WP3 parallel session Context and goals

Conveners:

Marco Landoni (INAF OA Brera)

Paolo Natoli (UNIFE & INFN)

- The use cases for WP3 are not consolidated yet

- Obvious redandancies exist in what will be presented. Significant "pooling" is required.

- One immediate goal of the session is to make these redunancies emerge, to ease the process of trimming down the number of use cases, with full involvement of the participants.

- At the same time, some key inputs are surely missing. We encourage interested groups to provide feedback and ideas

- Little time for discussion today => The conveners will try take minutes on a google doc
    - You are welcome to contribute: editing rights are open

- A longer term goal of this session is to pave the roads for future activities
    - We need to organize telecons (yes, we know we all have too many)
    - We need to establish links with other WPs

The agenda is very dense, please try to stay on time!

Please upload your presentation on the **agenda**. Ask the conveners if you cannot do it by yourself

15:00 → 18:05   Parallel WP3

ZOOM https://cern.zoom.us/j/66525894565?pwd=VlJPU2hpTVJNQ0dvQU9ZTWE5Ujlvdz09

Conveners: Marco Landoni (INAF - Istituto Nazionale di Astrofisica) , Paolo Natoli (Istituto Nazionale di Fisica Nucleare)

15:00 **Context and goals of the session**
Speakers: Marco Landoni (INAF - Istituto Nazionale di Astrofisica) , Paolo Natoli (Istituto Nazionale di Fisica Nucleare)

15:05 **INAF activities in WP3 and use cases**
Speaker: Antonio Stamerra (INFN-Roma and INAF-OAR)

15:25 **HPC case studies for the CMB**
Speaker: Luca Pagano (Istituto Nazionale di Fisica Nucleare)

15:40 **Turbulence everywhere: Atmosphere, Heliosphere, Cosmos**
Speaker: Leonardo Primavera (UniCal)

16:00 **Machine learning techniques for multimessenger and multiwavelength astrophysics** ¶
Speakers: Elisabetta Bissaldi (Istituto Nazionale di Fisica Nucleare) , Silvia Raino' (Istituto Nazionale di Fisica Nucleare)

16:15 **Landscape and computational challenges for the LISA global fit**
Speaker: Riccardo Buscicchio (UniMiB)

16:30 **Computing and analysis for gravitational wave searches with LIGO/Virgo/KAGRA data**
Speaker: Cristiano Palomba (Istituto Nazionale di Fisica Nucleare)

16:40 **Transient GW signals without templates**
Speaker: Edoardo Milotti (Istituto Nazionale di Fisica Nucleare)

16:50 **ML based PID (astroparticles) and GW signal detection**
Speaker: Massimo Lenti (Istituto Nazionale di Fisica Nucleare)

17:10 **HPC studies applied to astroparticle/astrophysics and gw theory**
Speaker: Achille Nucita (Istituto Nazionale di Fisica Nucleare)

17:25 **New physics from n-point correlations of large-scale structure, gravitational waves and the cosmic microwave background**
Speaker: Alvise Raccanelli (CERN)