



# Call for Abstracts

## “Technical Meeting on Low-Power Critical Facilities and Small Reactors”



Ottawa, Ontario CANADA  
2010 November 1-3

### “Celebrating ZED-2’s 50<sup>th</sup> Anniversary”

#### Objective

The Zero Energy Deuterium (ZED-2) Critical Facility, located at AECL’s Chalk River Laboratories will be celebrating its 50th Anniversary this year. Built in the late 1950s, ZED-2 achieved first criticality on September 7, 1960. ZED-2 was initially built to test the fuel arrangement of Canada’s first nuclear power plant, the Nuclear Power Demonstration (NPD), located along the shores of the Ottawa River about 20 km upstream of Chalk River. ZED-2 was the successor to the first nuclear reactor outside of the United States, the Zero Energy Experimental Pile (ZEEP), which was designed to investigate lattice physics and reactor kinetics. Since that time, the ZED-2 critical facility supports the development of the CANDU industry by testing a wide range of fuel bundle designs, fuel arrangements at low power under a variety of operating conditions and simulating accident scenarios. ZED-2 continues to operate today, supporting the current CANDU fleet, development of the Advanced CANDU Reactor and advanced fuel cycles including thorium fuels.

To mark the historic occasion of ZED-2’s 50<sup>th</sup> anniversary, a Technical Meeting to showcase the numerous accomplishments of low-power critical facilities worldwide will be held in Ottawa, November 1<sup>st</sup> and 2<sup>nd</sup>, 2010. The two-day Technical Meeting will cover topics of interest to operators, experimenters and analysts involved with low-power critical facilities. Following the Technical Meeting, AECL will host a tour (November 3) of the Chalk River Laboratories for all interested attendees. The highlight of the tour will be the ZED-2 critical facility.

#### Key Deadlines

Abstract submission .....Sept. 17, 2010  
Notification of acceptance.....Oct. 8, 2010  
Early registration deadline .....Sept. 15, 2010

#### Abstract Submission

Abstracts and (optional) extended abstracts must be submitted via electronic mail to the Technical Program Chair Milan Ducic, [ducicm@aecl.ca](mailto:ducicm@aecl.ca) before the abstract submission deadline. For the purpose of this technical meeting, full papers are not required. Moreover, extended abstracts should be no more than three pages in length.

Abstracts, extended abstracts, and participant’s presentations will be published on CD in the Conference Proceedings.

#### Conference Organizers

Honorary Co-chairs.....Ralph Green, Chas Millar  
Rick Jones, John Hilborn  
General Chair.....Bhaskar Sur  
Technical Program Chair.....Milan Ducic  
Program Committee.....Peter Boczar  
Ken Kozier  
Rick Didsbury  
Dave Irish  
Bruce Wilkin  
Brock Sanderson  
Julian Atfield  
Mike Zeller  
Elisabeth Varin

#### Topics of Interest

Papers related to the following topics are of interest to this conference:

- Safety and licensing of critical facilities
- Measurements in critical facilities
- Analysis of measurements from critical facilities
- The use of measurements from critical facilities in reactor physics code validation
- Extension of bias and uncertainty from the critical facility to the power reactor
- Other uses of measurements from critical facilities
- Design development of instrumentation for measurements in or control of critical facilities
- Different fuel compositions, geometries, reactivity worth of devices, kinetics parameters, reactor types
- Measurements of irradiated materials, actinides
- Reactor physics benchmark databases and activities
- Education and research with small reactors

#### Further Information

Additional information may be obtained by contacting Technical Program Chair Milan Ducic, AECL, Chalk River Laboratories, Chalk River, Ontario K0J 1J0 CANADA, Tel: (613) 584-3311; Email: [ducicm@aecl.ca](mailto:ducicm@aecl.ca)

