
WP 3 Deliverable No. 1

First Year Workshop Report

Project acronym:
AHEAD2020

Project Title:
Integrated Activities for the High Energy Astrophysics Domain

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INTRODUCTION

This document brings together the networking activities for the synergies between the Gravitational Wave and High Energy Astrophysics community done during the first year of the AHEAD 2020 project.

It is to be noted that due to the current COVID-19 pandemic situation the initial plan of the activities (see table 1, below) was modified and the activities rescheduled according to the circumstances. It is also very difficult to predict with confidence whether workshops and conferences at the moment planned to be in person or hybrid will take place as planned or whether it will be necessary to move online.

Task	Lead partner	NA	When
3.2. Multimessenger research	EGO	2 symposia	2020;2024
3.3. Synergies with High Energy and Geoscience	EGO	2 symposia	2021;2023
3.4 Research and Development	CNRS	2 workshops	2022;2023
3.5. Low Latency Triggers and Access to Data	NIKHEF	2 workshops	2021;2023
3.6. Next generation Large Infrastructures	INFN	2 workshops	2020; 2022

Table 1- Initial Plan of NA activities

Therefore, the next sections will (1) describe networking activities done in the course of the First Year of AHEAD2020 and (2) explain changes made in the schedule of the planned workshops.

NETWORKING ACTIVITIES DURING THE FIRST YEAR

WP3 is devoted to networking activities for the synergies between the Gravitational Wave and High Energy Astrophysics community, with strong links with the European agencies funding Astronomy, Astrophysics and Astroparticle Physics (APPEC, ASTRONET) and the European Southern Observatory (ESO).

During the First Year of the Project several remote meetings were held in order to network with AHEAD 2020 partners in view of the submission of the Einstein Telescope proposal to the 2021 update of the ESFRI roadmap (Task 3.6) and of the APOGEIA project proposal on the convergence between Geoscience and Astroparticle Physics (Call H2020-INFRAIA-2018-2020/Topic: INFRAIA-02-2020) (Task 3.3).

Within the activities of Task 3.6 a webinar on the Science targets of the 3rd generation GW observatories was held in July, with the involvement of the Einstein Telescope and Cosmic Explorer, while a remote symposium on Einstein Telescope was organized from 30/11 to 1/12/2020.

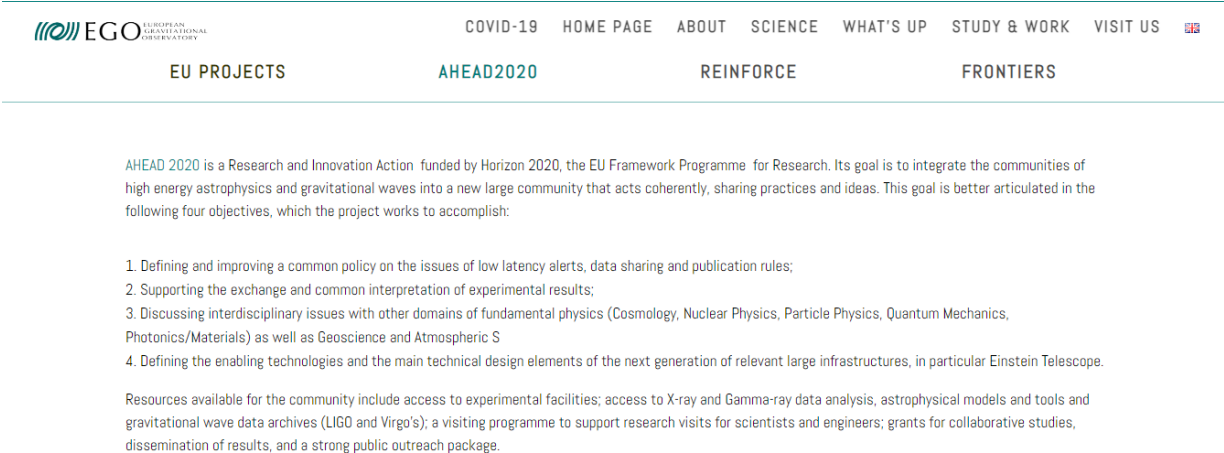
PLANNED WORKSHOPS

The networking activities originally planned under Work Package 3 includes 4 large symposia and 6 smaller workshops.

The symposia on multimessenger research and on the synergies with high energy and geoscience were initially scheduled for the years 2020 to 2024 and 2021 to 2023, respectively. However, due to the COVID-19 pandemic situation, the first biannual multimessenger research event has been rescheduled for September 2021, as an in-person or hybrid event, together with a smaller workshop on Low Latency Triggers and Access to Data.

An online workshop on multimessenger astronomy, with particular attention to high energy gamma and 3G is planned for 23-25 of June, in synergy with an initiative supported also by the Italian Ministry of Foreign Affairs: <https://agenda.infn.it/event/20758/>

Any modifications made to the plan of the other symposia and workshops will be reported and explained in the next deliverables and information will be posted on the related web-page set up on the EGO website (see fig. 1, below)



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EU PROJECTS **AHEAD2020** REINFORCE FRONTIERS

AHEAD 2020 is a Research and Innovation Action funded by Horizon 2020, the EU Framework Programme for Research. Its goal is to integrate the communities of high energy astrophysics and gravitational waves into a new large community that acts coherently, sharing practices and ideas. This goal is better articulated in the following four objectives, which the project works to accomplish:

1. Defining and improving a common policy on the issues of low latency alerts, data sharing and publication rules;
2. Supporting the exchange and common interpretation of experimental results;
3. Discussing interdisciplinary issues with other domains of fundamental physics (Cosmology, Nuclear Physics, Particle Physics, Quantum Mechanics, Photonics/Materials) as well as Geoscience and Atmospheric S
4. Defining the enabling technologies and the main technical design elements of the next generation of relevant large infrastructures, in particular Einstein Telescope.

Resources available for the community include access to experimental facilities; access to X-ray and Gamma-ray data analysis, astrophysical models and tools and gravitational wave data archives (LIGO and Virgo's); a visiting programme to support research visits for scientists and engineers; grants for collaborative studies, dissemination of results, and a strong public outreach package.

Fig. 1 AHEAD 2020 web-page on NA