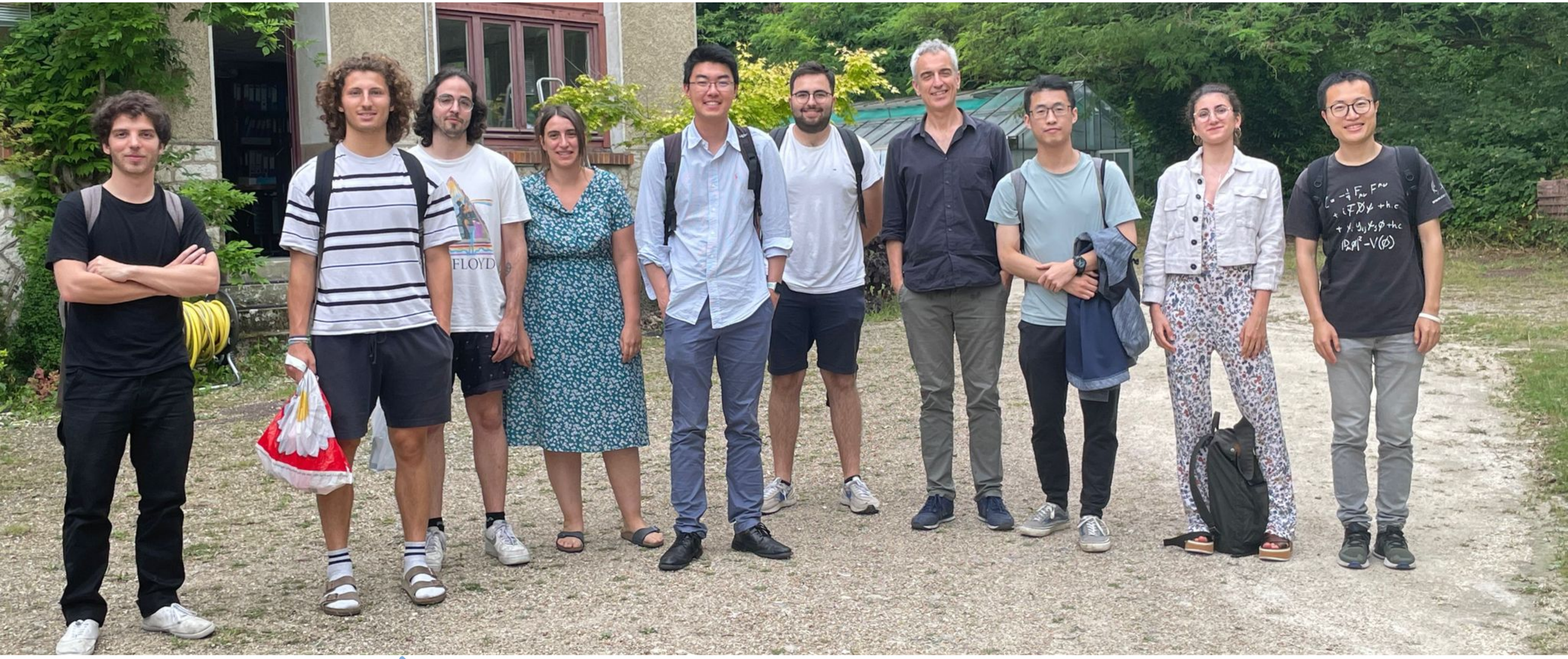
Experimental Virgo APC group retreat



Université Paris Cité

Fontainebleau 21-06-2023

Virgo commissioning

- Optical Characterisation
- ITF control/noise hunting
- Frequency dependent squeezing
- ITF simulation

Futures Virgo upgrades

- Mode-matching telescope design

Quantum noise reduction for Einstein Telescopes

- Table top experiment for non-trivial rotation demonstration
- Participation to ET squeezing group

Lunar detector (LILA)

- Noise budget

Experimental Virgo APC group retreat

mercredi 21 juin 2023, 09:15 → 18:00 Europe/Paris

Station d'écologie forestière

09:30 → 10:00 **Introduction** 30m

Orateur: Eleonora Capocasa

10:00 → 10:30 **Optimising frequency dependent squeezing for Virgo and ET** 30m

Orateur: Tangchao Liu

10:30 → 11:00 **Design of the table-top couple cavity experiment** 30m

Orateur: Charles Saucourt

11:00 → 11:30 **Discussion: R&D experiment realisation**

11:30 → 12:00 **Analysis of free spectral range scans of Virgo arms** 30m

Orateur: Anne Daumas (Laboratoire Astroparticules et Cosmologie (APC))

12:00 → 12:30 **Machine learning analysis of the Fabry-Perrot cavity mismatching and misalignment** 30m

Orateur: Marcos Morote Balboa

14:30 → 15:00	**Modelling Virgo with Finesse 3** **Orateur**: Jacques Ding	30m	
15:00 → 15:30	**ET noise budget studies** **Orateur**: Ghada Mahmoud	30m	
15:30 → 16:00	**break**	30m	
16:00 → 16:30	**Noise from lunar dust in lunar GW detector LILA (TBC)** **Orateur**: Leon Vidal	30m	
16:30 → 17:00	**Quantum noise estimation for LILA (TBC)** **Orateur**: Sacha Czernichow	30m	
17:00 → 18:00	**Discussion: brainstorming on possible future projects?**		