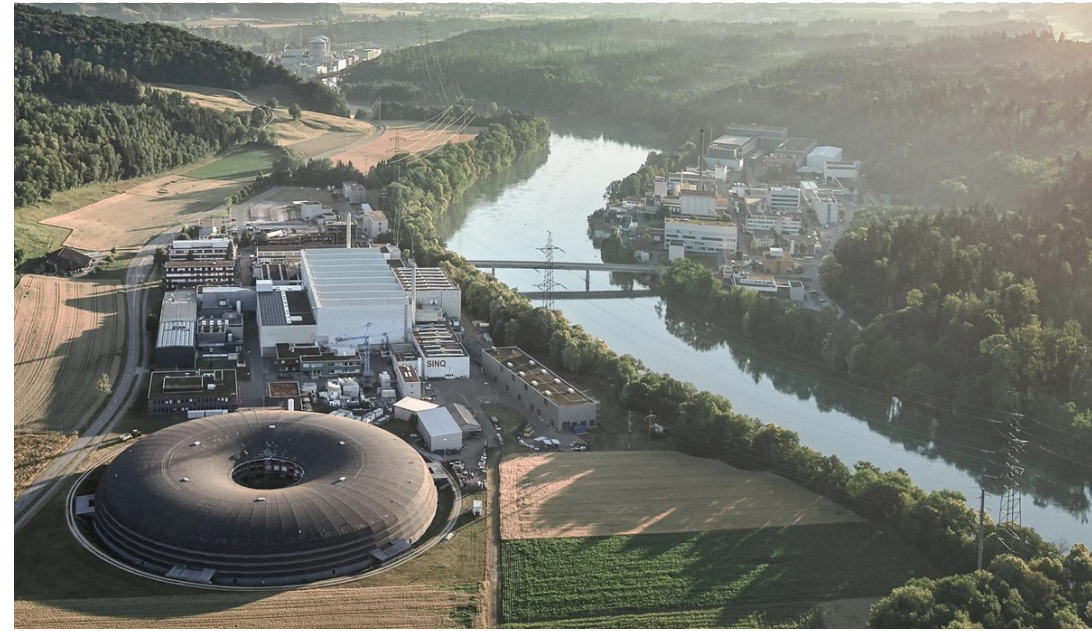


PSI Center for Nuclear Engineering
and Sciences



Summary of the 3rd SG16 meeting

D. Rochman

WPNCS Meeting, June 20th, 2025, OECD NEA, Paris

- 4 technical presentations
 - 2 from Fredrich Johansson (detailed OE2 irradiation history + new EPRI-SKB report)
 - 1 from Sébastien Bonthoux (impact of calculation options on decay heat)
 - 1 from Pedro Ortego (details on MonteBurns calculations)
- Main conclusions for decay heat:
 - 2D/3D calculations (axial profile < 1%)
 - Nuclear data library 1-2 %
 - Energy release per fission ~1 %

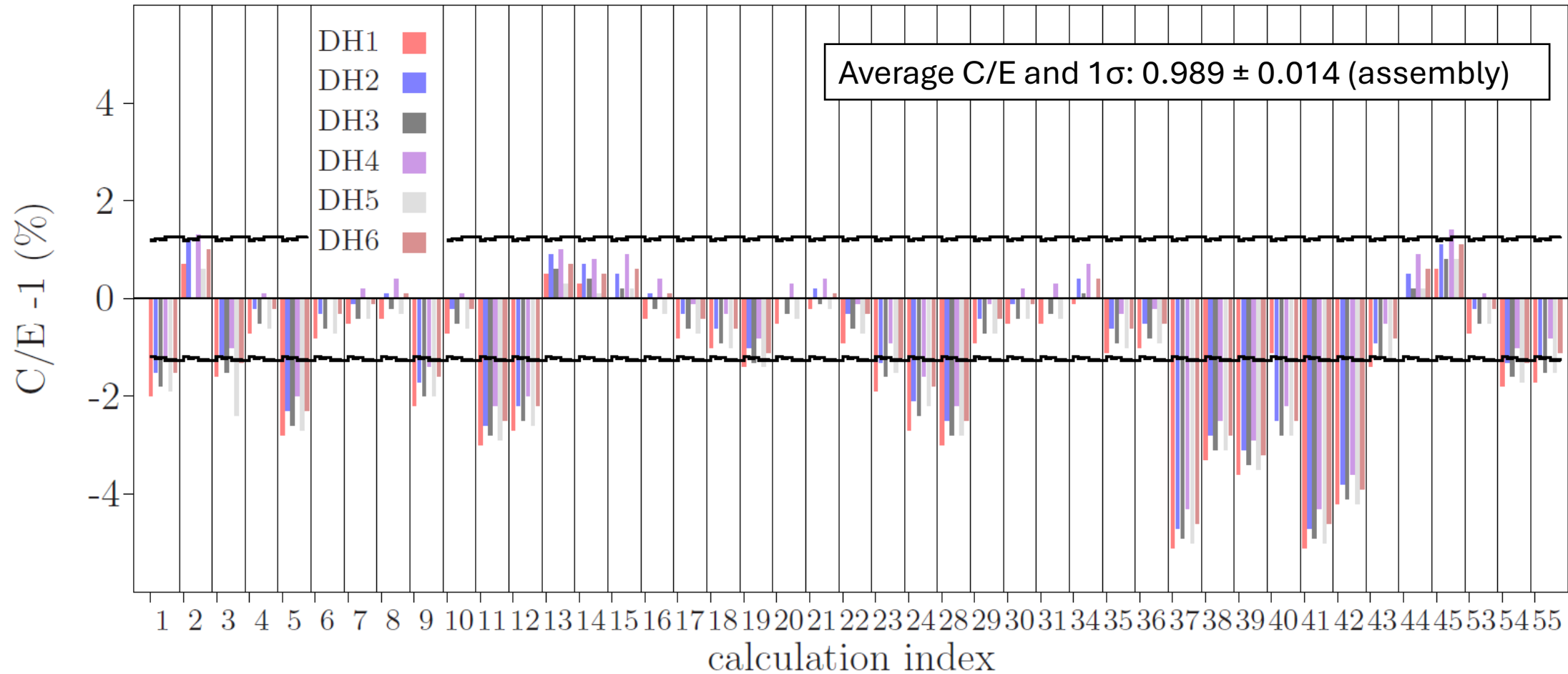
Sources of differences between calculated and measured decay heat



- a. Computer code bias and uncertainty
- b. Cross section data
- c. Modeling simplifications
 - i. Power history
 - ii. Burnable absorber history
 - iii. Soluble boron history (PWR)
 - iv. RCCA (PWR) or control blade history (BWR)
 - v. Moderator and fuel temperature history
 - vi. Void history (BWR)
 - vii. Spacer grid and end fitting content and modelling
 - viii. Axial power and burnup distribution
- d. Modeling uncertainty
 - i. Assembly mass
 - ii. Assembly burnup
 - iii. Assembly depletion history
- e. Measurement uncertainty

Summary

- Discussion on the SG16 summary paper: to be submitted this year



Summary

- Discussion on needs for burnup assessment (see presentation for a new SG)



Many thanks

- Questions ?

