Contribution ID: **11** Type: **not specified**

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

Wednesday, 29 June 2016 15:10 (20 minutes)

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 Ek and population of excited states.

The status of the future instrument will be presented.

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Session Classification: Nuclear Instrumentation