

**US ITER Forum
Activity Proposal Form**

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What is the scope of your proposed activity?

The Johns Hopkins Plasma Spectroscopy Group proposes to investigate new ideas and tools for soft X-ray to VUV diagnostic on ITER, focusing on the following:

- i) Development and testing of new ideas for the *extraction* and *detection* of soft X-ray to VUV light in the burning plasma environment
- ii) Design and prototyping of *robust* and *easily replaceable* soft X-ray to VUV spectroscopic and imaging devices
- iii) Development of new *atomic data* and *modeling tools* for the analysis of the measurements obtained with these devices

In which phase(s) would the activity be conducted?

Pre-construction (2003-5) Construction (2006-13) Research (2014-34)

In which phase(s) would the US benefit be realized?

Pre-construction (2003-5) Construction (2006-13) Research (2014-34)

What do you see as the US interest in the programmatic area of your proposed activity?

Novel technology developments in the field of X-ray, VUV and visible light optics
Development of diagnostics for burning plasma experiments
Advances in atomic physics modeling of burning plasma

For design and fabrication activities, what do you see as the US interest in performing the design and fabrication scope in your proposed activity?

Stimulating research and development in the field of X-ray to visible light optics in the private sector, universities and national laboratories

Development of new types of radiation hardened optics, detectors and electronics

Indicate the nature(s) of the proposed activity:

- US preparations for Negotiations
- US preparations for the Construction Phase
- US preparations for the Research Phase

- R&D and design work
- Fabrication of US components/systems
- Preparation of tools for the Research Operations Phase
- Other: _____