



Workshop Announcement

(version 28 November 2002)

Workshop on Technology and Applications of Accelerator Driven Systems (ADS)

ICTP, Trieste, Italy, 13 - 17 October 2003

Introduction

High-level waste disposal is an element of paramount importance in the discussion of nuclear power generation sustainability. This, and the desire to reduce the quantity of long-lived waste material, have stimulated new interest in the transmutation of actinides and some long-lived fission products, and in emerging system technologies for energy production with reduced actinide generation. One such system is the combination of a particle accelerator with a subcritical nuclear reactor.

The surmised advantages of accelerator driven systems (ADS) - apart from their intrinsic low production of long-lived radioactive waste, and transmutation capability - are also enhanced safety characteristics and better long-term resources utilization (e.g., in connection with thorium fuels). Significant efforts to develop high-power accelerator driven systems are under way in many countries including China, the European Union, India, Japan, Russia, and the US.

The R&D topics involved can be categorized according to the following R&D areas:

- General concept and system studies
- Accelerator
- Target
- Sub-critical core
- Fuel development
- Fuel cycle studies

Workshop Scope and Objectives

The scope of the workshop is training and information exchange.

The objective of the Workshop is to familiarize the students with the status of the R&D activities in the aforementioned areas. A review of the ADS designs presently under consideration will be given. They will study the theoretical foundation of ADS design work, identify the most problematic areas, as well as the limitations of the simulation methods presently used. Based on the discussion of the impact of the present uncertainties on the performance of the ADS, the needs for data and methods development and validation work will be identified.

The Workshop will consist of lectures, computer demonstrations and 'hands-on' exercises (a more detailed syllabus will be posted on this Web Site in due course). The participants are also invited to make short presentations of their own research activity, and send in, together with their participation requests, half page abstracts of their intended oral presentations. The selection of the presentations will be done during the Workshop.

Organization

The Workshop will be organized by the International Atomic Energy (IAEA) and hosted by the Abdus Salam International Centre for Theoretical Physics (ICTP). It will be held between 13 and 17 October 2003. The Organizer of the Workshop will be Dr. Alexander Stanculescu (IAEA, Vienna, Austria).

Participation

Scientists and students from all countries that are members of the UN, UNESCO or IAEA can attend the Workshops. Participants should hold a university degree in nuclear physics, nuclear chemistry, nuclear engineering or related subjects, and have several years of professional experience related to application of nuclear technology. They are expected to apply acquired knowledge through teaching and working in their home countries. In line with IAEA's and ICTP's respective missions, the main purpose of the Workshop is to help research workers from developing countries through a programme of training activities within a framework of international cooperation. However, students and post-doctoral scientists from developed countries are also welcome to attend. As this activity will be conducted in English, participants should have an adequate working knowledge of that language.

As a rule, travel and subsistence expenses of the participants should be borne by the home institutions. However, limited funds are available for scientists from developing countries. It is stressed that participants whose travel expenses are paid by the IAEA are required to attend the Workshop. There is no registration fee for attending the Workshop.

The request for participation form can be downloaded from here [REQUEST FOR PARTICIPATION](#) or should be requested via email from j.segota@iaea.org. It should be returned completed and signed to this address:

International Atomic Energy Agency
Department of Nuclear Energy
Nuclear Power Technology Development Section
Attn. of Mr. A. Stanculescu
Wagramerstrasse 5
P.O.B. 100
A-1400 Vienna
Austria

The participation requests must reach the IAEA before the closing date, 27 June 2003.