

# **US Fusion Power Plant Studies: Current Projects & Planned Activities**

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# Highlights of ARIES Team Activities in FY01

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- Most of the ARIES technical activity is focused on ARIES-IFE which was initiated in parallel to ARIES-AT in July 2000.

## ARIES-IFE research Goals:

- Analyze & assess integrated and self-consistent IFE chamber concepts.
  - Understand trade-offs and identify design windows for promising concepts.  
*The research is **not** aimed at developing a point design.*
- Small effort in modernizing ARIES MFE systems code is ongoing this year.
  - For the foreseeable future, the ARIES Team will continue working on both MFE and IFE power plants.
  - Given the available resources, we cannot launch two parallel large-scale studies, one in IFE and one in MFE. Thus, we are focusing our effort on one “large-scale” study and one small, exploration type study.

# ARIES Team Activities Plans for FY02 and Beyond

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## ➤ FY02 Plans:

- Completion of ARIES-IFE study.
- Initiation of a three-year integrated study of compact stellarators with an emphasis on innovation and evaluation of various compact stellarator configurations. FY02 activity will be limited to an assessment of various compact stellarator concepts.

## ➤ FY03 and FY04:

- We will launch the “large-scale” compact stellarator power plant design with most of ARIES resources devoted to this project.
- We will continue small-scale IFE studies focusing on innovative approaches such as fast ignition.