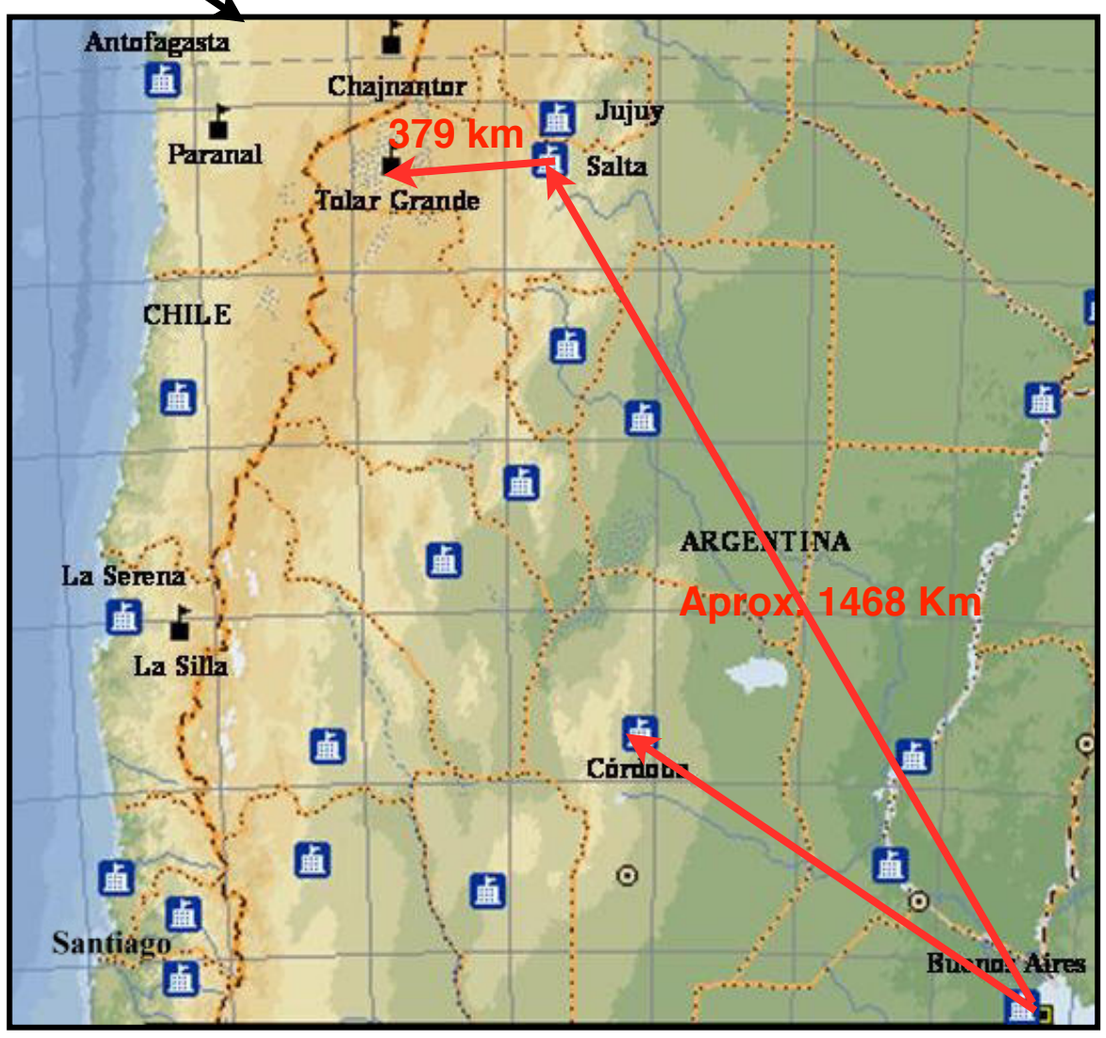
TOROS

Transient Optical Robotic Observatory of the South

New collaboration, new project , new site



- location 24.61 S., 67.32 W.
- Annual median seeing is 0.87 arcsec.
- altitude: 4,650 m.
- Useful nights: 90%.

- Main Goal: Dedicated aLIGO follow-ups.
- Other science: Exo−planet searches, Gravitational Microlensing observations, Rapid follow−up of GRB sources, Supernova light curve determination, Monitoring of variable objects, etc.
- Members:

1. IATE (Instituto de Astronomía Teórica y Experimental, CONICET) and Observatorio Astronómico de Córdoba (OAC) both at Universidad Nacional de Córdoba (Argentina)
2. Mitchell Institute for Fundamental Physics & Astronomy at Texas A&M University (USA):
3. Center for Gravitational Wave Astronomy at the University of Texas at Brownsville (USA).
4. Universidad Nacional de Salta (Argentina).
5. Università Carlo Bo di Urbino (Italy).
6. Los Alamos National Laboratory (USA).
7. University of Warsaw (Poland).

We offer the LVC:

- A fully dedicated facility (TOROS) for the initial search of the EM counterpart. We estimate our facility will be able to survey ~100 square degrees per hour and provide a SNR=10 detection of a V=22 mag transient in that time (under median observing conditions). Telescope 1-m class Schmidt-like with red-optimized 100 Mpix camera.

- In the event of a successful identification, we will provide a precise (~1 arcsecond) localization of the EM counterpart.

- Follow up imaging of the transient at optical and near−infrared wavelengths, using the 1.5 m telescope at Bosque Alegre (Córdoba, Argentina) and the planned 1.2 m ABRAS telescope at Cordón Macón, respectively.

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