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Fission Product Prompt gamma-ray Spectrometer, a new instrument for the ILL

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FIPPS (Fission Product Prompt gamma-ray Spectrometer) is a new instrument under construction at the ILL in the context of ILL ENDURANCE program. FIPPS addresses two fundamental domains of nuclear physics: fission of heavy elements and structure of neutron rich matter. Neutron capture induced reactions provide a suitable way to investigate these domains. FIPPS will complement the existing Nuclear Physics instrument suite at the ILL.

FIPPS consists of a high efficiency Ge detector array surrounding a fission target with a thick backing, coupled to a fission fragment spectrometer based on a gas filled magnetic (GFM) device. The new instrument will be positioned at a finely collimated halo-free thermal neutron beam at the ILL. The combined spectrometer will give access to new nuclear spectroscopy information of neutron-rich nuclides by tagging the complementary fragment and new insight into the fission process via combined measurements of mass A , nuclear charge Z , kinetic energy E_k and population of excited states.

The status of the future instrument will be presented.

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