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## The 300 cluster project – the new GIZMO-Simba run

*Thursday, 1 July 2021 09:50 (30 minutes)*

I will introduce the 300 galaxy project (<https://the300-project.org/>) with its new GIZMO-Simba run in this talk. Targeting at zoomed-in simulations of galaxy clusters with a very large sample (324 clusters with  $M_{200} > \sim 6 \times 10^{14} M_{\text{sun}}/h$ ), the 300 project provides varieties of analogues resulted from several semi-analytical models to hydrodynamical simulations with different baryon models. This new GIZMO-Simba run based on the successful Simba simulation (Dave et al. 2019) shows good agreements with observational results. I will show how Simba thinks the cluster, especially its brightest central galaxy, is formed with this set of galaxy clusters, and how Simba predicts the  $M_{\text{bh}}$  and  $M^*/\sigma$  relation at cluster scale.

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