

## 2° Forum della Ricerca Sperimentale e Tecnologica

# Metrology Instruments and tools for the New Adaptive Optics Facility @ INAF-Abruzzo (Teramo)

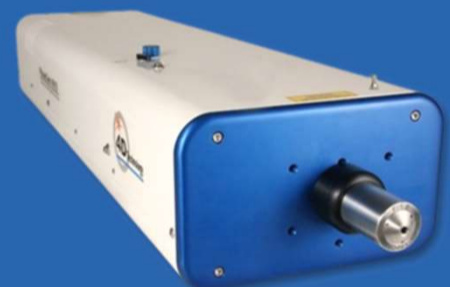
Fabio Di Nicola<sup>1</sup>, Fiorella Nusca<sup>1</sup>, Gianluca Di Rico<sup>1</sup>, Ivan Di Antonio<sup>1</sup>, Angelo Valentini<sup>1</sup>,  
 Benedetta Di Francesco<sup>1</sup>, Gabriele Rodeghiero<sup>2</sup>, Runa Briguglio<sup>3</sup>  
<sup>1</sup>INAF-OAAB, <sup>2</sup>INAF-OAS, <sup>3</sup>INAF-OAA, ADONI National Lab

We present the new metrology systems that will be acquired as part of the Activity 6402 of the STILES project (Strengthening the Italian Leadership in ELT and SKA), funded by the PNRR (Piano Nazionale di Ripresa e Resilienza) within the Next Generation EU (NGEU) programme. These new devices will enhance the instrumentation of the new Adaptive Optics laboratory, currently under construction at INAF-OAAb, supporting the ongoing and future development of advanced astronomical instruments for the ELT Telescope. The first application of these tools will be the assembly, integration and verification of the Calibration Unit of MORFEO.

### Dynamic Laser Interferometer

4D PHASECAM 4030 + testing setup with large aspherical Beam Expander (Ø 20 cm)



**MAIN APPLICATIONS:**  
 Measure both surface form and transmitted wavefront quality, dynamic performances of deformable lens and mirrors, testing flats, large focal optics and optical systems



### Portable Measuring Arm & Scanner

HEXAGON Absolute Arm 7-axis 8525  
 +  
 Absolute Scanner AS1



**MAIN APPLICATIONS:**  
 Reverse Engineering, Rapid Prototyping, Assembly, Integration & Verification, Surface Analysis, GD&T, Manufacturing Process Check (CNC) and Optimization

### Micro-Alignment Telescope

TAYLOR HOBSON M112-2582UC + CCTV ViVi system

**MAIN APPLICATIONS:**  
 High accuracy alignment of optical components, assembly & integration of complex systems, test & verification of low-throughput instrumentation, metrology and calibration

Proposta progettuale: IR0000034 STILES "Strengthening the Italian leadership in ELT and SKA", ammessa a finanziamento nell'ambito degli "Interventi" previsti dalla "Missione 4", denominata "Istruzione e Ricerca", "Componente 2", denominata "Dalla Ricerca alla Impresa" ("M4C2"), "Linea di Investimento 3.1", denominata "Fondo per la realizzazione di un sistema integrato di infrastrutture di ricerca e innovazione", del "Piano Nazionale di Ripresa e Resilienza" ("PNRR").- Finanziato dall'Unione europea – NextGenerationEU - Avviso n. 3264 28-12-2021 PNRR M4C2 - investimento 3.1, IR0000034 STILES  
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Info: [fabio.dinicola@inaf.it](mailto:fabio.dinicola@inaf.it)