

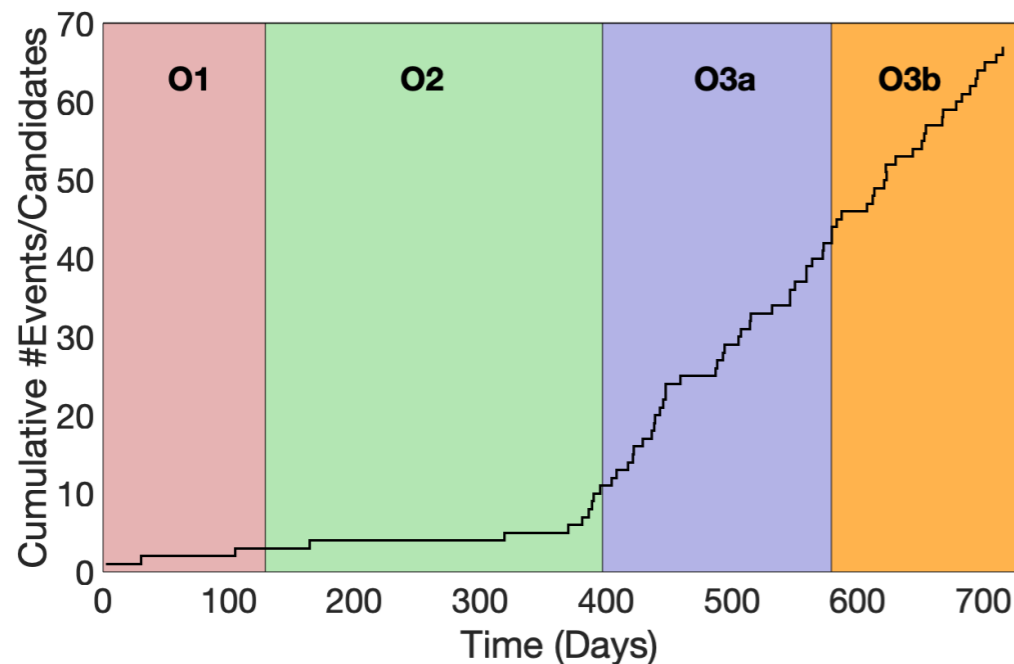
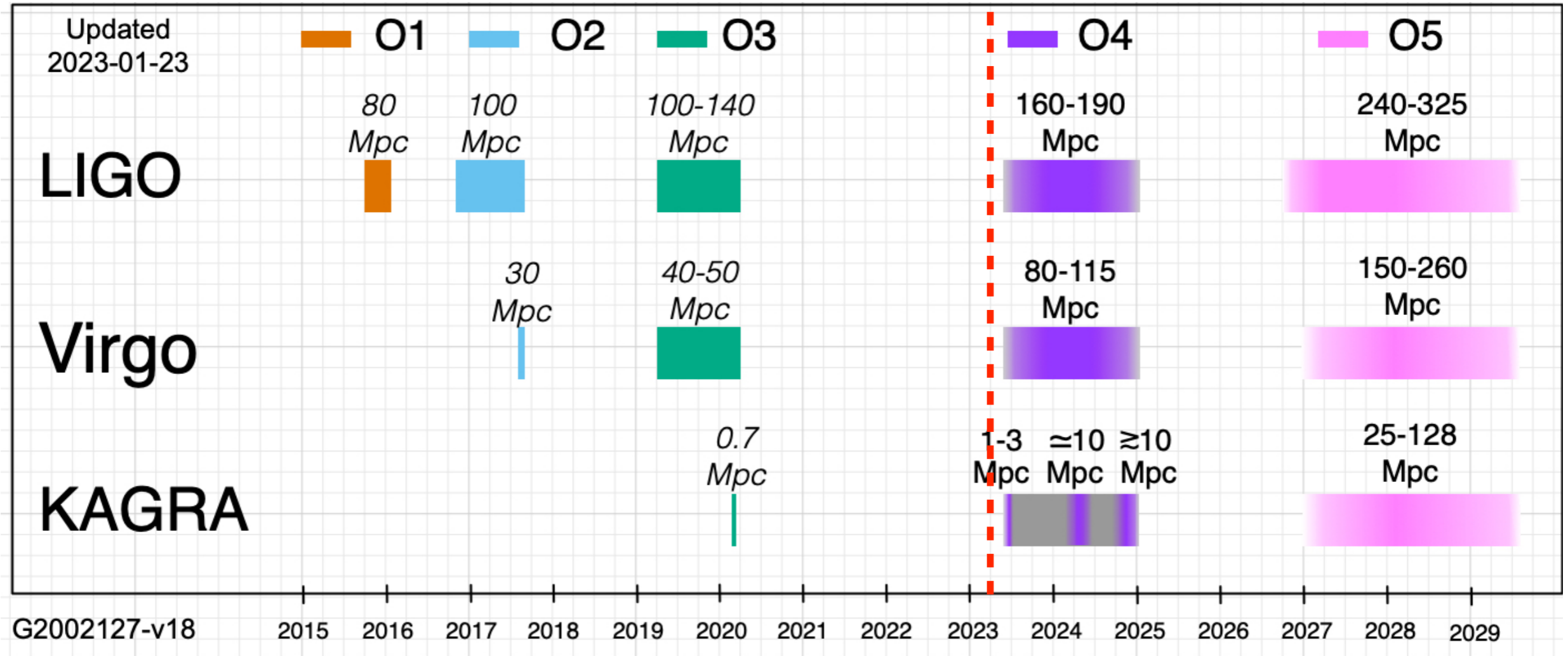


# Advanced Virgo+

*Eleonora Capocasa*

# GW detectors' network observing scenario

NOW



- 90 Gw signal detected so far
- New data taking (O4) starting soon

# Contribution to instrumental upgrade for O4

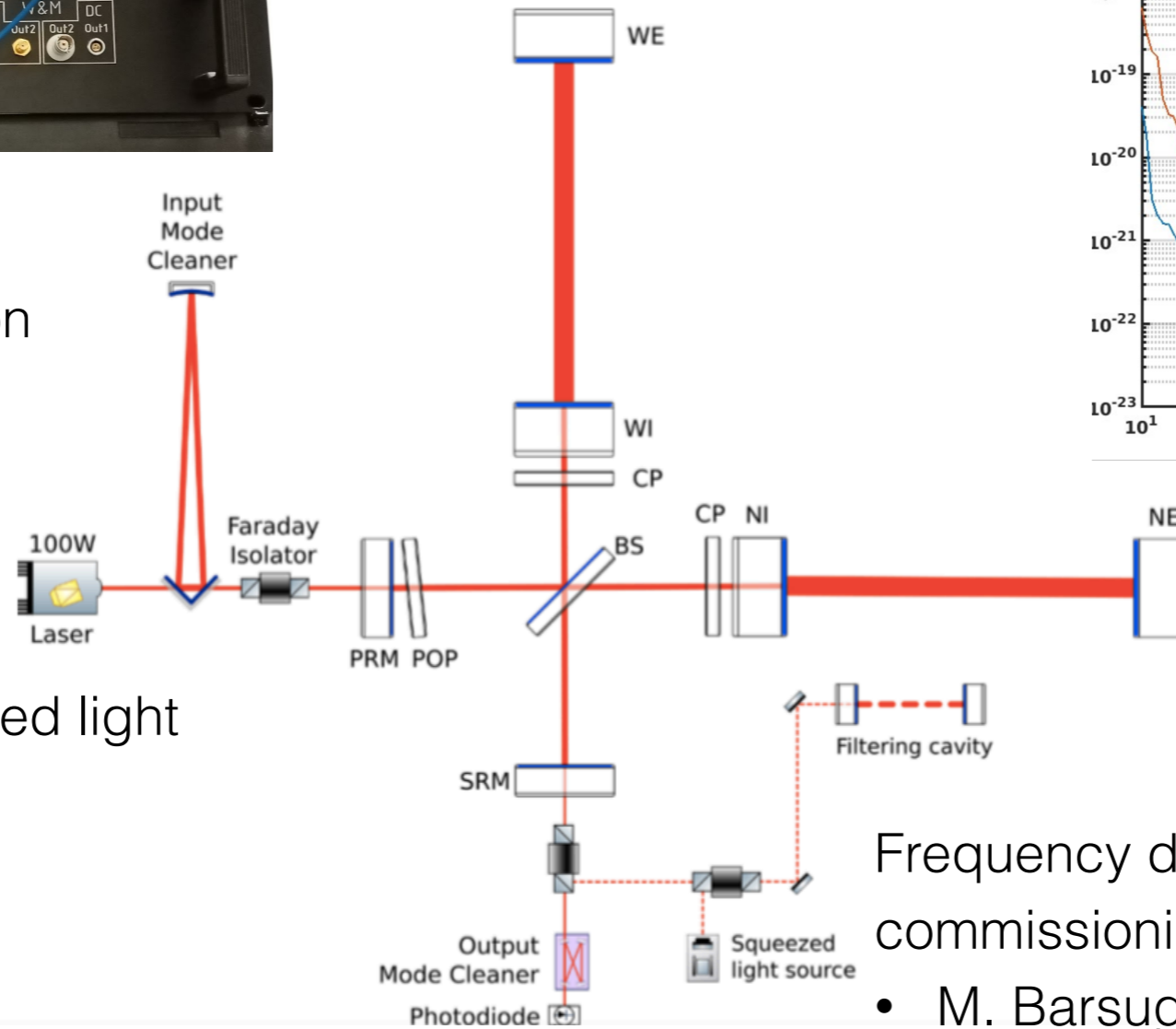
Photodiodes for new control scheme with signal recycling

- P. Prat



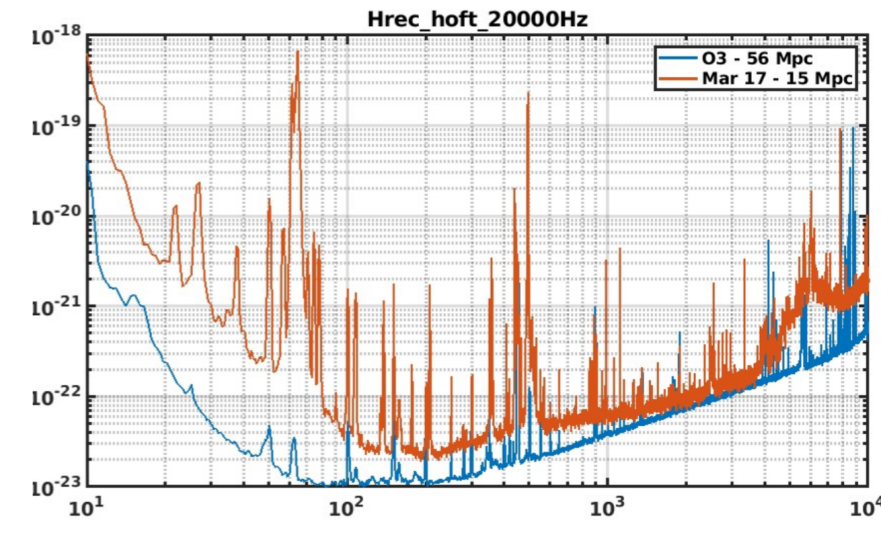
Optical characterisation

- E. Capocasa
- A. Daumas



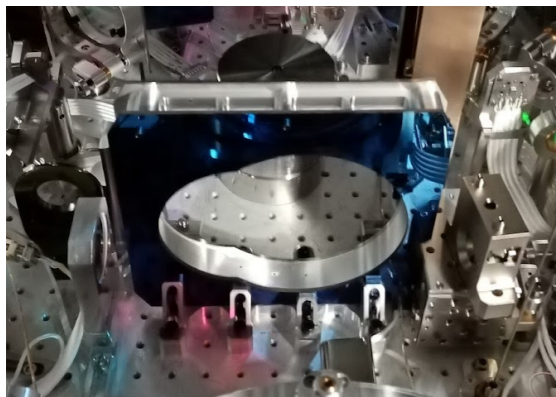
Interferometer control and noise hunting:

- M. Barsuglia
- E. Capocasa
- Y. Zhao



Diaphragms for scattered light

- W. Bertoli



Frequency dependent squeezing commissioning:

- M. Barsuglia
- E. Capocasa
- J. Ding
- Y. Zhao

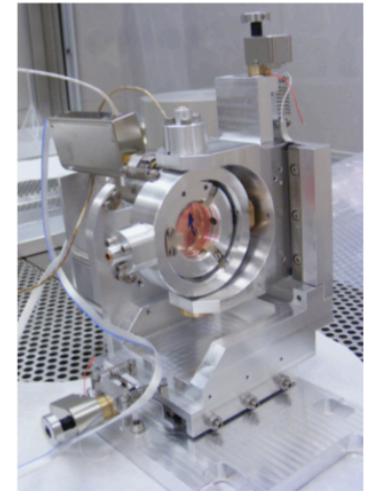
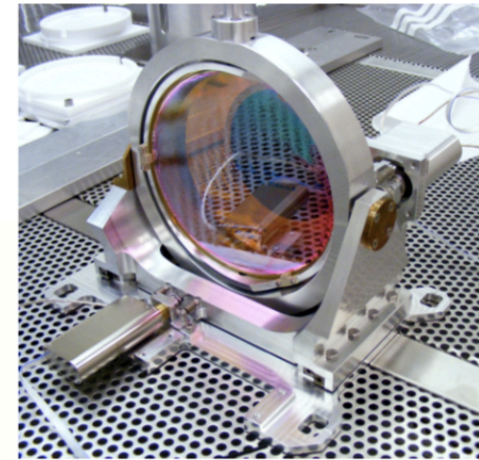
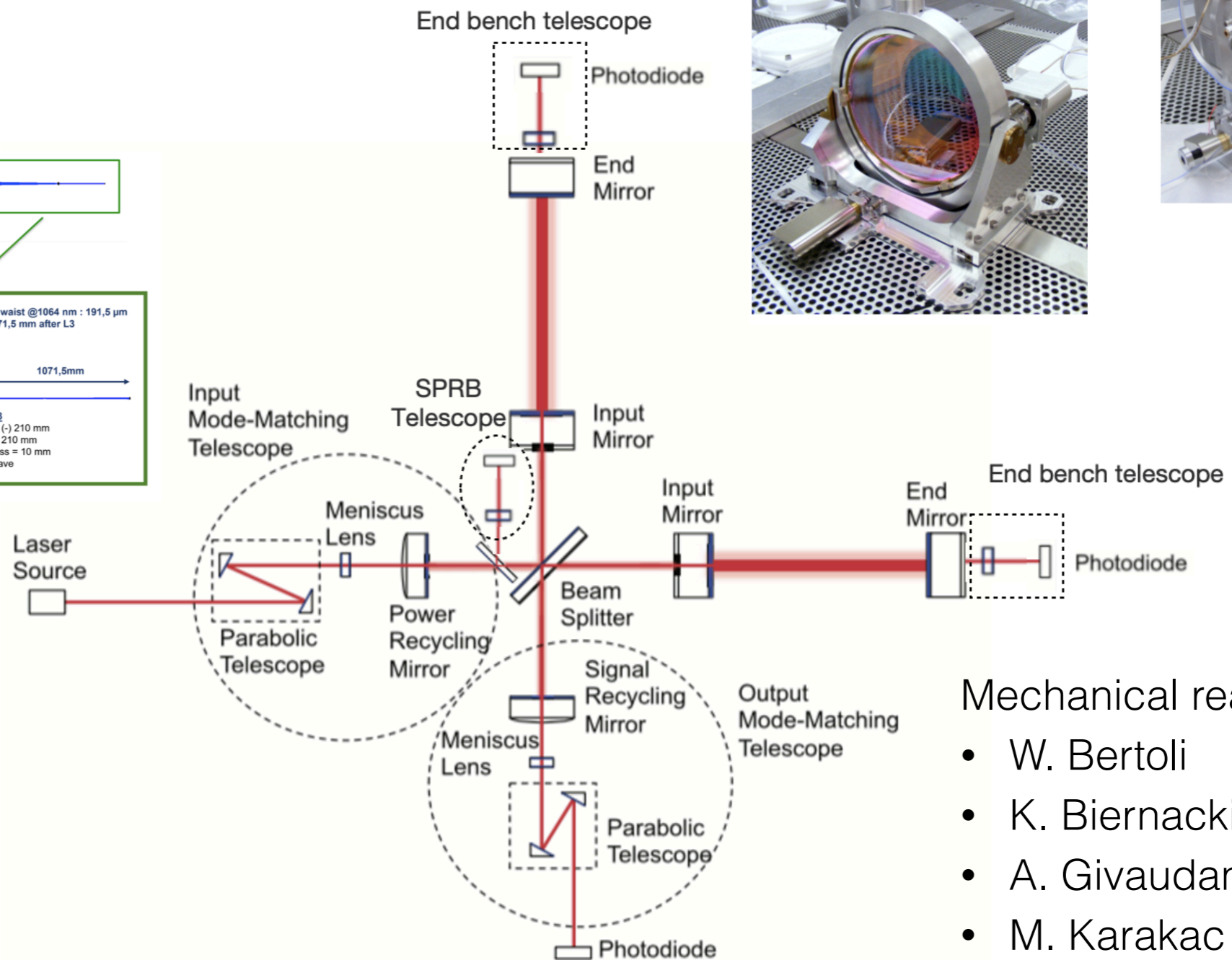
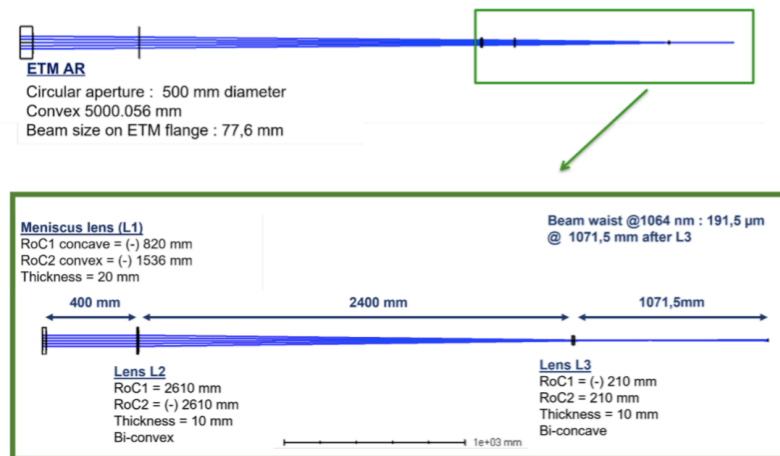


# Upgrade of mode-matching telescope for O5

- Larger beam in the arms cavity to reduce thermal noise

Optical design (almost completed)

- M. Barsuglia
- E. Capocasa
- A. Daumas



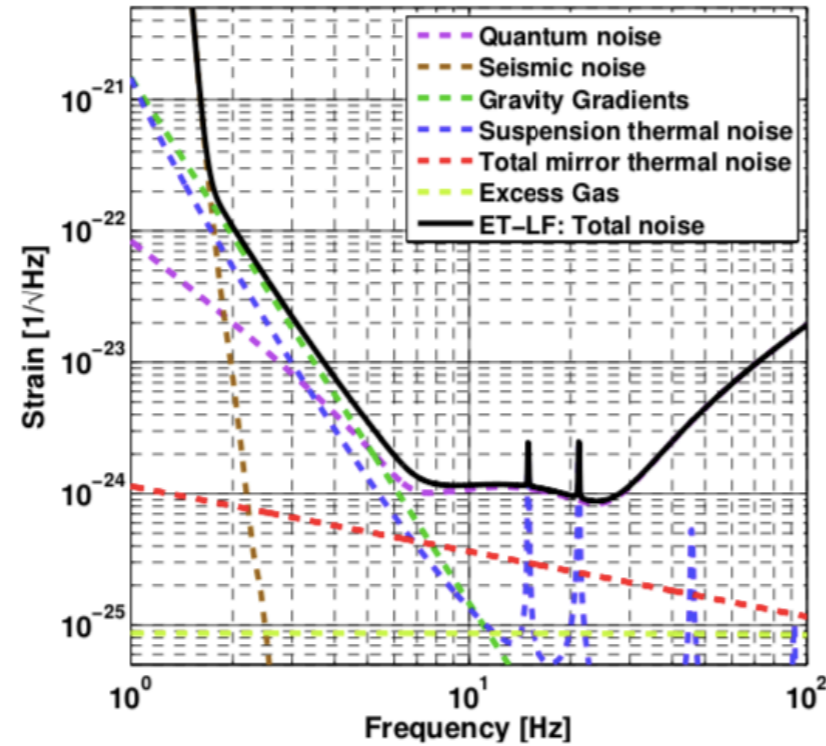
Mechanical realisation

- W. Bertoli
- K. Biernacki
- A. Givaudan
- M. Karakac

# R&D on squeezing for future detectors

- Frequency dependent squeezing for GW interferometer in detuned configuration
- Table-top experiment to start soon at APC

- M. Barsuglia
- E. Capocasa
- A. Daumas
- J. Ding
- Y. Zhao



## Mechanics

- M. Karakac
- K. Biernacki

## Electronics

- P. Prat

