

In-Kind Instrument Projects – Gathering Experience by building an R&D guide-section.

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ESTIA will be one of the first instruments at ESS. Based on its elliptical Selene neutron guide concept, the Instrument will project a 0.06 x 1mm slit over a distance of 24m to the sample position (<https://www.psi.ch/lms/estia>).

To achieve this extraordinary efficiency two Selene Guides will be aligned with 180 kinematic mounts. The mounts will spread over a length of 7.2m and will be aligned within micron accuracy to each other. Furthermore those kinematic mounts will be placed in vacuum and high radiation environment.

To gain confidence over the system, a guide prototype is currently being built and tested. I will present the interferometry-metrology concept and its motion mechanics which will allow for a measurement range over 7.2m. Furthermore we will discuss the technical implementation of the system, such as lessons learned in this R&D project.

Formal Invitation Letter Required

Yes

Primary author(s) : Mr GLAVIC, Artur (PSI); Mr SCHUETZ, Sven (PSI)

Presenter(s) : Mr SCHUETZ, Sven (PSI)

Session Classification : Session F