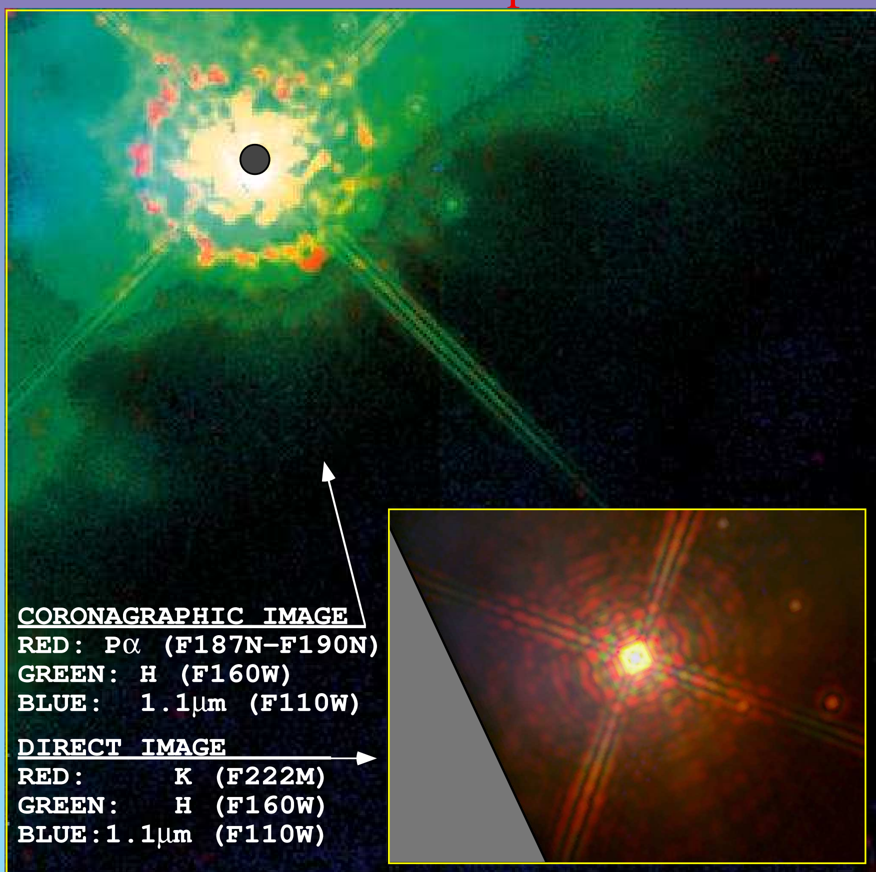
and now, for something completely different...

Allen's Source in NGC 2264
1-Orientation Coronagraphic Imaging

The intrinsic reduction of scattered light and mid/high frequency diffracted energy from the occulted core of a target PSF makes the NICMOS coronagraph a valuable tool not only for point source detection near bright objects, but for imaging complex extended low-contrast structures as well. The EONS dust disks program (7233) will take advantage of this in mapping out the circumstellar regions of newly-found (and previously known) disks by single orientation PSF subtraction as well. In a completely different arena, this capability was demonstrated by a recent revisit of Allen's source. This embedded infrared source was first observed with NICMOS by Thompson, et al (1998) as part of the NICMOS ERO program, providing very strong evidence of triggered star formation. Subsequent multi-color coronagraphic imaging (left) reveals the morphological details of the region unseen by direct imaging (left, inset). The composite coronagraphic image of the Stromgren sphere shows a ring of Paschen-α emission at a mean distance of ~1500 AU. A PSF subtracted H-band image (right) shows a broad-band continuum flux decrement immediately interior to the ring. A new stellar companion is also seen in the H-band image (right, inset).

Direct and Coronagraphic Imaging
Three-Color Compositions



Coronagraphic Imaging
F160W Stellar PSF Subtraction