

## **First light of BTFI on SOAR**

The Brazilian Tunable Filter Imager (BTFI) is a 3D-spectroscopy instrument mounted on SOAR which will produce data cubes with resolutions between 50 and 35000, covering a field of  $3 \times 3$  arcmin<sup>2</sup>. It was moved from the University of São Paulo to La Serena in June 2010 and it was mounted and tested on SOAR between July 5<sup>th</sup> and 31<sup>st</sup>. Only the low-resolution arm has been commissioned so far while the high resolution, high finesse, Fabry Perot plates will be installed only in 2011. BTFI may be used for the study of a variety of topics, from solar system bodies, stars, interstellar medium, galaxies, to cosmology.

BTFI was developed in the last four years by a team from the IAG, Poli/USP, INPE, Unipampa and UESC, in Brazil and Laboratoire d'Astrophysique de Marseille and University of Montreal. It was funded by FAPESP, LNA, CNPq and the ARCUS program (an international collaboration between Brazil and France). The first light of the instrument was on July 28<sup>th</sup>, when the Saturn planetary nebulae was observed with a resolution of  $R=100$ , in the region 4800Å to 5300Å. In Fig. 1 we show a composite image of a few selected bands and in Fig. 2 we show a spectrum of the object (the OIII lines are in channels 9 to 12 and Hbeta is in channel 22).

BTFI was initially mounted directly in the Nasmyth focus but the plan is to mount it on SOAR adaptive module in about a year. A second commissioning period for the low-resolution arm is planned for the end of November.

August 16<sup>th</sup>, 2010.

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