

AMOS and Airbus Defence and Space deepen their collaboration in the frame of the METImage mission

Airbus Defence and Space selected AMOS to deliver critical parts of the METImage Earth Observation optical instrument for the second generation of the EUMETSAT Polar System. The METImage instrument described herein will be developed by an industrial team led by Airbus Defence and Space GmbH on behalf of the German Space Administration DLR with funds from the German Federal Ministry of Transport and Digital Infrastructure and co-funded by EUMETSAT under DLR Contract No. 50EW1521.

METImage is a visible and infrared imaging spectro-radiometer which will be embarked on the series "A" of the METOP Second Generation weather satellites. These three polar-orbiting spacecraft will provide detailed information on clouds, cloud cover, land surface properties, as well as oceans, ice, and land surface temperatures, contributing to future improvements to meteorological and climate forecasting. The launch into a sun-synchronous orbit is planned for 2021.

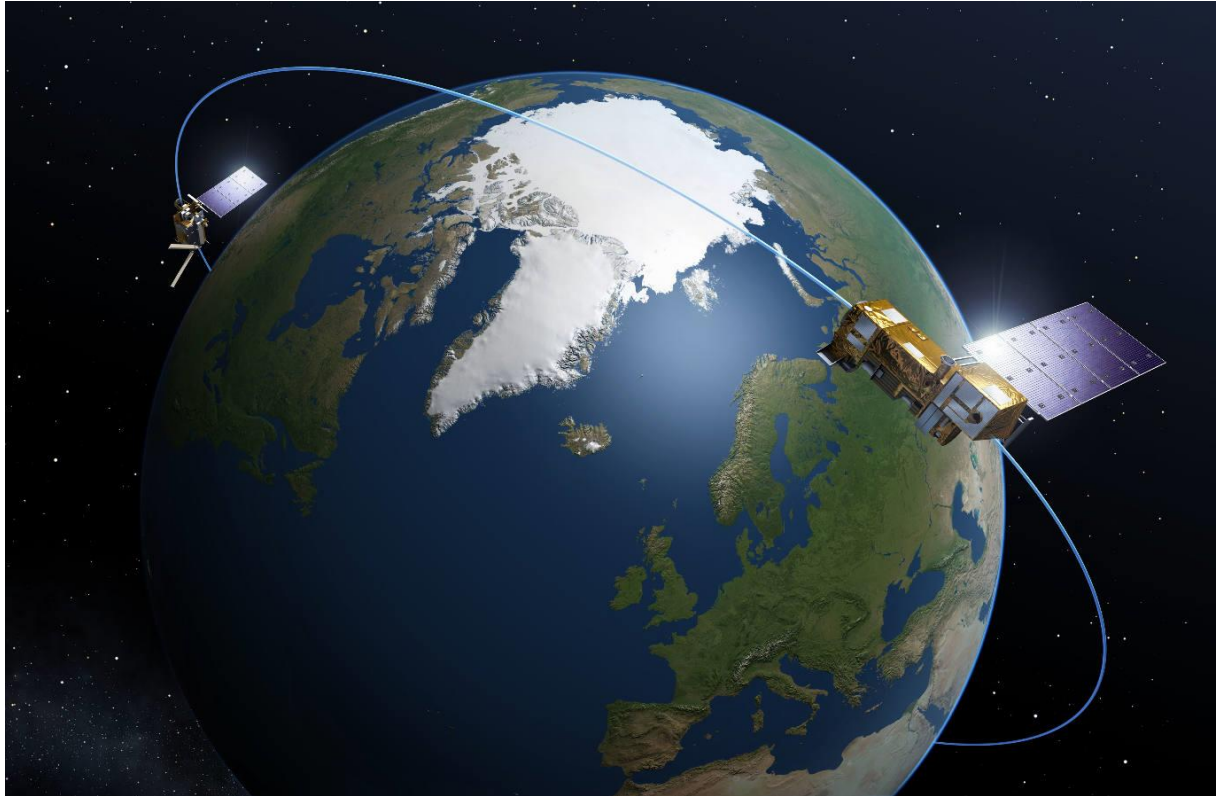
Airbus Defence and Space, after having contracted AMOS for the scan mirror of the instrument in January 2017, is now choosing AMOS again to design and manufacture the optics of the telescope and the derotator of the instrument.

The telescope will be made of strongly aspherical and lightweighted zerodur mirrors in order to meet the stringent instrument size and mass constraints.

The derotator will be composed of a set of flat mirrors assembled on a rotating structure. The purpose of this complex opto-mechanical sub-system is to ensure a regular imaging geometry on the detectors over the full angular range realized by the scan mirror.

Both projects require AMOS to manufacture optical elements with the ultimate precision. The surface accuracy of those components should be down to a few nanometers, while the roughness shall be better than 0.4 nm. This means that the "bumps" and "digs" on the surface shall be smaller than the diameter of 2 atoms on average !

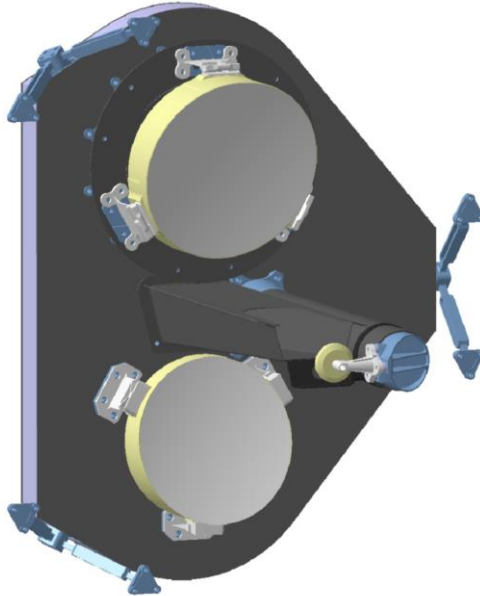
"We are very proud of the trust that Airbus Defence and Space once again places in AMOS by signing these two major contracts ", declared Philippe Gilson, CEO of AMOS. "Few companies in Europe can build such instrument. Furthermore, it is very gratifying to contribute to a mission which will help improve weather forecasts and our understanding of the dynamics of our climate."



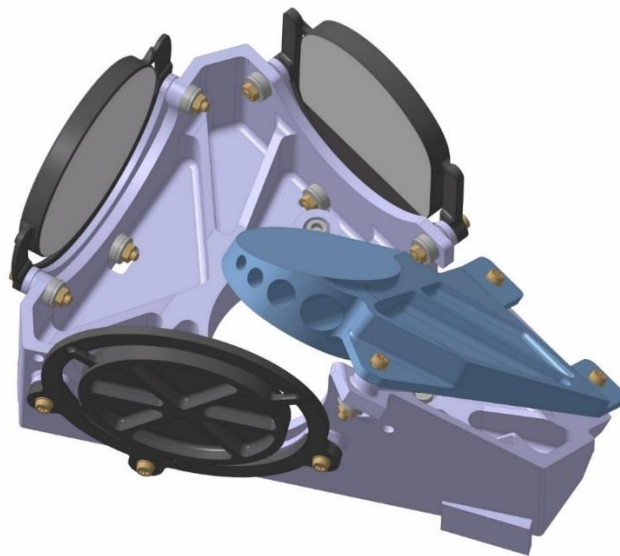
Artist view of the MetOp-SG System – Image Credit ESA

Useful links:

- Eumetsat Polar System – Second Generation:
<https://www.eumetsat.int/website/home/Satellites/FutureSatellites/EUMETSATPolarSystemSecondGeneration/index.html>
- General information on MetOp-SG program: <https://directory.eoportal.org/web/eoportal/satellite-missions/m/metop-sg>



METimage telescope, with the three mirrors to be made by AMOS in light blue (Credits: Airbus Defence and Space)



METimage derotator concept drawing (Credits: Airbus Defence and Space)

Useful links:

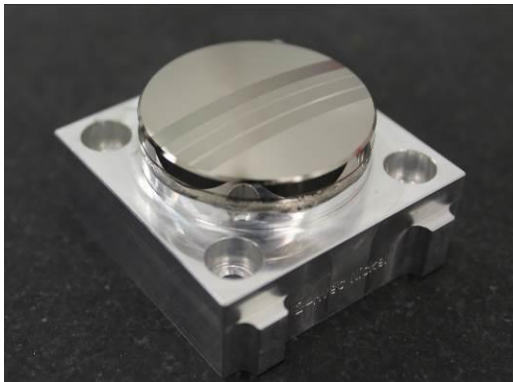
- METimage DLR page: http://www.dlr.de/rd/en/desktopdefault.aspx/tabid-2440/3586_read-10140/
- Airbus Press Release on METimage: <http://www.airbus.com/newsroom/press-releases/en/2016/09/metimage-new-weather-data-every-1-7-seconds.html>

AMOS in a few words

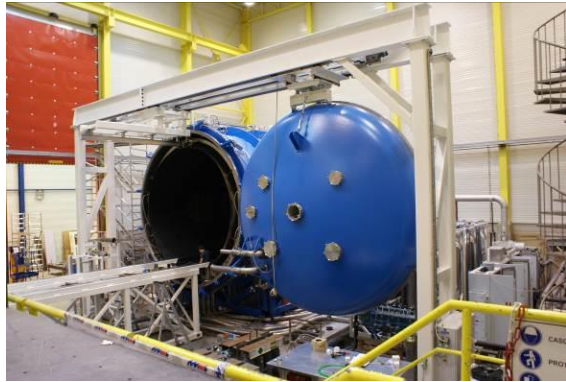
Located at the heart of the “Liege Science Park” in Sart Tilman, Liège, Belgium, AMOS has been designing and building high-precision optical and mechanical custom equipment for more than 30 years. Its flagship achievements are professional telescopes, terrestrial or space optical systems, test equipment for space devices, and high-precision mechanical equipment. It occupies today 100 employees highly skilled in advanced technologies and offers services to the space industry and to the professional astronomy sector.

AMOS’ turnover in 2016 was 18 million Euros, with more than 90% for export.

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



Hyperspectral Imaging Spectrometer component for the ISRO lunar mission Chandrayaan II



Thermal-vacuum Test Facility for VSSC (ISRO)



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

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