

Abstract Submitted  
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**Dark Energy Research: A Space Odyssey** OLIVIER DORE, JPL/Caltech — Dark energy, the name given to the cause of the accelerating expansion of the Universe, is one of the most tantalizing mystery in modern physics. 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. Understanding dark energy is one of the primary science goals of WFIRST-AFTA. This talk will review the state of Dark Energy science, the relevant activities of the Physics of the Cosmos Program Analysis Group (PhysPAG), and detail the status and complementarity of Euclid and WFIRST.

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