

4th TDAMM Workshop

- Theme

- Developing community observing plans for rapid follow-up of explosive transients

- Motivation

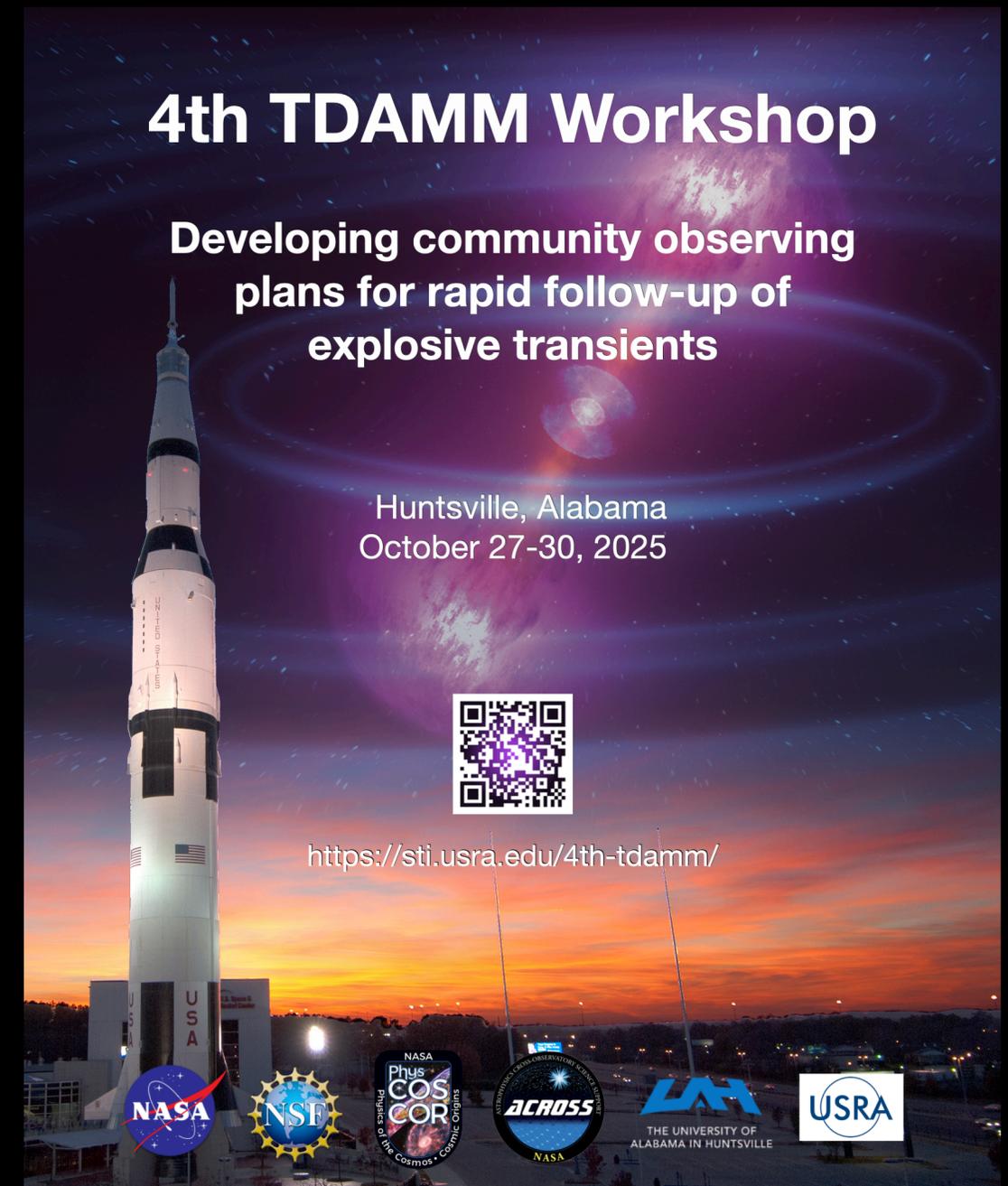
- Define and prioritize science cases, triggering criteria, and the essential follow-up observations desired by the community so that observatory science teams can pre-coordinate plans and efficiently execute community-driven observations.

- Date/Location

- Oct 27-30, 2025 in Huntsville, Alabama

- Sponsors/Organizers

- ACROSS, PhysCOS, NSF NOIRLAB, USRA, UAH



4th TDAMM Workshop

Developing community observing plans for rapid follow-up of explosive transients

Huntsville, Alabama
October 27-30, 2025



<https://sti.usra.edu/4th-tdamm/>



Acknowledgments

- Thank you to the funding sponsors of the workshop
 - NASA Astrophysics Division
 - National Science Foundation
- Local organizing committee
 - NASA's Marshall Space Flight Center
 - NASA's Physics of the Cosmos Program Office
 - University Space Research Alliance (USRA)
 - University of Alabama, Huntsville
- Science Organizing Committee (SOC)



Latest in a Series of TDAMM Workshops

- The TDAMM workshops have provided a collaborative forum to define TDAMM science priorities and identify policy changes to help maximize the scientific return of this emerging field
- 1st TDAMM Workshop (2022, Annapolis, MD)
 - Identified and prioritized the top science questions for TDAMM astrophysics
- 2nd TDAMM Workshop (2023, Tucson, AZ)
 - Focused on infrastructure, coordination, and policy challenges (alerts, ToO policies, data rights)
 - Provided recommendations for establishing community observing plans
- 3rd TDAMM Workshop (2024, LSU)
 - Focused on improving multidisciplinary science in the multimessenger era

Motivation for the 4th Workshop

- Recommendation from the 2nd TDAMM Workshop (Ahumada et al. 2023)
 - “For the most exceptional sources (e.g., next nearby GW counterpart, Galactic supernova), the MMA/TDA community should work with observatory staff to predefine observing programs whose data would become publicly available immediately upon triggering”
 - “The observatories should invite MMA/TDA experts from the community to define the scope of the program instruments to be used, trigger criteria, cadence, etc”
 - The program can set up a rotating executive committee for defining and updating its policies, including identifying people who can trigger, credit and authorship in publications, etc.
- This is what we are gathered here this week to accomplish

Goals of the 4th TDAMM Workshop

- Define and prioritize science cases and the essential follow-up observations desired by the community so that observatory science teams can pre-coordinate plans and efficiently execute community-driven observations
- Define the scope of the instruments to be used, trigger criteria, cadence, etc
- Determine the strategy for defining and updating the observing plans, including identifying people who can trigger, credit and authorship in publications, etc.
- Determine how best to fund and support the community who would analyze the data obtained through these programs
- Determine what, if any, proprietary period should be placed on data taken through these programs
- Identify any cross-agency opportunities

Scope of the Community Observing Plans

- The community observing plans are intended to only be used for the most exceptional of sources
- The plans are not meant to replace all community-triggered follow-up of time-domain sources
- The plans are intended to ensure that the community does not miss out on collecting data for the rare sources that...
 - Offer unique multi-messenger opportunities, or
 - Require rapid coordination across facilities to fully capture their evolution
- Establishing detailed triggering criteria will be an important part of the observing plans that we will be defining

Source Class Identification

- The Science Organizing Committee was assembled in part to determine the source classes that would most benefit from the establishment of community observing plans
- Identified 8 source classes that will be the focus of this week's agenda

Gamma-ray Bursts	Neutrinos	TDEs	Novae
X-ray Binaries	Compact Binary Mergers	Magnetars	Supernovae

Structure of the Workshop

- Project updates
- Mission updates
- Infrastructure updates
- Source class sessions
 - Invited talk on the state of the field
 - Presentation on the proposed community observing plan
 - Panel discussion to capture community feedback
- Programmatic and policy discussions
 - How will the observing plans be updated?
 - How will these programs be funded?

Workshop Deliverables

- White paper reports
 - The SOC will generate white papers for each of the 8 TDAMM sources that we will consider this week
 - The SOC will also generate a policy white paper outlining recommendations on how these programs should be governed and funded
- Community observing plans
 - The SOC will also generate actionable observing plans for each source class

The white papers and observing plans will be made open for public comment and community contributions

Your Role This Week

- Be engaged!
 - Actively engage in Q&A and during the panel discussions
- Be specific and pragmatic
 - Focus on actionable coordination steps and policy improvements
- Help ensure the recommendations reflect:
 - Science needs, community needs, operational feasibility, and equitable participation
- Leave with tangible progress towards a living repository of observing plans

Every participant here helps define the next decade of TDAMM science!

Thank you!