Contribution ID: **24** Type: **not specified**

Current and Future Constraints on H0 from Infrared SBF

Friday 9 September 2022 11:30 (20 minutes)

We recently published a new measurement of the Hubble constant H0 determined from distances to over 60 early-type galaxies out to 100 Mpc measured by the Surface Brightness Fluctuations (SBF) method using data from the WFC3 Infrared Channel on the Hubble Space Telescope (HST). More than a third of these galaxies have hosted well-measured Type Ia supernovae, and we use these to do detailed comparisons of SBF and SNIa distances. If we recalibrate SNIa using SBF, we find a steeper dependence of supernova peak luminosity on decline rate in early-type galaxies, but the resulting value of H0 is indistinguishable from the values given independently by SNIa and SBF when each are calibrated from Cepheids. We discuss these recent SBF results from HST/WFC3 as well as the excellent prospects for a fully independent TRGB-calibrated SBF precision measurement of H0 using JWST.

Presenter: Dr BLAKESLEE, John