

Target accuracies:

- Present status
- Revised values?

All Fast Reactors and ADS systems Target Accuracies (1σ)

Multiplication factor (BOL)	200 pcm
Power peak (BOL)	1%
Burnup reactivity swing	200 pcm
Reactivity coefficients (Coolant void and Doppler – BOL/EOL)	5%
Control rod bank	3%
Single control rod	2%
Major nuclide density at end of irradiation cycle	1%
Other nuclide density at end of irradiation cycle	10%

Target accuracies (preliminary)

ADS values and parameters to be revised (JAEA, E. Ivanov)



Target Accuracy (1σ) for UO₂- and PuO₂-Fuelled VHTR's

Criticality	300 pcm (operation and safety)
Local power (in fuel compact)	5% (1% in pin-wise fission rate of fresh fuel; 3% in main fissile isotope conc. of irradiated fuel)
Burnup (cycle length)	1% (\Rightarrow ~ 500 MWd/t)
Doppler coefficient	20%
Moderator temperature coefficient	1 pcm/°C
Nuclide inventories at EOL	
Main fissile isotopes	3%
Fertile isotopes	5%
MAs and FPs	20%

VHTR values and parameters to be revised (E. Ivanov)



High BU PWR Target Accuracies (1σ)

k_{eff}	Doppler temperature coefficient	Burnup $\Delta\rho$	Transmutation
0.3%	7%	300 pcm	5%

From SG26


Molten Salts Reactors (for details and definitions, see EGIEMAM-II final report)

k_{eff}	Temperature coeff. : α -total (pcm/K)	Total core temperature effect, α -core (pcm/K)	Burnup $\Delta\rho$	Isotope Transmutation	β_{eff}	Mean Neutron generation time (Λ)
0.3%	5%	5%	300 pcm	5%	3%	3%

MSR values and parameters to be revised (E. Ivanov)
