The assembly history of the milky way nuclear star cluster

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Propositions

accompanying the thesis

The Assembly History of the Milky Way Nuclear Star Cluster

1. The cluster of young stars in the central parsec of the Milky Way nuclear star cluster formed in-situ. *(Chapter 4)*
2. The majority of the old stars of the Milky Way nuclear star cluster do not originate from infalling globular clusters. *(Chapter 5)*
3. The Milky Way nuclear star cluster is not a simple spherical system of stars. *(Chapter 2)*
4. The assumed surface brightness profile is important for the measurement of black hole masses via dynamical modelling. *(Chapter 3)*
5. A spectroscopic search for young stellar objects in the central molecular zone is required to estimate the present-day star formation rate.
6. The future *James Webb Space Telescope* and the *European Extremely Large Telescope* can constrain whether supermassive black hole seeds formed via the direct collapse of primordial gas clouds or as the end-product of stellar evolution.
7. The measurement of the stellar velocity dispersion σ used in the relation with the black hole mass $M_\bullet$ needs to be standardised.
8. Future ground-breaking discoveries in the physical sciences will increasingly be made by large collaborations and consortia.
9. The activities of the science department at the European Southern Observatory (ESO) benefit both the astronomy community and ESO as an organisation.
10. The curriculum of university students of the natural sciences has to include courses in scientific writing.
11. The number of publications per observing night depends on the commitment of the astronomer to the data. *(Sterzik et al. 2015, Messenger)*
12. For faculty positions, there should be separate rankings for female and male applicants.
13. "Essentially, all models are wrong, but some are useful." *George Box*

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