

ACCELERATOR COLLOQUIUM

“Soreq Applied Research Accelerator Facility - Phase I Status and Looking Ahead to Phase II”

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The Soreq Applied Research Facility, SARAF, is currently under construction at Soreq NRC, Yavne, Israel. SARAF will be a multi-user facility, whose main activities will be neutron physics and applications, radio-pharmaceuticals development and production, and basic nuclear physics research.

SARAF is based on a continuous wave (CW), proton/deuteron RF SC linac with variable energy (5-40 MeV and current (0.04-2 mA). Phase I of SARAF consists of a 20 keV/u ECR ion source, a low energy beam transport, a 4-rod RFQ, a medium energy (1.5 MeV/u) transport, a superconducting module housing 6 half-wave resonators and 3 superconducting solenoids, a diagnostic plate and a beam pump. Phase II will include 5 additional SC modules. Phase 1 of SARAF is fully installed and is currently being commissioned. So far, a CW 1 mA proton beam has been accelerated up to 3 MeV and low duty cycle 1 mA (instantaneous) deuteron beam has been accelerated up to 4.3 MeV. These were the first ever ion beams to be accelerated through half-wave resonators.

The presentation will include a brief overview of Soreq NRC, the SARAF accelerator design and challenges, status of its commissioning and foreseen research and application at SARAF.

**Thursday, July 8, 2010
11:00 a.m. – 12:00 p.m.
CEBAF Center Auditorium**