WEAVE: The 8-in-1 Massive Spectroscopic Survey Mat Pieri

The WHT Extended Aperture Velocity Explorer (or WEAVE) is a wide-field massive spectroscopic survey set to begin full operations this year. Its 8 surveys extend from our local kiloparsec to the largest scales and the end of the reionisation epoch. I will briefly review the instrument, and then summarise the 3 galactic and 5 extragalactic surveys that for WEAVE. I will then provide some detail on the quasar survey WEAVE-QSO survey, which aims to obtain around 400,000 Lyman-alpha forest (z>2.1) quasar spectra. WEAVE-QSO will probe the intergalactic medium (IGM) from the largest scales to circumgalactic regions. WEAVE-QSO aims to use absorber properties, statistics of large-scale structure and and cosmic web maps to study galaxy formation and dark energy.