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TIME: Tuesday, 3:00 PM, Sep 18, 2012 LOCATION: A601 NAOC

Photometric and Spectroscopic observations from Polar and Space Missions

Dr. Merieme Chadid

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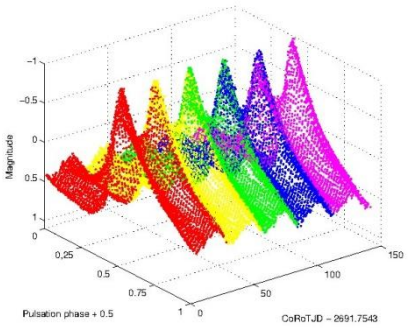
Merieme Chadid is an explorer, professor in the University of Nice, and an astronomer for the Centre National des Astronomes in France. Chadid is the first female astronomer to have led an expedition in the heart of Antarctica as part of a scientific program composed of twenty male scientists. In so doing, she became the first woman to set foot in Antarctica.Merieme earned an MA in physics from the University of Casablanca and then moved to France to study imaging science in Nice. She spent three years in the southeast of France at the Observatoire de Haute-Provence, where she obtained a PhD on her study, "Stellar Pulsation and Evolution," exploring a mysterious class of pulsating stars. She obtained a post as an engineer astrophysicist at the National Center for Scientific Research (CNRS) in Montpellier, France. While there, she was selected by the European Southern Observatory as one the first working astronomers to install and run the Very Large Telescope (VLT) on Paranal Mountain in the Atacama Desert in Chile, the driest desert in the world. One of her proudest accomplishments has been her successful installation of astronomical experiments at Dome C in the South Pole.

Abstract

In the context of long and continuous time–series photometric and spectroscopic observations, and after the MOST, CoRoT, KEPLER & Hubble space missions and large geographic longitude ground–based networks, a new method is offered by the polar location helping to cope with the problem associated with the Earth’s day-night cycle. In this talk, we present the first long time-series photometry from Dome Charlie in the heart of Antarctica and the analysis. Using the 40-cm telescope and Photometer AntarctIca eXtinction, named PAIX, we will show how the high-precision CCD photometry with a very good time resolution can be undertaken at Dome Charlie in Antarctica, even with the low-cost commercial components and under very harsh working conditions, and can help in completing time series astrophysical measurements, and challenge photometry & spectroscopy from space.



Two–dimensional CoRoT light curve of V1127 Aql folded with the pulsation period (0.355996 d) over five Blazhko cycles. The variations in the light curve due to the Blazhko effect are clearly visible (Chadid et al. 2010, A&A 510, 39).

All are welcome! Tea, coffee, biscuits will be served at 2:45 P.M.

You are welcome to nominate speakers to Shude Mao (shude.mao@gmail.com), Licai Deng (licai@bao.ac.cn), Xuelei Chen (xuelei@cosmology.bao.ac.cn).