
# Transient monitoring programs at PRL Mt Abu Observatory and steps towards and intelligent observatory

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## Abstract

PRL Mt Abu Observatory, located at the highest peak of the Aravali hills in India (altitude ~ 1680 m ), hosts four optical telescopes (diameter~2.5m, 1.2m, 0.5m and 0.43m). My group is actively involved in monitoring blazars, tidal disruption events and GRBs in close collaboration with other facilities using the triggers from GCN, Fermi, MAGIC, HAWC, IceCube etc. We also have been actively collaborating with the South African Astronomical Observatory (SAAO) not only limited to the monitoring programs but also to develop scalable tools helpful for the robotic operations of the telescopes, specifically for the ToO based triggers. Over the last couple of months, we have been involved in the development of modules to enable switchable operability of the 1.2m and 2.5m telescopes at Mt Abu Observatory. The architecture is made generic enough to generate sufficient metadata and to follow an optimized flow. In this meeting, in addition to my brief about our monitoring plans and possibility of further coordinations, I aim to discuss two of our recent major developments: ANVESHIKA: Autonomous Networked Virtual Environment for Scientific Handling and Integration of Knowledge in Astronomy; and the data pipeline for the Faint Object Camera onboard 2.5m telescope. ANVESHIKA addresses the growing need for intelligent, autonomous, and collaborative astronomical data infrastructure, enabling efficient data discovery, access, and visualization in modern observatory environments. This architecture can be used for semi-/fully- robotic operations of the meter class telescopes.