GLORIA PROJECT COMMUNITY OPEN DAY
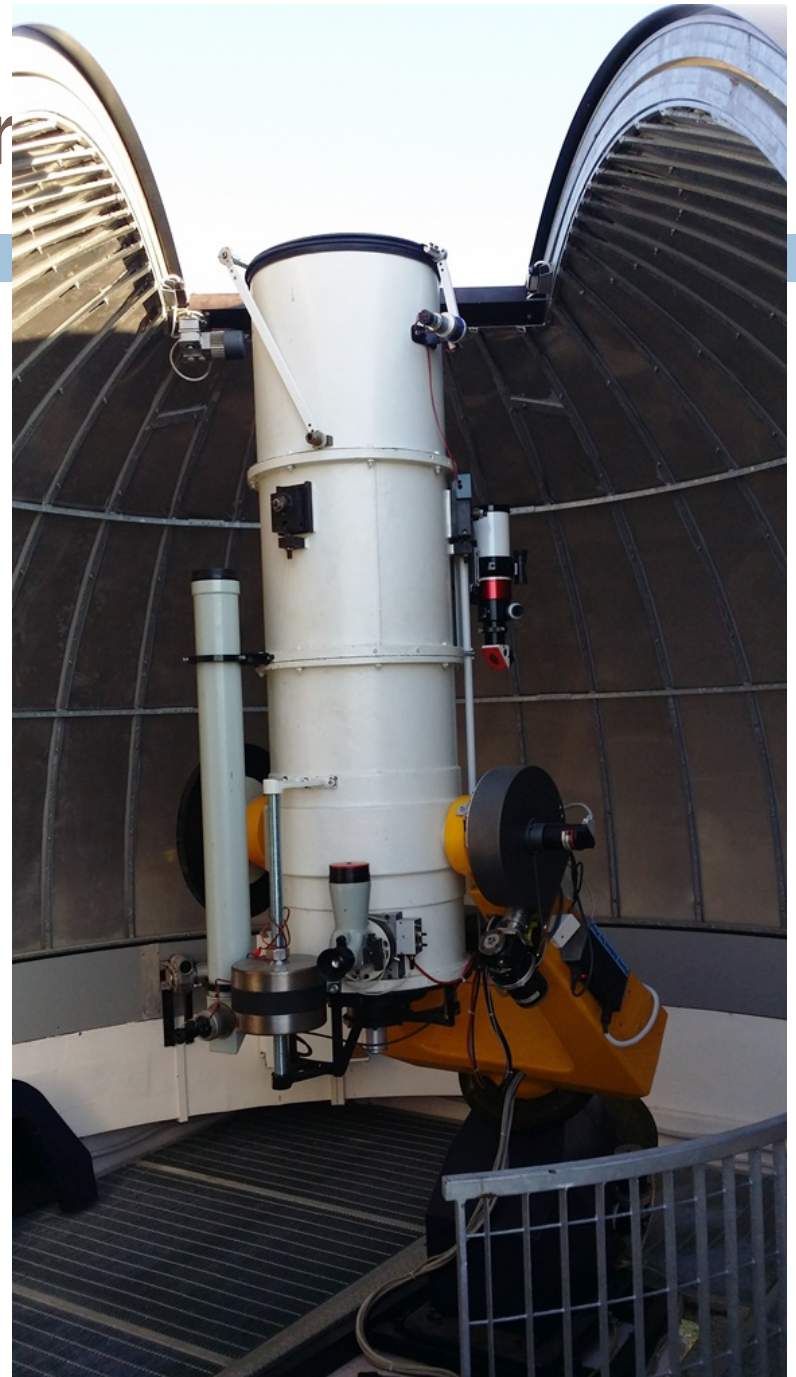
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Teramo Observatory

- The Teramo Observatory is provided with three telescopes (72-cm and 40-cm reflectors, plus a H-alpha solar refractor) equipped with focal plane instrumentation and devoted to remote observations.

Teramo Observator

TNT Main Technical Data

Aperture	*72 cm*
Optical design	*Ritchey-Chrétien*
Focal length	*8.4*
CCD	*Apogee Alta U47 1024x1024*
Pixel FOV	*0.27 /px*
CCD Field	*4 x 4 arcmin2*
Blind pointing accuracy	*< 30 arcsec*
Open-loop tracking accuracy	*< 1 arcsec (5 minutes)*
Closed-loop tracking accuracy	*< 1 arcsec*
Slew rate	*2.5°/sec*

Remotization of the whole system (safety, efficiency, and ease of use)

- Started in the year 2011 it has been completed at the beginning of the year 2012; It will be upgrated within the current year (new ccd, new cameras…)

- Teramo Normale Telescope (72-cm) has already been upgraded to allow safe and full remote controls, without the need of local operators
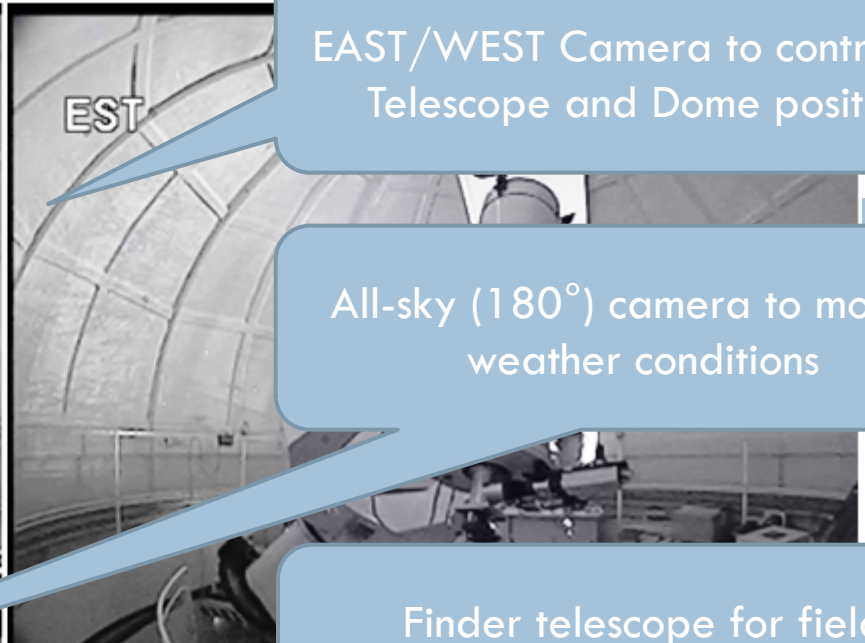
EAST/WEST Camera to control the Telescope and Dome position

All-sky (180°) camera to monitor weather conditions

Finder telescope for field recognition and guiding

Educational projects

- The TNT telescope is inserted in educational projects involving secondary schools

- Students and teachers can carry out atronomical observations directly from the classroom at any time, by using a simple web interface, that manages telescope pointings, ccd acquisitions and *weather control*

Augmented reality - New technologies for museums and exhibition

- Augmented reality mobile application in order to integrate the telescope observation with new user experience

- 3D reconstructions for the main tools in the Teramo observatory Museum

- Realization of new virtual museum areas to integrate other tool or object coming from different structure

3D Reconstruction

☐ Structure from motion algorithm (Yasutaka Furukawa's PMVS/CMVS)

☐ Image-based modeling and rendering
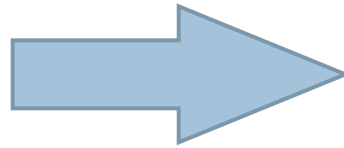
Conclusion and future developement

- New virtual museum areas
  - Planet Room
  - Kircher museum Room

- Animation and modeling

- Educational game project