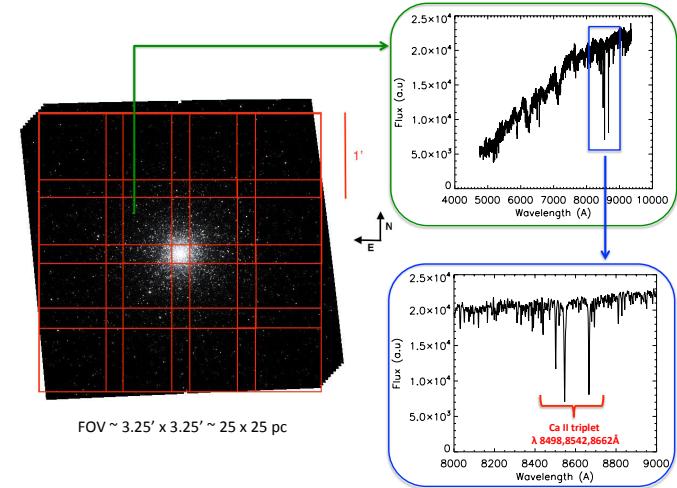


M54: A key to the connection between globular and nuclear star clusters

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- ~ $1 - 2 \times 10^6 M_{\odot}$: Second most massive star cluster in the Milky Way.
- Stripped NSC in the Sagittarius dwarf galaxy.
- Distance of 27.4 kpc.
- Multiple stellar populations.
- Possible $10^4 M_{\odot}$ black hole host.
- Large spread in iron abundance.

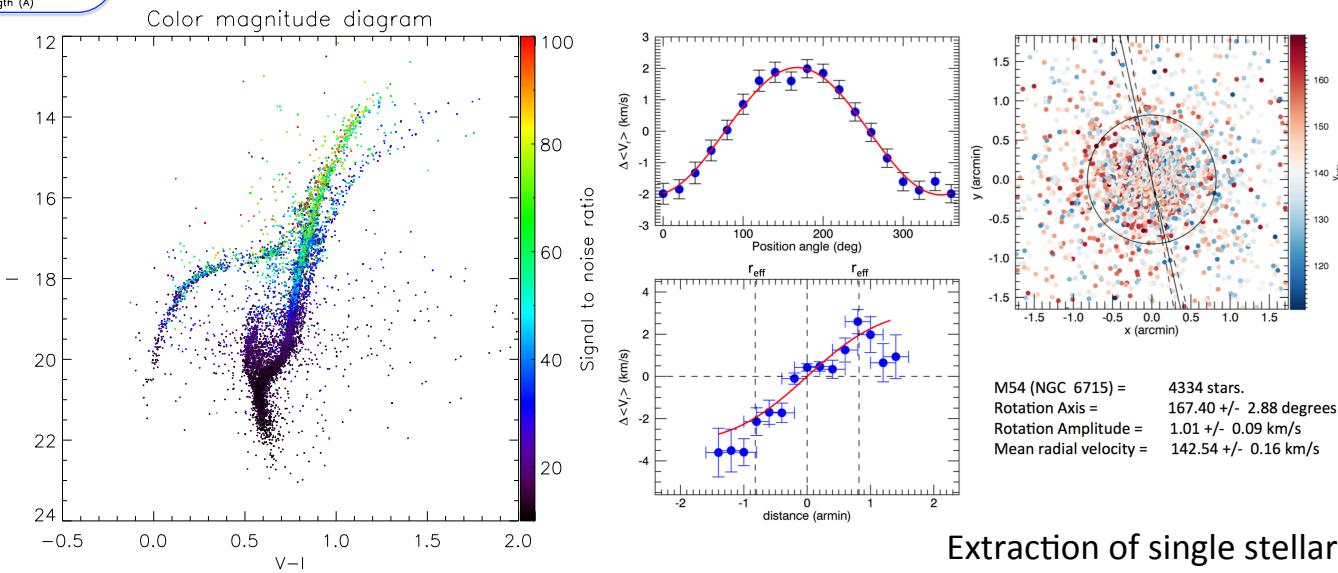
→ Remnant from the accreted Sgr dwarf galaxy and an excellent laboratory.

Large M54 MUSE data set
(UT4/VLT at Paranal Observatory, Chile)

→ FOV $\sim 3.25' \times 3.25' \sim 25 \times 25$ pc

Goal:
Revealing the formation history of M54

How? Constraining the dynamical properties and chemical enrichment.



Extraction of single stellar spectra:
~10000 stars, $S/N > 10$.

→ Allowing us to understand the connection between globular and nuclear star clusters.
→ This may pave the way to uncover the origin of the most massive GCs in the MW.