

M@TE - Extending the Coverage of TeV Monitoring

Tuesday, 13 April 2021 18:16 (4 minutes)

Blazars are extremely variable sources showing flux variations on time scales from minutes to years. To study typical variability time scales of few hours to one day, continuous observations are crucial. Furthermore, studying the temporal evolution of the spectral energy distribution is a key to discriminate between different theoretical models for the emission mechanisms and processes underlying the observed variability.

Monitoring at TeV Energies (M@TE) is a project aiming at long-term observations of blazars in gamma rays. Combining these observations with the long-term monitoring carried out by FACT the continuous coverage will be extended to 12 hours. For this, a small imaging air Cherenkov telescope is being installed in Mexico. A mount from a previous experiment is being refurbished and will be equipped with a new SiPM camera. Providing an excellent and stable performance, these semi-conductor photo sensors are ideal for long-term monitoring. The mount, a new drive system and new mirrors are already available. The new SiPMs purchased provide an improved photon detection efficiency. Different options for the production of the light guides are under investigation. Simulations of the different detector components are being implemented. With the observatory of San Pedro Martir, an excellent site has been chosen.

In the presentation, an overview of the project will be given and its status discussed.

Primary author: DORNER, Daniela

Presenter: DORNER, Daniela

Session Classification: Gamma-ray Bursts/SN/Instrumentation-1

Track Classification: Instrumentation