

Ultra Low Temperature Electronics (ULTE) Project

Game Changing Development Program | Space Technology Mission Directorate (STMD)



ANTICIPATED BENEFITS

To NASA funded missions:

This technology significantly reduces the mass and power over the current Europa Lander baseline avionics suite. The benefits of the improved mass/volume/power enable an extended set of science requirements (e.g. additional instrument or increased lifetime).

DETAILED DESCRIPTION

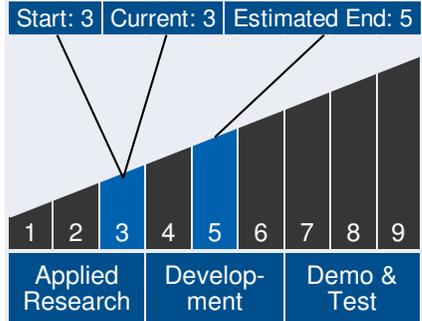
Develop electronics that maximize the science return from Europa lander by allow the lander to last longer on the surface and enable additional science instruments. This goal will be achieved through: **Electronic Packaging** - Dramatically reduce electronics volume and mass through the use of advanced packaging. **Low Power Multi-Core Computing** - Develop an advanced embedded processing module that enables reduction significant reduction in power and processing mass. **Cold Capable Electronics & Cameras** - Reduce the power required for survival & operational heating by allowing electronic assemblies to operate and survive at temperatures beyond the Mil-Std temperature range of -55 to +125°C.



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Technology Maturity



Management Team

Program Executive:

- Lanetra Tate

Program Manager:

- Mary Wusk

Project Manager:

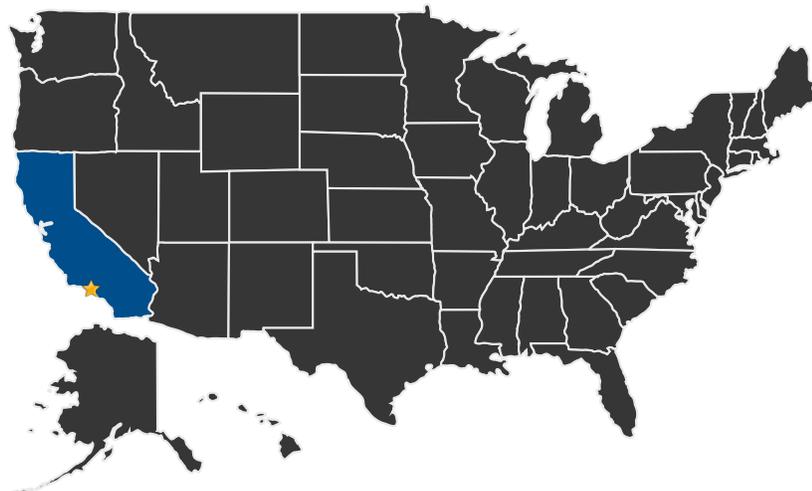
- Thomas Cwik

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U.S. WORK LOCATIONS AND KEY PARTNERS



■ U.S. States With Work ★ **Lead Center:**
Jet Propulsion Laboratory

● **Supporting Centers:**

- Jet Propulsion Laboratory

Other Organizations Performing Work:

- Air Force Research Laboratory

DETAILS FOR TECHNOLOGY 1

Technology Areas

Primary Technology Area:

Robotics and Autonomous Systems (TA 4)