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Large direct imaging surveys have revealed that giant planets are rare on large orbits, and there is now a growing interest in pushing high-contrast imaging towards ever smaller angular separations. In the past two years, the GRAVITY interferometer has directly detected additional planets in the beta Pic and the HD 206893 systems demonstrating its ability to image planets predicted to exist from radial velocity and Gaia observations. Together with GRAVITY's unprecedented astrometric precision of at least 100 μas, this resulted in precise dynamical mass constraints for both beta Pic and HD 206893 companions. Comparisons with evolutionary models of planet formation do now shed light on the formation history of these companions. The picture is further complemented by C/O abundance ratios obtained from the combination of the GRAVITY K-band spectra with data at shorter wavelengths and giving clues about the formation mechanism and location within the protoplanetary disk.

Using the aperture masking interferometry (AMI) mode of JWST, we aim to obtain precise L- and M-band photometry of the beta Pic (GO 2297) and HD 206893 (GO 1843) companions to improve their metallicity and C/O abundance ratio measurements. By complementing the GRAVITY spectra with JWST photometry, our observations will be sensitive to CO, CH_4, and H_2O and will be able to detect non-equilibrium chemistry in the planets' atmospheres. Furthermore, we will be able to probe the properties of the dust in the planets' clouds and provide a benchmark case for atmospheric models of companions at the L-T transition. Combining GRAVITY and JWST AMI will enable a comprehensive characterization of high-contrast companions (up to ~10 mag) at small angular separations (down to ~70 mas).