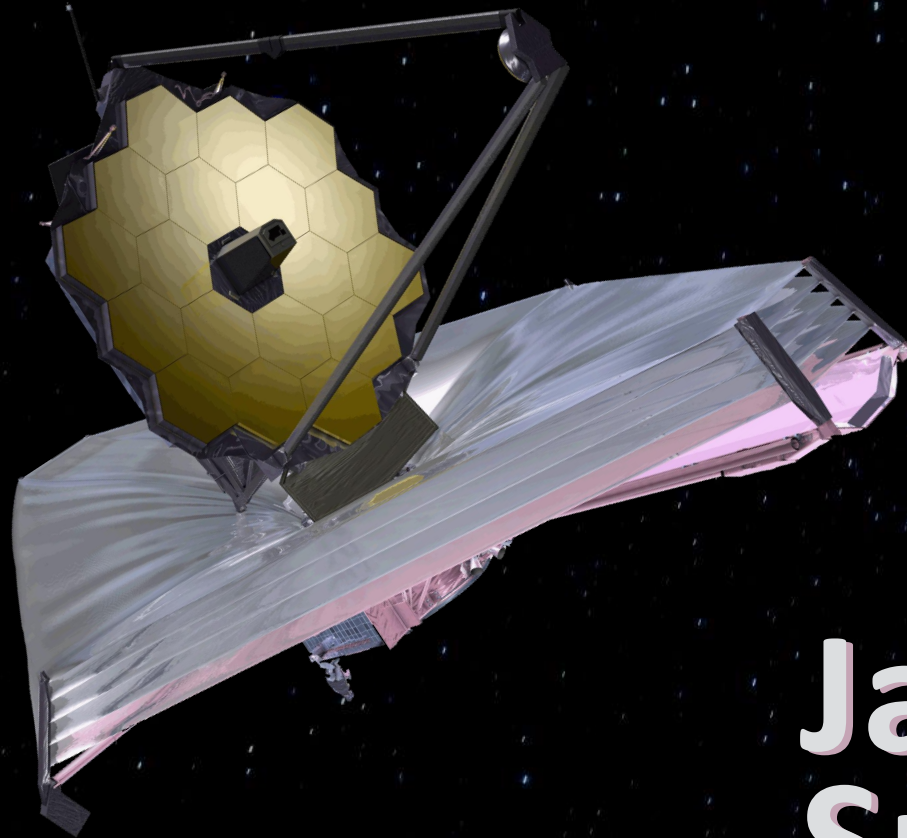




JAMES WEBB SPACE TELESCOPE

James Webb   
Space Telescope



# James Webb Space Telescope



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# Jupiter



BINOCULARS





BINOCULARS



SMALL TELESCOPE



BIG TELESCOPE



MONSTER TELESCOPE



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# Hubble Space Telescope

Image credit: NASA/ESA







JAMES WEBB SPACE TELESCOPE

# Hubble Space Telescope

Image credit: NASA/ESA







# Space Telescopes



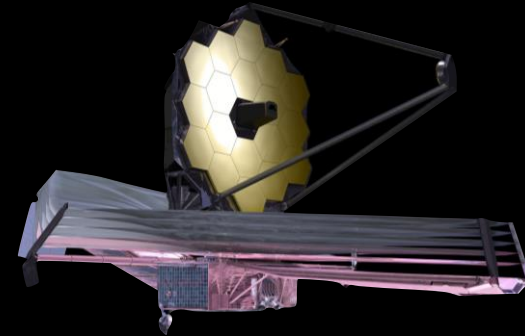
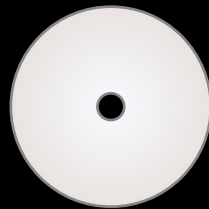
HUBBLE  
2.4 m



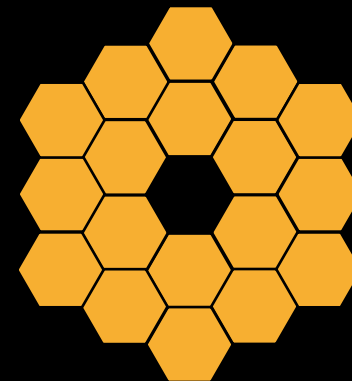
SPITZER  
85 cm



HERSCHEL  
3.5 m



WEBB  
6.5 m

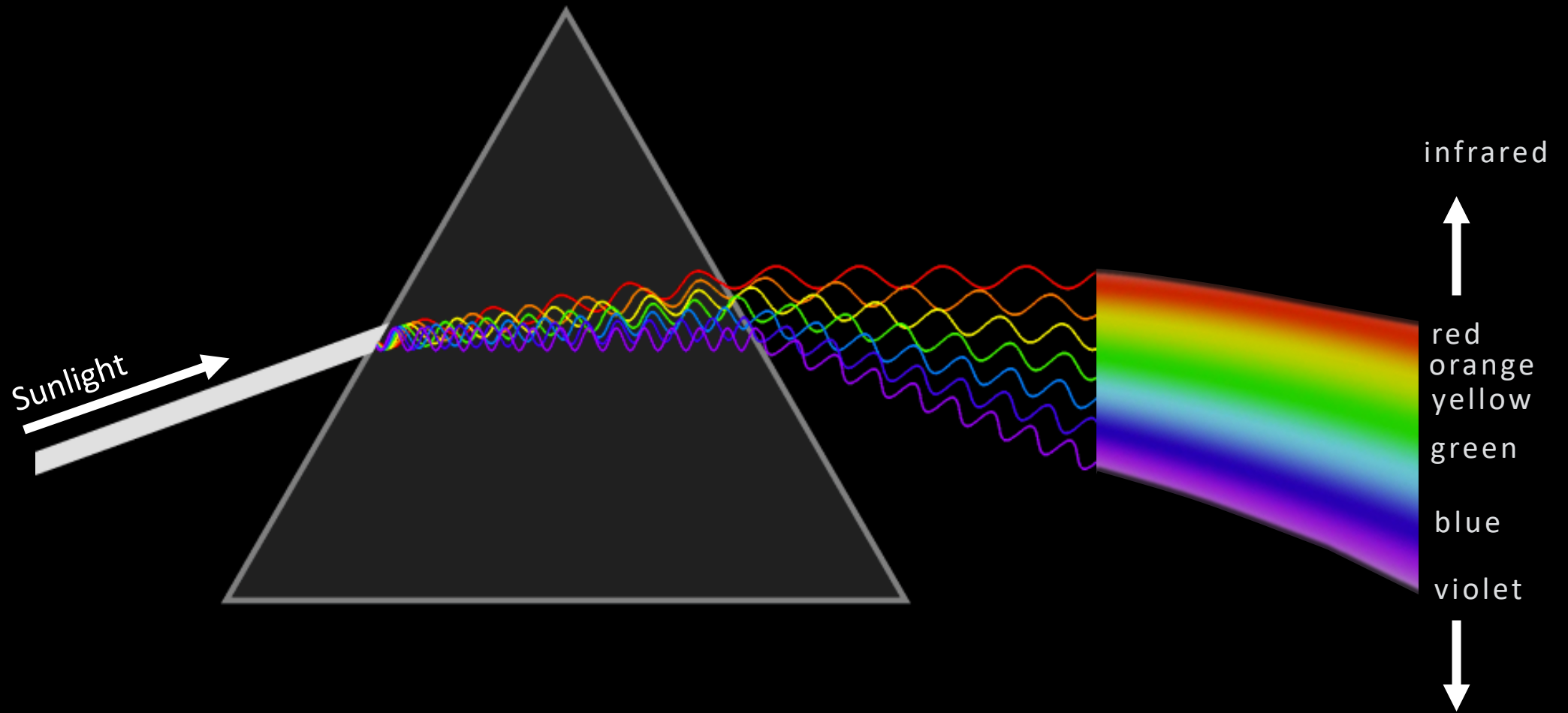




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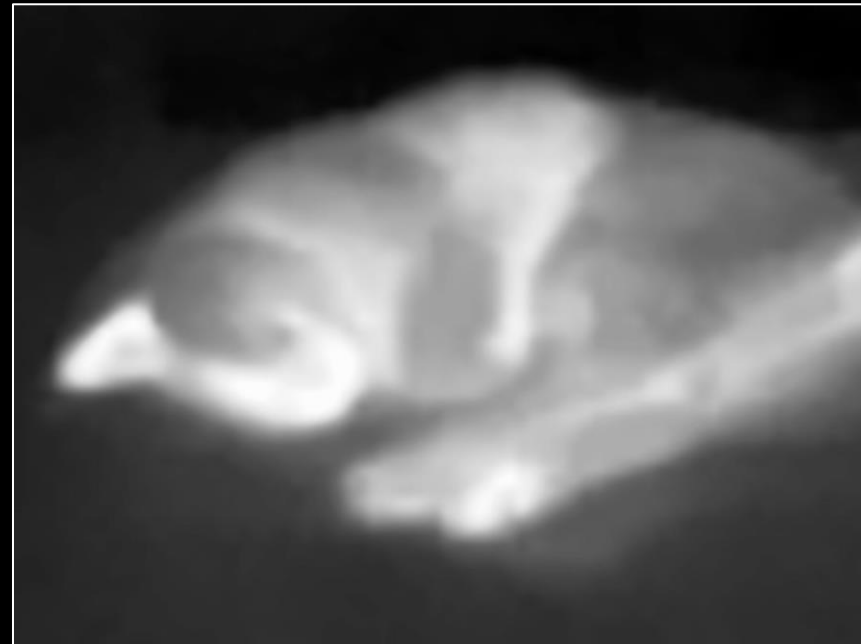




# Seeing in Infrared



Louis the Cat – normal light

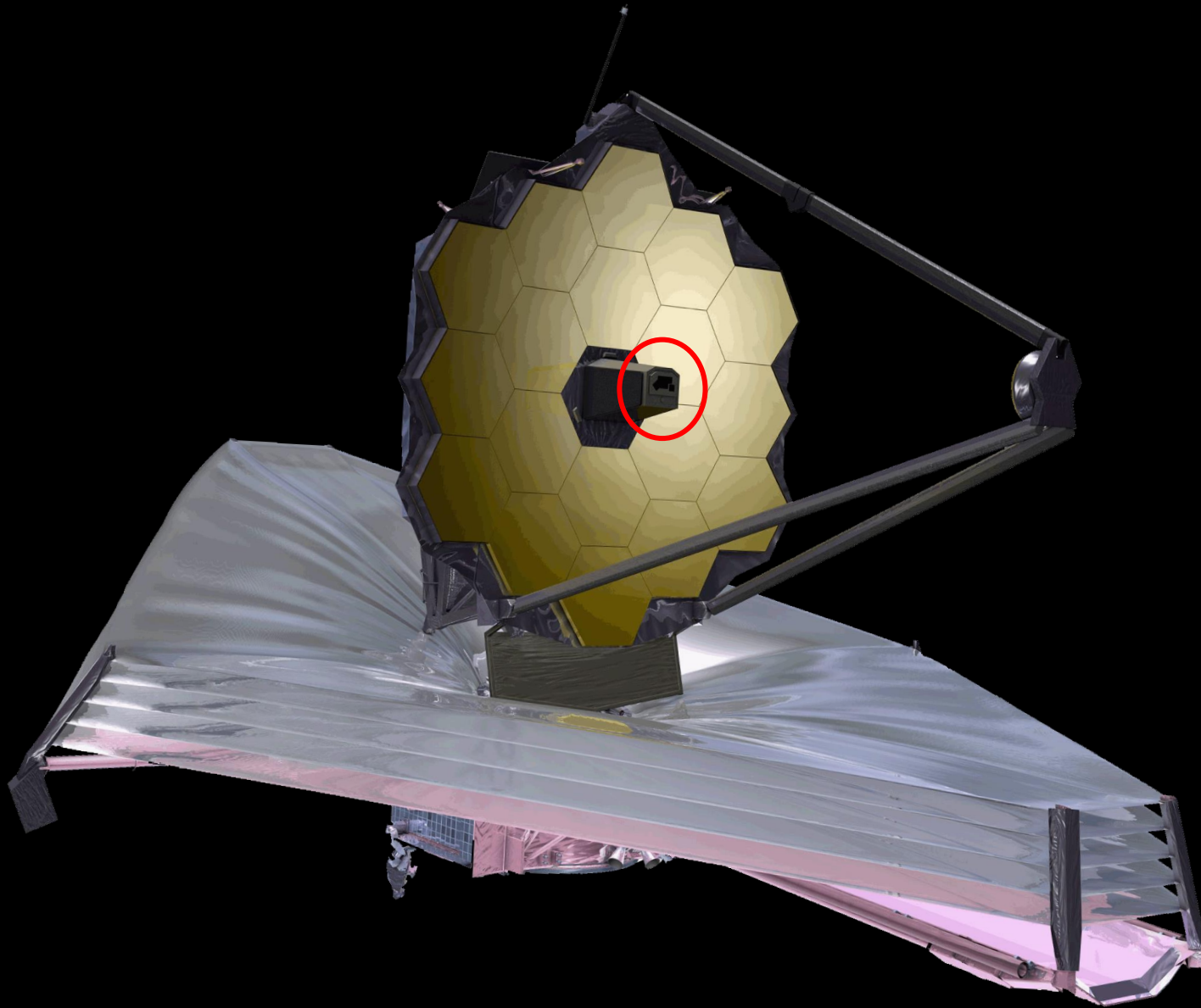


Louis the Cat – infrared light



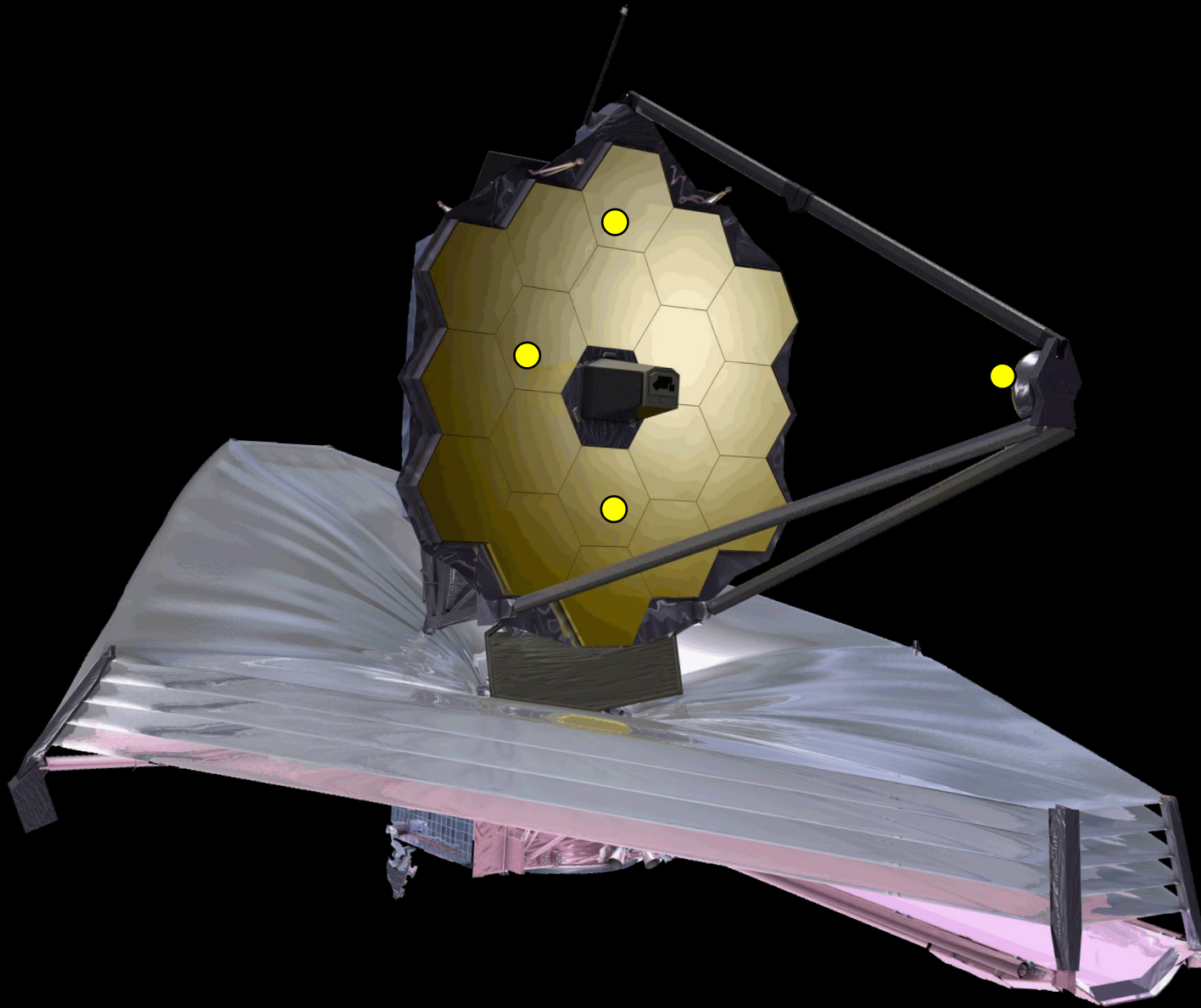


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# Comets





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# Giant Planets

Image credit: NASA/ESA





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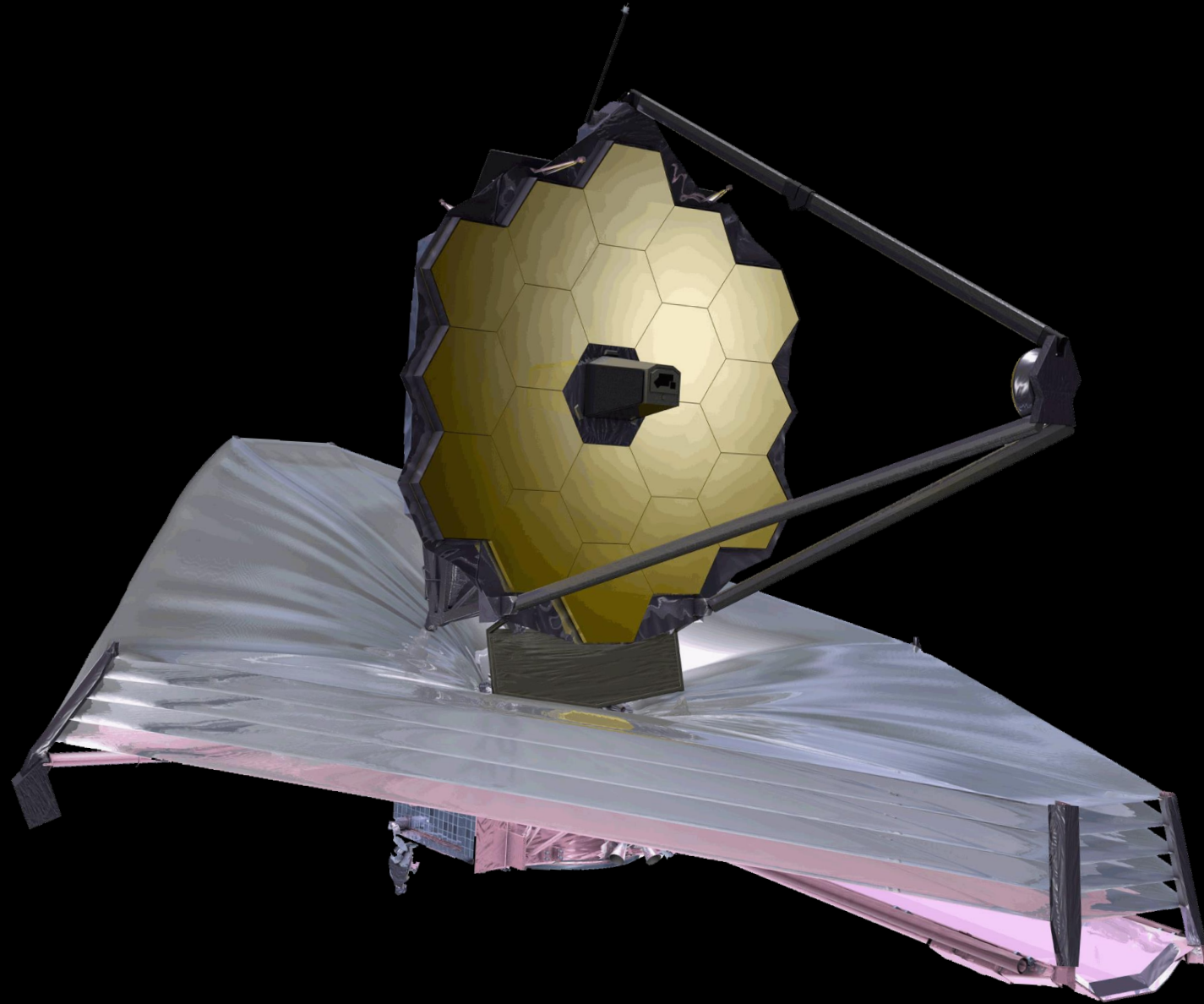
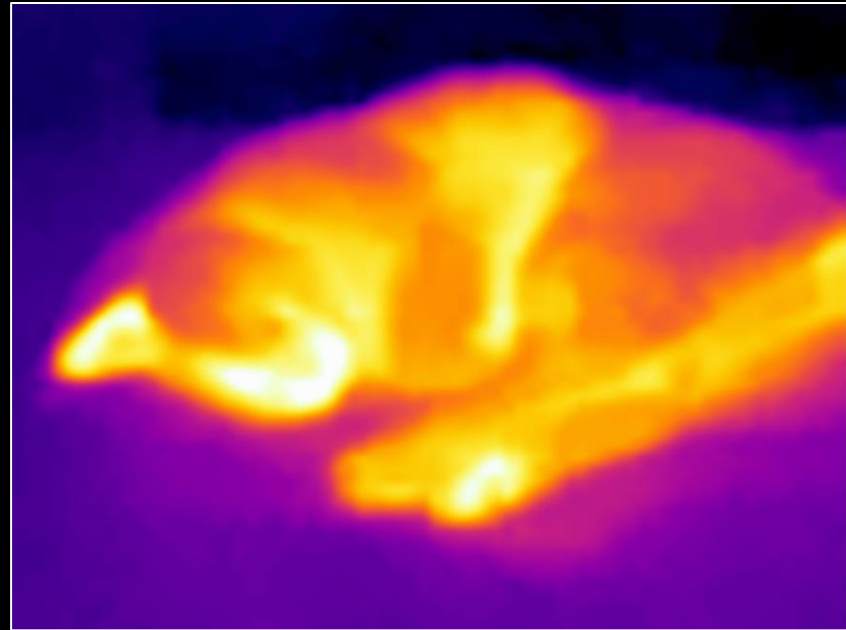
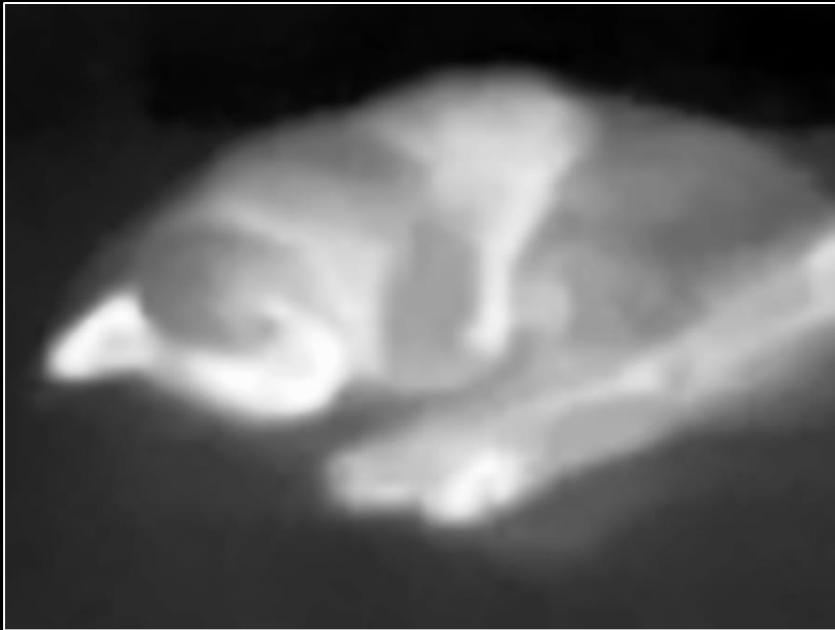


Image credit: NASA/ESA



## Camera colours



this is the same picture!





# JAMES WEBB SPACE TELESCOPE

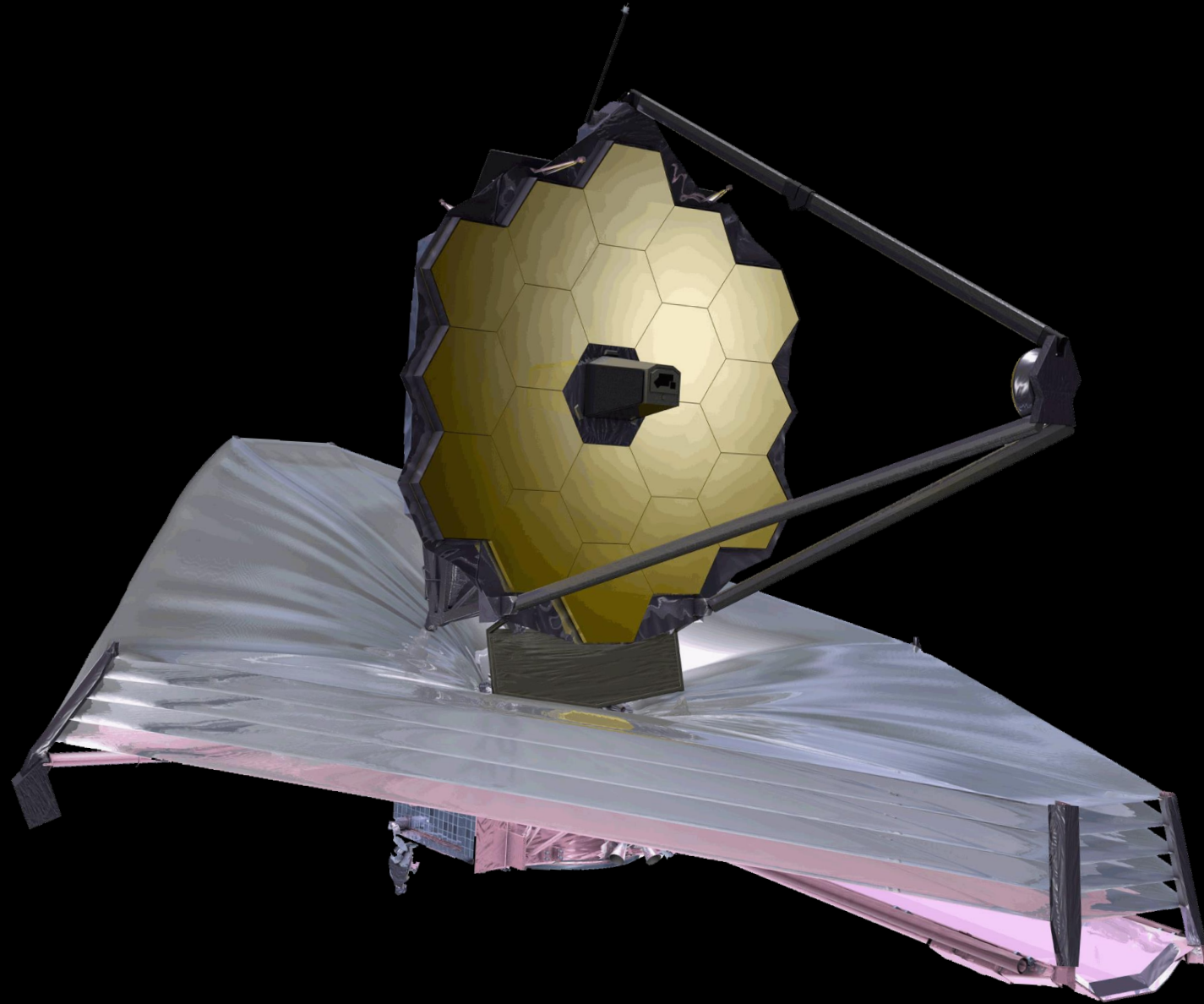


Image credit: NASA/ESA



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Image credit: NASA, ESA and the Hubble Heritage Team (STScI/AURA)





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Image credit: NASA, ESA, K.Kuntz (JHU), F. Bresolin (University of Hawaii), J. Trauger (Jet Propulsion Lab), J. Mould (NOAO), Y.H. Chu (University of Illinois, Urbana) and STScI.





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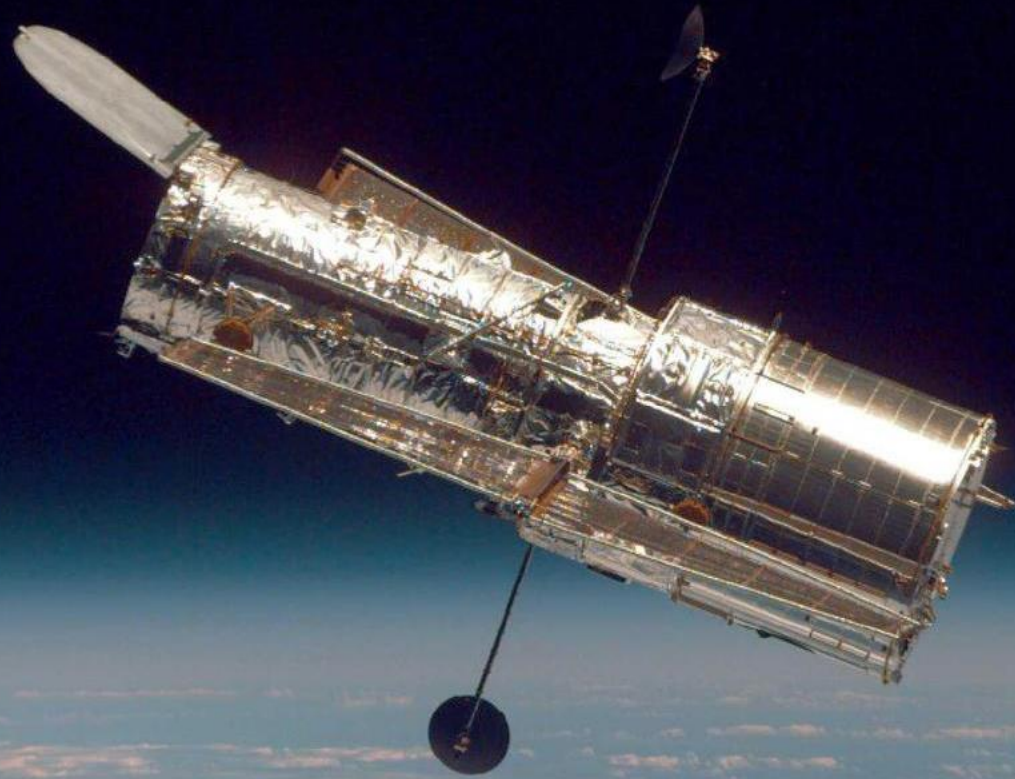


Image credit: NASA, Jet Propulsion  
Lab/Caltech and K.Gordon (STScI)



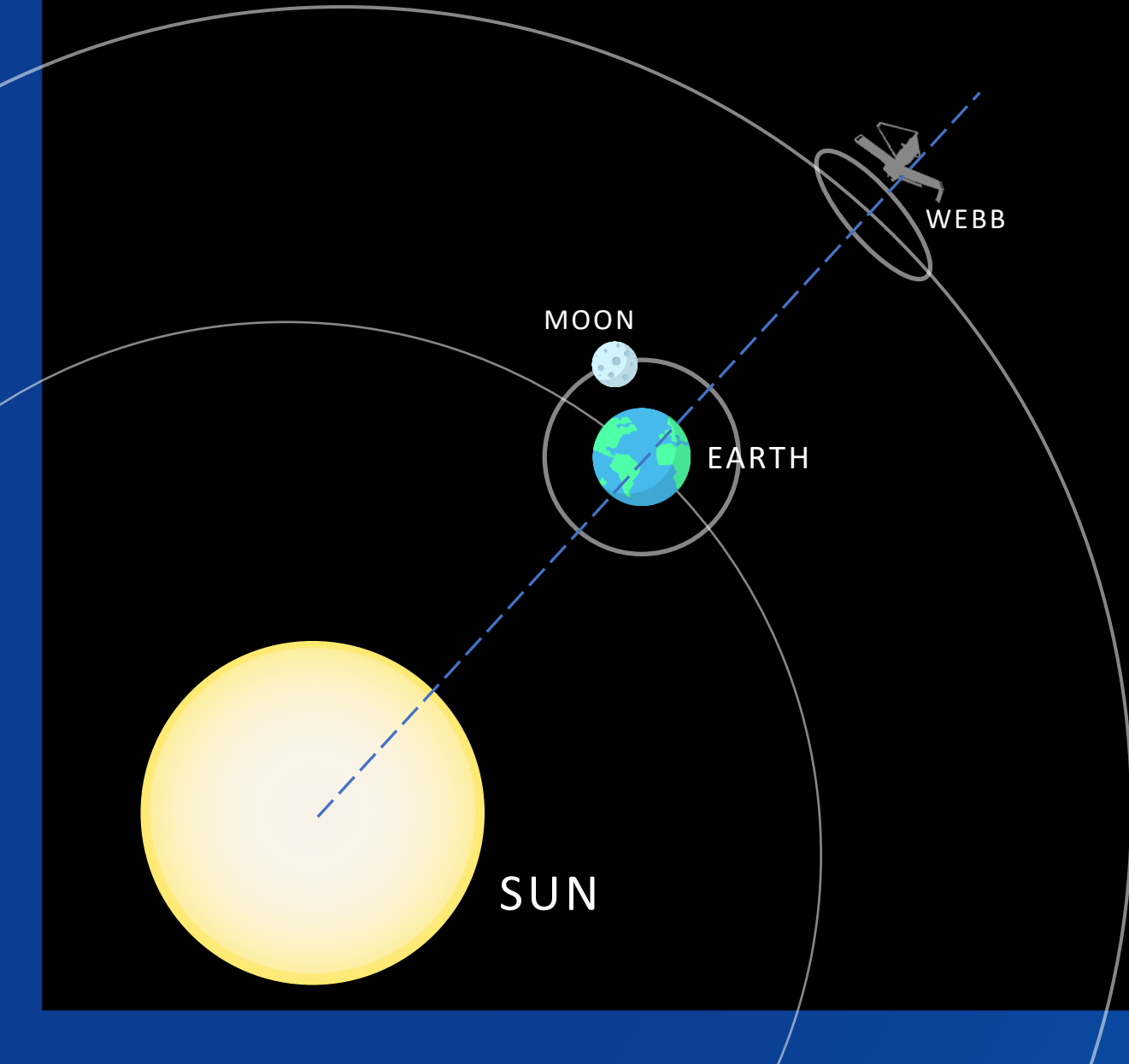


JAMES WEBB SPACE TELESCOPE



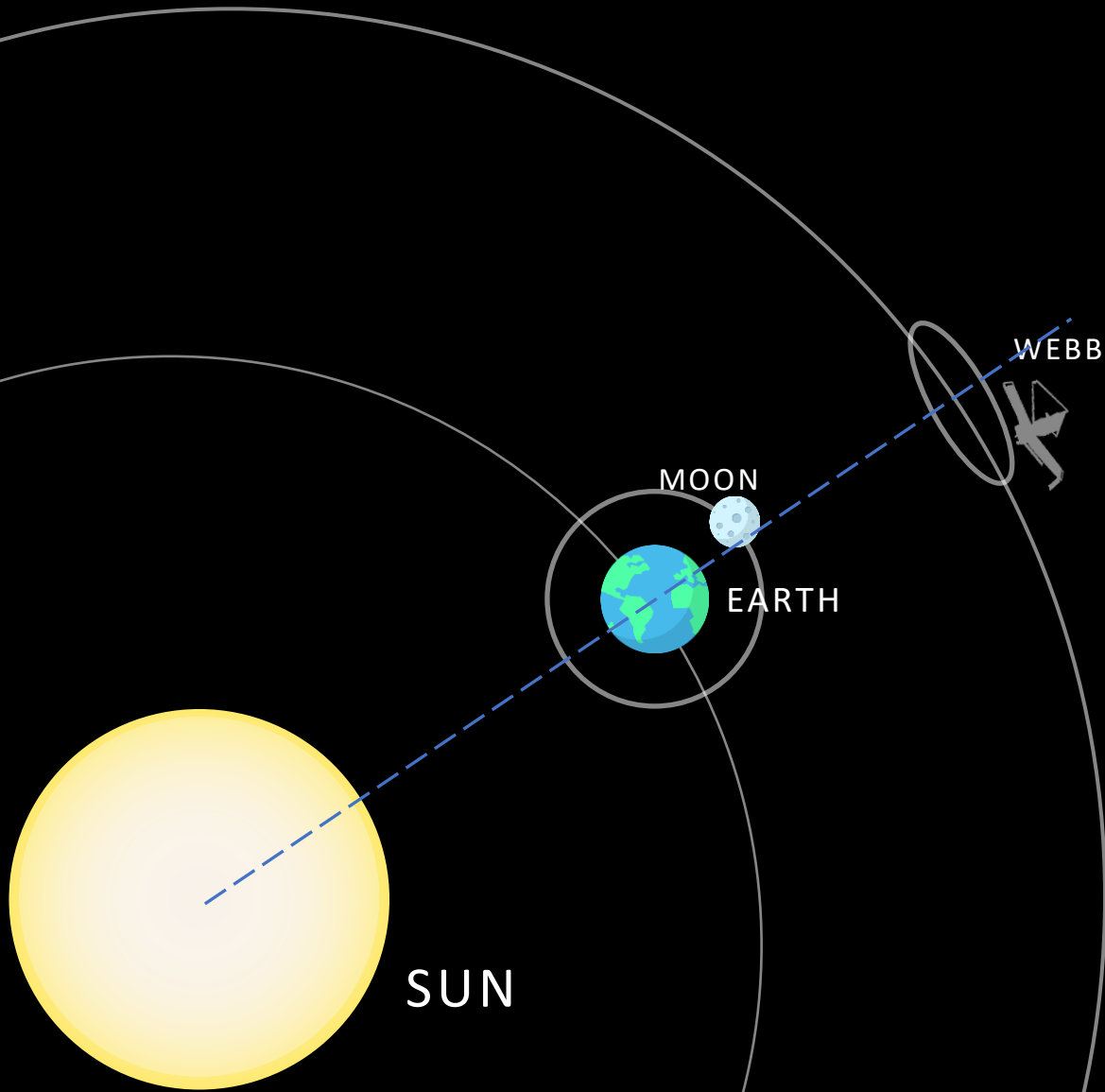
Hubble Space Telescope





It's **REALLY** far away  
1,500,000 km from Earth  
That's 4x further than the Moon!

This diagram is not to scale!



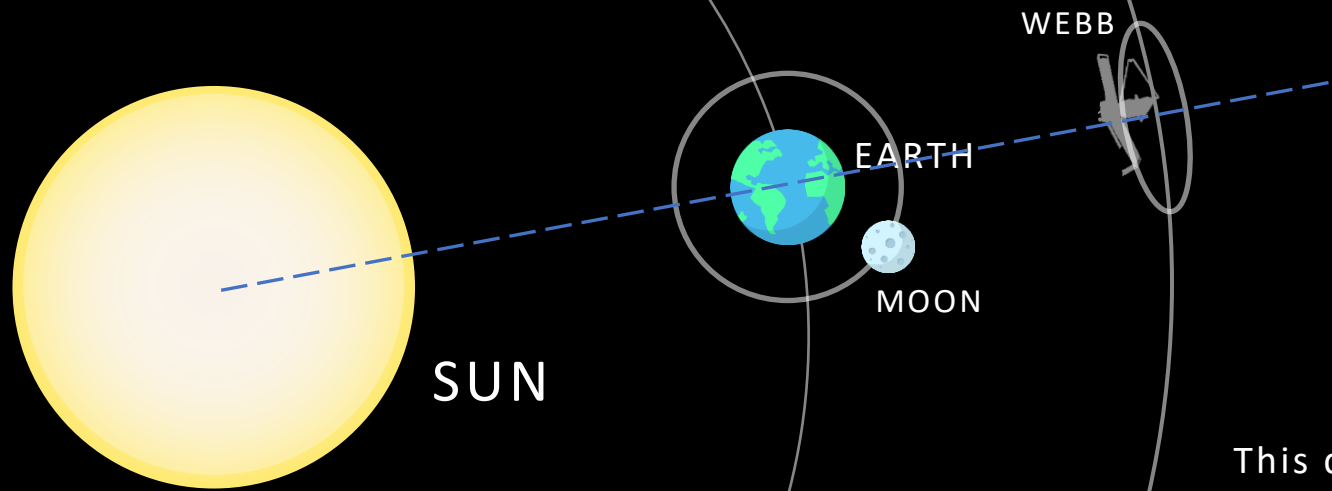
It's **REALLY** far away  
1,500,000 km from Earth  
That's 4x further than the Moon!

This diagram is not to scale!





It's **REALLY** far away  
1,500,000 km from Earth  
That's 4x further than the Moon!



This diagram is not to scale!



# Sunshield

Warm side  
109°C

Cold side  
-220°C

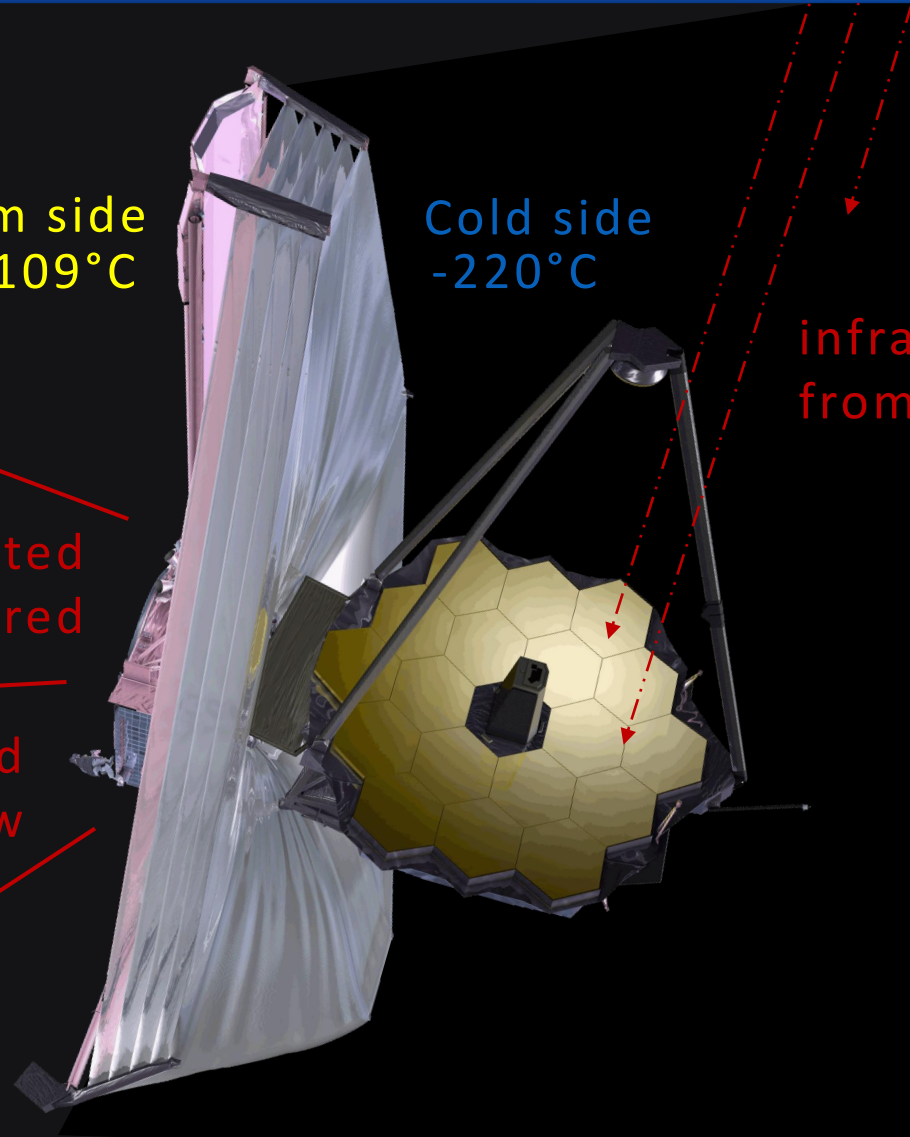
Sunlight

Earth glow

reflected  
infrared

infrared  
glow

infrared light  
from space







# JAMES WEBB SPACE TELESCOPE

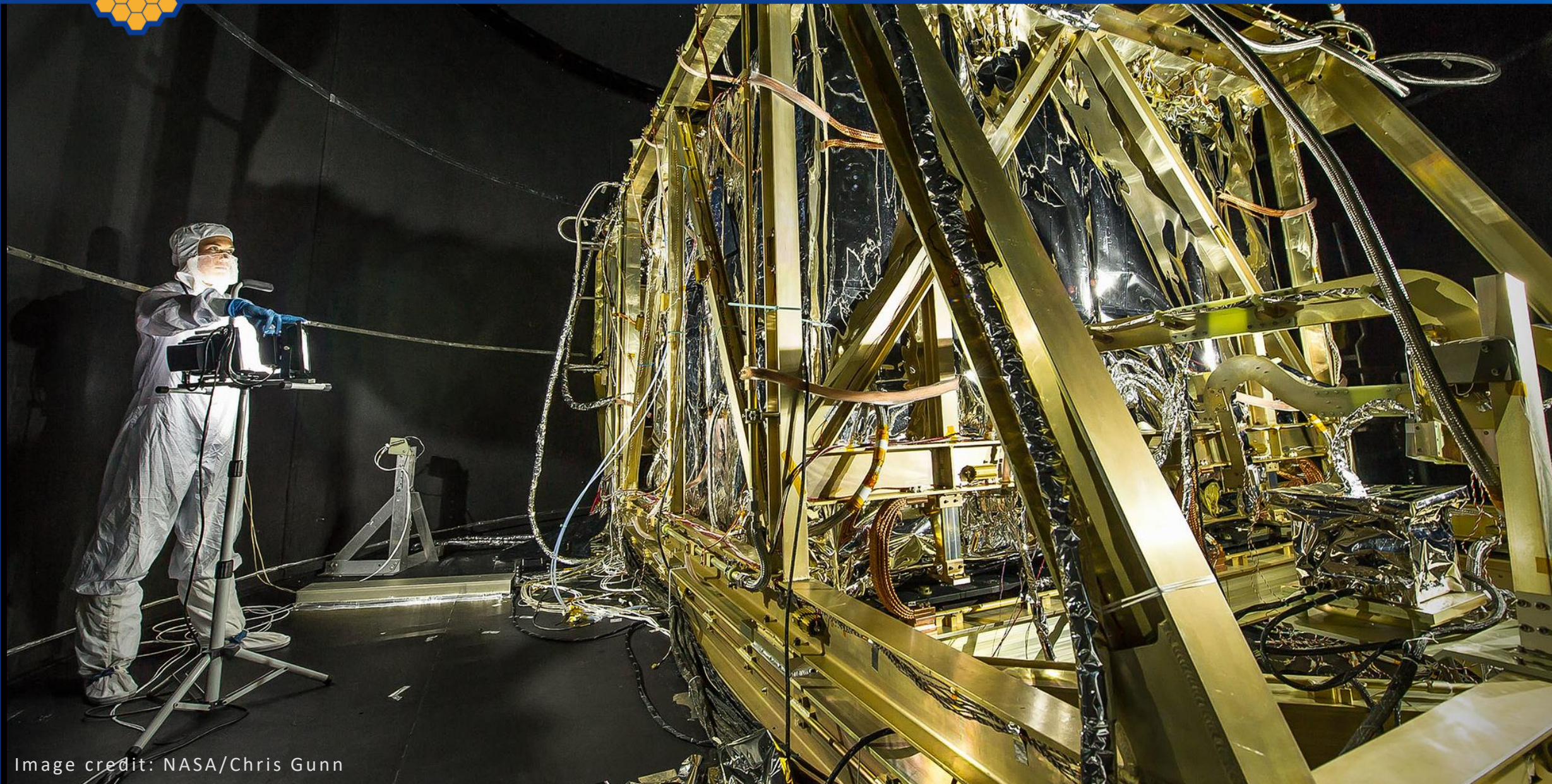


Image credit: NASA/Chris Gunn





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Image credit: NASA/Chris Gunn





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Image credit:  
NASA/Desiree Stover





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Image credit: NASA/Chris Gunn







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NASA/Chris Gunn





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# Launch: Autumn 2021



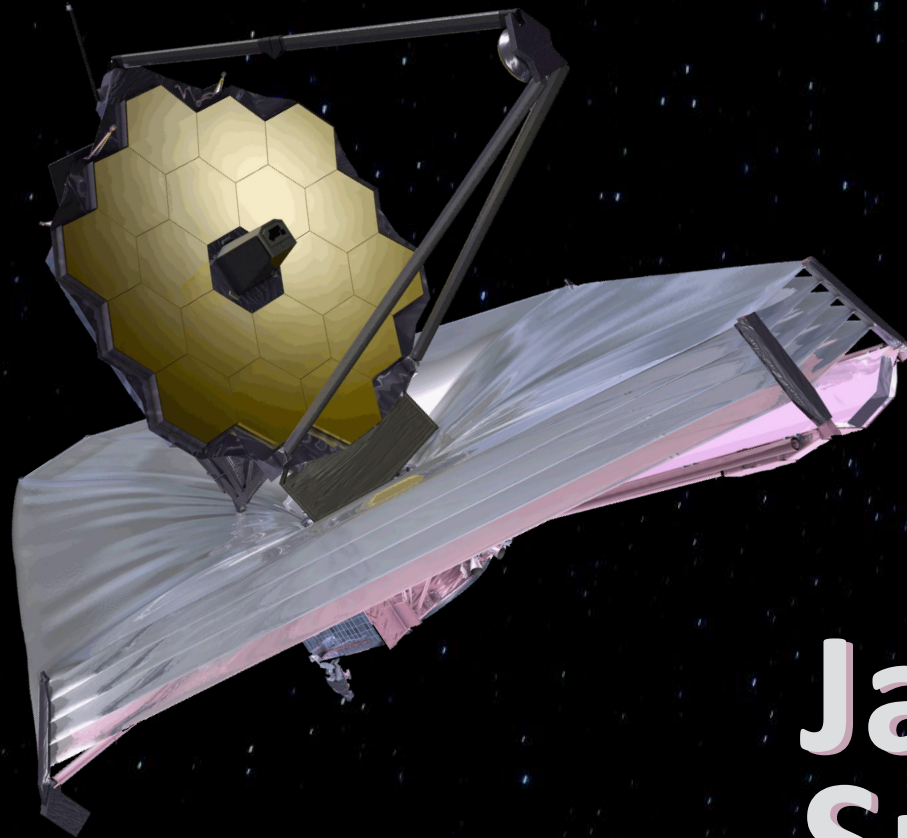


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James Webb   
Space Telescope



Science and  
Technology  
Facilities Council



# James Webb Space Telescope