



Wir schaffen Wissen – heute für morgen

NES präsentiert, 18.03.2015

Martin A. Zimmermann

09:00	Begrüßung und Einführung	M. Zimmermann
09:15	Labor für Reaktorphysik und Systemverhalten	H. Ferroukhi
09:45	Labor für Thermohydraulik	H.-M. Prasser
10:15	Kaffeepause	
10:30	Labor für Nukleare Materialien + Hotlabor	H.-P. Seifert / D. Gavillet
11:15	Labor für Endlagersicherheit	S. Churakov
11:45	Labor für Energiesystem-Analysen	S. Hirschberg
12:15	Schlussbetrachtungen und Verabschiedung	M. Zimmermann
12:20	Ende der Veranstaltung	

Für die Kaffeepause gilt Selbstbedienung.

Die Präsentationen stehen als PDF ab nächster Woche zur Verfügung:

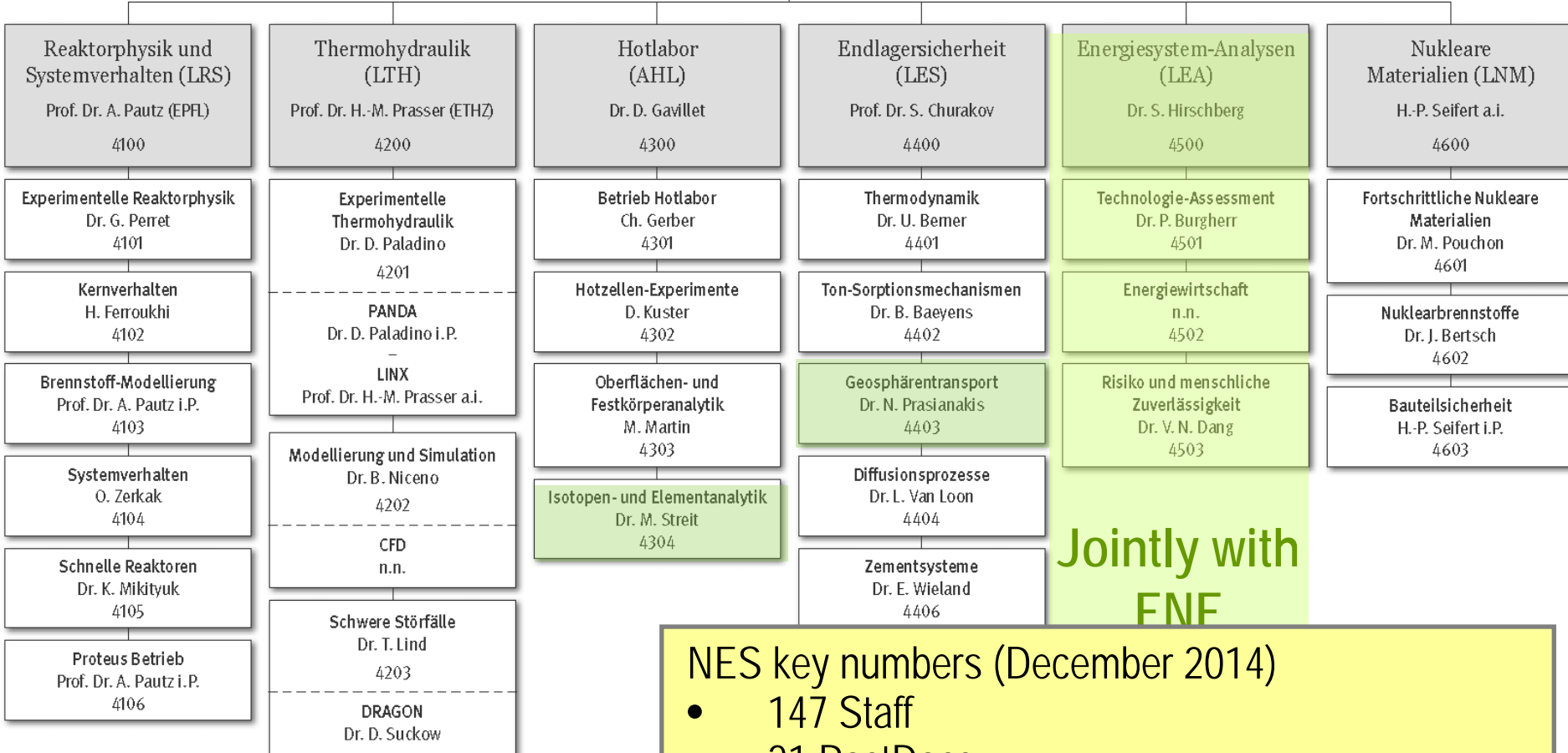
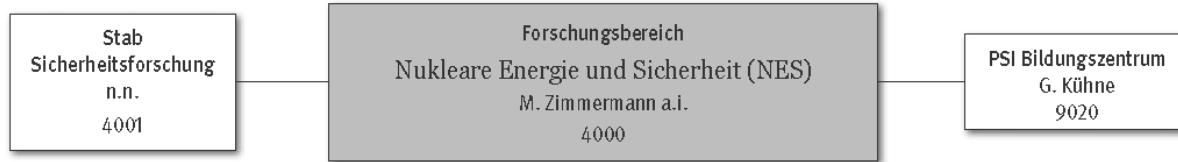
<http://nes.web.psi.ch/events/index.html>

Update on situation at NES

Presentation of capabilities available NES

- Holistic overview: Not restricted to either ENSI, swissnuclear or other partners

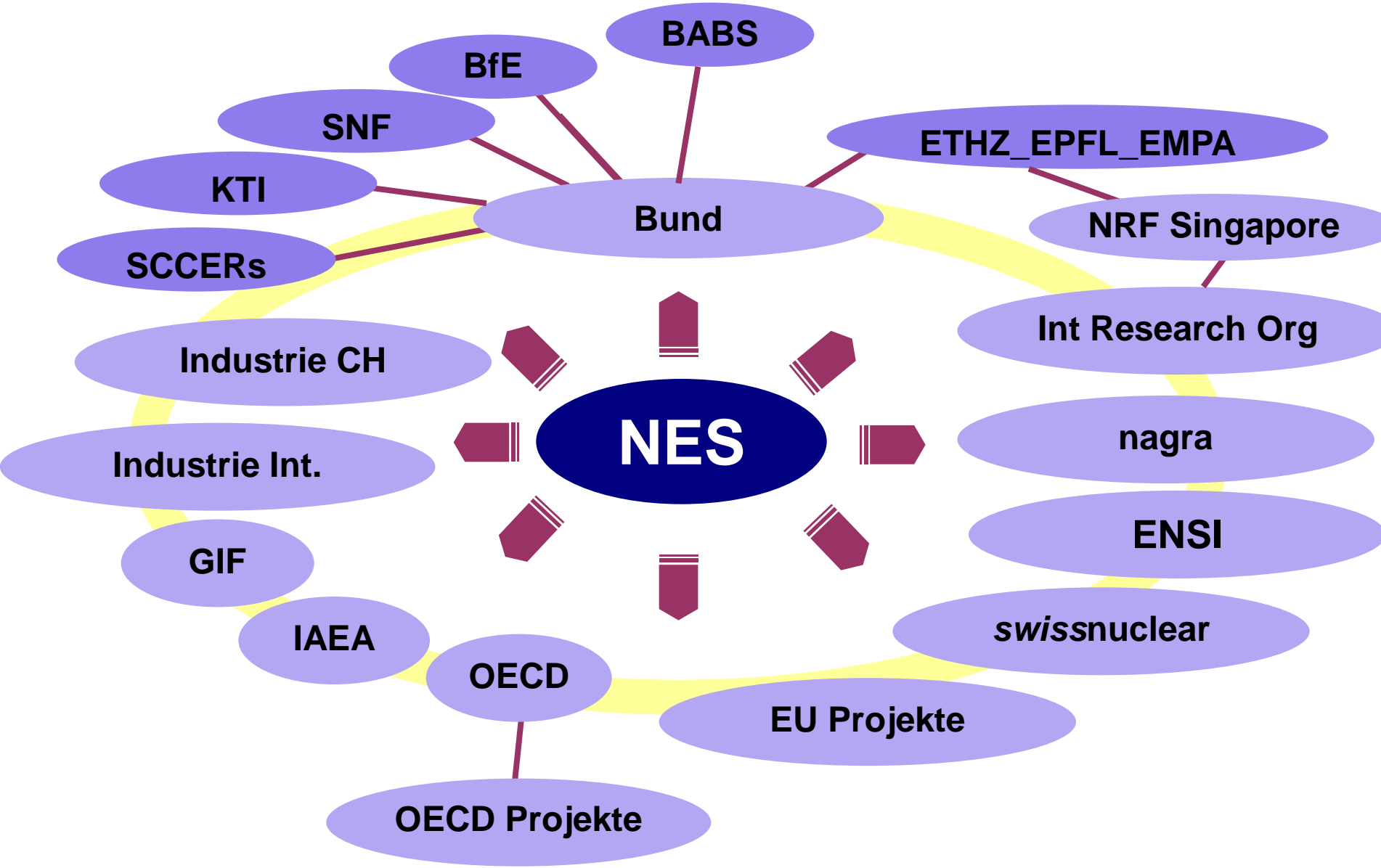
Showing selected highlights from the labs/projects

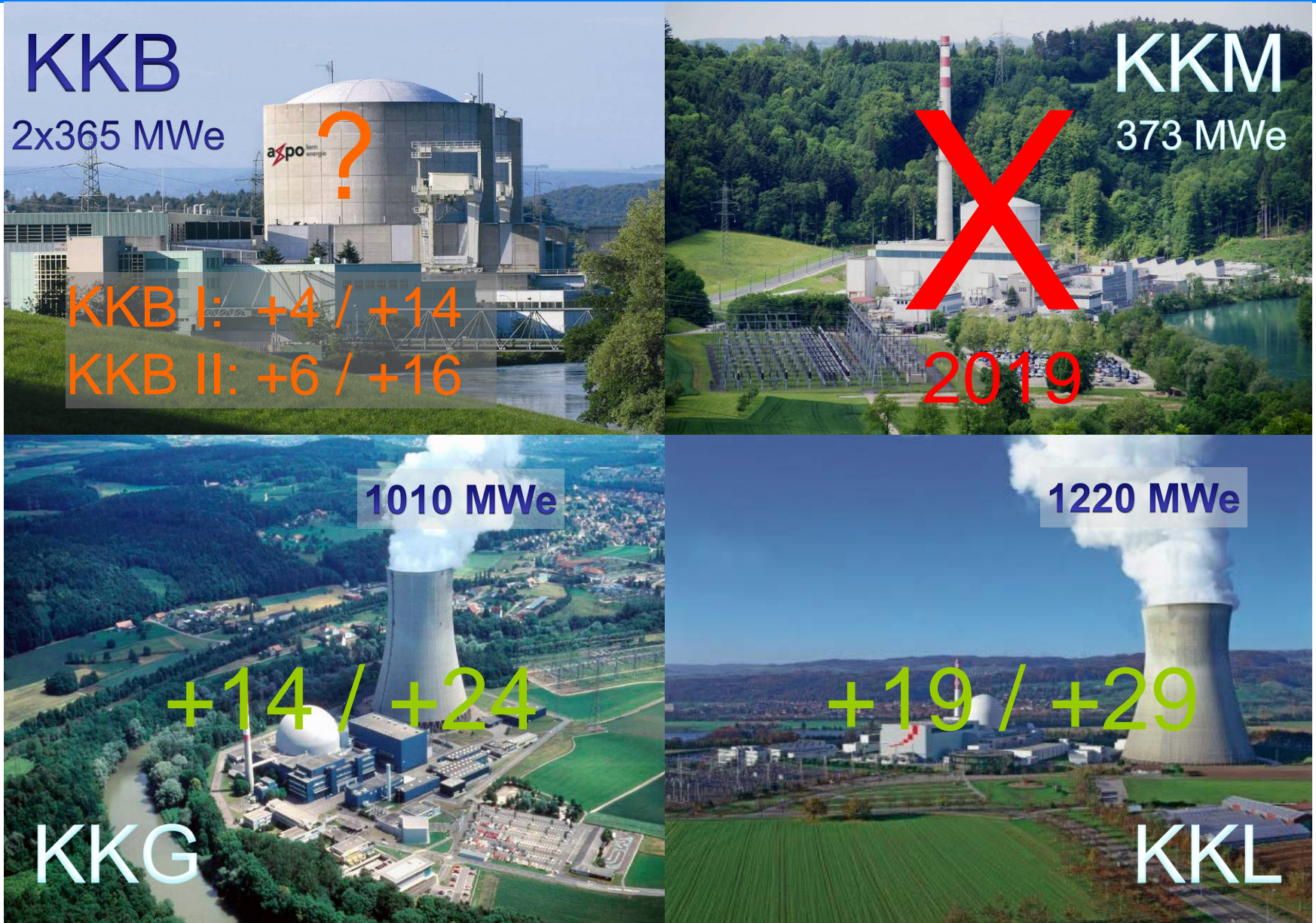


Jointly with
ENF

NES key numbers (December 2014)

- 147 Staff
- 21 PostDocs
- 23 PhDs

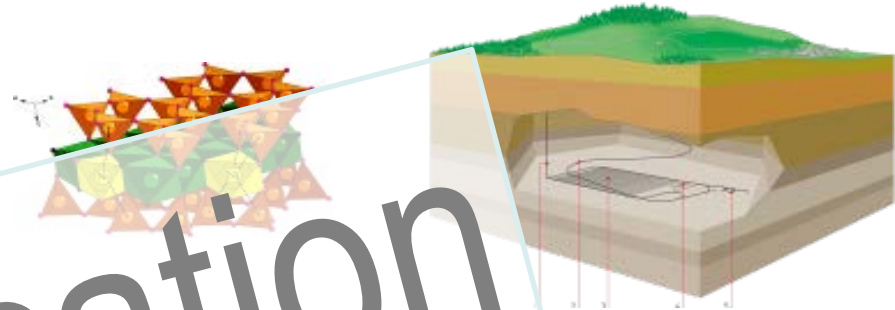






Waste Management

Multiscale reactive transport
of radio-isotopes
Safety of deep geological repository

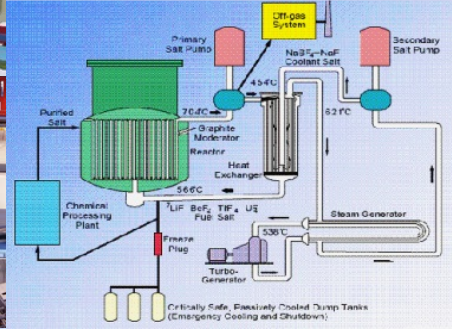


Education



New Technologies

Reduced risk - Reduced waste

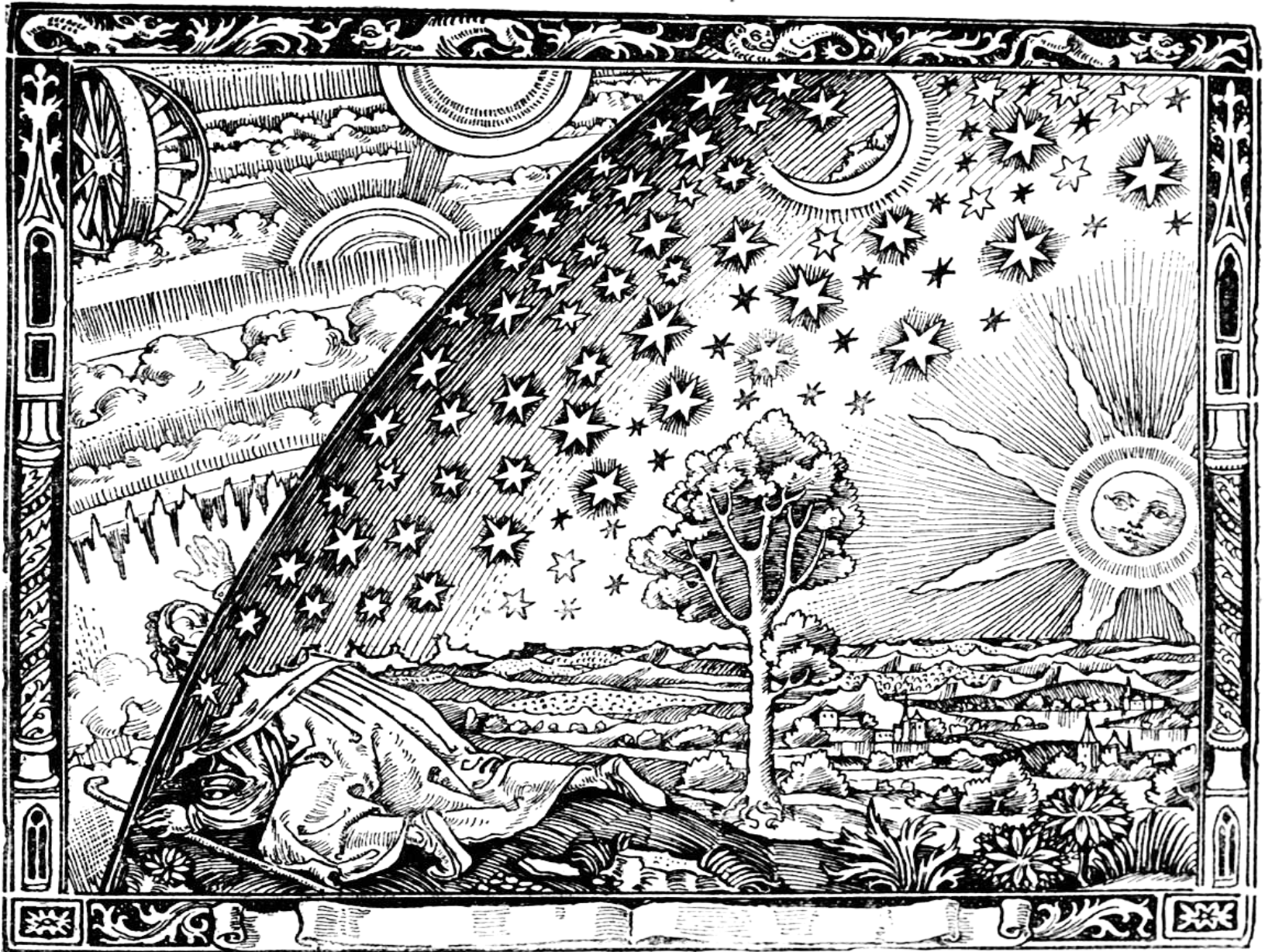


Safety

Understanding relevant phenomena
Normal Operation ... Severe Accidents
Materials performance (barrier integrity)

- MSR is a substantially different reactor concept compared to the ones already studied in NES
 - Allows for rethinking nuclear energy generation
 - Possibility or «crazy ideas»?
- Contributions from all labs possible
- Fast, thermal, as well as intermediate spectrum possible
- Good system to explore «zero risk, zero waste»
- Kernel of expertise already available in LRS and elsewhere in NES

Molten Salt Reactor (MSR, Gen-IV)



- Some funding from two PSEL-projects already available
- To date:
 - 3 (small) projects already completed
 - 2 PhD projects granted from SNF, one already started
 - 2 MSc projects on-going
 - 9 projects approved (~47 pm)
 - 8 projects proposed
- Technical disciplines
 - Neutronics
 - Fluid dynamics
 - Chemistry
 - Development of simulation tools

What has already happened?

- Cooperation between NES labs
- International cooperation starting (EU-project, bilateral,...)

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