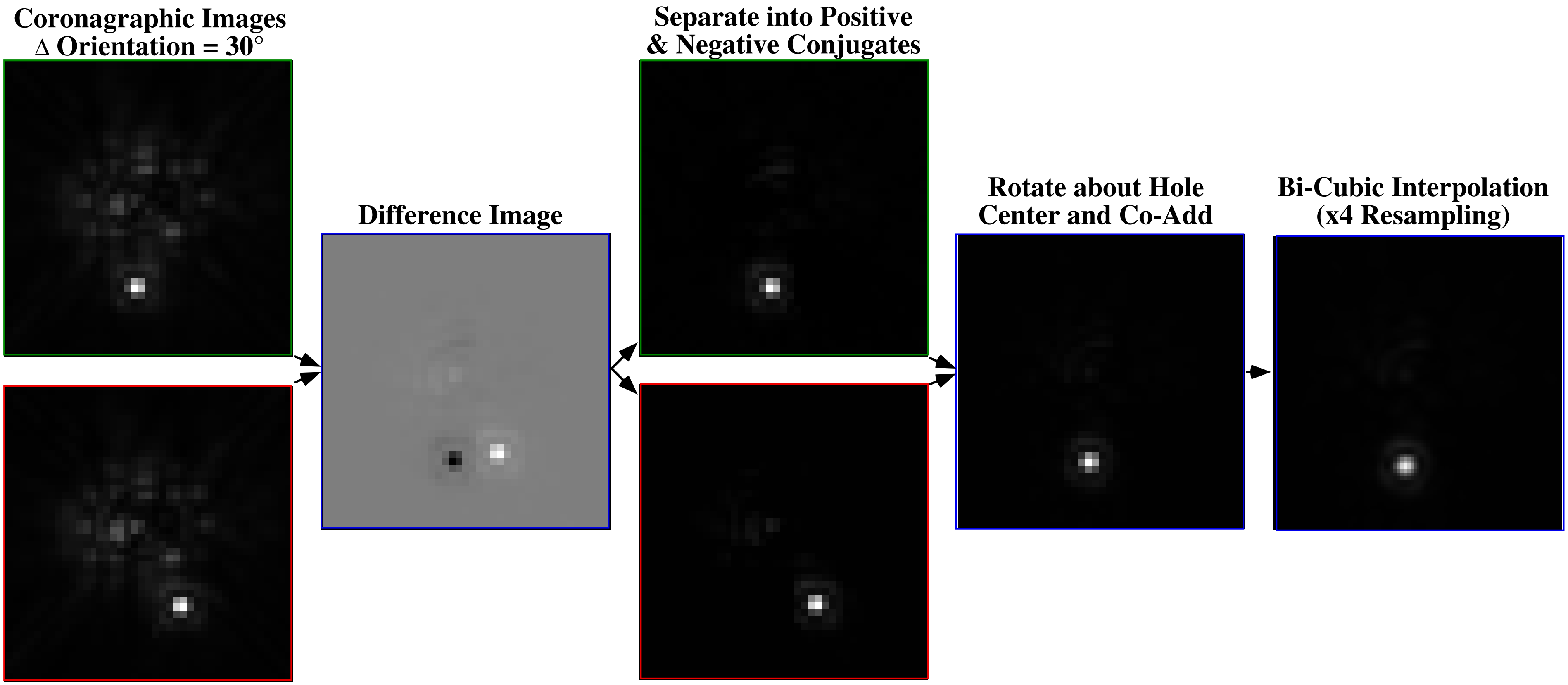
CORONAGRAPHIC DIFFERENTIAL IMAGING AND CONJUGATE RECONSTRUCTION

HD 102982, H = 6.9 (G3V), ΔH = 5.3, ρ = 0.9"



A coronagraphic observation of HD 102982 demonstrates our ability to image brown dwarfs and high mass planets. With the H= 6.9 primary occulted the S/N for the newly discovered possible companion at a separation of 0.9" is ~1600 for a ΔH of 5.3 (a *very* easy detection, which would be possible in NICMOS camera 2 at lower S/N without the coronagraph). For this star, the companion is probably a low-mass M star (~M6). A companion of ΔH = 12 (if one existed) at this separation would have a S/N of ~5 (an unambiguous detection). For the younger stars in our sample such a detection would reveal giant planets in the <~ 10 Jupiter mass regime.