Abstract Submitted
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NASA and Dark Energy JASON RHODES, NASA JPL — Dark energy, the name given to the cause of the accelerating expansion of the Universe, is one of the most profound mysteries in modern science. Current cosmological models hold that dark energy is currently the dominant component of the Universe, but the exact nature of dark energy remains poorly understood. There are ambitious ground-based surveys underway that seek to understand dark energy and NASA is participating in the development of significantly more ambitious space-based surveys planned for the next decade. NASA has provided mission enabling technology to the European Space Agency's (ESA) Euclid mission in exchange for US scientists to participate in the Euclid mission. NASA is also developing the Wide Field Infrared Survey Telescope-Astrophysics Focused Telescope Asset (WFIRST-AFTA) mission for possible launch in ∼2023. WFIRST was the highest ranked space mission in the Astro2010 Decadal Survey and the AFTA incarnation of the WFIRST design uses a 2.4m space telescope to go beyond what the Decadal Survey envisioned for WFIRST. Understanding dark energy is one of the primary science goals of WFIRST-AFTA. I'll discuss the status of Euclid and WFIRST and comment on the complementarity of the two missions.

Jason Rhodes
NASA JPL

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