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Deconvolution of Hubble Space Telescope Images using Simulated Point Spread Functions

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Presented is a study of the use of simulated point spread functions (PSFs) to deconvolve Hubble Space Telescope images. We concentrate on images from the Wide Field and Planetary Camera (WFPC) and examine the affect of position dependence of the PSF and the telescope focus position on deconvolutions. Comparisons will be made to what will be expected from WFPC II, which will include corrective optics. Since PSFs can be simulated for any specific observation, with the added advantage of being noise free and the ability to subsample them, they may be more suitable for deconvolution than observed ones in some cases. And since finding a suitable observed PSF may be difficult, simulated ones may be easier to use.