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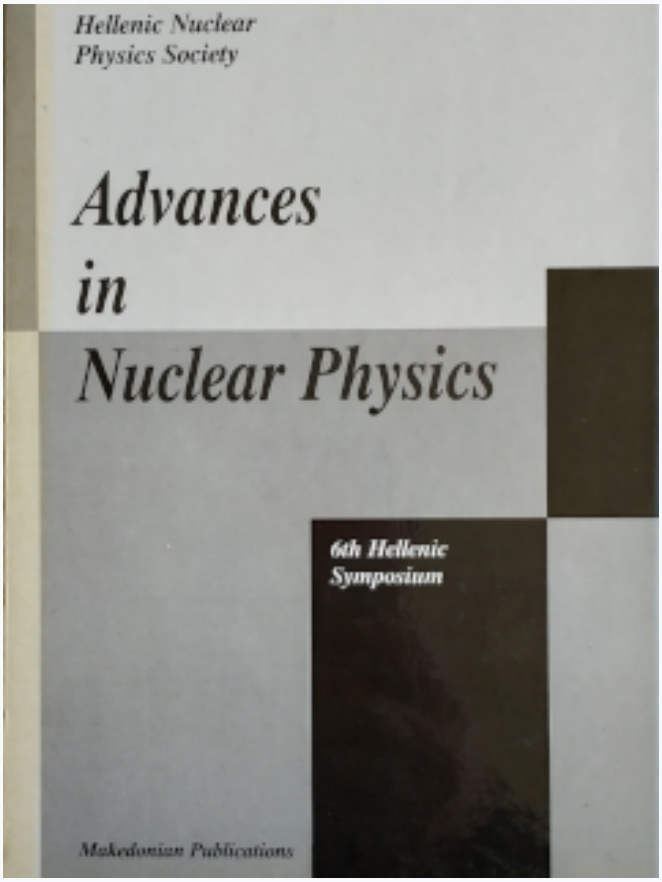

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The IASA Racetrack Microtron Facility (Athens, Greece)

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Abstract

The recently established Institute of Accelerating Systems and Applications (I.A.S.A) is pursuing research in traditional and cross-disciplinary areas where electron accelerators play an important role. The first major facility of I.A.S.A, is a 240 MeV two-stage CW Cascade Microtron. Equipment originating from the University of Illinois (Urbana-Champaign-USA) and from NIST (Waschington-USA) are going to be disassembled and sent to our Institute in Athens in a year time (June 1996). Installation and modifications of the original design will take place in the "Maquette" building of I.A.S.A and will include the construction of the injector complex as well as the implementation of the new control system based on EPICS (Experimental Physics Industrial Control System). The planned experimental program and facilities will include research areas namely the areas of nuclear and particle physics, nuclear medecine, archeology and material science.

[1] Presented by A.Karabarbounis

Energy Amplifier
A More Clear and Promising Nuclear Energy

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Abstract

The present experience and techonology of fission reactors and on accelerators makes possible the easy and inexpesive construction of an accelerator-reactor system for production of (nuclear) energy, the Energy Amplifier (EA).

In the talk the first results of an EA experiment carried out ar CERN will be presented. The experiment was positive, in the sense that there was energy excess at the output of the EA in comparison to the input. In addition, the present energy situation on the planet, which imposes the search for large energy sources, will be analyzed and the advantage of the EA will be presented. The main advantages are i) the EA will be "more clean" as far as redioactivity is concerned, ii) it will not produce Pu-239 for military applications, iii) it will almost never become hypercritical, explosive, and iv) in the case that the fissile material is Th there will be sufficient supply of raw material on the planet for millions of years. [1]

[1] Full paper on page 352 (greek version).