VERA C. RUBIN OBSERVATORY

Refining the Alert Follow-Up System

Intro: Bryan Miller

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Background

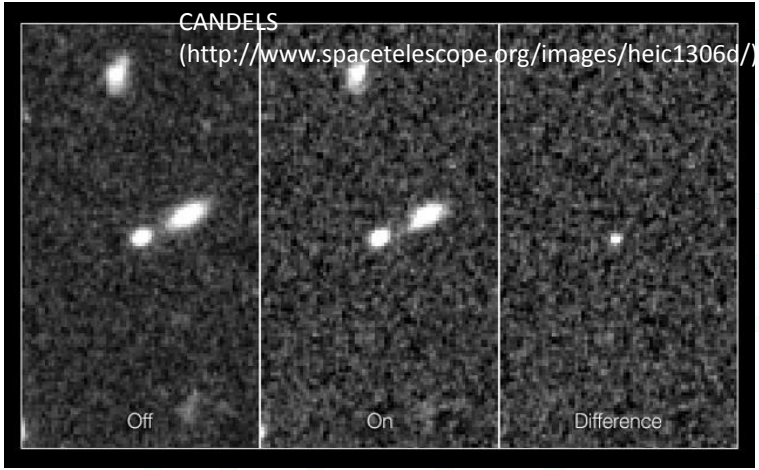
Rubin/LSST will be generating thousands of transient alerts every few minutes.

For many new transients photometry alone is not enough to characterize => follow-up with other facilities will be needed.

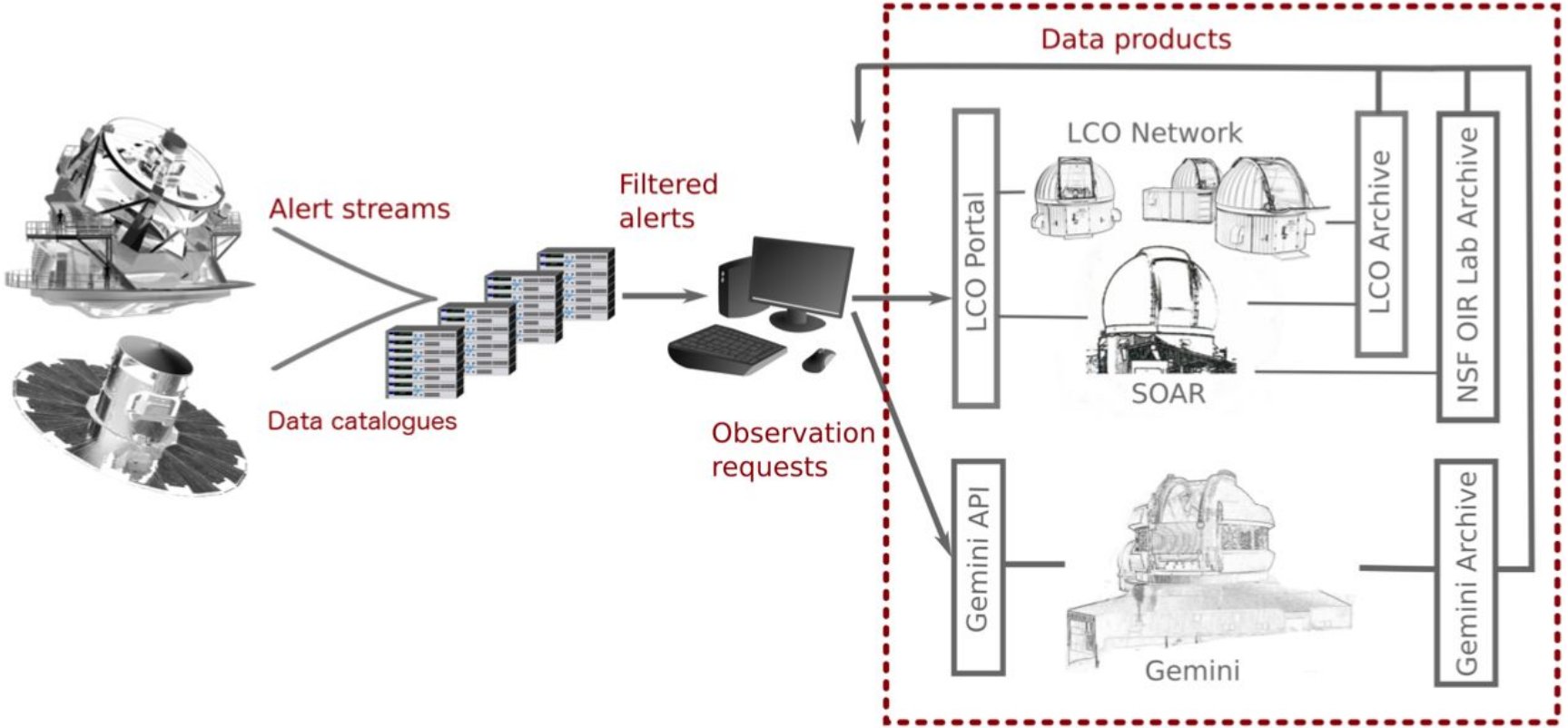
High alert rates => automated workflows to get the most out of the various alert streams.

Following up multi-messenger events rapidly has similar needs.

The community has been busy developing tools and systems to accomplish this.



Transient detection from difference imaging



Surveys
LSST
ZTF
Gaia
ASAS-SN
++more

Brokers & Catalog Servers
ANTARES, Lasair
ALeRCE, Simbad
Vizier, MAST, CADC,
++ more

TOM Systems

Astronomer-led projects

AEON
Astronomical Event Observatory Network

Extendable network of programmatically-accessible telescope facilities

Background

This session summarizes some of the progress since the last similar session in 2019.

An extension of the morning session on transient identification.

If we don't have time for your question, please put it on Slack

day3-wed-1400-alert-follow-up

https://rubin2023pcw.slack.com/archives/C05KMV2SC3C

Please think about existing and future needs in TDAMM and consider contributing to the Windows on the Universe workshop in October

https://noirlab.edu/science/events/websites/MMA2023

Agenda

- Intro (Bryan Miller)
- New GCN Alert System (Leo Singer, 10 min)
- Rubin Alert Plans and Broker Selection (Eric Bellm, 10 min)
- ANTARES Broker (Tom Matheson, 10 min)
- Alerce Broker (Alejandra Muñoz, 10 min)
- Pitt-Google Broker (Michael Wood-Vasey, 10 min)
- TOM Toolkit and Related Tools, AEON @ Las Cumbres (Rachel Street, 10 min)
- AEON @ NOIRLab (César Briceño, Bryan Miller, 15 min)
- Rubin In-Kind Telescope Contributions (Steve Margheim, 10 min)