

Scalable Cyberinfrastructure to support Multi-Messenger Astrophysics



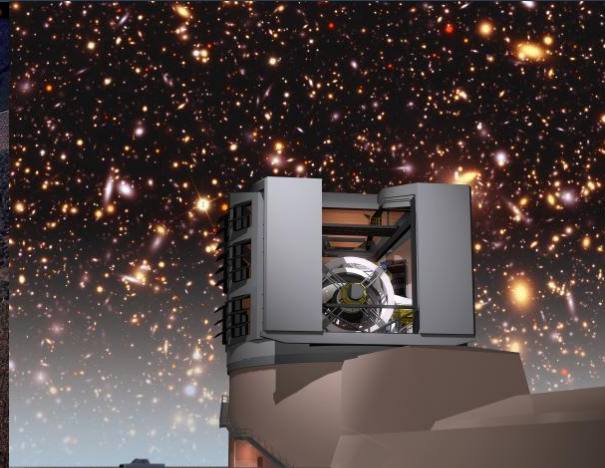
NSF OAC-1841625: Community Planning for Scalable Cyberinfrastructure
NSF OAC-1934752: A Framework for Data Intensive Discovery in Multimessenger Astrophysics

MMA: sample science drivers

High-energy neutrinos detected and localized to a galaxy cluster trigger electromagnetic follow-up of a tidal disruption event.

Early-warning of compact binary mergers via gravitational waves allowing the detection of the earliest phase of the electromagnetic counterpart.

A Galactic or Local Group supernova observed across all the messengers.

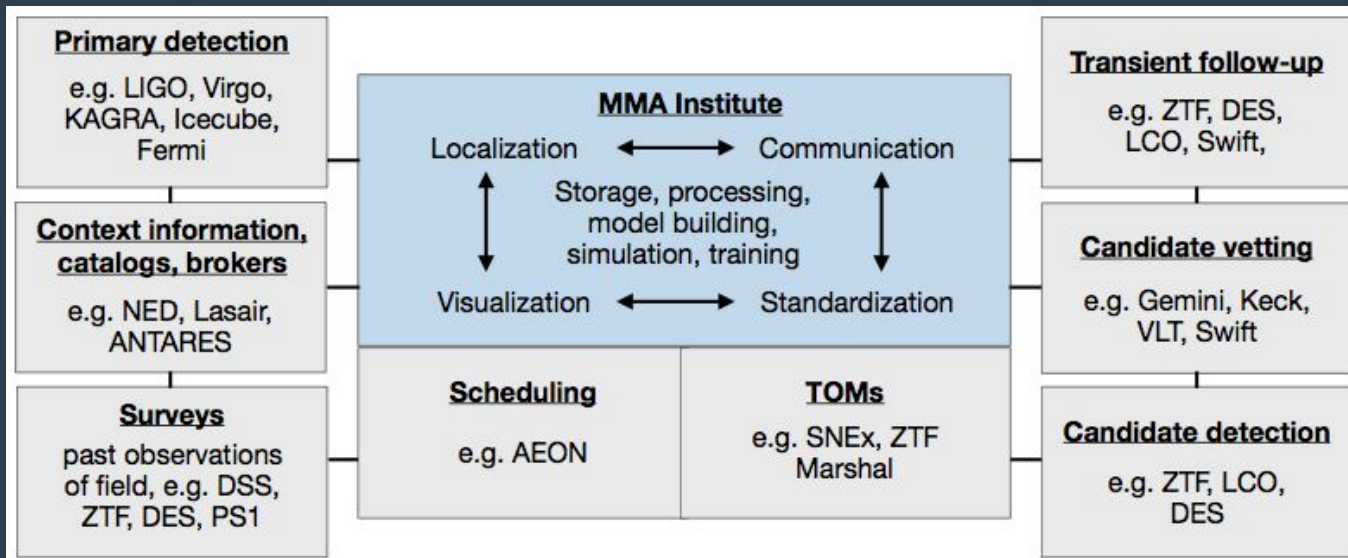


SCiMMA activities 2018-2019

Workshop summaries & white papers
<https://scimma.org/documents.html>

- **Exploration & documentation of disiderata:**
 - Workshops: Deep Learning @ NCSA, SCiMMA @ NYC, SCiMMA Inference @ UCSB.
 - Systems, Data Management, Inference & Machine Learning, Modeling and theory, Education & workforce development, Policies & Management.

Data flow &
collaborative network
of people and
instruments



SCiMMA activities 2019-2021

- Framework for Data Intensive Discovery in Multi-messenger Astrophysics
 - Prototype solutions that address immediate needs
 - Baseline design for an institute to support MMA into the 2030s

