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Synergies with ELT-HARMONI

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HARMONI is the work-horse, first light, AO assisted, visible and near-infrared integral field spectrograph for ESO's Extremely Large Telescope, expected to start operations in 2027. At near-infrared wavelengths, HARMONI's AO systems will provide diffraction limited spectroscopy, with spatial resolution of 10 milli-arcseconds, and Strehl ratios of 30-50% with excellent sky coverage. Combined with the extreme sensitivity provided by the ELT's large collecting area, HARMONI will revolutionise observational astronomy in the coming decade. I will present a brief summary of HARMONI's capabilities and operating modes.

MAVIS's integral field capability at visible wavelengths, with comparable spatial resolution, will nicely complement HARMONI, allowing exquisite spatial resolution with broad wavelength coverage. This will permit multi-wavelength studies, at fixed spatial resolution, of a variety of astrophysical targets, ranging from objects within our own Solar System, to the most distant high-redshift galaxies. I will explore some of these synergies, and present some results from HARMONI science simulations, that could be extended to cover MAVIS wavelengths.

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Session Classification: The Birth, Life, and Death of Stars and Their Planets