

Newsletter Focus

RADIATION MONITORING: A PRESTIGIOUS ACKNOWLEDGEMENT FOR THE INFN SPIN-OFF BEAMIDE



Understanding and monitoring the effects that radiation has on human beings, materials, and electronic systems is fundamentally important for developing successful space missions and for many other activities, from nuclear physics to IT and medicine. This is the main goal of the start-up Beamide, created as a spin-off of INFN at the end of 2021, which recently received a prestigious award from the Italy-USA Foundation, the "American Innovation Award". The award was assigned

last 14 March during a ceremony held in the Chamber of Deputies. Aimed at innovative and competitive start-ups in the global market, the award was given to Beamide for devising and producing software useful both in the aerospace sector and in the fields of medical and nuclear physics. The software simulates the effect of radiation on systems that are sensitive to it. The company's flagship project is actually the [MRADSIM \(Matter Radiation Interaction Simulator\)](#), easy-to-use software that also allows non-experts to simulate the negative effects of radiation on electronic and biological targets and those made from other materials. This software was devised at the Perugia INFN Division, by a group led by the researcher Behcet Alpat, to simulate the effects of radiation on a satellite sent to space. This was an ambitious goal that required a very long and rigorous research and experimentation path, leading to the creation of versatile software, which then became the seed of the Beamide spin-off. Today, Beamide continues to work in collaboration with INFN, which is engaged in using and testing MRADSIM, contributing to perfecting the software. And, at the same time, it advances projects to develop innovative radiation detectors that can have various applications, from the creation of a personal, multi-use electronic dosimeter to the development of more complex detectors for medical applications. Established with a strong contribution from INFN Technology Transfer Committee, the start-up's goal is to consolidate itself on the international market as a leading company for services relating to detecting, measuring, and mitigating radiation effects in the space, medical, IT, and nuclear fields.