Opticon – FP7-2
WP1 – Adaptive Optics
Workplan for deformable mirrors

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Main objectives

The primary goal of Work Package 1 is to develop the technologies and the knowledge required to improve the performance and operational efficiency of existing AO facilities in Europe, as well as to develop the state of the art instrumentation required for the next generation of European astronomical facilities, i.e. the 40m European Extremely Large Telescope (E-ELT).

Proposed activities

- WP1.1: coordination
- WP1.2: Future deformable mirrors
- WP1.3: Towards LGS and NGS wave front sensing
- WP1.4: On-sky optimization and exploitation of AO data
- WP1.5: Outreach

Proposed activities

- WP1.2: future deformable mirrors
  - WP1.2.1: specifications and follow-up (IPAG, ONERA, LESIA)
  - WP1.2.2: large open-loop electromagnetic deformable mirror development (ALPAO)
    - embedded built-in position sensors
    - laboratory prototype, could be used on Canary
  - WP1.2.3: mini piezoelectric deformable mirror (IPAG)
    - connection of 40k actuators to high voltage amplifiers (400 V)

Proposed activities

- WP1.2: future deformable mirrors
  - WP1.2.4: Prototyping of cryogenic active mirrors (MPIA/NOVA)
    - not really DM but linked to cold tip-tilt and/or steering mirrors for 3-5 micron instruments