

- **pileup: CCD pile-up model for Chandra**

CCD pile-up model used for brightish point sources observed by Chandra. This is an implementation of the fast pile-up algorithm proposed by John Davis (see <http://space.mit.edu/~davis/papers/pileup2001.pdf>). The frame time and maximum number of photons to pile up should be fixed. The grade morphing is expressed through a single parameter, alpha, which should be left as a free parameter. This model should be considered in beta test. Note that to calculate fluxes etc. for the model you must remove the pileup component. The pile-up model is similar to the operation of the convolution models, differing only in the treatment of the detector efficiency during the convolution.

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| par1 | frame time (in seconds) |
| par2 | maximum number of photons to pile up |
| par3 | grade correction for single photon detection |
| par4 | grade morphing parameter (good grade fraction is assumed proportional to par4^{p-1} where p is the number of piled photons) |
| par5 | PSF fraction. Only this fraction will be treated for pile-up |
| par6 | Number of regions. The counts to be piled-up will be distributed among par6 regions, which will be piled-up independently. |

