



OMAMO

**Optomechanical Metrology Alignment and
MOnitoring**

Annual Review

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November 09/11/2023

Agenda

01. Aim

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03. Future results

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02. Activities done

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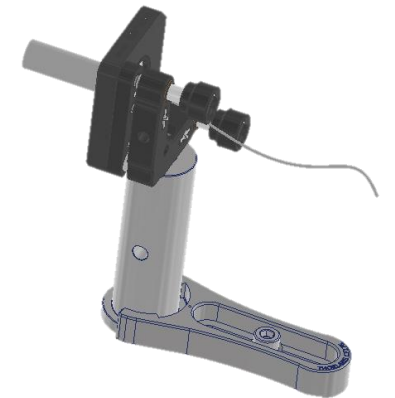
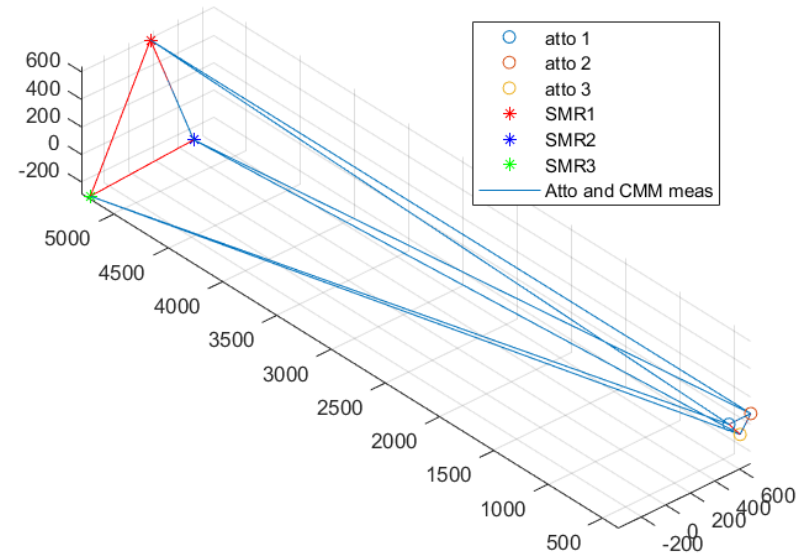
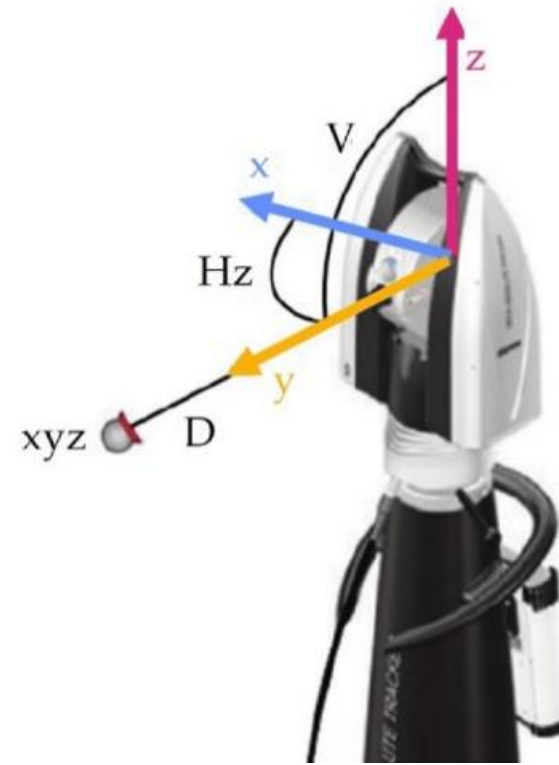
04. Milestone and Budget

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AIM

This minigrant investigate the possibility to use alignment tools like Laser Tracker and Interferometric Measurement system. The methodology consist to extend the flexibility of the procedures, the software and the hardware to a large amount of astronomical instrument



ACTIVITIES DONE

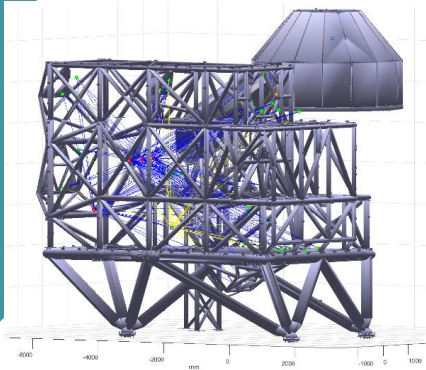
The main activity did in the past year was improve the software already developed for other instrument providing a generalized form as input and output.

INPUTS:

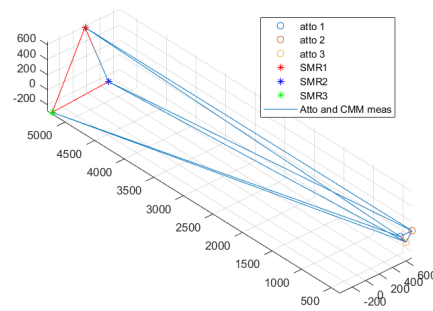
Geometry of the astronomical instrument

MPE value of the metrological device

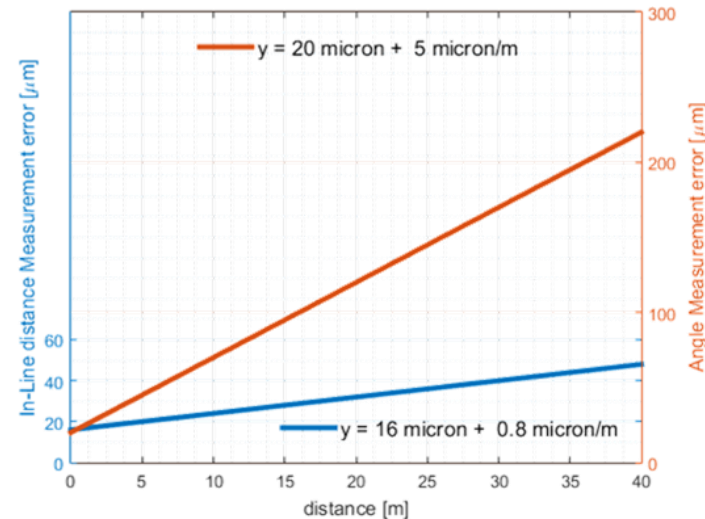
CAD



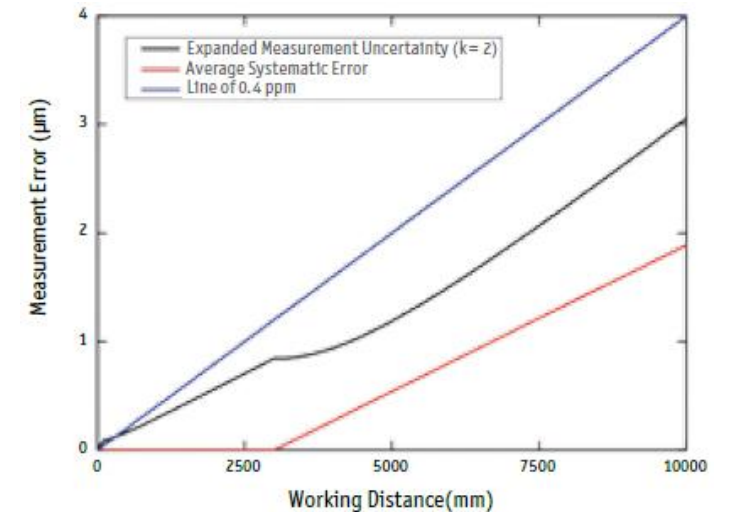
Atto cube implementation scheme



LT MPE value



ATTO CUBE MPE value



ACTIVITIES DONE

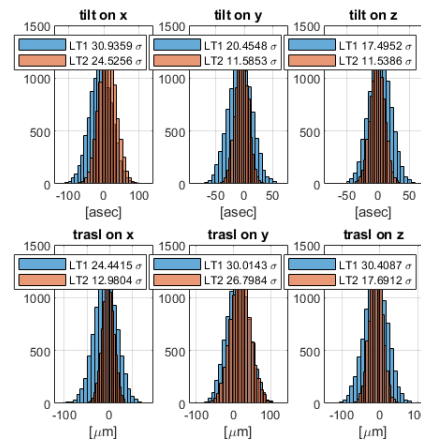
Another important aspect did during this period was improve the knowledge on the metrological devices used by ESO at VLT and ELT. The experience was made at the LIH @ ESO headquarter using the tracker and the etalon system for telescope test



Expected result

Software

- Full validate software integrated with the metrology device.
 - Position of the devices and the sensors
 - Alignment error of the measured components along the different degrees of freedom



Hardware

- Test the LT and the attocube on a real setup
- Validate the produced software

