

THE CURRENT STATUS OF PISCO AT CALERN

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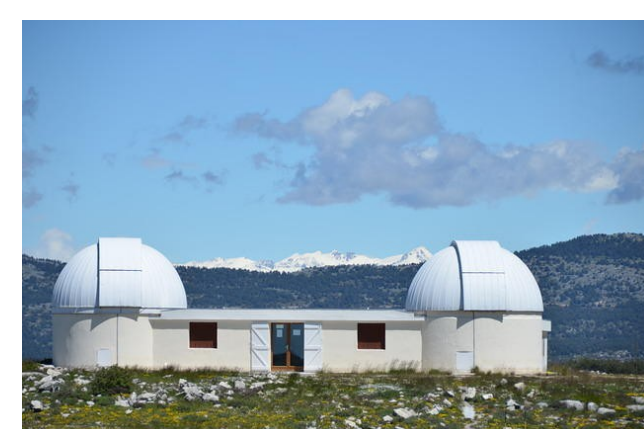
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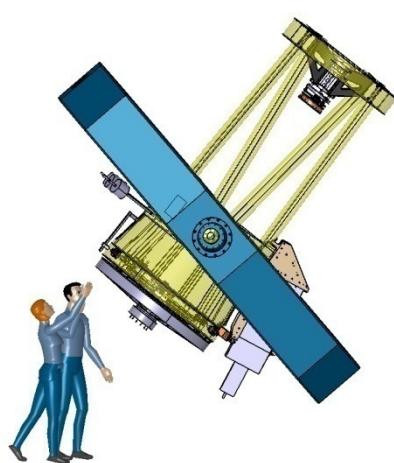
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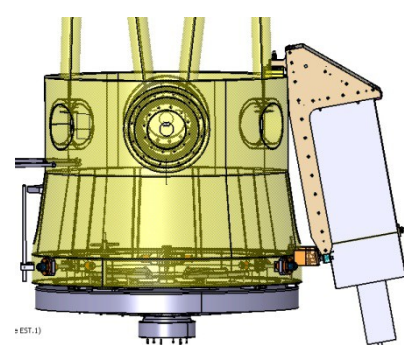
Plateau de Calern



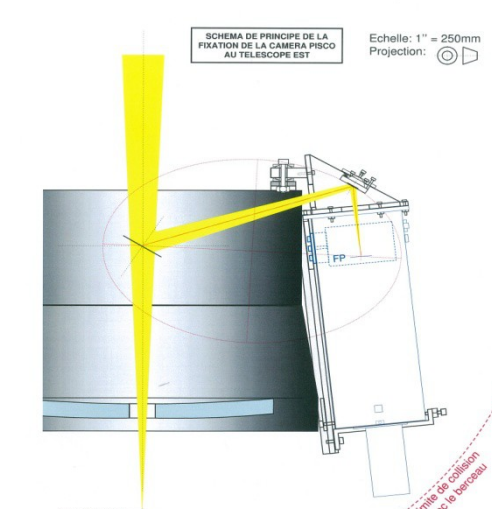
The twin domes of C2PU



Sketch of the Epsilon telescope with PISCO



Detail of the assembly of PISCO



Optical scheme of the Epsilon telescope with PISCO



The Pupil Interferometry Speckle camera and COronagraph (PISCO) is at present operating at the Cassegrain focus of the 102-cm Zeiss telescope of the Merate station of the *Istituto Nazionale di Astrofisica-Osservatorio Astronomico di Brera* (INAF-OAB) 18 miles north of Milan. The idea of transferring it to the Calern station of the *Observatoire de la Côte d'Azur* (OCA) originates with M. Scardia, who announced it at the annual meeting of the *Commission des Etoiles Doubles de la Société Astronomique de France* held in Nice on September 2008. The original plan was to set up PISCO at the coudé focus of the 154-cm MEO altazimuthal telescope atop the Plateau de Calern, but this was not approved.

In 2010, the C2PU framework plan (<https://c2pu.oca.eu/spip.php?article11>) was announced. It results from collaboration between the *Observatoire de la Côte d'Azur* (OCA), the *University of Nice Sophia-Antipolis* (UNS), and the *Collège de France* (CdF) (Bendjoya et al., 2012). Work started to restore and modernize the twin 1-m aperture telescopes, which comprised the former infrared interferometer "SOIRDETE" (Rabbia, 1990), and which had been long out of use because of the conclusion of the original project. At this point, a new proposal to transfer PISCO to Calern was given the go-ahead, and the speckle camera was included with the other instrumentation outlined in the C2PU plan. The news was announced to the international astronomical community during the workshop at Santiago de Compostela in February, 2011 (Scardia et al., 2012). It was then decided to set up PISCO at the *Epsilon* (EAST) telescope, in a fixed position. The *Omicron* (WEST) telescope has been operating since the summer of 2012 whereas the work required to update *Epsilon* (EAST) is almost complete. As is the case with *Omicron*, the Cassegrain and coudé foci will be available on the *Epsilon* telescope. The optical characteristics of the two telescopes and their accessories are listed in the "Excel" table at the web page <https://c2pu.oca.eu/spip.php?article53>. Because of its size (130x40x43 cm) and weight (~ 60 kg), PISCO will be mounted by a solid slide fastened outside the telescope structure, and a flat, high-reflection mirror will feed it.

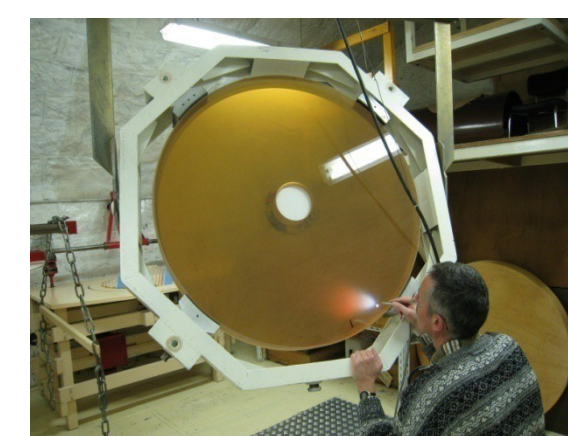
The English-type, equatorial mount restricts the northern limit to a declination of +62°. Like its twin telescope *Omicron*, the pointing of *Epsilon* will be automatic and operated by a PC which will be placed in the control room adjacent to the dome together with the two PCs dedicated to speckle camera control. The transfer of PISCO from Merate to Calern is expected to take place in the summer 2014, and regular observations should start in autumn. Operation will be automated, but, initially, an astronomer will be present to oversee observations and verify the observational results. Thereafter, observations will be made remotely, although, for safety reasons, the presence of someone will be always necessary. When fitted to the *Epsilon* telescope, PISCO will be calibrated in an absolute way by means of the same diffraction grating mask of 130-cm in diameter built in 2005 and used to calibrate the *Zeiss* - PISCO arrangement at Merate (Scardia et al., 2007). When it starts operations, *Epsilon* will be the biggest telescope in the world continuously devoted to the observation of visual binary stars using speckle interferometry.

References

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PISCO at the Cassegrain focus of the Zeiss telescope of INAF-OAB at Merate



A step in the working of the mirror for the EAST telescope



Parabolizing the EAST mirror



Interferential control of one of the flat mirrors.



The Omicron telescope. The Epsilon telescope will be identical.