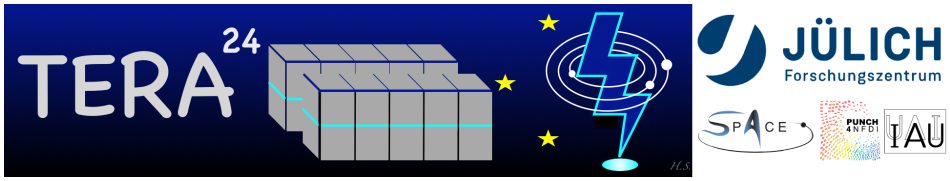

Contribution ID: **59** Type: **not specified**

Challenges and solutions to run and analyse large cosmological simulation boxes IllustrisTNG and MillenniumTNG

Wednesday, 25 September 2024 13:30 (30 minutes)

Large cosmological boxes are a crucial tool to understand the universe and to interpret ongoing and future cosmological surveys. The largest cosmological boxes simulations are among the biggest simulations run on current supercomputers. I will discuss our experiences running and analysing them, with a focus on the technical, machine, algorithmic problems we encountered when running MillenniumTNG (10^11 resolution elements, 122000 cores on Supermuc-NG, 170M core-h) and the solutions we came up with to overcome them.

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