Flat-field, Bias and Sky Level Interpolation and Smoothing

Interpolation and smoothing algorithm for the flat-field and bias vectors, and sky values is controlled by 4 parameters specified in psParam.par:

- ff_ninterp: controls the number of adjecent frames, Nadj, to smooth and interpolate over (Nadj = 2 * ff_ninterp + 1)
- ff_sigrej: rejection limit in σ of the flat-field values distribution (values that differ more than σ*ff_sigrej from the mean are not included)
- ff_beta: index specifying interpolation method (see below)
- ps_smooth_length: how to smooth the bias vectors, this parameter is not implemented yet and must be set to 0

Flat-field, bias and sky level for a given frame are determined from their values for Nadj neighboring frames. Depending on ff_beta two different filters are used: for ff_beta = 0 a median filter, and for ff_beta = $\beta \geq 1$ the following weighting function:

$$w(r) = \frac{1}{(\Delta r)^{\beta-1} + 1} \tag{1}$$

where Δr is a distance between the row for which an interpolated value is sought, and the current row r.