

## Final project report

<i>Project ID</i>	2002/7.8
<i>Title</i>	Concordiastro/Italia
<i>Principal investigator</i>	Giuseppe Severino
<i>Institution</i>	INAF-Osservatorio Astronomico Capodimonte
<i>Email</i>	severino@na.astro.it
<i>Duration</i>	2 years
<i>Assigned funding</i>	98.119,00 €

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### Activities and results

The goal of the project CONCORDIASTRO/Italia was to qualify from the point of view of solar observations the site of Dome C, in Antarctica, potentially one of the best astronomical site in the world. To this aim we proposed the installation of a 40 cm aperture solar telescope at the French-Italian Concordia station.

The project, approved in 2002 by the CSNA, was financed only partially, i.e. for about 1/3 of the requested budget (30980 € for contracts and travels, and 67139 € for hardware).

The partial funding allowed us to define the technical characteristics of the Antarctic solar telescope including the system for image acquisition. Moreover, thanks to PRIN2004, a funding program of the Italian Department for University and Research (MIUR), we could buy and test the camera, an Apogee Alta 2000 CCD with software MAXIM and LabView, integrated with a Barr filter in the G band (1 nm passband at 430.5 nm). Simultaneously, we worked to make the international community recognise the unique opportunities offered by Dome C for solar observations with high spatial resolution. As a consequence, the Solar Working Group of the European Network ARENA, created at the end of 2007, included the development of solar observations with high spatial resolution at Dome C as one of its goals and picked out a member of Concordiastro/Italia as co-chairman.

On the basis of this effort, we issued two calls for tenders; at the second attempt we received an offer that was qualitatively valid but exceeding the available budget of 67139 € by about 90000 €, confirming that the allocated amount of funds was insufficient for building the solar Antarctic telescope.

We then requested to the competent national scientific institutions to provide the residual amount of money necessary to build the telescope. Unfortunately, our request remained without answer, therefore we were forced to close the project in 2007.

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### Products

#### A – papers in scientific magazines

1. Severino G., Andretta V., Berrilli F., Cascone E., Centrone M., Crisculi F., Del Moro D., Ermolli I., Giorgi F., Jefferies S.M., Magri' M., Moretti P.F., Oliviero M., Parisi L., Porzio V., Smaldone L.A., Straus Th.: CONCORDIASTRO/Italia: A Solar High Resolution Observation Program at Dome C, Mem. SAIIt Suppl. 2, 181, 2003
2. Moretti P.F., Severino G., Andretta V., Berrilli F., Cascone E., Del Moro D., Ermolli I., Parisi L., Porzio V., Smaldone L.A., Straus Th.: CASTEL: Capodimonte Antartic Solar TELEscope, Mem. SAIIt Suppl. 2, 186, 2003

#### B – book chapters

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#### C - proceedings of international conferences

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## Programma Nazionale di Ricerche in Antartide (PNRA)

### D – proceedings of national meetings and conferences

1. Straus, Th., Severino, G., Andretta, V. and the CONCORDIASTRO/Italy team: 2006, "CONCORDIASTRO: Solar Physics at Dome-C?", , IV Convegno della Ricerca Italiana in Fisica Solare e Relazioni Sole-Terra, Trieste, 18-20 October 2005, relazione su invito (pdf file of 10Mb size available on request from severinio@na.astro.it)

### E – thematic maps

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### F – patents, prototypes and data bases

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### G – exhibits, organization of conferences, editing and similar

1. "The Scientific Outlook for Astronomy and Astrophysics: Research at the Concordia Station", Capri 28-30 aprile 2003

### H - formation (PhD thesis, research fellowships, etc.)

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## Research units

Andretta Vincenzo, astronomer, OAC  
Berrilli Francesco, associate professor, Università TorVergata, Roma  
Cascone Enrico, astronomer, OAC  
Jefferies Stuart M., senior scientist, MHPCC, New Mexico University  
Moretti Pier Francesco, contract employee, OAC  
Oliviero Maurizio, astronomer, OAC  
Parisi Leopoldo, technician, OAC  
Porzio Vincenzo, technician, OAC  
Severino Giuseppe, associate astronomer, OAC  
Smaldone Luigi A., associate professor, Università Federico II, Napoli m (dal 2003)  
Straus Thomas, astronomer, OAC  
Tripicchio Alfredo, contract employee, OAC

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**Date: 2009-04-03**

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