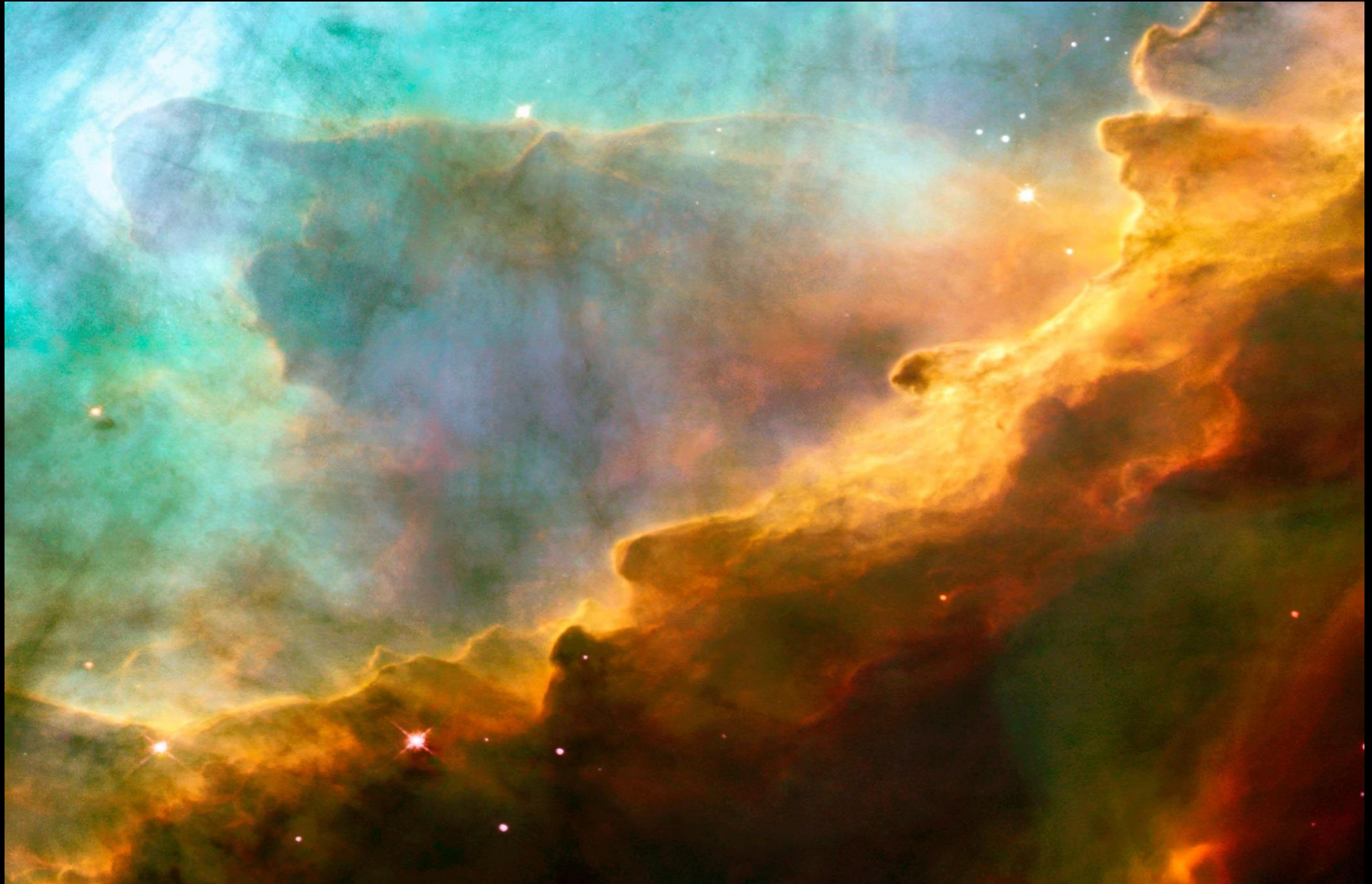
Big Bang



FORMAÇÃO DE NOVOS SISTEMAS
PLANETÁRIOS



CONSTITUIÇÃO DO UNIVERSO



NASCIMENTO E MORTE DE
ESTRELAS

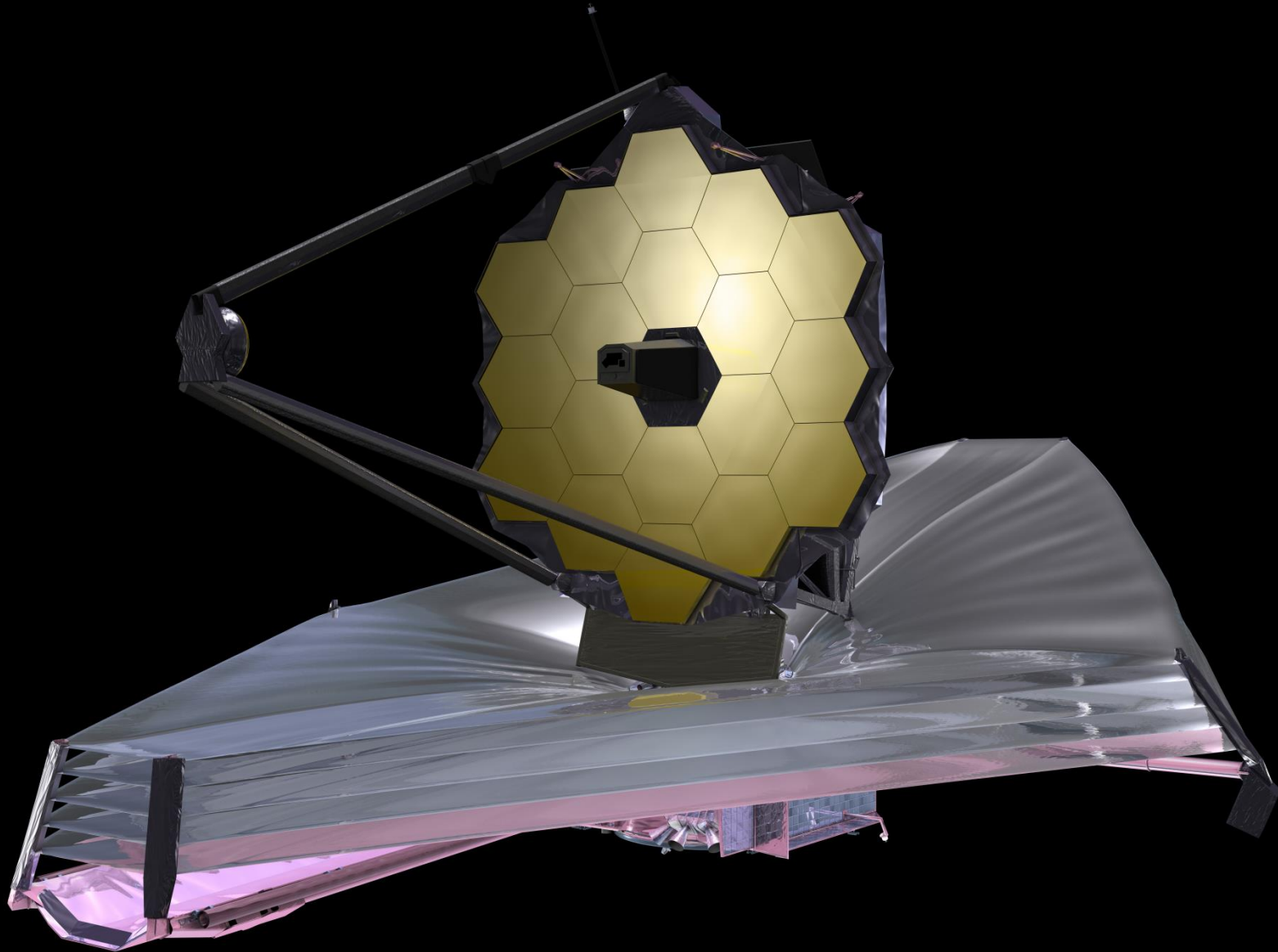


CHOQUES GALÁCTICOS



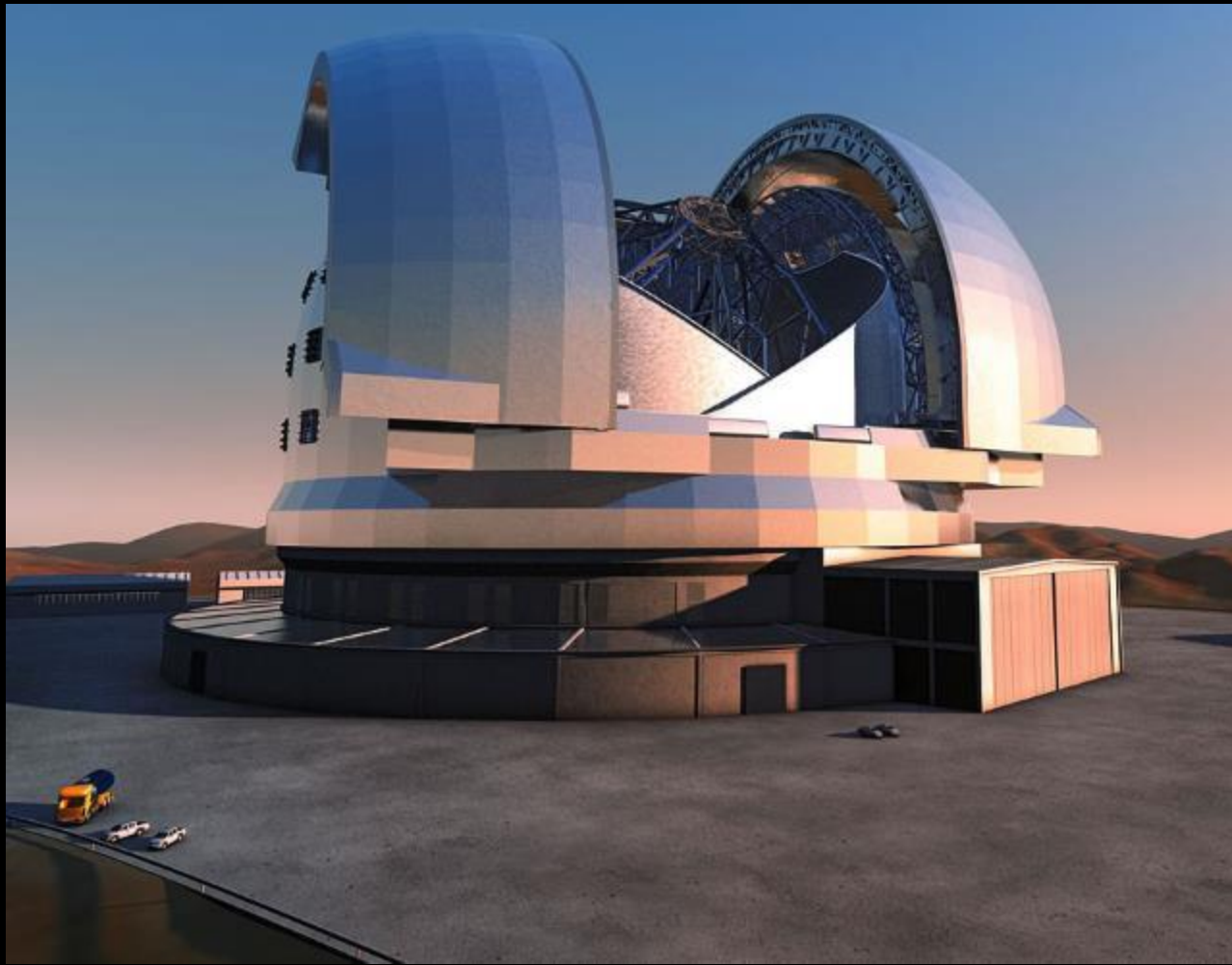
NGC 2207 E IC 2163

FUTURO: JAMES WEBB





FUTURO: TELESCÓPIOS GIGANTES – E-ELT



<http://www.space.com/13880-world-large-telescope-step-light.html>

FIM!