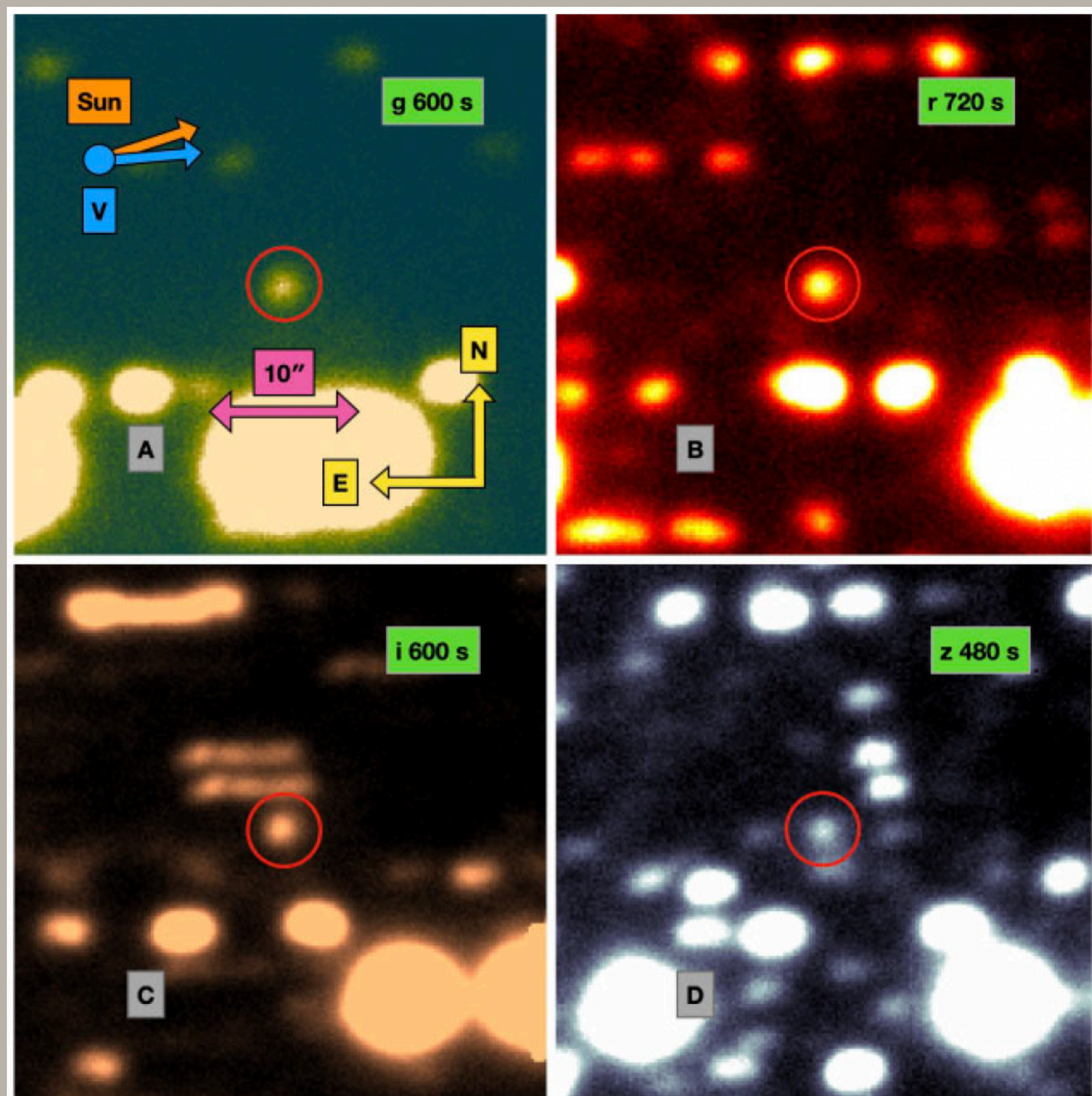
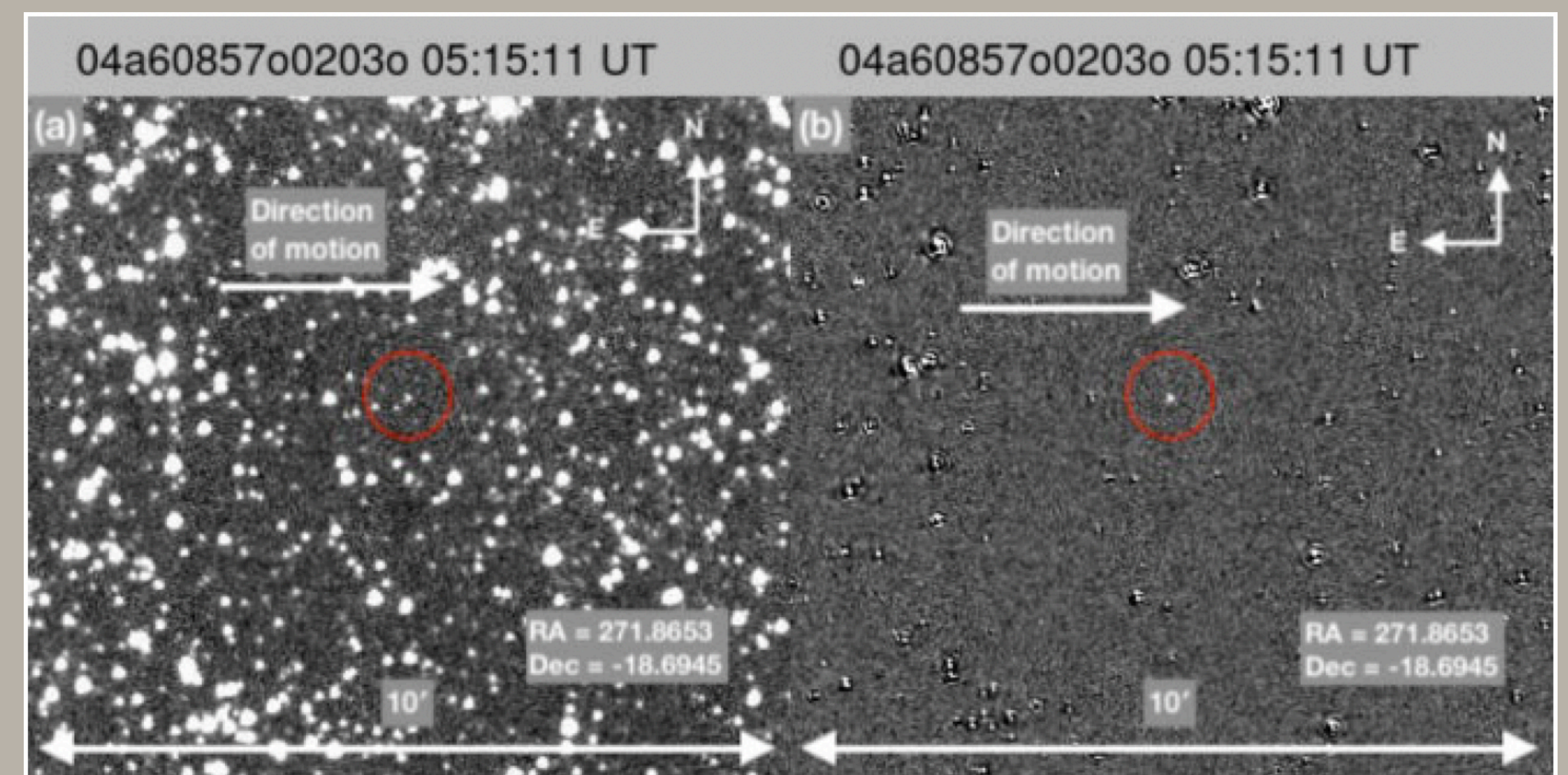


# Interstellar comet 3I/ATLAS: discovery and physical description

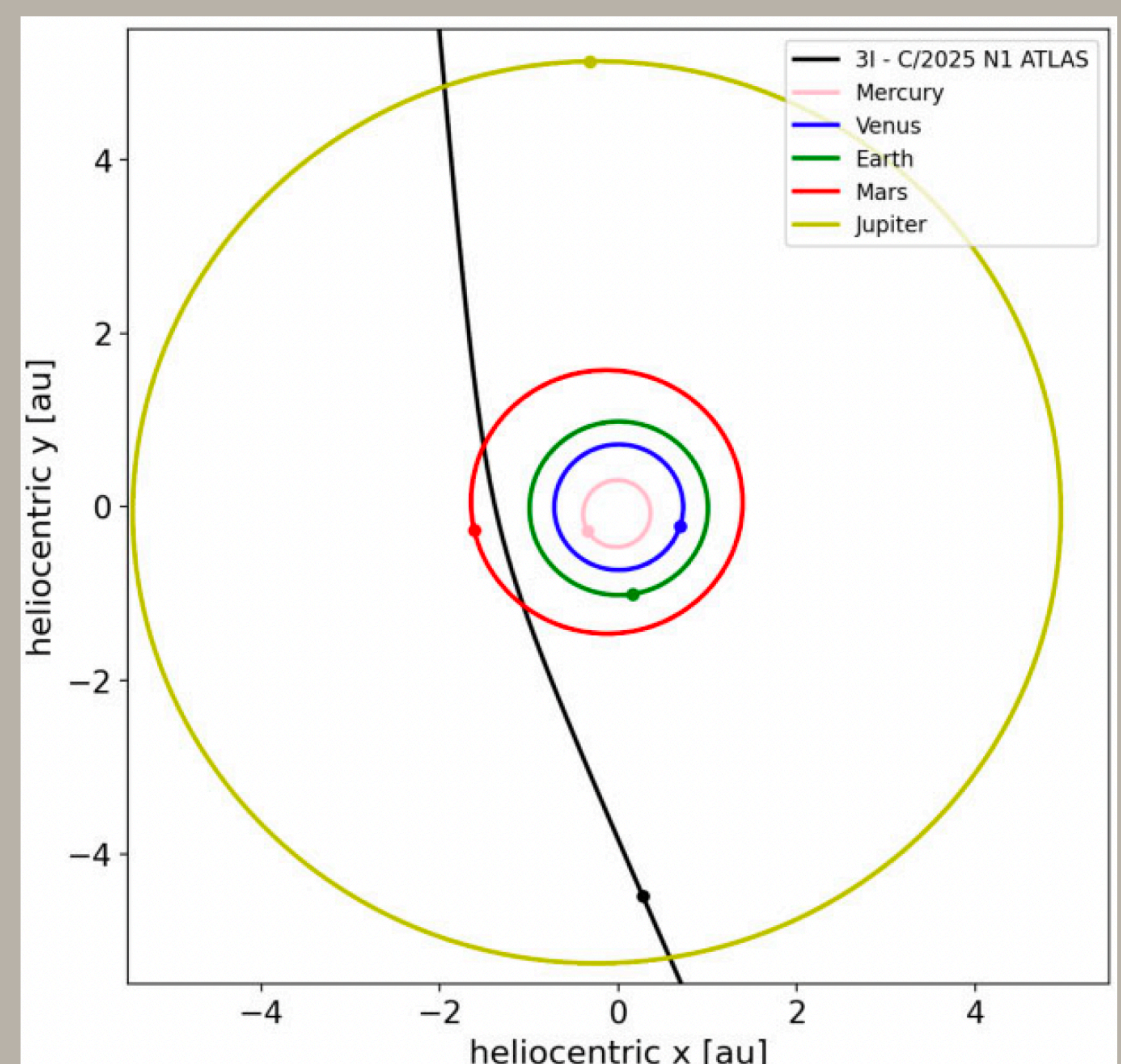
B. T. Bolin (Eureka Scientific)



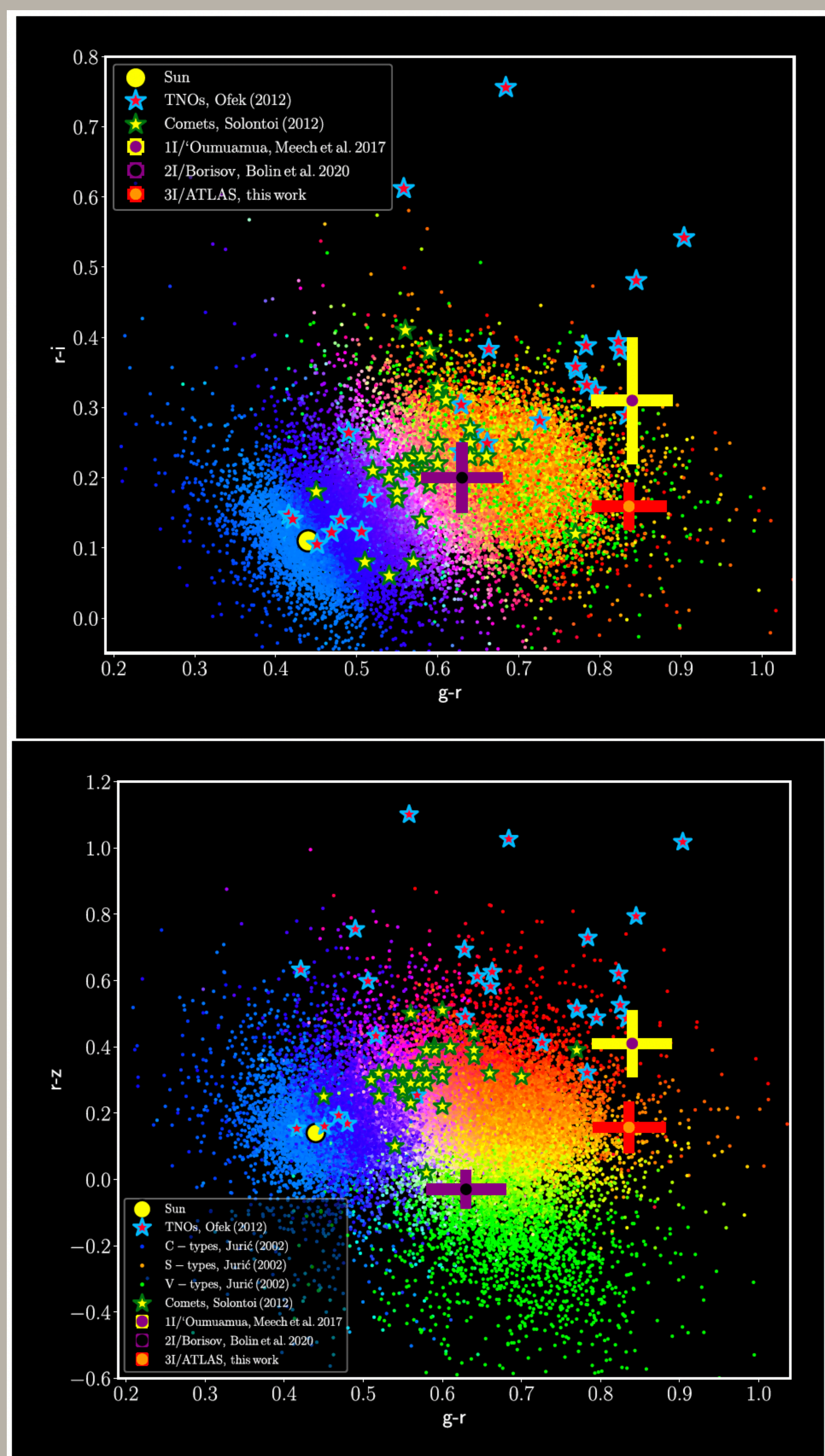
Imaging g , r , and i , and z -band stacks of 3I/ATLAS taken with ARCTIC on 2025 July 6. The images were taken with the telescope tracked at the asteroid's apparent rate of motion. The cardinal, solar, and orbital motion directions are indicated, and a double arrow 10 arcsec wide is included for scale.



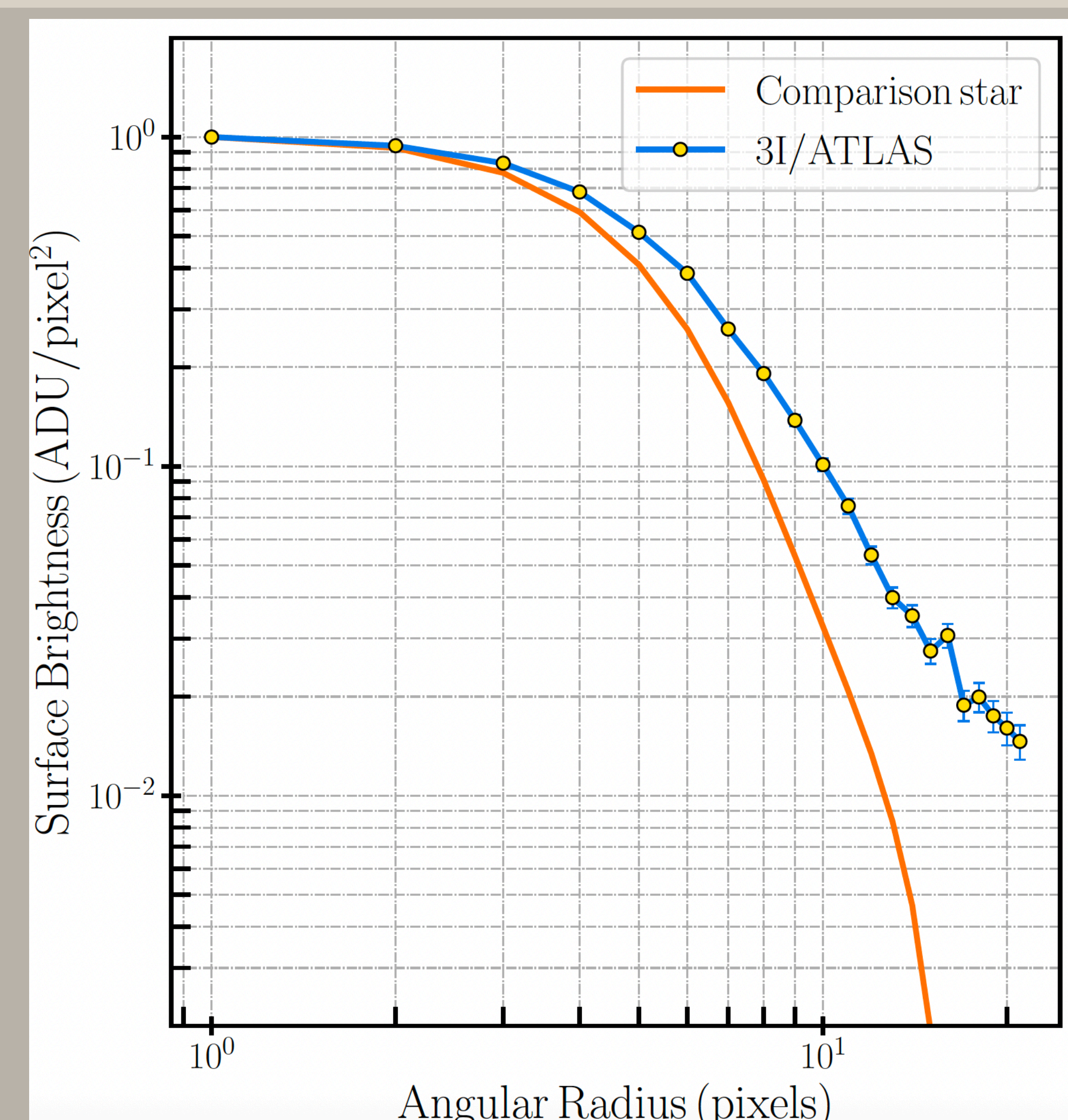
Cut-out images from the first and fourth discovery observations of 3I/ATLAS from the ATLAS facility in Chile, spanning approximately one hour. 3I/ATLAS is moving at 73.31 arcsec h<sup>-1</sup> against the stellar background.



Orbits of 3I/ATLAS and Solar system planets. Top panel: ecliptic pole view of the orbits and positions of 3I/ATLAS (black and the planets at the time of the discovery. Positions of the planets and 3I/ATLAS are from JPL HORIZONS.



The g , r , i , and z colours of 3I/ATLAS from our measurements compared with Solar system objects and other ISOs. Top panel: The g –r versus r –i colours of 3I/ATLAS and other objects. We use the scheme of Ivezić et al. ( 2002 ).



the azimuthally averaged surface brightness profile of the combined r -band stack of 3I taken with Palomar on July 3 2025. A nearby comparison star's azimuthally averaged surface brightness profile is o v er-plotted as an orange line.