# **PS1 Pixel flags in Image Table Data**

All images, warps and stacks, have mask images which indicate image flags for individual pixels. Below is a table that indicates the meaning for each flag. These flags are applicable for both the warp and stack images.

(Source: http://svn.pan-starrs.ifa.hawaii.edu/trac/ipp/browser/trunk/ippconfig/recipes/masks.16bit.config)

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The starting point for the PS1 data archive is at Pan-STARRS1 data archive home page.

## Pixel Flags

### Mask values which represent features of the detector

Flag name	hexadecimal value	Description
FLAT	0x0002	Pixel doesn't flat-field properly
DARK	0x0004	Pixel doesn't dark-subtract properly
BLANK	0x0008	Pixel doesn't contain valid data
CTE	0x0010	Pixel has poor Charge Transfer Efficiency
SAT	0x0020	Pixel is saturated or non-linear

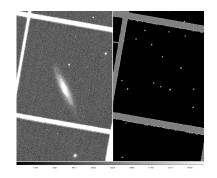
#### Mask values which represent invalid signal ranges

Flag name	hexadecimal value	Description
SAT	0x0020	Pixel is saturated or non-linear
LOW	0x0040	Pixel is low
SUSPECT	0x0080	Pixel is suspected of being bad

#### Mask values which represent non-astronomical structures

Flag name	hexadecimal value	Description
BURNTOOL	0x0080	Pixel may contain uncorrected streak.
CR	0x0100	Pixel contains a cosmic ray
SPIKE	0x0200	Pixel contains a diffraction spike
GHOST	0x0400	Pixel contains an optical ghost
STREAK	0x0800	Pixel contains a streak
STARCORE	0x1000	Pixel contains a bright star core

Mask values which identify pixels badly affected by convolutions and interpolations



Warped image (left) and its mask image (right)

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Flag name	hexadecimal value	Description
CONV.BAD	0x2000	Pixel is bad after convolution with a bad pixel
CONV.POOR	0x4000	Pixel is poor after convolution with a bad pixel