



# Lucy

First to Visit  
Jupiter's Trojan Asteroids



# Lucy and Lockheed Martin



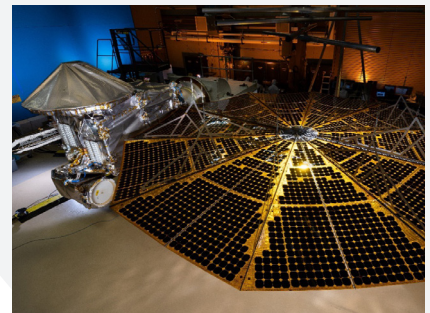
## LOCKHEED MARTIN'S NEXT ASTEROID-HUNTING SPACECRAFT

Lucy is NASA's mission that will take an epic 12-year, 4-billion-mile journey to Jupiter's elusive Trojan asteroids. Scientists believe the Trojan asteroids are relatively unblemished remnants from the creation of our solar system and could hold clues about how it formed.

As a crucial member of the mission team, Lockheed Martin Space designed, built, integrated, tested and will operate Lucy after the spacecraft launches in fall 2021.

At Lockheed Martin Space, we combine our long history of supporting planetary exploration with new digital engineering innovations to help our customers discover more than they ever thought possible.

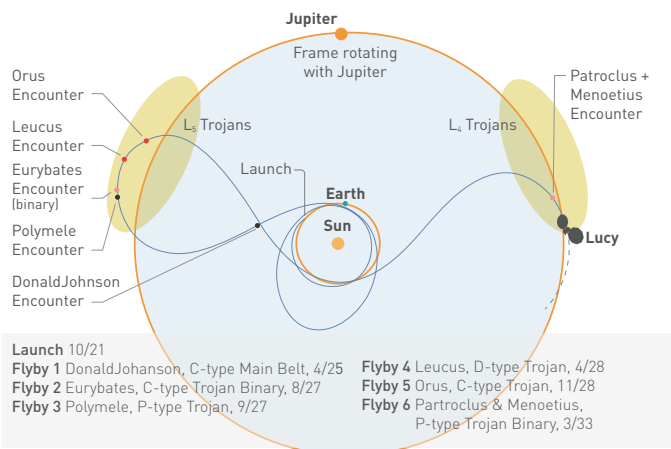
Lucy is the seventh of 13 NASA Discovery Program missions Lockheed Martin has supported. This mission builds on years of technology from previous spacecraft the team has built, like Mars Odyssey, OSIRIS-REx and InSight, among others.



Lucy Spacecraft with single Solar Array Deployed

## MISSION PARTNERS

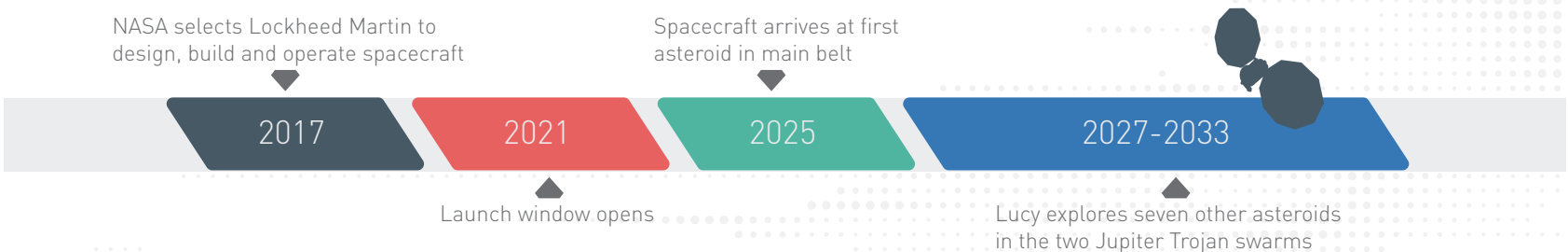
- Principal Investigator: Dr. Harold Levison of the Southwest Research Institute in Boulder, Colorado
- Mission Management: NASA's Goddard Space Flight Center in Greenbelt, Maryland
- Discovery Mission Program Oversight: Marshall Space Flight Center in Huntsville, Alabama
- Instrument Suppliers: Arizona State University, the Johns Hopkins Applied Physics Laboratory, Goddard Space Flight Center



Lucy's long journey will take the spacecraft on an orbital path that includes encounters with one Main Belt asteroid and seven Trojans, plus three close Earth flybys.

- L'LORRI**  
 Long Range Reconnaissance Imager (LORRI)  
 High Spatial resolution visible imager  
 Heritage: NH  
 Supplier: APL
- TTCam**  
 Terminal Tracking Camera (TTCam)  
 Visible imager used for target centroiding  
 Supplier: Malin Space Systems
- Radio Science**  
 Telecommunications link with DSN provides Doppler measurements which enable mass density determination of each trojan SDST  
 Heritage: MAVEN, OREX, InSight  
 Supplier: Lockheed Martin
- L'Ralph**  
 Multi-spectral Visible Imaging Camera (MVIC)  
 Linear Etalon Imaging Spectral Array (LEISA)  
 Color visible imager (MVIC) and infrared imaging spectrometer (LEISA)  
 Heritage: New Horizons, O'REX  
 Supplier: Goddard
- L'TES**  
 Thermal Emission Spectrometer (TES)  
 Point FTIR Spectrometer  
 Heritage: O'REX, Mars Global Surveyor  
 Supplier: ASU

Lucy carries updated versions of proven instruments from spacecraft like New Horizons, OSIRIS-REx and Mars Global Surveyor to study the geology, surface composition and physical properties of Jupiter's Trojan asteroids.



For more information visit: [www.lockheedmartin.com/lucy](http://www.lockheedmartin.com/lucy)