

Perugia Advanced Physics Seminars

A journey to the frontiers of knowledge

May 7, 2021 - 15:00

SAFIR: A fast pre-clinical PET insert

The SAFIR (Small Animal Fast Insert for MRI) project is developing a pre-clinical Positron Emission Tomography (PET) insert for a commercial Bruker BioSpin 70/30 Magnetic Resonance imaging (MRI) system. SAFIR aims at unprecedented temporal resolution, i.e. images of good quality should be acquired within seconds instead of minutes. This enables truly simultaneous PET/MR imaging and opens the possibility to study the dynamics of the tracer distribution precisely on the timescale of seconds. In 2019 we successfully completed the construction of a fully functional prototype with 34 mm axial coverage. In this presentation I will describe some details of this scanner and show the first results including performance measures, first images and a dynamic study. Moreover, I will give a short outlook on the development of the full detector (140 mm axial coverage), which is presently ongoing. Finally, I will also present two spin-off developments, towards the realization of human brain PET scanners for various applications.



Günther Dissertori
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[Zoom link here](#)



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