Parameter Control of ***j\_ima\_iros V. 5.1.29***  with light curve extraction.

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1.

The user can activate the light curve extraction feature by setting the parameter *useIROS = “yes”.*

The parameter *endLevel* should beset to: *IMA.*

The bin size for the light curves (in seconds) is specified with the parameter *timeStep*. The default value is 4 s.

2.

Through the use of the *flag* word in the user catalog the user can request output of light curves of other sources, even if these may be too weak to be identified in the standard j\_ima\_iros search for sources.

Setting *flag* = 1 for a specific source forces j\_ima\_iros to extract the flux and the light curve for this source, even if the source is too weak to be detected in the (full) data set. The source flux and light curve are extracted from simultaneous fits to the selected source plus the significant sources found in the current science window. The number of *flag-1* sources is not limited.

Setting *flag* = 3 for a specific source forces j\_ima\_iros to extract the flux and the light curve for this source, even if the source is too weak to be detected in the (full) data set. Using this flag value forces the selected source to be present in the fits of all other sources. This is a non-standard option which must be used with care. A maximum of 3 *flag-3* sources are allowed for each analysis.

This use of *flag* is just an extension of the logic already existing in previous versions of j\_ima\_iros.

3.

When *useIROS* is “yes”, all light-curves will be searched for burst activity.

3b.

If a significant burst is detected (a flux excursion actually, not necessarily a true X-ray or gamma-ray burst!) information about the burst will be indicated in the log file and the 512-bit of the *flag* word of the *srcl\_res* file.

The ‘512’-bit will be set in the *flag* column for every source for which a burst is detected. See the extracted data from the *srcl\_res* file is shown for four parameter situations.

The scw is 041100230010 in which four bursts are recorded from four different sources.



**Fig. 1. No light curve extraction and no user source requests (3 sources found)**



**Fig.2 No light curve extraction but *flag-1* request for all known burst source (3 sources found by j\_ima\_iros, 40 sources tested and fluxes indicated in *srcl\_res* for this *scw*).**



**Fig. 3 Light curve extraction but no user source requests.**

**(3 sources found (2 also exhibiting bursts), plus one additional burst source identified from image extracted during burst peak in detector light curve).**

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**Fig. 4 Light curve extraction and *flag-1* request for all known burst sources**

**(3 sources found, plus 2 identified from source light curves, 40 sources total in *srcl\_res*)**