

# Cosmology/Astrophysics News

A large, silver, conical Orion spacecraft is suspended in a cleanroom. The spacecraft is surrounded by a complex network of metal scaffolding and support structures. Several people are visible in the background, working on the facility. The lighting is bright and even, highlighting the metallic surfaces of the spacecraft.

Orion spacecraft

June 2024 for Rose City Astronomers SIG

<http://101iq.com/RCA>

# Nature – June 6, 2024

- How NASA astronauts are training to do science on the moon
  - <https://www.nature.com/articles/d41586-024-01533-3>
- Star formation shut down by multiphase gas outflow in a galaxy at a redshift of 2.45
  - <https://www.nature.com/articles/s41586-024-07412-1>

# Science – June 7, 2024

- A carbon-rich protoplanetary disk around a very-low-mass star
  - <https://www.science.org/doi/10.1126/science.adq8596>
  - <https://www.science.org/doi/10.1126/science.adi8147>
- Ultra-high-energy cosmic ray sources are invisible in gamma ray surveys
  - <https://iopscience.iop.org/article/10.3847/2041-8213/ad4359>

# Nature – June 13, 2024

- Chinese spacecraft collects first rocks from moon's far side
  - <https://www.nature.com/articles/d41586-024-01625-0>
- Lense-Thirring precession after a supermassive black hole disrupts a star
  - <https://www.nature.com/articles/s41586-024-07433-w>

# Science – June 14, 2024

- Hubble telescope down to last gyroscopes, limiting science

– <https://www.science.org/content/article/aging-hubble-telescope-moves-one-gyro-operations-reducing-productivity-and-limiting>

# Nature – June 20, 2024

- A Broad Line-width, Compact, Millimeter-bright Molecular Emission Line Source near the Galactic Center
  - <https://iopscience.iop.org/article/10.3847/2041-8213/ad47fa>
- A secondary atmosphere on the rocky exoplanet 55 Cancri e
  - <https://www.nature.com/articles/s41586-024-07432-x>

# Science – June 21, 2024

- Galaxy's central black hole ignites
  - <https://www.science.org/content/article/astronomers-witness-ravenous-black-hole-lighting-center-galaxy>
- No place like home
  - <https://www.science.org/content/article/could-super-earths-mini-neptunes-host-life-among-stars>

# Nature – June 27, 2024

- How huge black holes sprouted just after the Big Bang
  - <https://www.nature.com/articles/d41586-024-01703-3>
- A warm Neptune's methane reveals core mass and vigorous atmospheric mixing
  - <https://www.nature.com/articles/s41586-024-07395-z>
- A high internal heat flux and large core in a warm Neptune exoplanet
  - <https://www.nature.com/articles/s41586-024-07514-w>



# Science – June 28, 2024

- Simulations predict intermediate-mass black hole formation in globular clusters
  - <https://arxiv.org/pdf/2406.06772>

# Miscellaneous

- I will post this monthly news possibly with zero or more videos and links to watch, as for example, these:
  - <https://www.youtube.com/watch?v=3Q5cl6oUoQE>
  - <https://www.youtube.com/watch?v=26ZmKqLNSZ8>
  - [https://www.youtube.com/watch?v=hZoxLVx\\_OE8](https://www.youtube.com/watch?v=hZoxLVx_OE8)
  - <https://www.youtube.com/watch?v=6EHI0GRBSbs>