

SOFIA vs. JWST

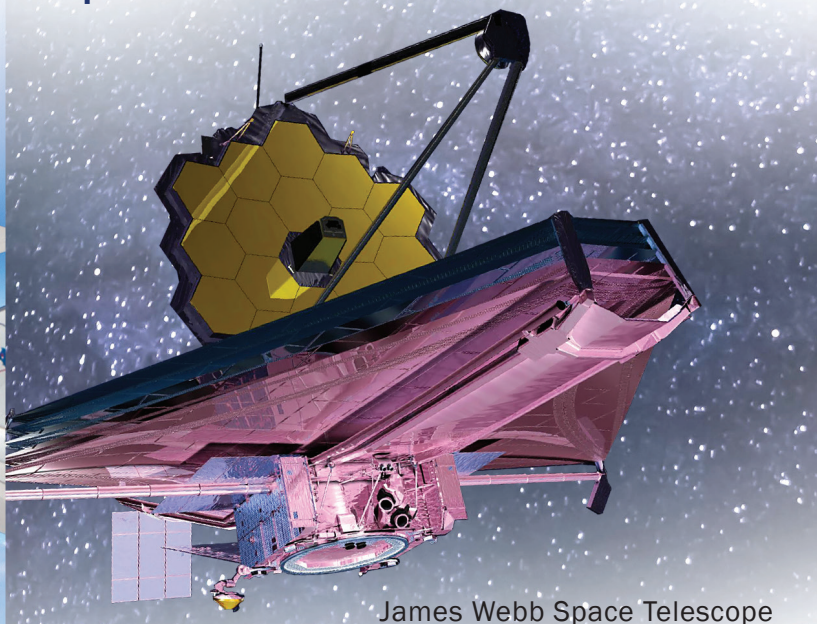
What's the difference?



While both these telescopes have immense value, they are different and their differences complement each other



Stratospheric Observatory For Infrared Astronomy



James Webb Space Telescope

Unique

- The only observatory that observes in the far infrared
- Unique access to wavelengths longer than what is observable with JWST and shorter than what is accessible to ALMA

Powerful in Scope

- Largest space observatory in history working in the near and mid infrared range
- Will collect infrared light from distant corners of the universe
- Will allow us to probe origins of the universe and our place in it

Tailored

- Because of its ability to change instruments, SOFIA is able to customize its capabilities according to science requirements
- SOFIA lands after each flight, facilitating servicing and maintenance

- JWST has a robust design for its 5 year mission and 10 year goal
- However, it is not serviceable because of the distance it will operate at – one million miles away from Earth

Observations

- SOFIA probes bright, iconic objects such as stars forming in the Milky Way, nearby galaxies, and solar system bodies such as the Moon, Earth, and Venus

- JWST observations of the distant universe and nearby faint objects complement observations made by SOFIA

Complementary Role

- SOFIA offers detailed observations of the nearby universe that can calibrate what is happening in the distant universe observed by JWST
- SOFIA probes the Interstellar Medium in the nearby universe

- JWST offers detailed observations in the near infrared that complement what SOFIA finds in the far infrared
- JWST pushes the frontier limits of the distant universe, so both telescopes together in fact cover the whole universe

International Expertise

- SOFIA works with its German Partners at DLR and its proposal calls are open to the scientific community worldwide

- JWST has combined the expertise from the United States, Europe, and Canada to develop the observatory and instrumentation suite and its proposal calls are open to the scientific community worldwide