



Solar System Science with WFIRST

WHAT IS THE SCIENCE QUESTION?

- Science “use-cases” were needed to determine the mission capabilities and operations required (e.g. moving target tracking) for WFIRST to support Solar System science in addition to its astrophysics goals.

WHAT ARE THE FINDINGS?

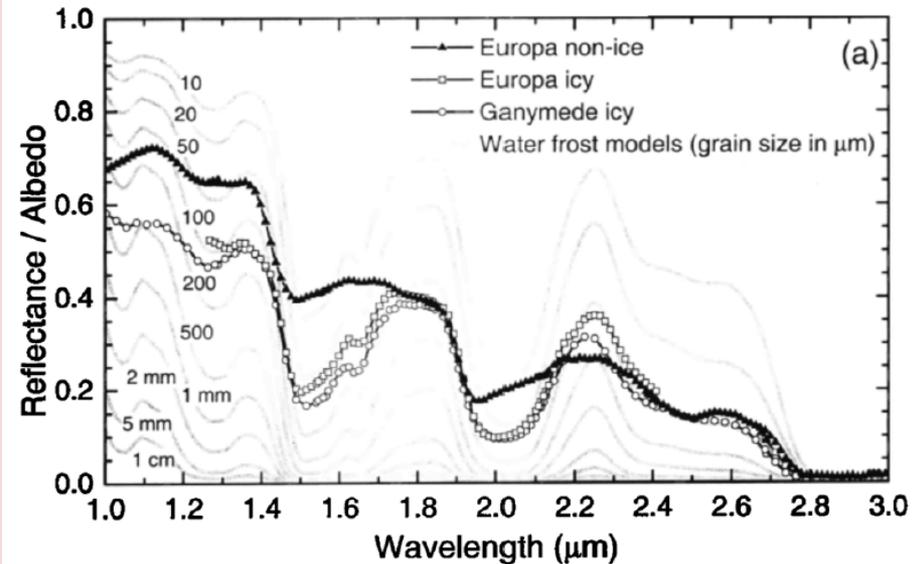
- Observations of asteroids, the giant planets and their satellites, Kuiper Belt Objects, and comets will be possible with WFIRST.
- WFIRST’s 0.28 deg² field-of-view makes it uniquely well-suited for both surveys of minor planetary bodies and time domain studies of variable surfaces and atmospheres.
- There are significant synergies with other observatories and current/future planetary missions.

WHAT IS THE IMPACT?

- WFIRST should consider Solar System science in its mission design and planning. The science return and inter-disciplinary community support will greatly benefit WFIRST’s mission.

WHY DOES IT MATTER TO NON-SCIENTISTS?

- Even non-scientists are excited about the new Solar System discoveries and mysteries that NASA’s observatories and missions reveal every day.



Comparison of ice-rich and ice-poor regions on the surface of Europa. The differences between these regions are easily detectable using the IFC on WFIRST (~10 pixels across the whole disk). From McCord et al. (1999).

*The Solar System Working Group presents a community-led assessment of the capabilities of WFIRST for Solar System science in a new white paper:
B.J. Holler (STScI), S.N. Milam (NASA/GSFC), J.M. Bauer (UMd), and the SSWG, on arXiv: <http://arxiv.org/abs/1709.02763>.*