

Annual report 2022 – IAU Working Group on Supernovae

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The SN WG continues to work according to its work plan. Several activities have been advancing in parallel:

The Transient Name Server (TNS; <https://wis-tns.org/>), the official IAU instrument for report, distribution, and name assignment to astronomical transients, has now been fully adopted by the community. Reported transient numbers continue to rapidly rise (see: <https://wis-tns.weizmann.ac.il/stats-maps/reports-timeline>) from 500 reports/month when the service was launched to >3000 reports per month in recent years. Development of this infrastructure continues following community needs, including the following recent additions:

- Handling of archiving, reporting and name designation for Fast Radio Bursts (FRBs).
- Launch and wide use of the new AstroNotes utility for reports of interest to the community.
- Ongoing work to add name designations for Gamma-Ray Bursts (GRBs) as well as initial discussions regarding gravitations-wave events (GWs) and X-ray bursts (XRBs).
- We are working with other large initiatives to integrate TNS services with other activities to benefit the community, including services like Treasure Map (<https://arxiv.org/abs/2001.00588>) and the NSF funded SCIMMA (Scaleable Cyberinfrastructure for Multimessenger Astronomy).

We continue to work to improve online supernova data archives, including support and development of the WISeREP archive (<https://wiserep.org>), which now includes online analysis tools.

We expect to request a continuation of this WG beyond 2022.