

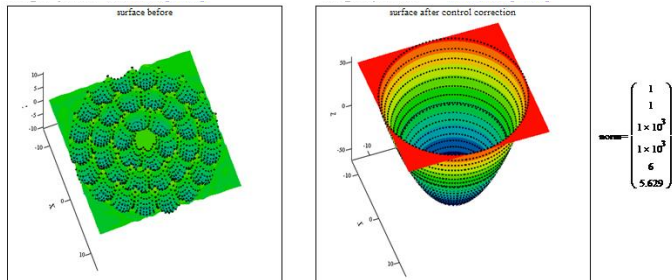


Panorama from CCAT Site on C. Chajnantor Photo: G. Gull

CCAT Moves Toward Not-for-Profit Incorporation

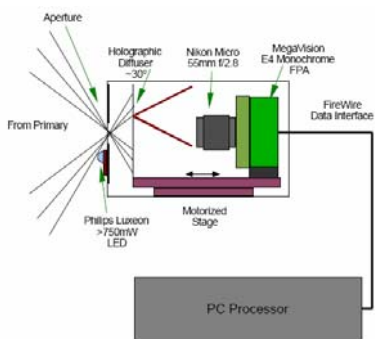
The CCAT Consortium has unanimously approved retaining a Syracuse firm to provide legal services toward forming a not-for-profit business entity to represent the Project. Bond, Schoeneck & King's Higher Education Practice Group provides legal services to about 100 Colleges and Universities on a wide range of topics. The scope of services proposed includes a survey of potential business structures and recommendations to the Board. Upon engagement, BS & K will prepare articles of incorporation, file, and obtain Federal tax exempt status for the Corporation.

CCAT Mirror Modeling & Analysis



David Woody (Caltech, OVRO) and Dan MacDonald (JPL) have achieved significant results in modeling of CCAT primary mirror segment control schemes. Their work reveals that additional sensors are required to address panel curvature driven errors in control. Work continues to identify alternative sensing approaches to ensure robust primary mirror shape control for CCAT.

Adaptive Optics Associates Completes Concept Study



AOA Tilt Sensor Concept

JPL awarded a small concept design study to Adaptive Optics Associates, a Northrup Grumman Company, to develop concepts for a primary mirror panel tilt angle sensor for CCAT. The concept utilizes a visible point source near the secondary mirror and small spherical mirrors attached to each panel. The focused returns are collected on a diffractive screen and the resulting spot pattern imaged by a simple CCD camera. AOA's work included consideration of a number of different potential optical designs, radiometric and signal to noise analyses, and determination of possible precision and accuracy of the system. This inexpensive system provides additional panel position information which supplements that provided by panel edge displacement sensors to resolve problems indeterminacy based problems with panel control law.

Technical Planning Meeting at Caltech

On 13 September a representatives from the CCAT Consortium met in Pasadena to pursue a systematic review of technical risk and identify approaches to risk mitigation for the entire CCAT Observatory. The meeting identified the highest risk areas in each major subsystem and identified several key technical undertakings which will be addressed during the next year. The highest technical risk was accorded to mirror alignment sensing and control followed closely by risk associated with mirror fabrication. Over the next year CCAT will continue to work with contractors to identify cost effective technically acceptable design approaches for critical subsystems. Some element of technical development is being pursued at all CCAT partners during this phase of the Project.



CCAT Meets with U. Colorado Administration

CCAT representatives and senior members of the U. Colorado Department of Astrophysical and Planetary Sciences (ASP) met with Chancellor G.P. (Bud) Peterson in Boulder on 15 October. He and Vice Chancellor for Research, Stein Sture, were enthusiastic in their support for CCAT. Meetings with ASP personnel illustrated the broad and aggressive range of science and technology which this department enjoys. Some specific discussions were held on engineering aspects of the telescope in which ASP may support development over the next year.