

How do Peculiar Velocities fit in?

- Goal: 1% measurement of σ_8 /MG today, where RSD can't be reached
- Complementarity:
 - Obtains strong new constraints from investment in DESI & Extension
 - Exploits investment in LSST SN discoveries & provides training for conventional LSST SN program
 - Would benefit from Southern Spectroscopic Redshift Survey if implemented
- Timeline:
 - Now: Exploit existing IFS & near-term nearby SN discovery machines in DESI footprint
 - 2018 – 2022: Design and deploy next-generation IFS
 - 2020 – on: Clone IFS and deploy on existing (partner) telescopes in south
- Cost:
 - Now: \$100-200K to upgrade existing IFS; \$200K – \$1M/yr running (depends on partner telescope contrib)
 - 2018 – 2022: \$1 – 2M for new IFS; \$200K – \$1M/yr running (depends on partner telescope contrib)
 - 2020 – on : Baseline would be to help partners deploy IFS on existing telescopes
- Obstacles:
 - Near-term: upgrade \$\$, running \$\$, and most amount of engineering manpower (initial partners known)
 - Longer term: \$\$ for new IFS hardware, skilled optical/mechanical engineers; partner telescope
 - Differentiation from apparently similar facilities (but which are likely to be poorly calibrated & applied to diffuse interests)