

# SHARING AHEAD 2022 - Public communication of astrophysics across Europe



Contribution ID: 9

Type: **not specified**

## The REINFORCE project

I will report on REINFORCE supported by the European Union's Horizon 2020 SWAFS program. It has developed demonstrator projects in the citizen-science platform, Zooniverse, engaging citizens in the analysis of:

- a) transient-noise signals mostly of environmental origin, in data from the Virgo gravitational-wave detector, concurrently participating in the improvement of the sensitivity of the detector;
- b) bioluminescence and bioacoustic data from KM3NeT, in the context of neutrino astronomy, helping to optimise detection strategies for cosmic neutrinos, while in parallel participating in a study of marine life in the deep sea environment;
- c) high-energy physics data from the ATLAS experiment at CERN, contributing to the search for new long-lived particles;
- d) and cosmic-ray data, exploring the connections across the fields of cosmic-ray physics, geology, volcanology and archaeology.

All demonstrator projects interact transversally with a sonification package in order to not only provide access to the data to visually-impaired people, but also to increase the perceptual capabilities of general scientific efforts, investigating the ability to distinguish signal from background using the different senses.

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**Session Classification:** Communicating H2020 projects