Update on Spatio-angular Transfer Functions

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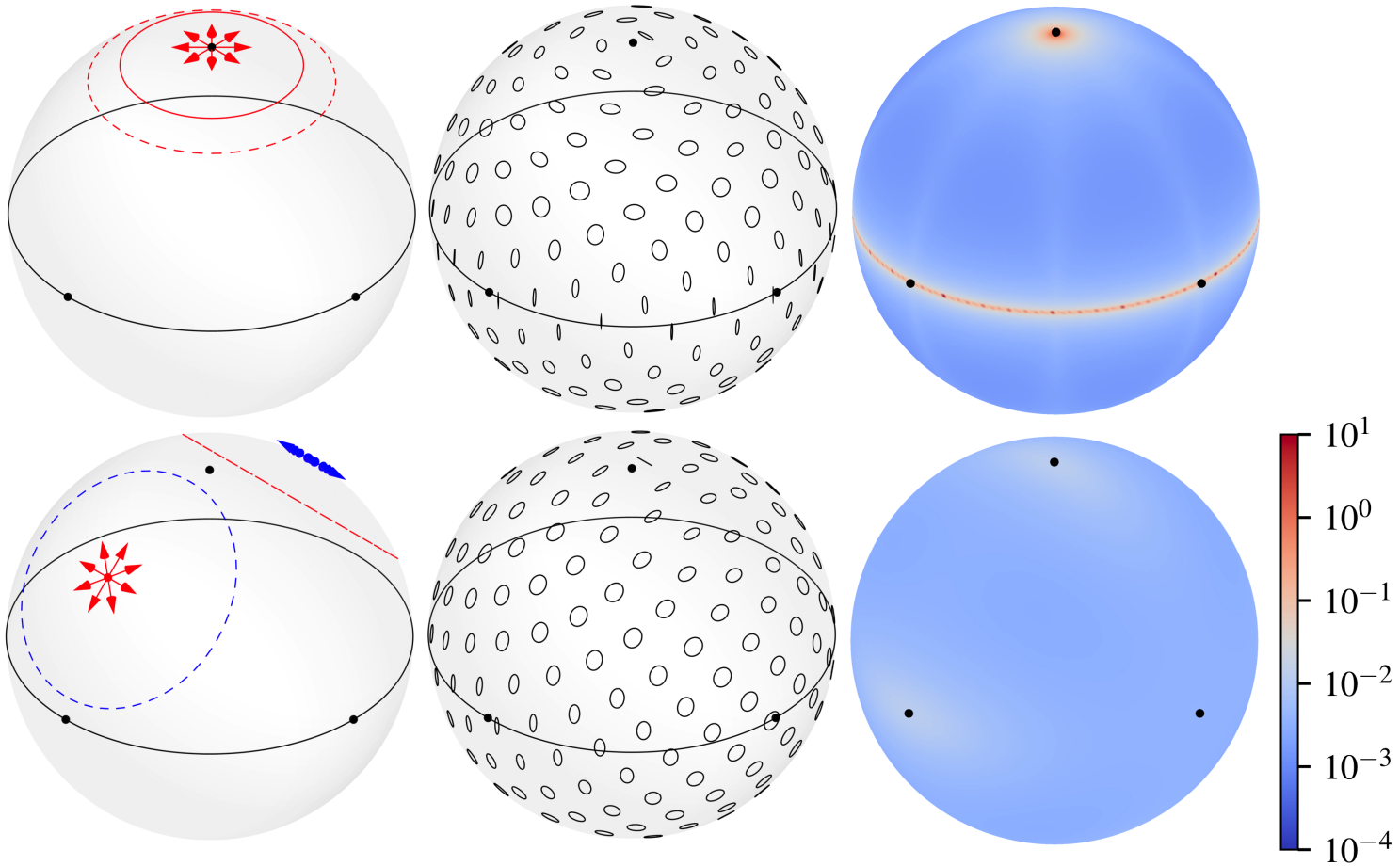
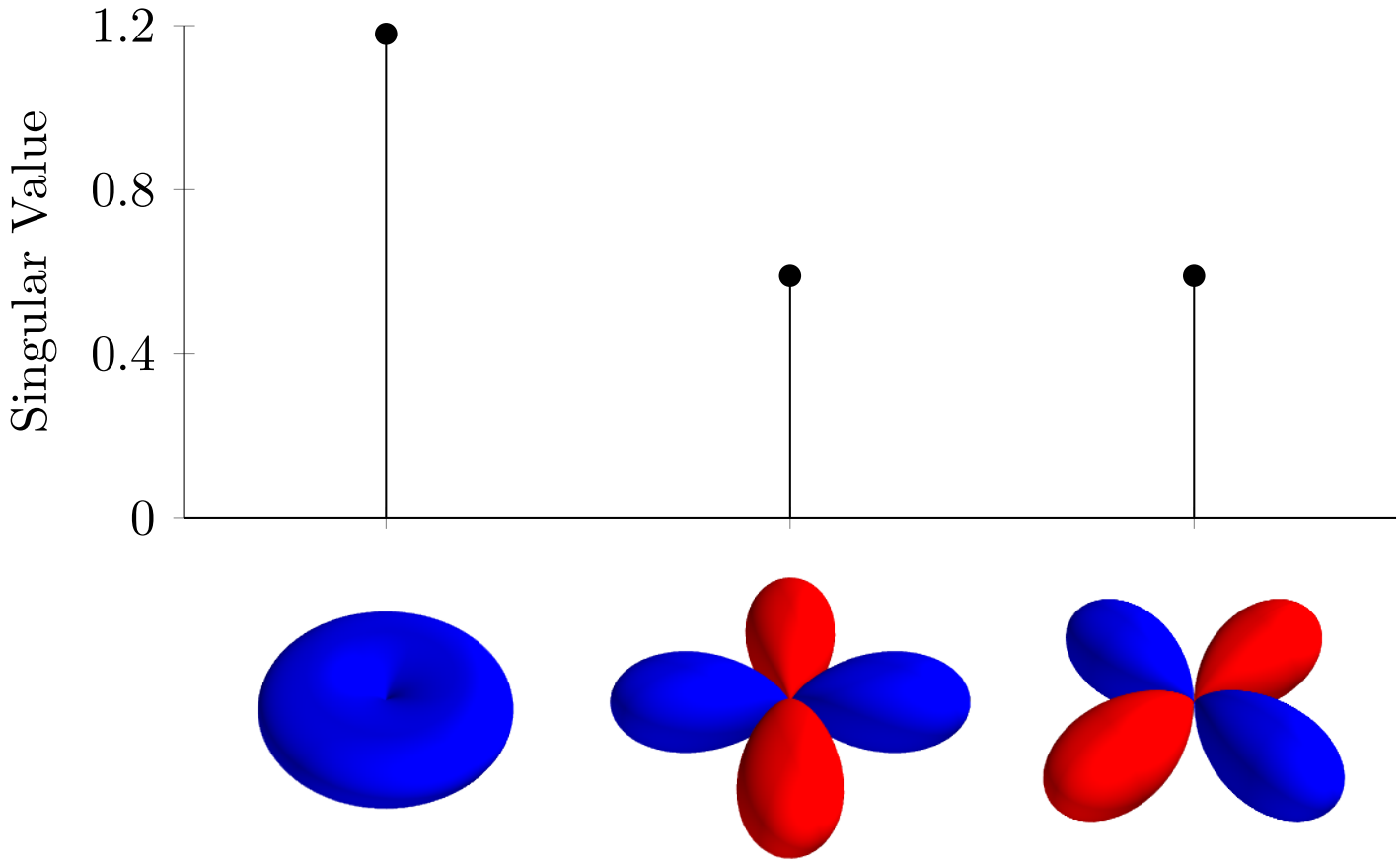
Steady progress on closed form OTF

- Initial calculation didn't match my numerical OTF.
- Found some issues that I glossed over. Calculation still in progress.

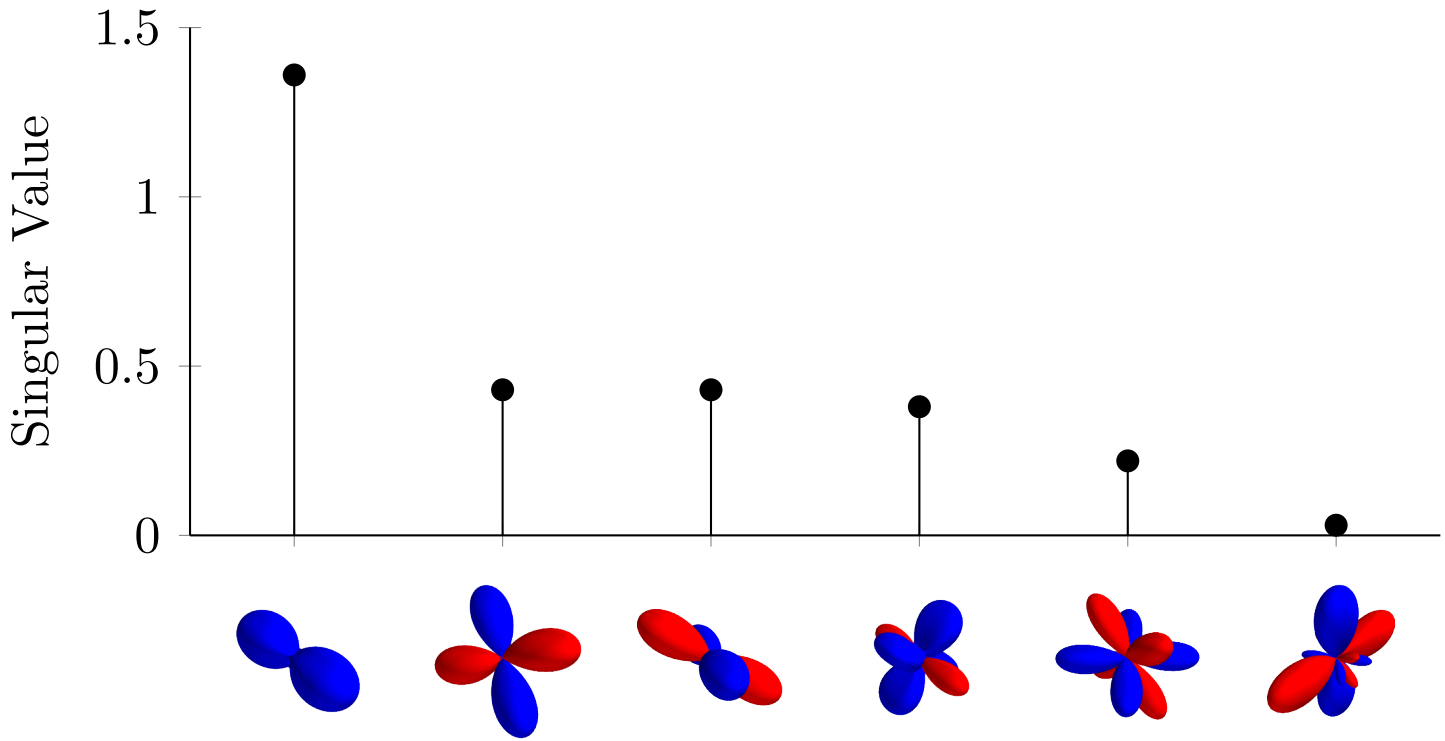
Brute-force degeneracy finding



0.8 NA Epi-illumination Microscope



0.8 NA Symmetric diSPIM Microscope



Group theory for finding degeneracy

Quantum mechanics

$\mathcal{H}$ = Hamiltonian

$$\mathcal{H}\psi_k = W_k\psi_k$$

$$\mathcal{T}_j\mathcal{H} - \mathcal{H}\mathcal{T}_j = 0$$

$\mathcal{T}_j$ form the symmetry group of the Hamiltonian.

Imaging

$\mathcal{H}$ = Forward operator

$$\mathcal{H}^\dagger\mathcal{H}u_k = \mu_k u_k$$

$$\mathcal{T}_j\mathcal{H}^\dagger\mathcal{H} - \mathcal{H}^\dagger\mathcal{H}\mathcal{T}_j = 0$$

$\mathcal{T}_j$ form the symmetry group of the imaging system.