

Figure 1: *Monochromatic on $-$ axis PSF in log irradiance, normalized to the peak irradiance value.*

Monochromatic Normalized Irradiance (Radial Average)

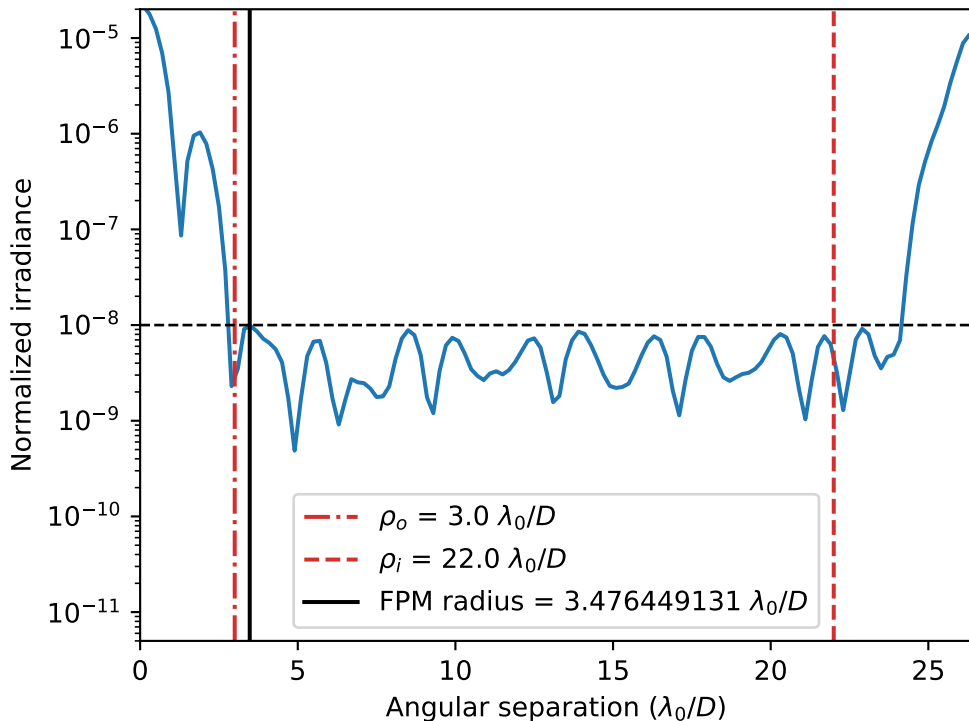
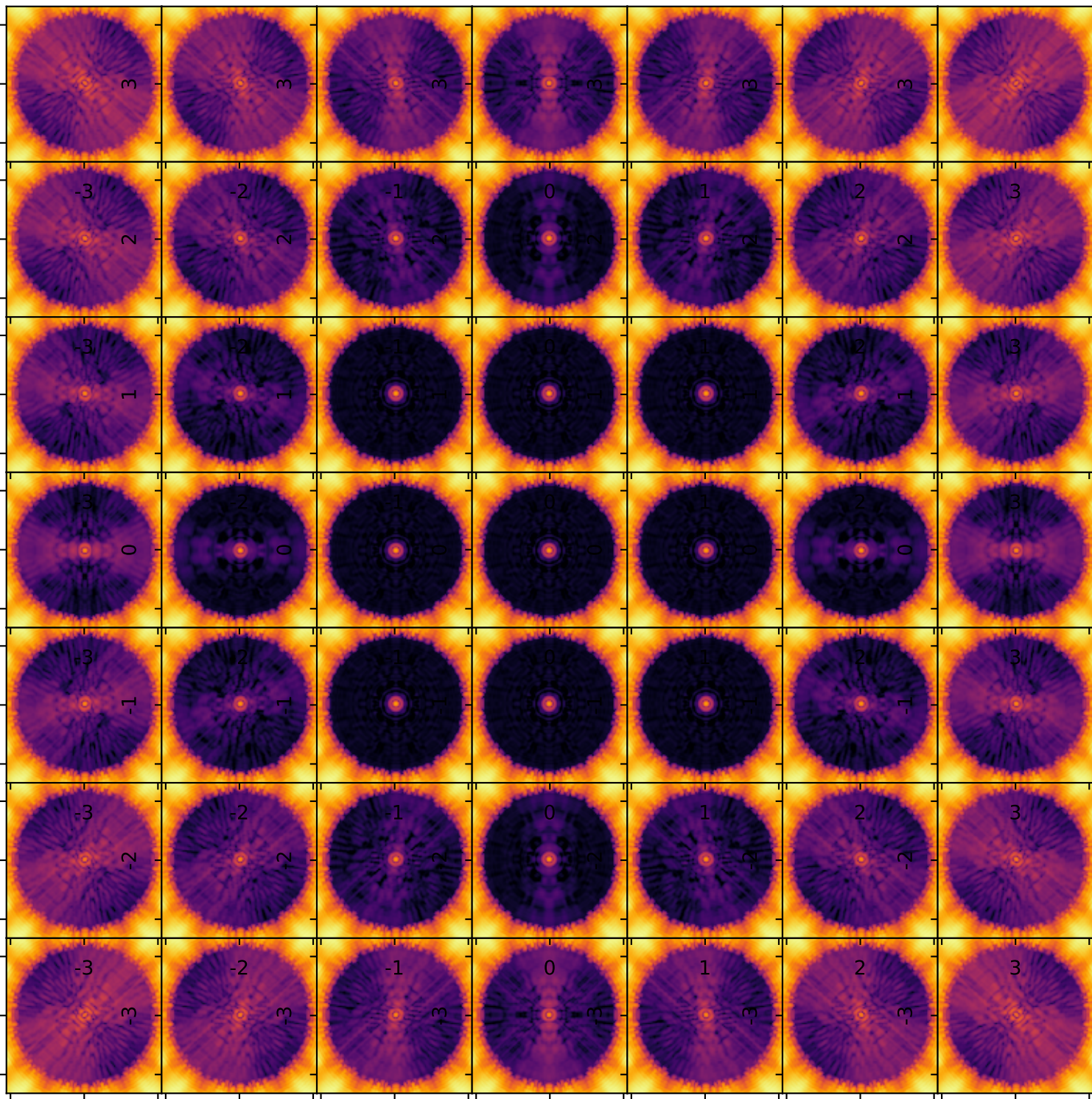


Figure 2: Monochromatic on – axis PSF azimuthally averaged over angular separations 0.1 - $37.3 \lambda/D$, normalized to the peak irradiance. The vertical, solid black line at separation $3.476449131 \lambda/D$ marks the radius of the FPM occulting spot. The vertical, redlines at 3.0 and $22.0 \lambda/D$ respectively indicate the radii of the inner and outermost constraints applied during the apodizer optimization.



APLC Analysis Summary

APLC design	2.51188643150958%
nPup	1168 x 1168 pixels
Oversampling (grey levels)	4
Telescope	GPI
Bandpass	2.51188643150958%
# wavelengths	3
FPM radius (grayscale)	3.476449131 λ/D
nFPM	1168 pixels
IWA — OWA	3.0—22.0 λ/D
Lyot stop alignment tolerance	1
# Lyot stops	9

Optimizer called with the following parameters:

- ▷ *Pupil file:* GPI/Primary_GPI_grey_oversamp04_symmetric_N1168.fits
- ▷ *Lyot stop file:* GPI/LS_GPI_080m12_03_grey_oversamp04_notabs_N1168.fits

Analysis Summary

Apodizer &
Telescope Aperture

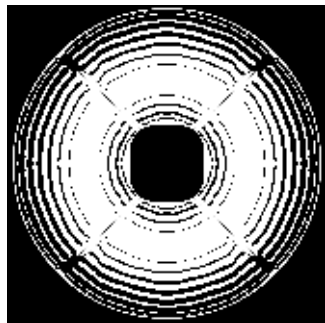


Image plane

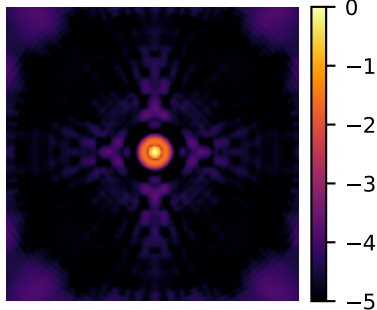
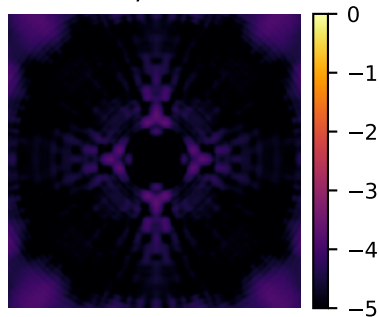
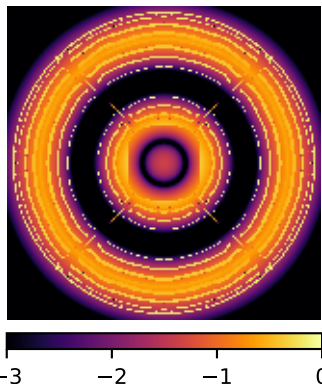


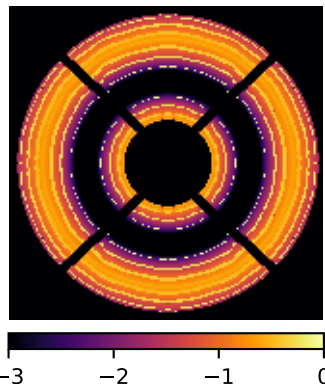
Image plane
w/FPM



Lyot plane



Lyot plane
w/lyot stop



Final image plane

