



## **Integrated Activities for the High Energy Astrophysics Domain**

Acronimo: **AHEAD**

Call: **H2020-INFRAIA-2014-2015**

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**Abstract:** Future space projects in the high-energy astrophysical science, as the fore coming ESA Mission Athena, need the development of space oriented instrumentation based on cutting-edge sensor technology. The AHEAD project promotes a coordinated use of key research infrastructures from 26 institutes over 16 European countries to tighten the connection between different institutes and with industry, thus enabling a more rapid advancement in the required technologies. Along the last twenty years, the University of Perugia has developed a deep expertise in space related technologies, leading the design, construction and testing of instruments as Fermi-LAT, AMS and DAMPE, which are currently operating in space. Test facilities have been deployed for the space qualification of scientific payloads following the standards required by international space agencies. A large variety of devices, from electronics boards to large payloads, can be tested in the University of Perugia laboratories against mechanical and thermal stresses in vacuum to verify their performances in hostile environments, the electromagnetic compatibility of the devices with surrounding equipment can be verified in dedicated anechoic chamber. Through the AHEAD consortium, access to the space qualification facilities of the Perugia University and sharing of the expertise in space technology will be made available to scientific institutes and industries of the whole European community. University of Perugia participates to AHEAD with the Department of Physics and Geology.