EUROPA CLIPPER MISSION

SwRI supports NASA's Europa Clipper mission with two instrument packages. The spacecraft will orbit Jupiter to study its moon Europa to determine whether the ocean beneath its icy shell could support life. Launched in October 2024 and arriving in the Jovian system in 2030, the spacecraft complements ESA's Jupiter Icy Moons Explorer, which launched in 2023 and includes another SwRI-led UVS instrument.

516 million MILES FROM EARTH

SUBSURFACE **H_2O OCEAN** **2X** **EARTH'S OCEAN** VOLUME

EUROPA

90% THE SIZE OF **EARTH'S MOON**

25% THE SIZE OF **EARTH**

NASA'S LARGEST PLANETARY SPACECRAFT

- **16 FEET** tall
- **100 FEET** wide w/solar arrays deployed
- **7,145 POUNDS** without fuel/propellant
- **600 WATTS** of solar energy power

4th largest MOON OF **JUPITER**

JANUARY 8, 1610
Europa discovered by **GALILEO GALILEI**

~50 CLOSE PASSES **OVER EUROPA** as close as **16** MILES **FROM SURFACE**

PAYLOAD SwRI-LED MASPEX

SwRI's Mass Spectrometer for Planetary Exploration (MASPEX) will "sniff" Europa's gases to study the chemistry of the moon's suspected subsurface ocean.
Principal Investigator: Dr. Jim Burch

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The novel MASPEX instrument provides **50** times finer resolution than other space spectrometers. At **3** feet long, it provides a **4,800**-foot flight path as ions bounce **800** times back and forth to reveal chemistry.

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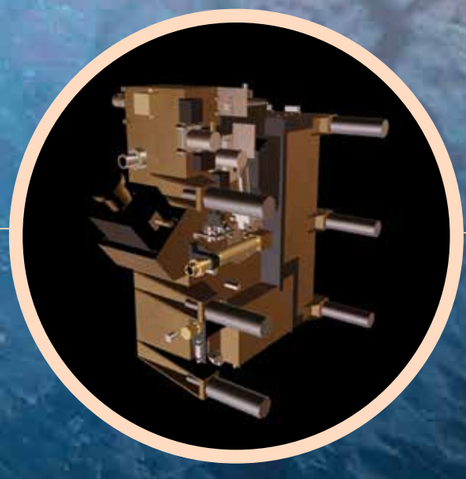
This **6**th-generation, **8.5**-Watt UVS instrument is **14x14x6** inches and weighs just **43** pounds.



PAYLOAD SwRI-LED EUROPA-UVS

SwRI's Europa Ultraviolet Spectograph (UVS) images and characterizes Europa's atmospheric gases and surface materials.
Principal Investigator: Dr. Kurt Retherford

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