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Asteroseismology at Dome C in Antarctica

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Abstract

The Antarctica plateau, at altitudes between 3 and 4 kilometres, offers the best possible sky for many astronomical purposes. Among these are the need for an excellent sky transparency, a heavily reduced level of scintillation and the possibility of very long times of integration only interrupted by rare clouds. So, asteroseismology observations using both photometry and spectroscopy are among the first scientific targets for the next few years at the Italo-French Concordia station, that is now open for winter-over activity since February, 2005.

I briefly described the site testing activity and what we already know of the sky quality, and then the asteroseismic programmes that are likely to start within the next 5 years or so.

DISCUSSION

Hatzes: You are building a telescope in a rather extreme environment. Is there an estimate of how much more it would cost to build and operate it compared to a telescope of the same size at a "normal" site?

Fossat: We have only built telescopes of $25 - 35$ cm diameter so far. The cost of making them work in this region is only about 10% larger. If you are building a large telescope, it may be different. We are not taking into account the logistical costs.

Philippe Mathias, Janine Provost and Er*c Fossat.

Oleg Kochukhov seems happy with his coffee. Behind: Mikhail Sachkov.