

AMOS finalizes a 2.5m telescope for the Physical Research Laboratory in India

This Friday, October 16th, AMOS celebrated in Liège the finalization of a new telescope for the observatory of Mount Abu, located in the north-east of India and operated by the Physical Research Laboratory (PRL). The ceremony was enhanced by the participation of Mr. Willy Borsus, Walloon Minister of the Economy and Vice-President of the Walloon Region; His Excellency Santosh Jha, Ambassador of India to Belgium, Luxembourg and the European Union; the director of the Physical Research Laboratory (PRL), Dr. Anil Bhardwaj; the director of the Aryabhata Research Institute of Observational Science (ARIES), Prof. Dipankar Banerjee, as well as representatives of ULiège, the Royal Observatory of Belgium and AWEX.

This event is a major step in the execution of a contract signed with the PRL in 2016. For 4 years, AMOS designed the instrument, manufactured its components, assembled them and tested the entire system in its workshops. AMOS actually polished all the telescope optics, including the 2.5m diameter primary mirror. After the success of the performance tests, the telescope is now ready for delivery to India.

Now begins the last phase of the project, during which the telescope will be dismantled, and transported by boat and then by truck to the summit of Mount Abu, at an altitude of 1,680 m. It will then be reassembled in the new observatory built for this purpose by the PRL. A new campaign of tests and optimization of its performance will follow, before its final acceptance and the start of scientific observations around mid-2021.

This contract entrusted to AMOS by PRL perfectly illustrates the long scientific collaboration between Belgium and India. It is indeed the third telescope that AMOS has produced for this country, the two previous ones being the Multi-Application Solar Telescope (MAST) located at Udaipur, already for the PRL, and the Devasthal Optical Telescope (DOT) for the Aryabhata Research Institute of Observational Science (ARIES), on the foothills of the Himalayas. With a diameter of 3.6m, the latter is the largest optical telescope in Asia.

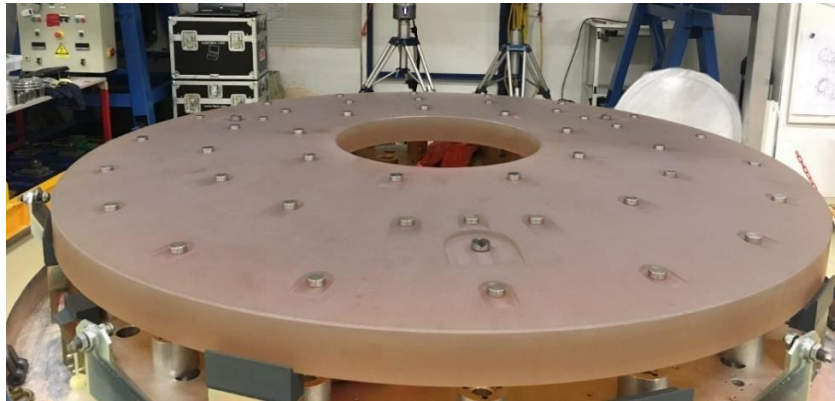
The long-term relationship between AMOS and its Indian partners also extends to the space sector for which AMOS has for example delivered to the Indian Space Agency, ISRO, the optical elements at the heart of the spectrometer of the Chandrayaan II probe, currently orbiting the Moon.

What especially struck Minister Borsus and His Excellency Santosh Jha during this event was the enthusiasm of our Indian partners and the AMOS teams for this fruitful collaboration, and the passion that animated all the interventions, demonstrating that this partnership is a tremendous success.

The Mount Abu telescope is of the Ritchey Chretien type, with a focal length of 20 m. It is equipped with "Active Optics" technology, which dynamically controls the shape of its main mirror with an accuracy of 0.04 microns, using 58 actuators which constantly correct the effects of temperature fluctuations and telescope movements. With a height of 9m, a total diameter of 6.5m and a mass of 55 tons, it is capable of making world-class observations by carrying three different observation instruments that can weigh up to 700 kg in total. It will mainly be operated in combination with a high-resolution spectrograph used for PRL research, including the study of exoplanets, the evolution of the solar system and other cosmic phenomena.



The Mont Abu 2.5m telescope



The 2.5m diameter primary mirror during installation of its fixing pads



The Mont Abu Observatory : the new telescope building is on the right

Ceremony held on October 16 in presence of Minister Willy Borsus



Speeches by Philippe Gilson, CEO, and Xavier Verians, Business Development Director of AMOS



Speeches by Olivier Pirnay, AMOS Project Manager, and Indian partners: Prof. Banerjee, director of ARIES; Dr. Bhardwaj, director of the PRL; His Excellency the Ambassador of India to Belgium S. Jha.

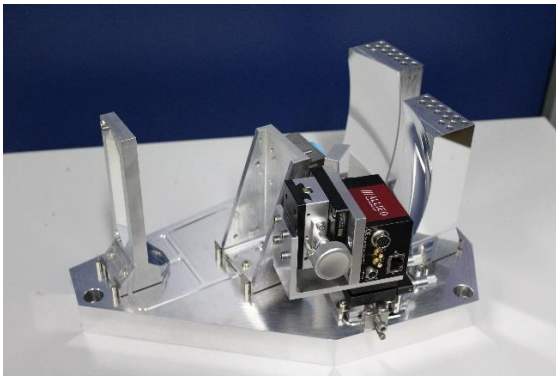


The AMOS project team, with Minister Willy Borsus

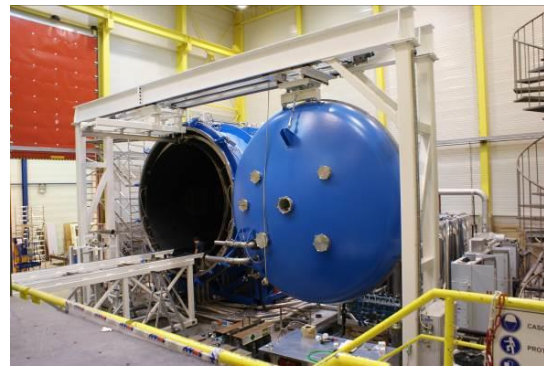
AMOS in a few words

Located in Belgium, AMOS has been designing and building high-precision optical and mechanical equipment for more than 35 years. Its main achievements are professional telescopes, space optical systems, test equipment for space instruments, and high-precision mechanical equipment. It employs more than 100 employees highly skilled in advanced technologies and offers services to the space industry, to the professional astronomy sector, to scientific laboratories and to industry.

AMOS has customers in Europe (ESA, ESO, AIRBUS DEFENCE & SPACE, THALES ALENIA SPACE, OHB), in United States (AURA), in India (ISRO, PRL, ARIES), and has more recently expanded its business in countries like China, Turkey and Russia.



Spectrometer of the ELOIS hyperspectral camera



Thermal-vacuum Test Facility for VSSC (ISRO)



ATS (Auxiliary Telescope Systems),
“mobile” telescopes of the VLTI in Chile (Cerro Paranal)

More info: www.amos.be

PRL : <https://www.prl.res.in/prl-eng/> ; <https://www.prl.res.in/~miro/>

ARIES : <https://aries.res.in/facilities/astronomical-telescopes/36m-telescope>

ILMT : <http://www.ilm.t.ulg.ac.be/home/>

MAST - Udaipur Solar Observatory: <https://www.prl.res.in/prl-eng/division/usob>

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