

Poster

Splinter Populations

MASS-DEPENDENT DYNAMICS IN GLOBULAR CLUSTERS

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The analysis of mass-dependent dynamics in globular cluster mainly hinges on the number of stars observable and the ability to resolve main-sequence stars. Using crowded field 3D spectroscopy on MUSE data, we were able to spectroscopically resolve at least  $10^3$  stars for 25 globular clusters each, including main-sequence stars. This enabled us to study the mass-dependency of the velocity dispersion for all of these clusters, but in particular NGC 104, NGC 3201, NGC 5139, NGC 6254, NGC 6656 and NGC 6752. Velocity dispersion, meaning the statistical dispersion of velocities around the mean velocity of the cluster, is thereby used as the dynamic's characteristic quantity of each globular cluster. Our results show agreement with theoretical expectations for some clusters. However we also find disagreement for other clusters, namely NGC 6656 and NGC 5139.