

Table 1: Statistical results of pixel brightness values of FITS files images from CASA 3.3 VLA observation and imaging simulations (with same parameters and settings as in previous simulations) for implementations of A-Projection together with W-Projection to correct for visibilities corrupted by the VLA PB. The implementation of A-Projection was set by modifying lines of code in nPBWProjectFT.cc related to gridding correction steps involving the prolate spheroidal (PS) function and PS function gridding correction steps in anticipation of convolution by the GCF (and where each polarization plane is corrected by the appropriate PB). Specifically, the PS function gridding correction step modifications included dividing the gridded visibilities by the PB correction factor to the power of 2.049 in all cases. W-Projection was also used in conjunction with A-Projection. The leftmost column of the table lists the number of W-Projection planes for each simulation. Note that PB correction factor was taken to the power of 2.049 and the oversampling factor for GCF was 32.8 in all cases.

no. projection planes	w-	mean(btwn,src1,src2)	r.m.s.(btwn)	D.R.	no. major cy- cles	wall-clock time(hrs.)	CPU time(hrs.)
2		8.9959e-07, 0.0229, 0.0259	2.5693e-5	5.1936e4	67	4.66	4.39
4		3.2522e-07, 0.0229, 0.0260	2.0516e-05	6.5213e4	73	5.47	4.97
5		3.2298e-07, 0.0229, 0.0260	2.0460e-05	6.5389e4	73	6.05	5.22
6		3.0292e-07, 0.0229, 0.0260	2.0442e-05	6.5447e4	73	5.42	5.20
8		3.3139e-07, 0.0229, 0.0259	2.1718e-05	6.1541e4	72	6.93	5.49
128		-3.6085e-07, 0.0230, 0.0256	3.44547e-05	3.8487e4	65	27.65	22.74