ID de Contribution: **23** Type: **Non spécifié**

LSST survey of the Vera Rubin Telescope

mardi 14 septembre 2021 09:30 (25 minutes)

In this talk, I will present the Vera Rubin Observatory Legacy Survey of Space and Time (VRO LSST). During the next decade, VRO will obtain high-resolution optical images of the Southern Sky at unprecedented depths. LSST is designed to address four science areas: probing dark energy and dark matter, taking an inventory of the solar system, exploring the transient optical sky and mapping the Milky Way.
VRO public alert stream will communicate the detection of millions of potential transient objects every night. The key to use this stream is to be able to select promising transients and to automatically connect with multi wavelength facilities. I will introduce Fink, a broker developed on high-end technology and designed for fast and efficient analysis of big data streams. Fink enables the selection of promising transients by providing preliminary classifications and combining information from multiple channels (both surveys and catalogues). Within minutes, Fink is able to communicate these candidates to teams and follow-up facilities. Fink opens a new way of combining data from LSST and other time-domain surveys and will be key for analyses ranging from transient astrophysics to cosmology.

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Classification de Session: Multi-messenger astrophysics