

ILMT Project Status: After November 2016

- Progress since November 2016
- Future plans



ILMT compressor, control and main ILMT buildings



Progress since November 2016

- **Compressor : 27/02/2017–02/03/2017** (Gardner Denver)
 - Two air compressors and air tanks
- **Mechanical structure: 02/03/2017–20/03/2017** (AMOS)
 - Pneumatic air system
 - ILMT structure erection
 - Preliminary optical corrector installation
- **Fitting the pneumatic control system: 08/05/2017-17/05/2017**
 - Include installing pneumatic valves, filters, dryers, dew point sensor, pressure sensor, temperature sensor, ...

Current Status: Air compressor and air tank

- Installation during 27 February-1st March 2017, by the Gardner-Denver company
- Pipeline fitting completed.
- Two were installed to avoid interruption, by making auto-switching (e.g during maintenance).
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View of the ILMT compressor room

Mechanical structure: Transportation of container of ILMT equipment 02/03/2017



ARIES and Liège University team helped AMOS mission

Mechanical structure: Joint inspection of stored ILMT equipments



A joint committee inspection team, inspected the stored equipment and mirror. No major damage seen though there was rusting, etc, plus some cracks on mirror edges.

Mechanical structure: Pneumatic air control system

- Installed by AMOS, during their 02-20 March 2017 mission.
- To secure it further, security valves, air dryers, and air filters have been later mounted (during Prof. Paul Hickson's visit).



Pneumatic air control system in the ILMT main dome building.

Mechanical structure: main mission

02/02/2017-20/03/2017



Erection of the ILMT structure on 4/3/2017.



Erection of the ILMT structure on 5/3/2017.

Mechanical structure: main mission

02/02/2017-20/03/2017



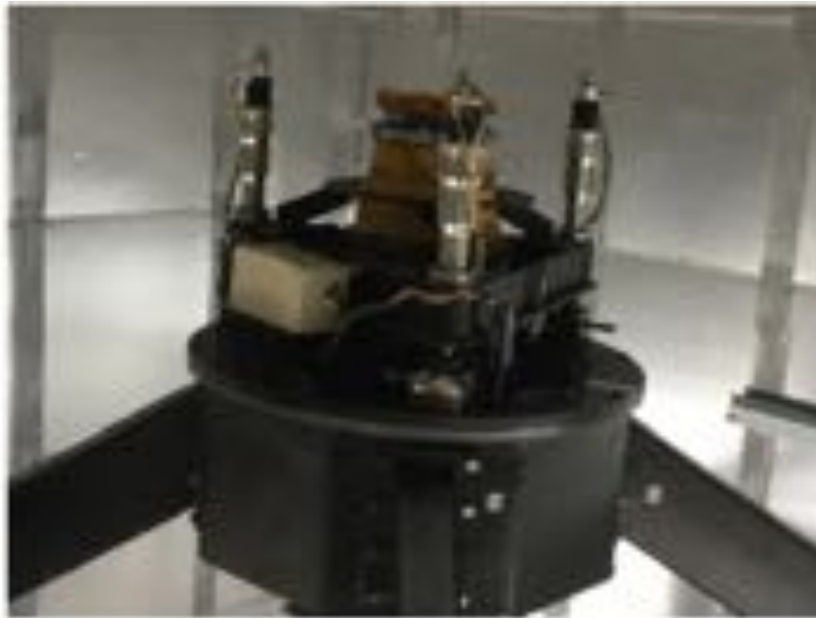
The platform to access the prime focus 9/3/2017.



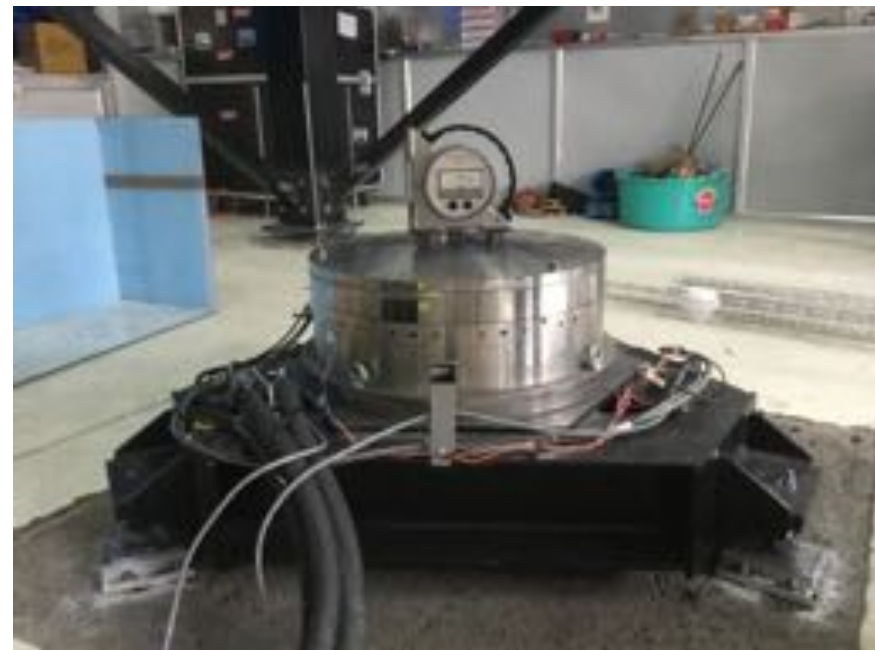
Central structure to hold the optical corrector on 10/3/2017.

Mechanical structure: main mission

02/02/2017-20/03/2017



The optical corrector assembled with the tip-tilt and focus adjusting device.



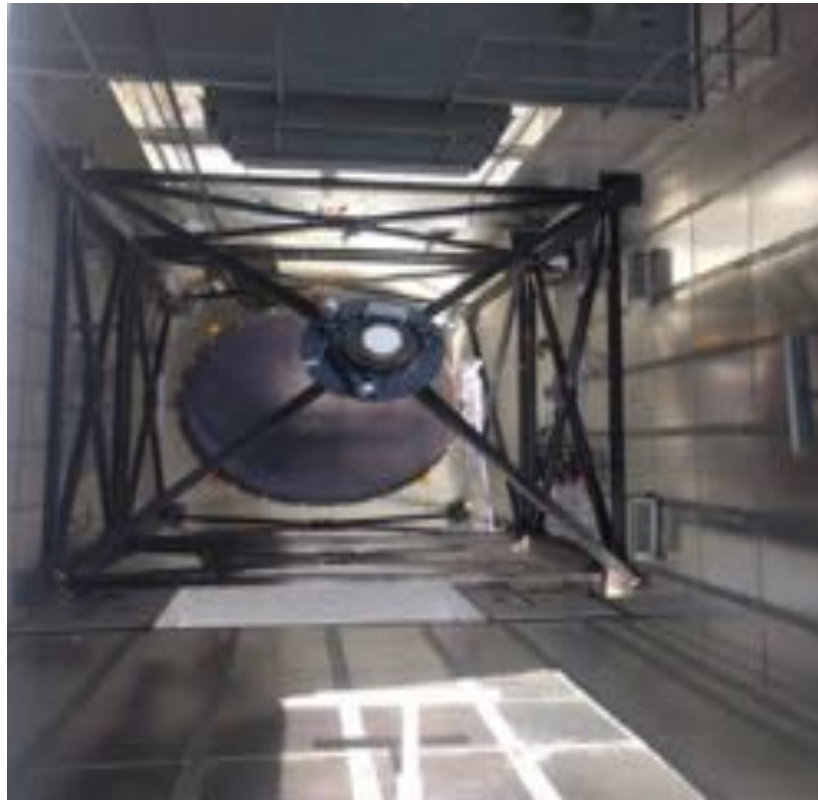
Positioning and centering of the air bearing just below the optical corrector.

Mechanical structure: main mission

02/02/2017-20/03/2017



ILMT mirror, the air bearing, after new epoxy flooring.



ILMT view from the top: the optical corrector is superimposed over the mirror.



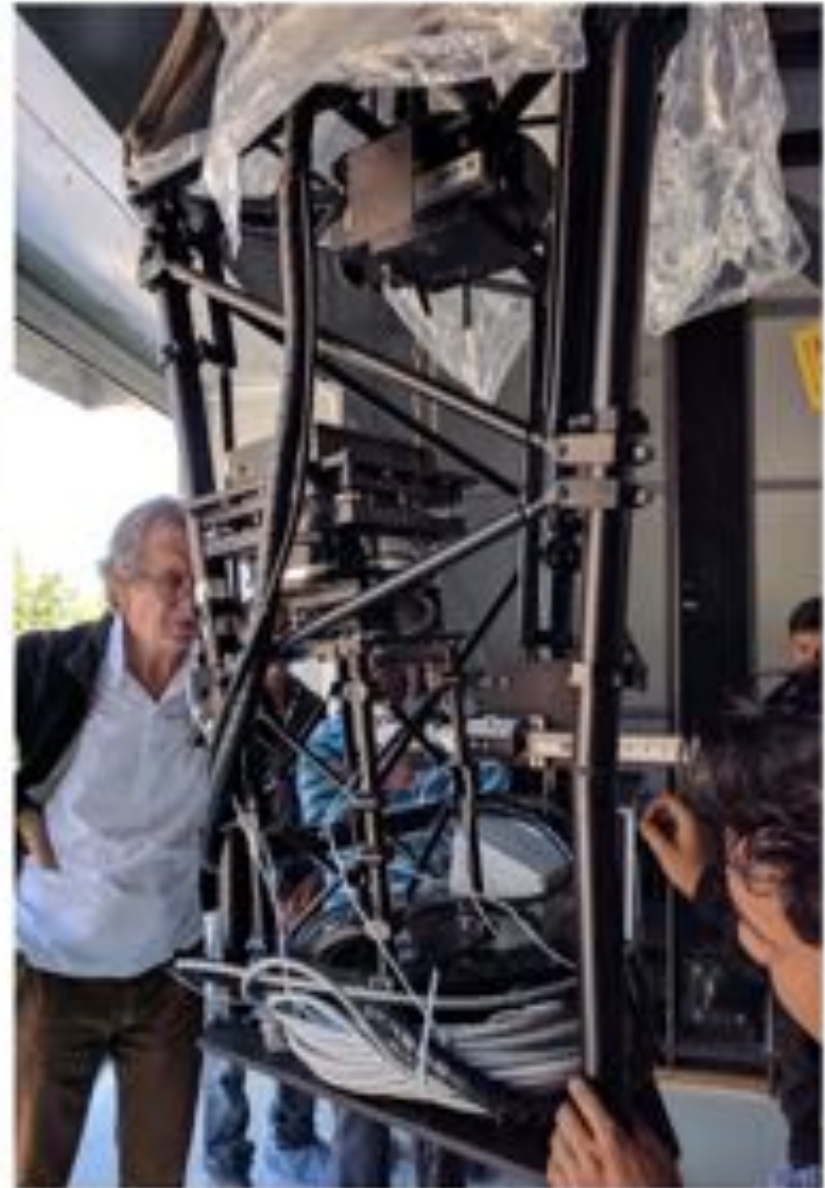
Overall summary of ILMT status since November 2016

- Compressor : 27/02/2017–02/03/2017 (Gardner Denver)
 - Two air compressor s and air tanks
- Mechanical structure: 02/03/2017–20/03/2017 (AMOS)
 - Pneumatic air control system
 - ILMT structure erection
 - Preliminary optical corrector installation
- Control system for Pneumatic system: 08/05/2017-17/05/2017
 - Filters, valves, dew point sensor and their control system mounted.
 - Work on observatory control system also carried out.



Bad surprise

- **During our present visit (October 2017):** The mechanical interface between the optical corrector and the CCD camera has been unpacked and found to be damaged (discussions are presently taking place between AMOS, the transporter and the insurance provider)







Future plans

- **Immediate next (October 2017):** Mirror crack repair being done.
- For different orientations of the air bearing w.r.t the mirror container, the “vertical run-out” and “tilt stiffness” measurements are being carried out in order to determine the optimal relative orientation
- AMOS mission for mirror control system in **March 2018 is envisaged.** Prof. P. Hickson also plans to be present.
- **First light planned during spring 2018:** final check on the integration of the pneumatic, mirror control and observatory control systems is planned to achieve this key mile stone.