

Personnel Training in JAEA

**Regional Workshop on Application of the
Code of Conduct on the Safety of Research
Reactors**

**30 April – 11 May 2007, Argonne National
Laboratory, Illinois, USA**

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Japan Atomic Energy Agency, JAEA

- **Operating Organization of Research Reactors, Accelerators, Quantum beam facilities, Nuclear fuel cycle facilities, etc...**
- **JAEA was established in 2005 by integrating the JAERI and the JNC**

Mission of JAEA



**Long-term energy security
Countermeasures to
environmental problems**

Establishment of nuclear fuel cycles
(FBR cycle, HLW, Tech. support of LWR Cycle)

**Contribution to hydrogen economy
by nuclear process heat**

**Creation of advanced science
and technology with
competitive edges**

**Research and development of
nuclear fusion energy**

Quantum beam technology
(Quantum beam user platform)

**Activities on securing safety
and securities**

Research on nuclear safety

**Nonproliferation &
safeguards technology**

**Decommissioning of nuclear facilities,
Treatment & Disposal of low level waste**

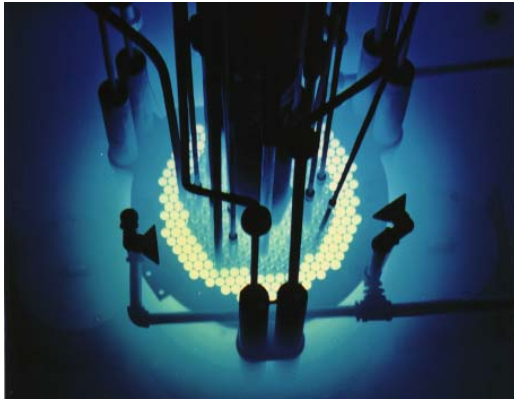
**Cooperation with academic and industrial
communities/ International collaboration/
Human resource development/ Atomic
energy information**

Common bases of science and technology

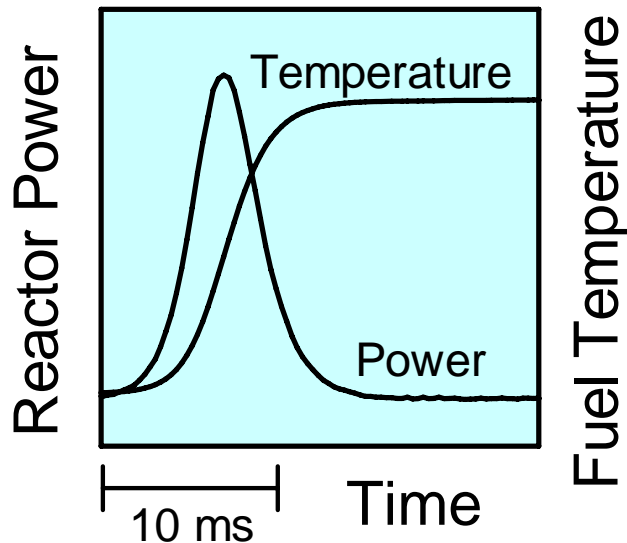
Basis nuclear engineering research, Advanced basic research

Nuclear Safety Research Reactor, NSRR

Modified TRIGA-ACPR (Annular Core Pulse Reactor)



For the study of fuel behaviour during an RIA



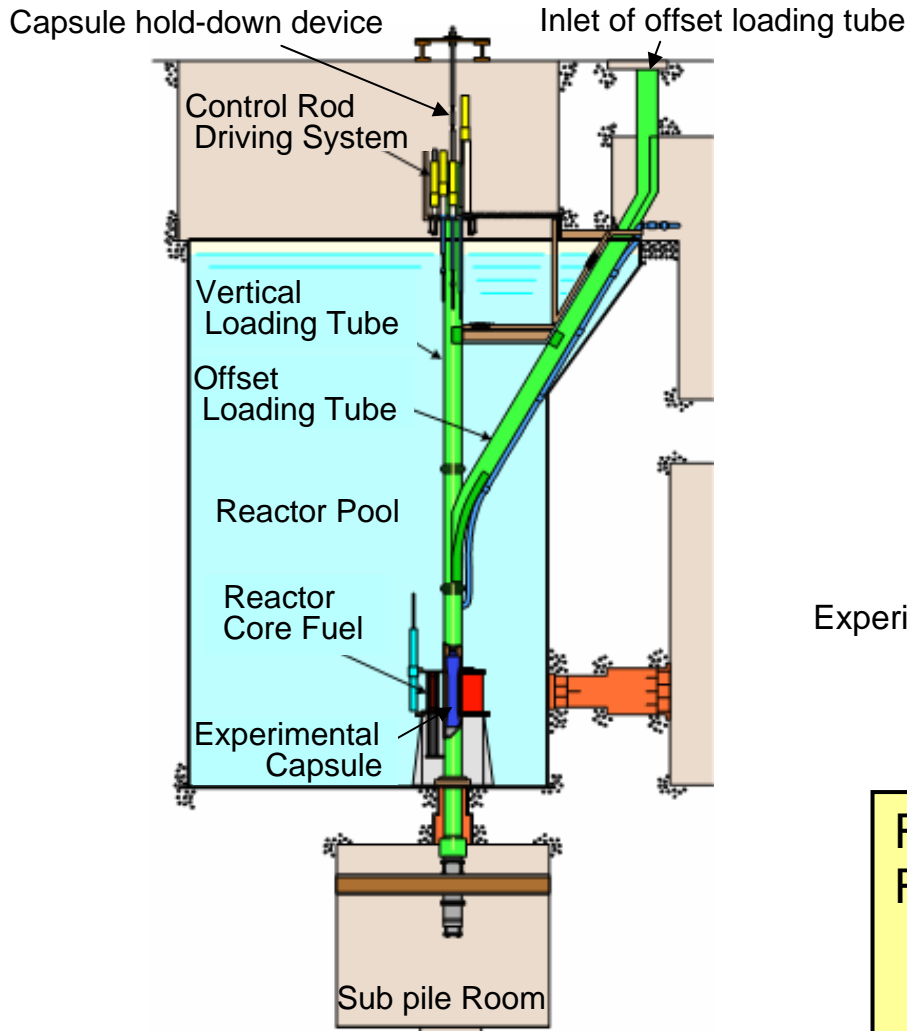
Pulse operation

- Inserted reactivity: Max. β
- Maximum pulse,
 - ✓ Peak power: 23 GW
 - ✓ Integrated power: 130 MJ
 - ✓ Pulse width: 4 ms

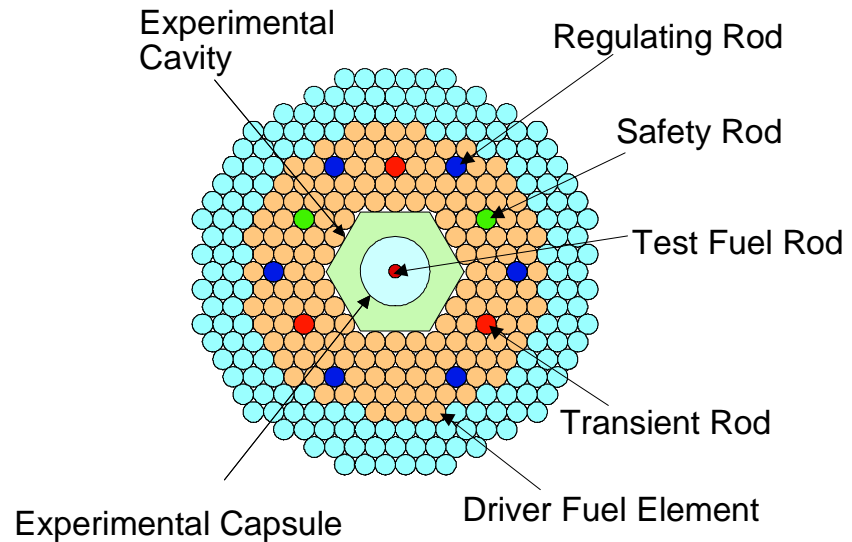
Normal operation

- Reactor power: 300 kW

Nuclear Safety Research Reactor, NSRR



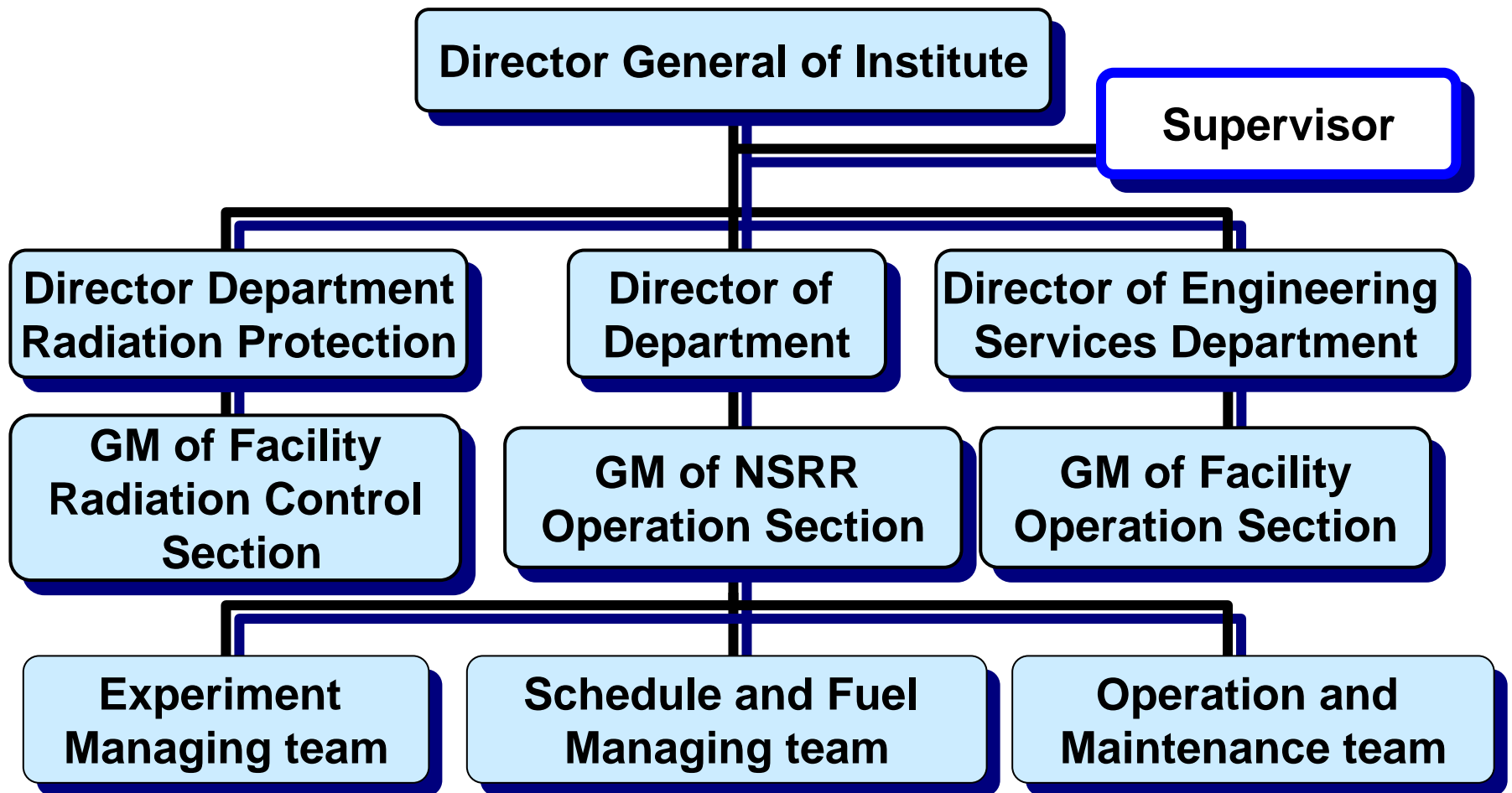
Vertical Cross Section of NSRR



Horizontal Cross Section of NSRR

Reactor vessel:	3.6W x 4.5L x 9H m
Reactor core:	
Effective height	38 cm
Equivalent diameter	63 cm

Organization of Safety Activity of NSRR Operating Section



Training System (1/2)

■ Training based on Regulations

- Regulation of Safety Activities
- Regulation of Physical Protection of Nuclear Materials
- Regulation of Radiation Hazard Prevention
- Regulation of Management of X Ray instrument

■ Other Training

- Training for Inspection of Facility
- Training outside of Section
- Extra Training caused by other facility's problems or accidents