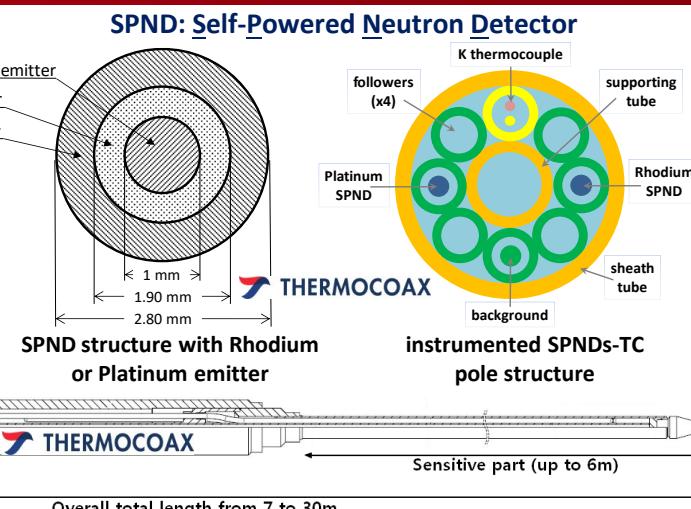
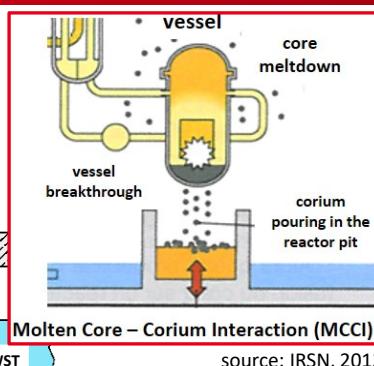
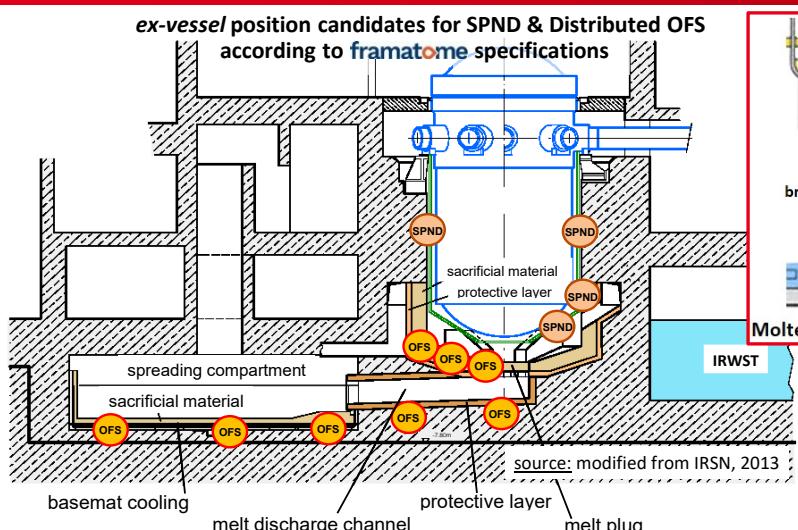
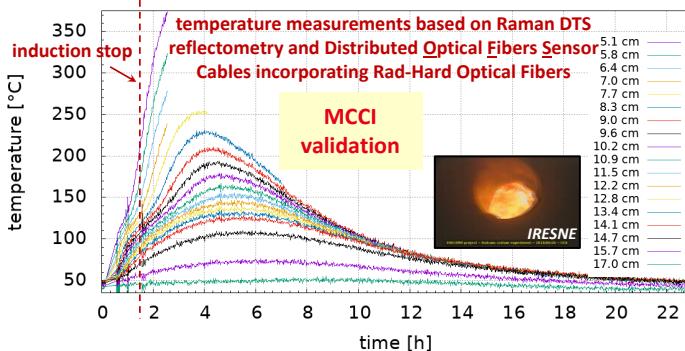


Long length SPNDs and Distributed Optical Fiber Sensors for Severe Accident remote monitoring and their contribution to Nuclear Safety in the post-Fukushima context



2 complementary technologies of **passive sensors**: ex-core long length SPNDs-TC & Distributed Optical Fiber Sensors

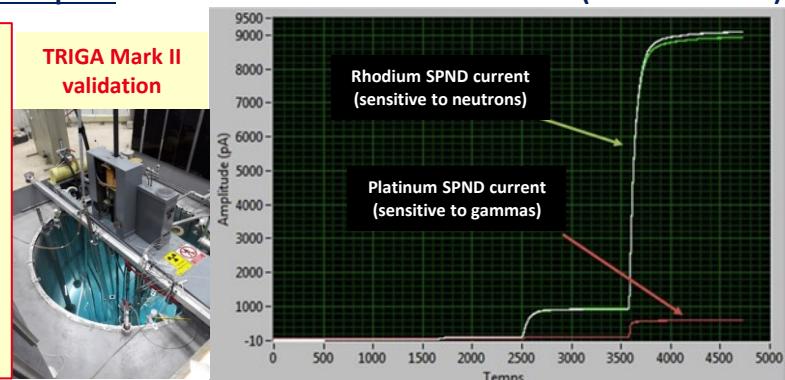
Distributed Optical Fiber Sensors: temperature in concrete



Remote detection / monitoring

- ✓ Reactor shutdown
- ✓ Onset on the Severe Accident
- ✓ Vessel breakthrough with corium pouring on the floor
- ✓ Corium interaction with the concrete floor until its prospective breakthrough
- ✓ Long term corium cooling

SPND-TC pole: SPND currents for different scenarios (tests in reactor)



Information remotely obtained from a safe place, even in case of total loss of power supplies:

- to increase the nuclear safety,
- to reduce operator exposition to ionizing radiations,
- to avoid the breach of 3rd containment barrier & environmental consequences with on-time & appropriate mitigation strategies

Distributed Sensing for Corium Monitoring and Safety – DISCOMS

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