

INAF inside the Cherenkov Telescope Array ICT

F.Gianotti INAF-IASF Bologna for the CTA ASTRI project.

The Cherenkov Telescope Array (CTA) will be the largest ground-based very-high-energy gamma-ray detection observatory in the world with more than one hundred telescopes located in two sites, one in the northern hemisphere and one in southern hemisphere.

The Information and Communications Technology (ICT) system will effectively support the array operations as well as the management and the exploitation of the scientific data.

The Italian National Institute for Astrophysics (INAF) leads the ASTRI project for CTA and has developed the dual-mirror ASTRI SST-2M end-to-end telescope prototype installed in Italy at the INAF observing station located at Serra La Nave, Mt. Etna.

The ASTRI SST-2M prototype is the basis of at least nine ASTRI telescopes that will form the mini-array proposed to be installed at the CTA southern site during its early implementation phase.

In this presentation we will describe the contribution provided to CTA by INAF through its ASTRI project, focusing our attention to the ICT aspects.

Data archiving, real time analysis, telescope control software, Camera Server and Digital Acquisition Software will be briefly illustrated by highlighting aspects related to ICT infrastructures. We will present the ASTRI SST-2M end-to-end prototype computer infrastructure that is already running at Serra La Nave site and its evolution in view of the ASTRI mini-array. Finally, the ICT infrastructures that support the development and integration of ASTRI software will be described.