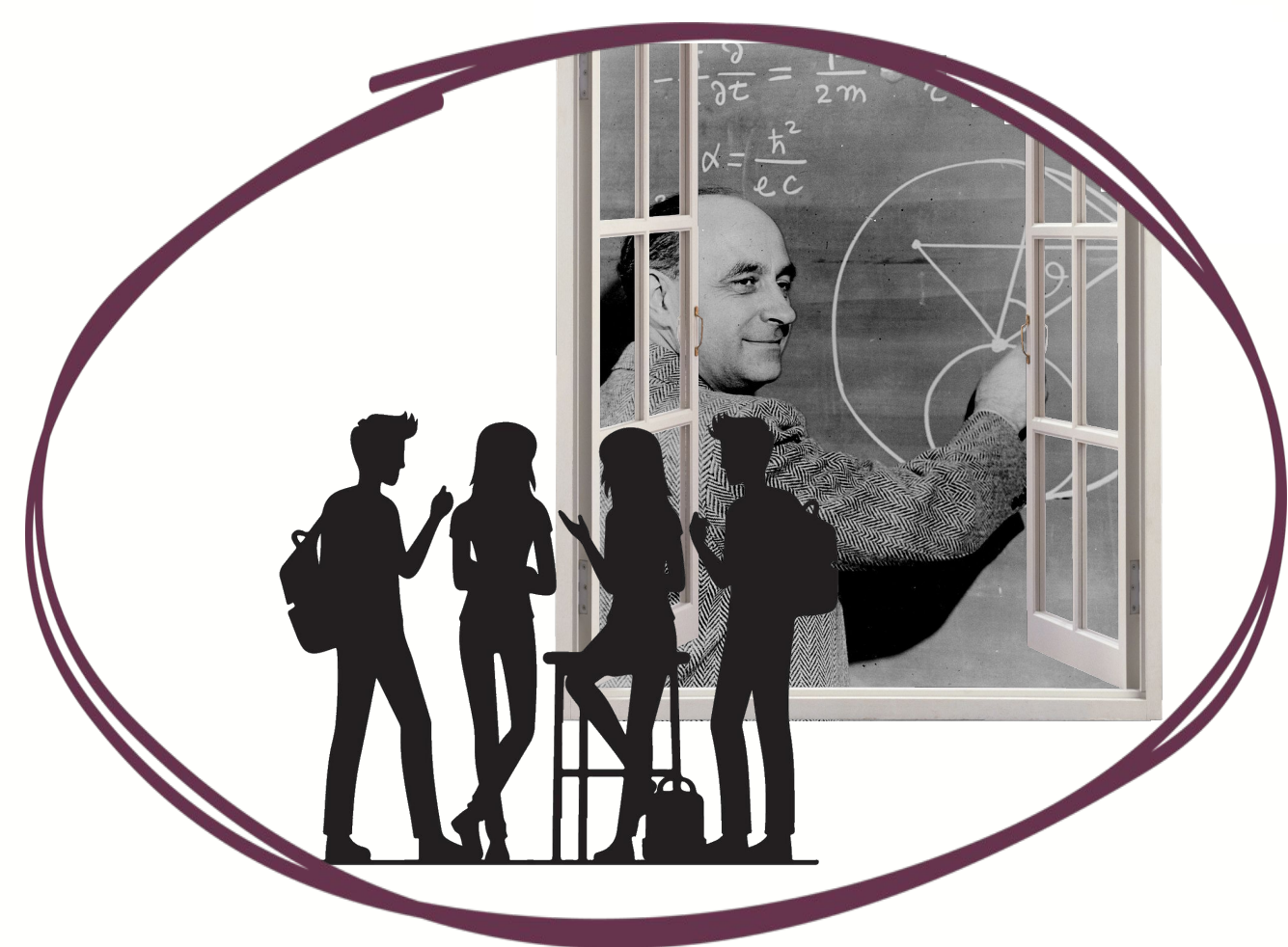




KM3NeT

The next generation neutrino telescope

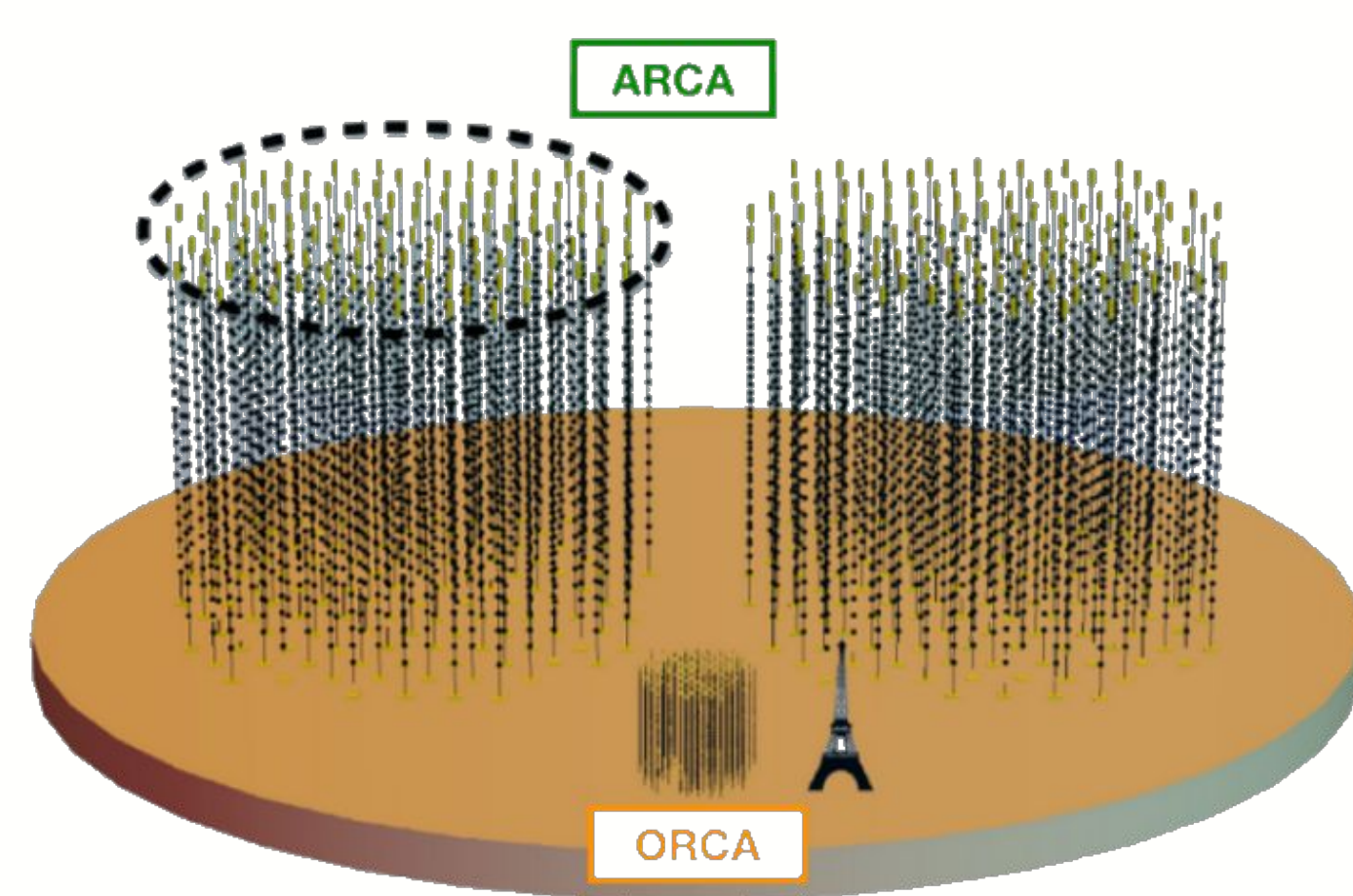
Alessandro Vestro, F. Ameli, A. Capone, S. Celli, I. Di Palma,
M. Mastrodicasa, C. A. Nicolau, A. Tudorache



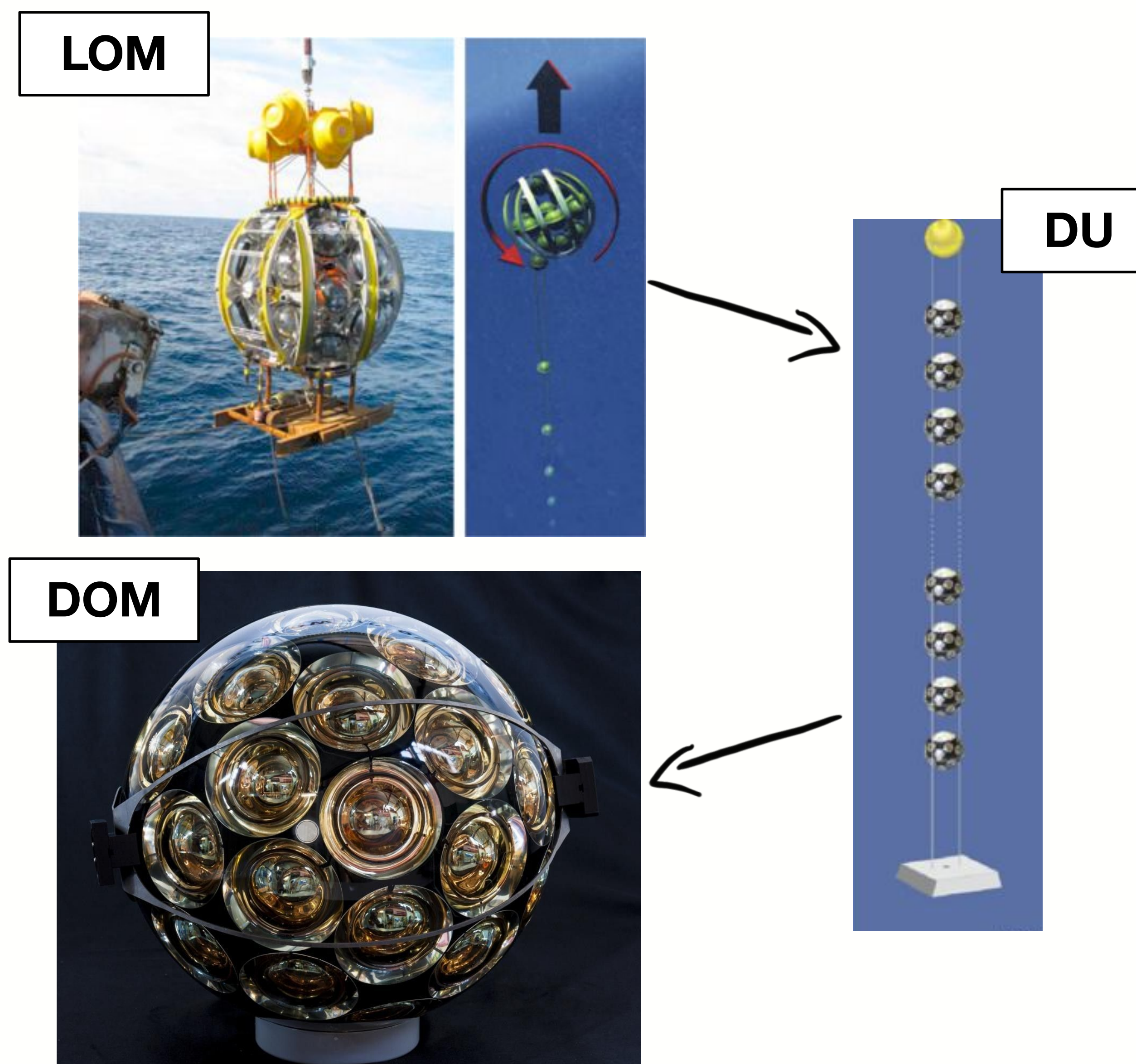
WEBSITE

What is KM3NeT?

KM3NeT is a deep-sea research infrastructure housing the next generation neutrino telescopes. Once completed, the telescope will have detector volumes between megaton and **several cubic kilometers** of clear **sea water**.



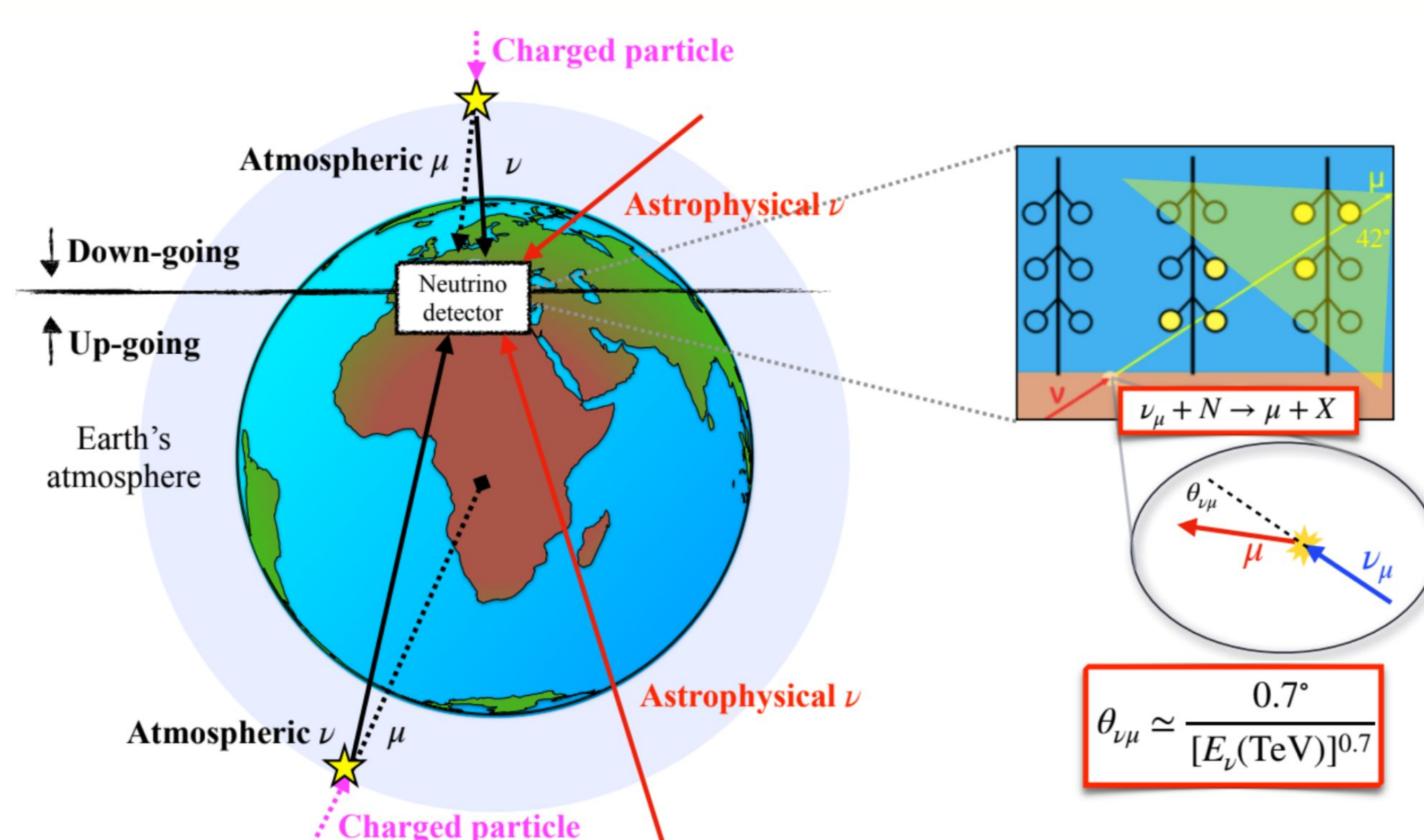
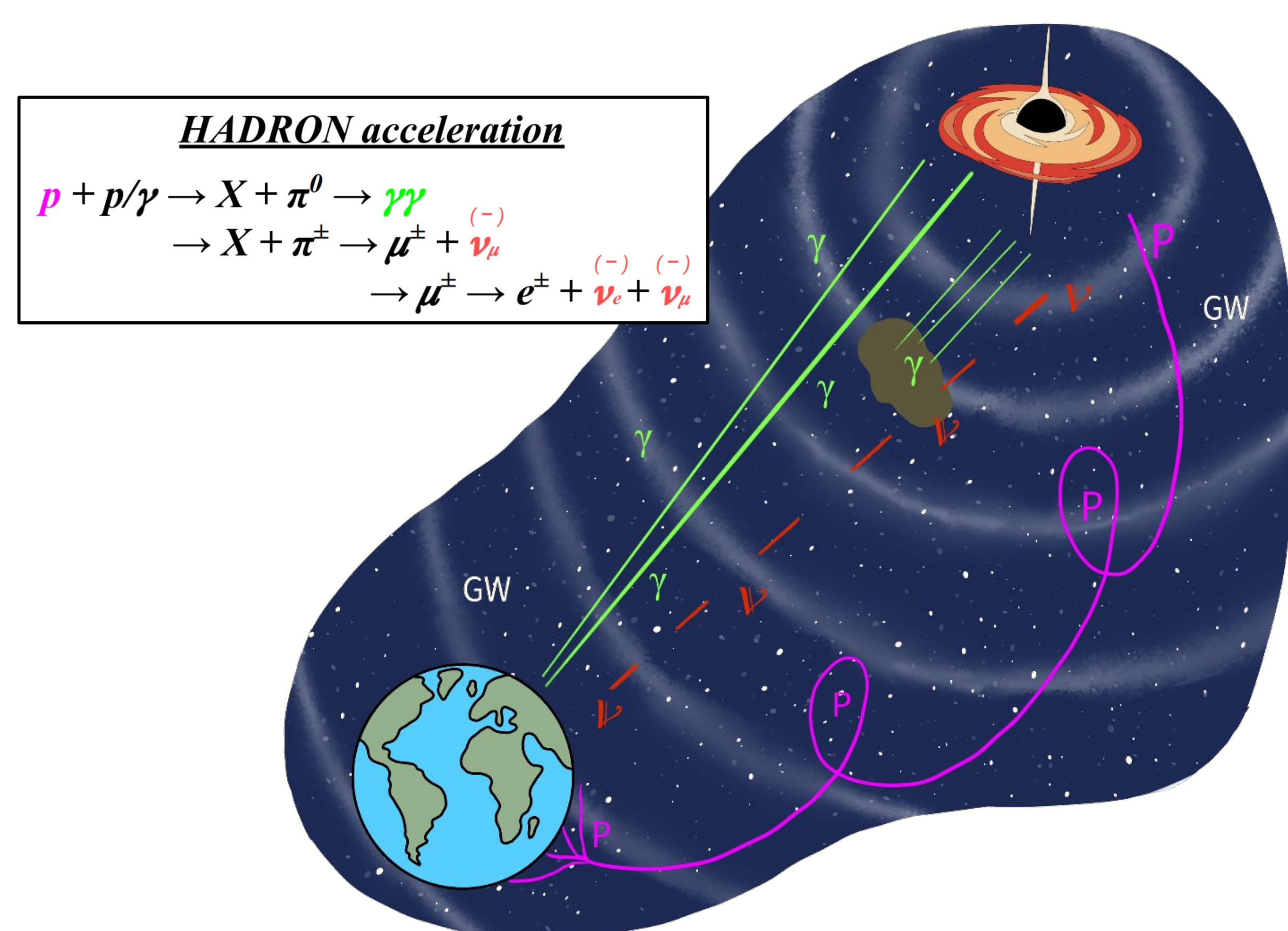
The KM3NeT collaboration includes more than **250 scientists** from more than **15 different countries**. In their final configurations, **ARCA** and **ORCA** will have **230** and **115** DUs, respectively. Currently, the two detectors are taking data, ARCA with **28 DUs** and ORCA with **23 DUs**.



The detectors consist of long vertical lines, the Detector Units (**DUs**), each carrying 18 Digital Optical Modules (**DOMs**) housing 31 3" Photo-Multiplier Tubes (**PMTs**).

Why cosmic neutrinos?

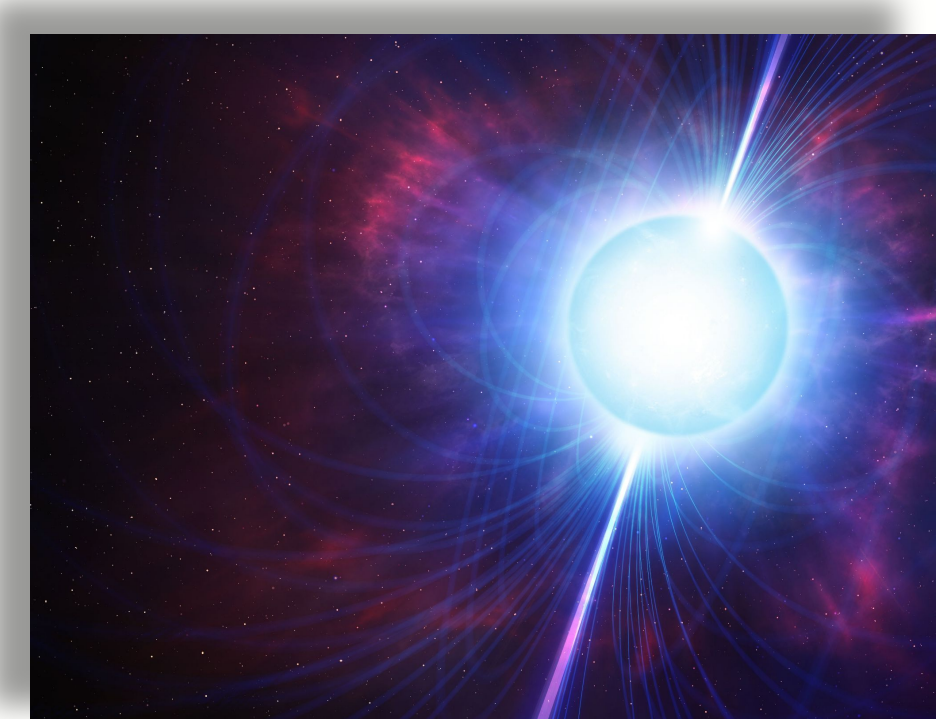
Being both electrically neutral and interacting very weakly, neutrinos escape the core of compact objects in which they are produced by the interaction of **high energy cosmic rays** and neither absorbed or deflected by magnetic fields as they travel through space. Thanks to its location, KM3NeT provides a coverage of **87% of the sky** and allows a survey of almost the whole galaxy including the **Galactic Centre**.



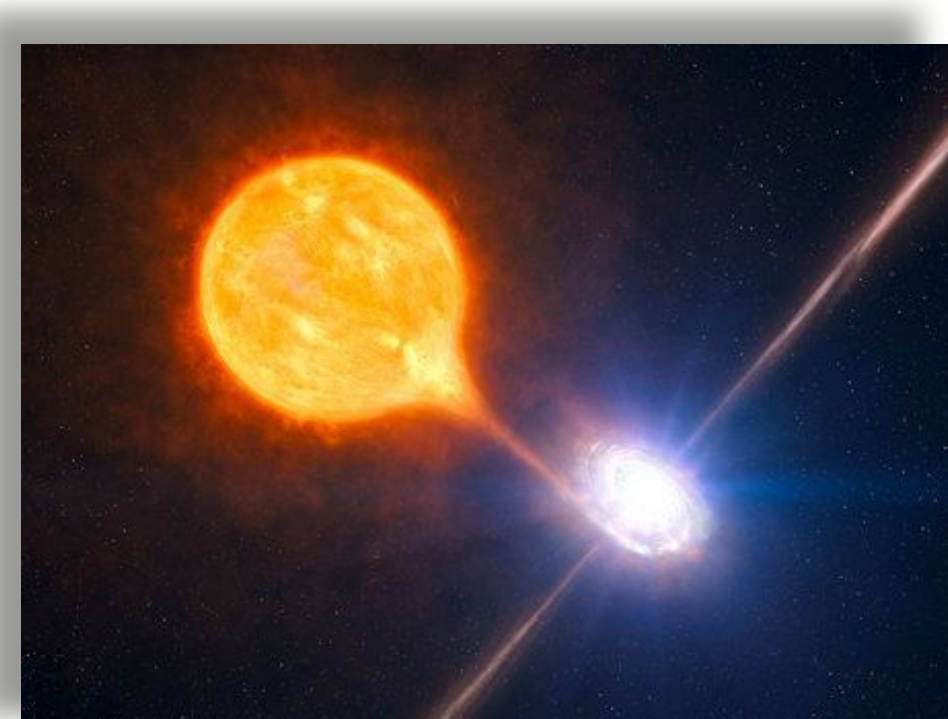
Which sources can emit cosmic neutrinos?



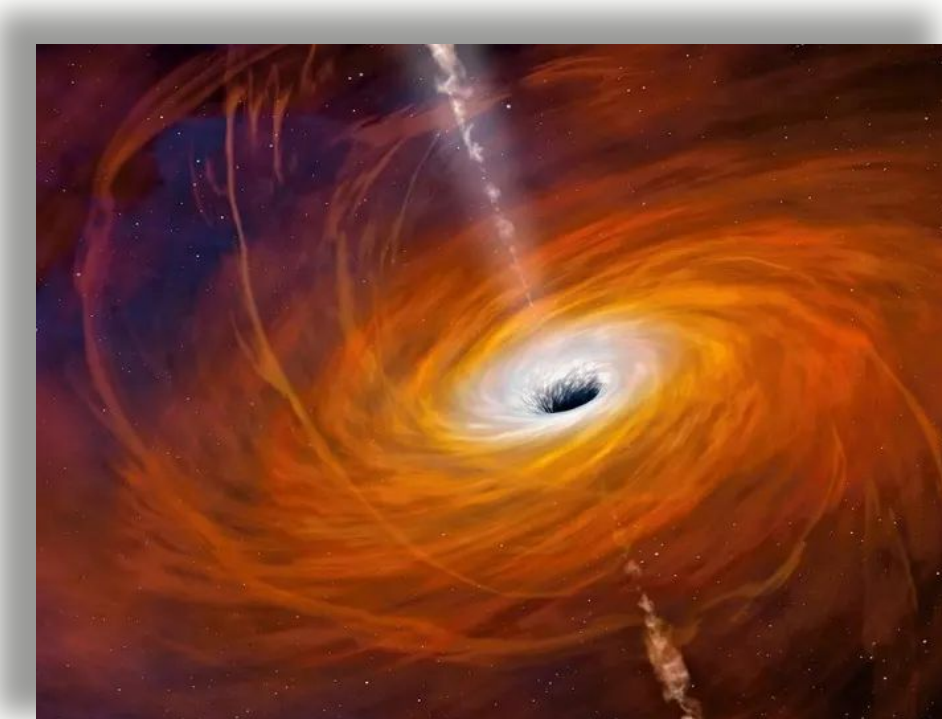
Supernova remnant



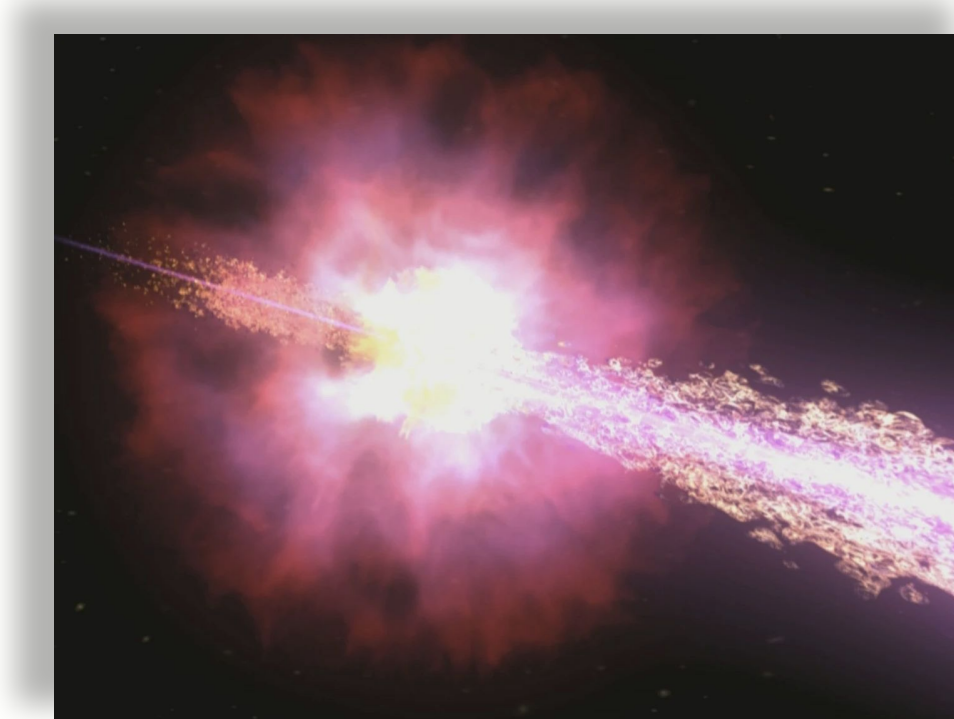
Pulsars



Microquasars



Active galactic nuclei



Gamma-ray burst