

ATHENA: A Thermal Neutron Spectrum Sodium-Cooled Microreactor

- Power: 10 MWe
- Fuel: UCO TRISO particles.
- Moderation: $\text{YH}_{1.84}$ moderation particles.
- Particles embedded in graphite matrix.
- Coolant: sodium channels (0.5 cm diameter) with ZrC cladding (0.04 cm thick).
- Control Mechanism: B_4C control drums
- Python-SCALE Interface for Writing Input Files

Core Parameter	Value
Power Level (MWth)	31.04
Inlet/Outlet Temp. (K)	773/973
Core Volume (m^3)	0.909
Enrichment (% U-235)	18.0
Fuel Plates	546

