

ImgMan User Guide

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Overview

ImgMan (short for Image Management) is a suite of Matlab applications for collecting and analyzing beam images from laser cameras and profile monitors at LCLS. ImgMan consists of the Image Acquisition, Image Browser, and Image Analysis applications.

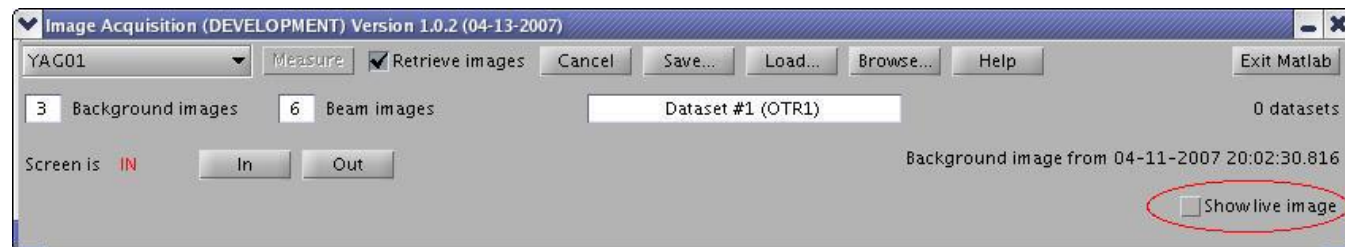
Starting ImgMan from Matlab Desktop

To start ImgMan from Matlab, type

```
imgAcq_main
```

in the Command Window.

Viewing Live Images



In the Image Acquisition window, select a camera and check the "Show Live Image" box. After a short delay, the window expands, and you can see the live image as well as the [#Image Processing Panel](#), which can be found on all three main windows of ImgMan.

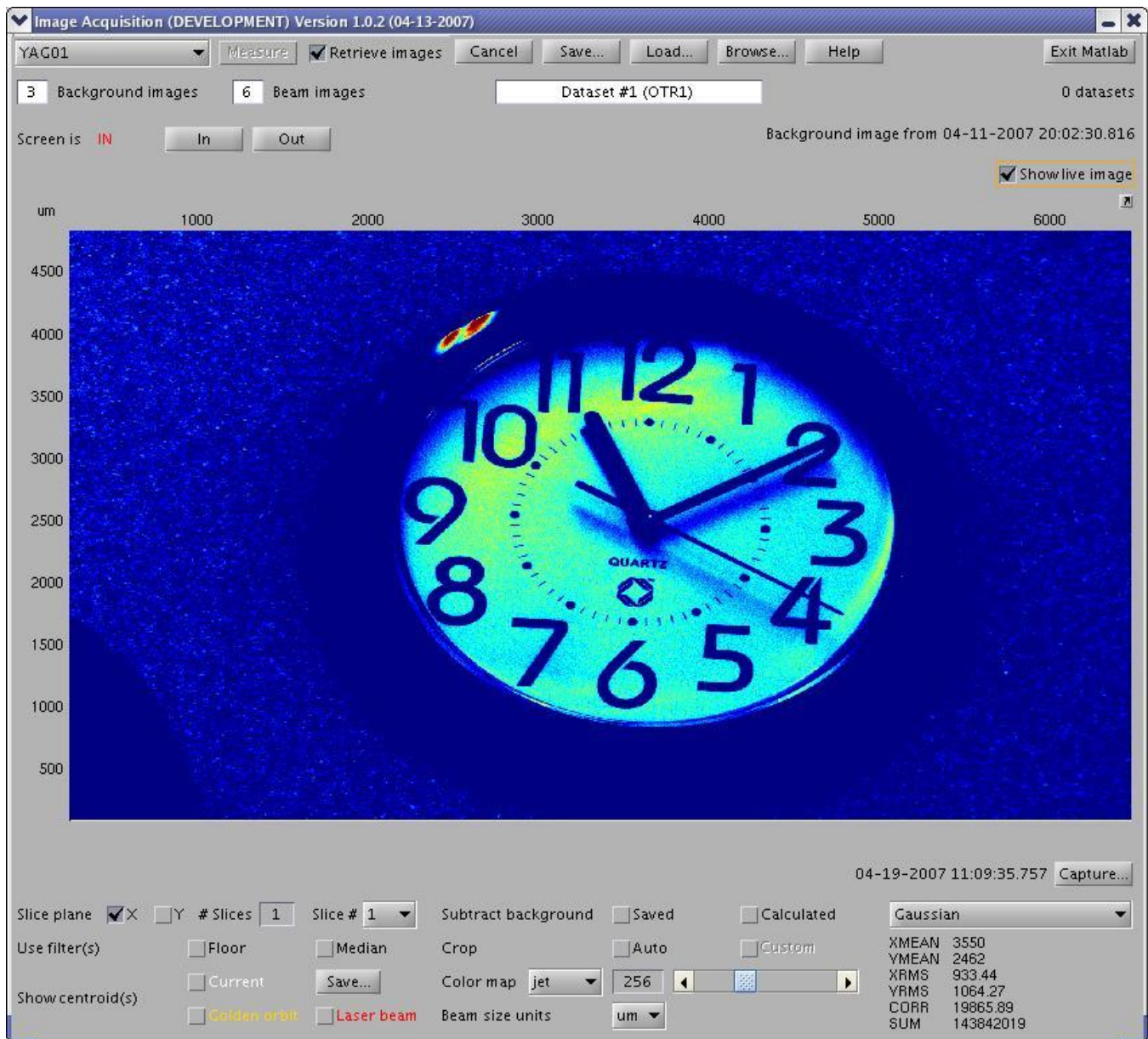


Image Processing Panel

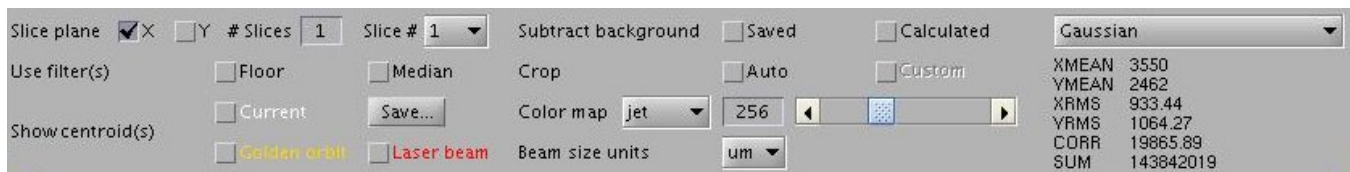
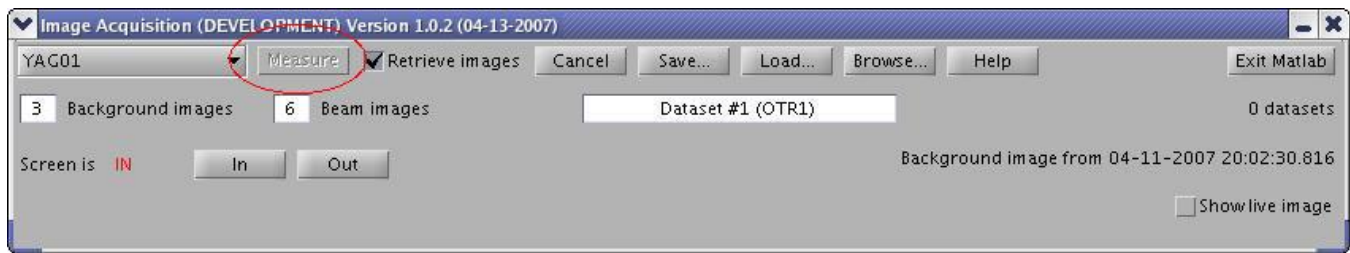


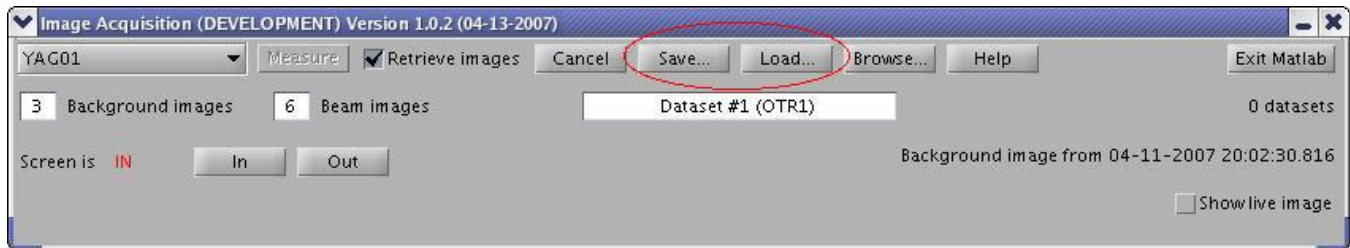
Image Processing Panel contains widgets for setting image processing parameters, e.g. slicing, background subtraction, filters, cropping, color maps, annotations (centroids), unit scales, the image processing algorithm. In general, ImgMan handles changes to these parameters immediately. However, if an "Apply" button is present, you must press it before some costly image processing is started (alternatively, you can check the "Instant" Apply box).

Collecting Images



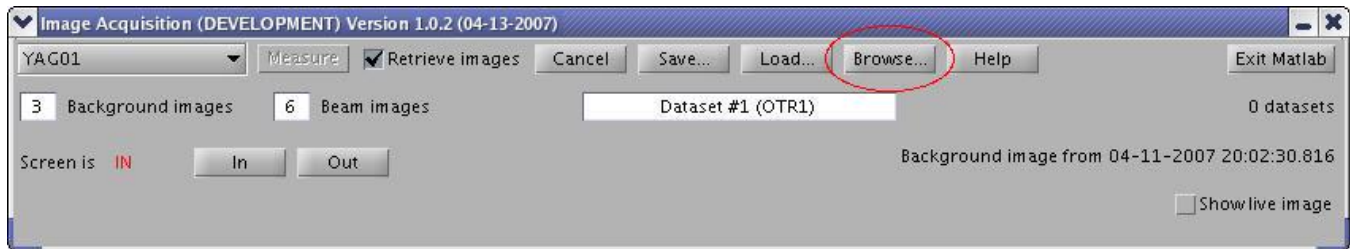
In the Image Acquisition window, select a camera, specify the desired number of background and beam images, and press the "Measure" button. If you don't want to save images locally, uncheck the "Retrieve images" box. You can monitor the progress of the measurement either in the Image Acquisition window or in *cmlog*. Each measurement results in one dataset of images.

Saving and Loading Datasets

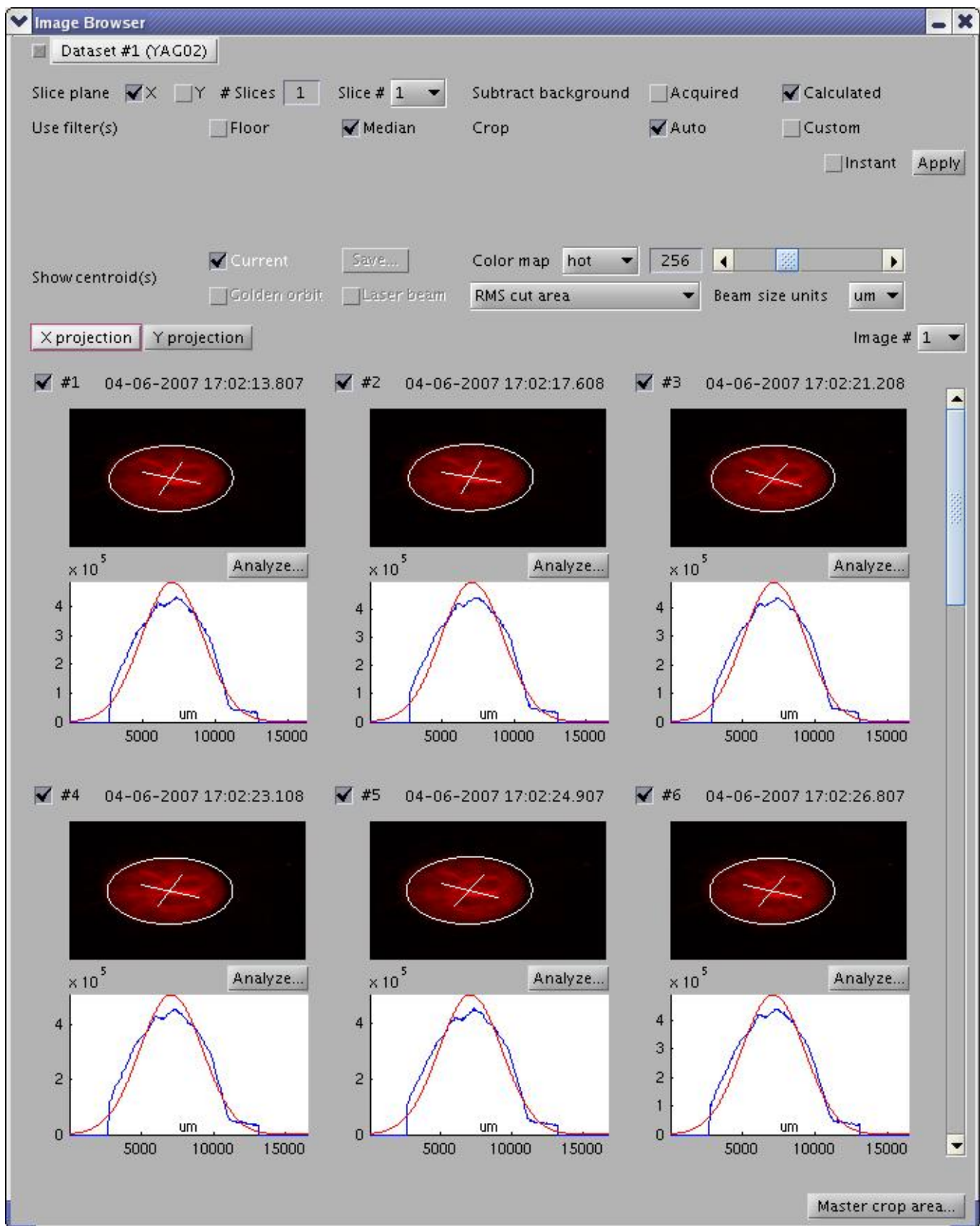


Press "Save" button to open a "Save As..." dialog and save your image datasets. Press "Load" button to open a "Load File..." dialog and load image datasets.

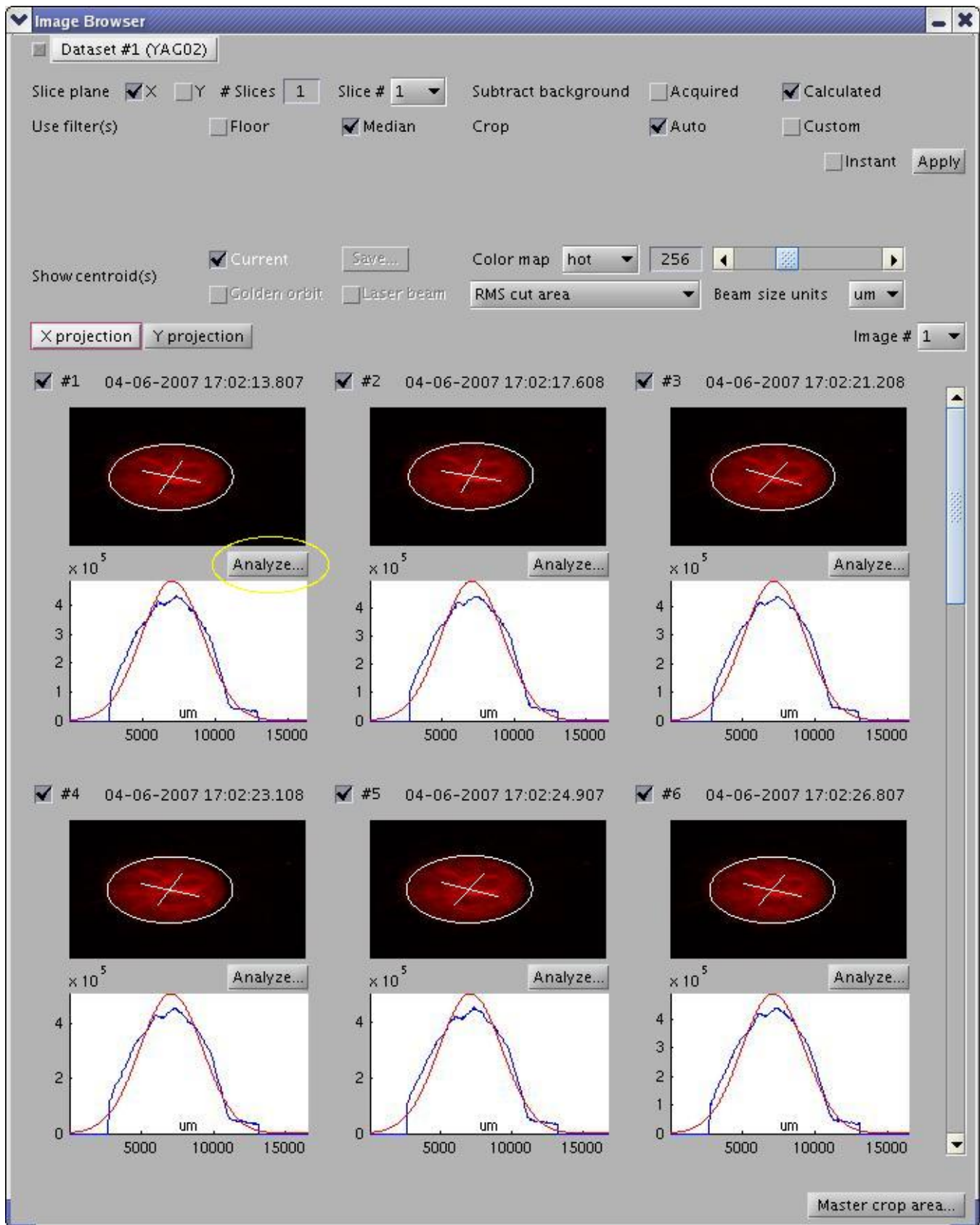
Browsing Image Datasets



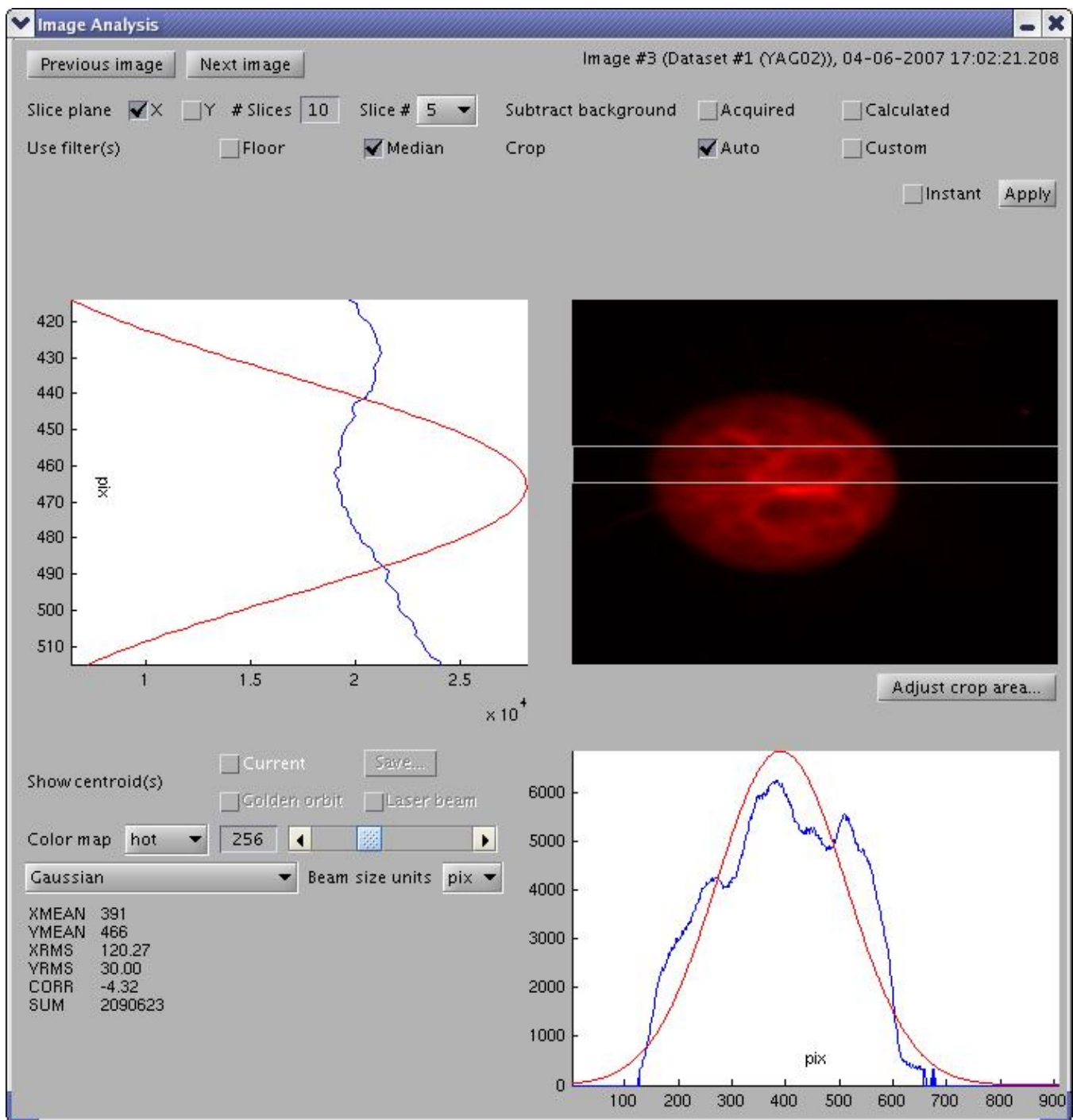
In the Image Acquisition window, press the "Browse..." button to open the [#Image Browser](#). You can select a dataset, browse images, and specify image processing parameters on an [#Image Processing Panel](#).



Analyzing Single Image



In the Image Browser window, press the "Analyze..." button to open an [Image Analysis](#) application for the corresponding image. Image Analysis also contains an [Image Processing Panel](#).

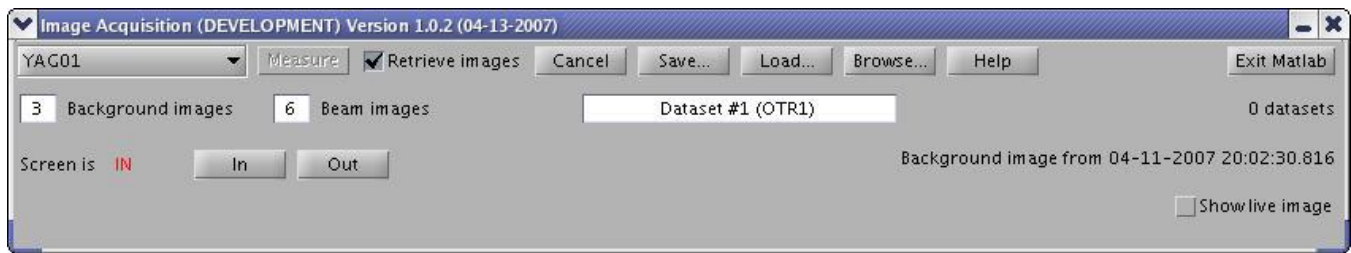


Online Help For ImgMan

ImgMan (short for Image Management) is a suite of Matlab applications for collecting and analyzing beam images from laser cameras and profile monitors at LCLS. ImgMan consists of the Image Acquisition, Image Browser, and Image Analysis applications. For more details, check the [User's Guide](#).

Image Acquisition

Image Acquisition is used to acquire background and beam images from cameras in the LCLS beam line. Some cameras are associated with a screen, which you must put IN first. After specifying the number of the desired background and beam images, press the "Measure" button to start the acquisition. You can monitor the status of your measurement on the main panel. When the acquisition is complete, you can [browse](#) through your image datasets.



You also have the ability to process live images and extract beam data from them.

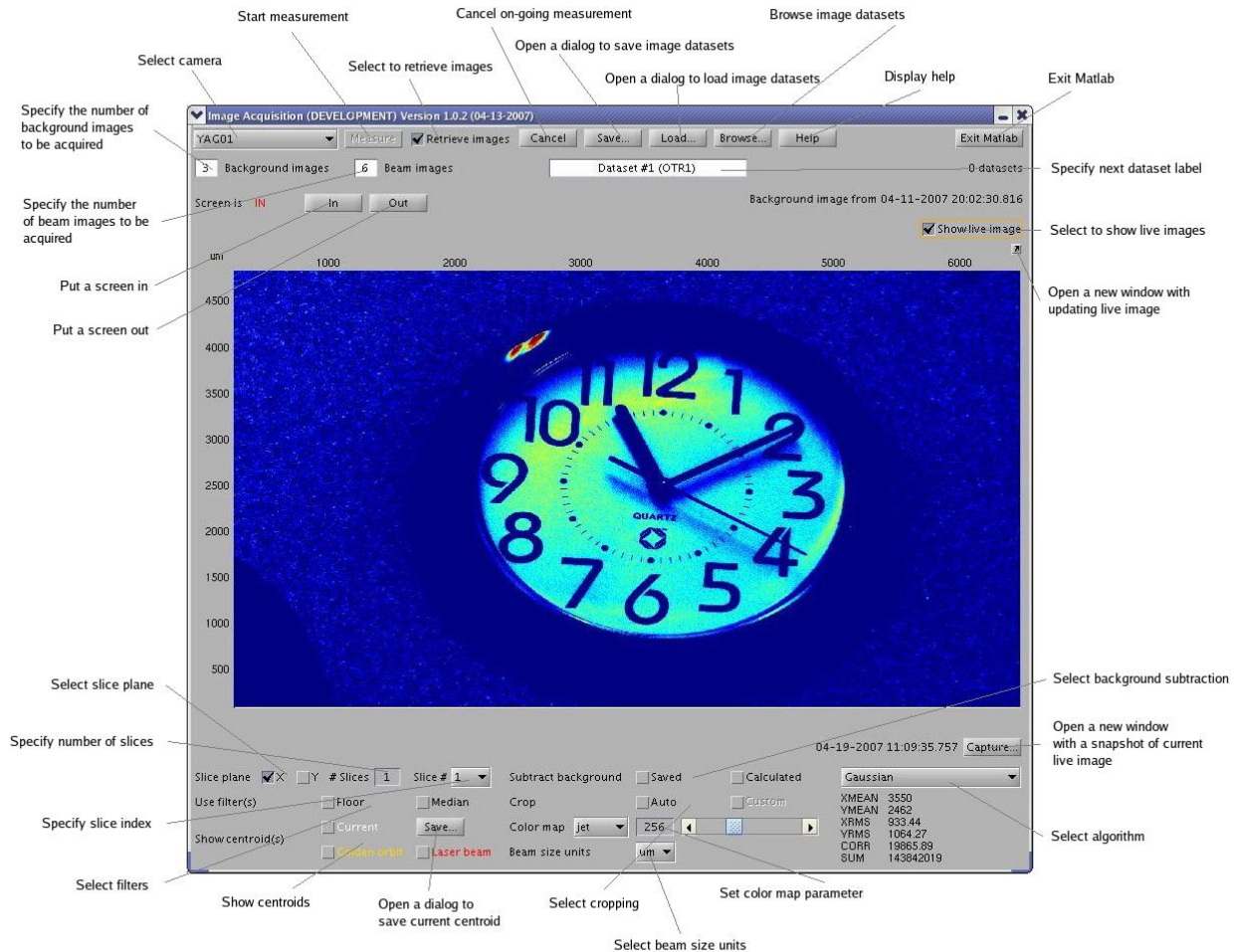


Image Analysis

Image Analysis is used to analyze single images from your dataset. Images are processed, and beam data is extracted according to the parameters that you specify. You can trim the width or the height of the cropped area- depending on which slice plane you have selected.

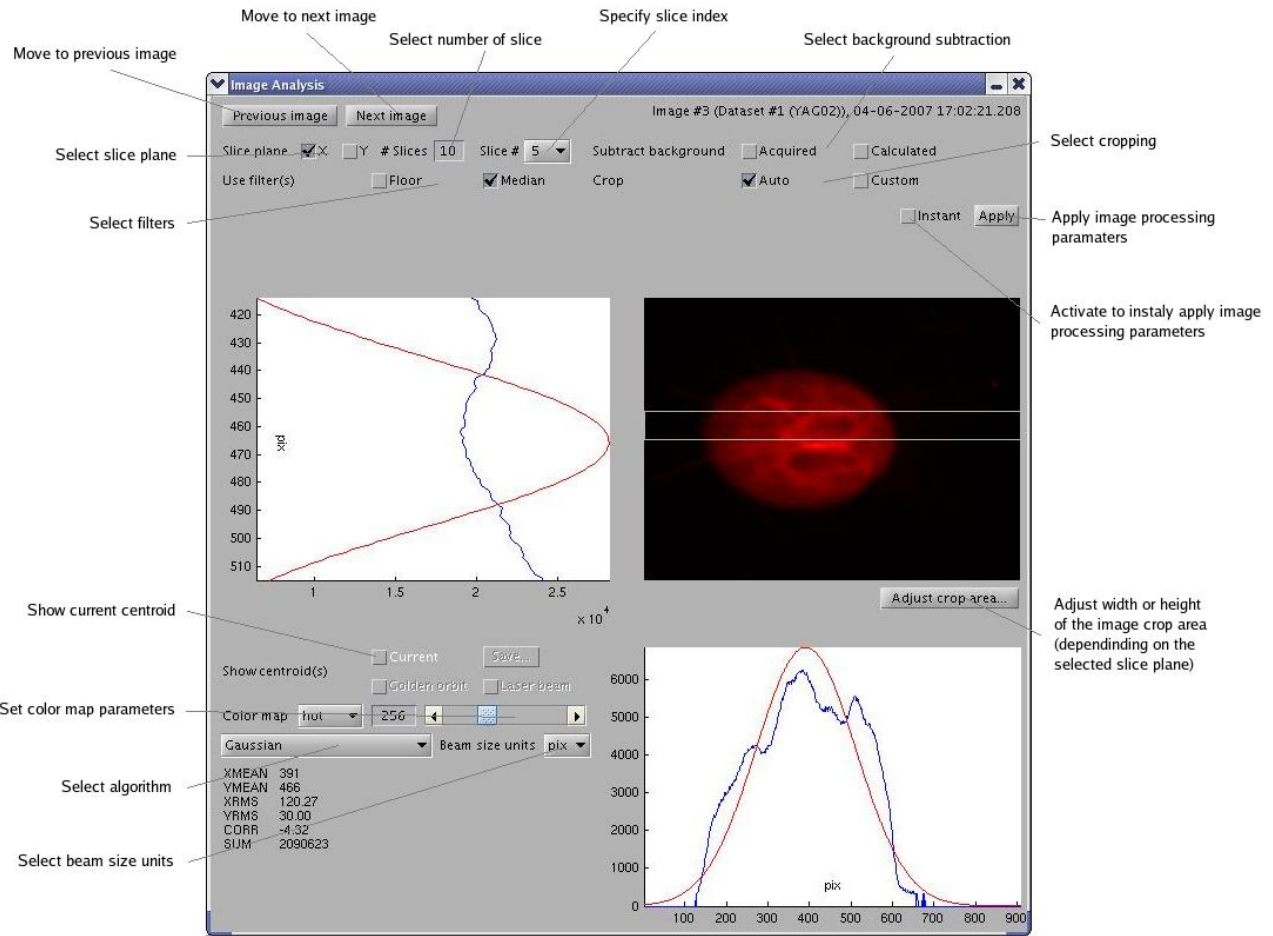


Image Browser

Image Browser is used to browse through image datasets. Images are processed according to the parameters that you specify. You can set a master crop area for all images in a dataset.

