

## **Current performances and developments of MeO laser station**

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Located on the “plateau de Calern” in France, the MeO station (for “Métrologie Optique”) is dedicated to lunar laser ranging. MeO is also able to track LEO and HEO satellites thanks to a fast motorization of its telescope.

In this presentation, I will review all the new technical developments and studies currently underway:

- 1) The MeO performances are well adapted to obtain echoes on RadioAstron, an international space VLBI project led by the Astro Space Center of Lebedev Physical Institute in Moscow. Due to the eccentricity of its orbit, the distance of the satellite evolves between 10 000 km and 3500000 km. MeO is currently the only one station of the ILRS network able to track it. I will review our observations and our experience on this satellite.
- 2) Adaptive optic has been recently installed on MeO. This system could permit to improve the link budget by correcting the effects linked to atmospheric turbulence. I will introduce the performances expected and the optical bench implemented.
- 3) The MeO station contributes also to the Mini-DOLL project: the aim is to realize coherent laser link through turbulent atmosphere. I will introduce a description of the experiment and the benefits that coherent link could provide compared to pulsed link for clock comparison.