DRAFT

Quantitative beam size measurement using the MAXVIDEO digitizer

Document Number: Document Number—TBD

Revision Number: Rev. 2; Feb. 5, 1998

Technical Custodian: P. Piot (5032)

Estimated Time to Perform: few minutes (<5 mins)

Procedure Overview

Plot beam profiles, measure rms values, and save beam spot images (in .pgm format) from the OTR and fluorescent screen using the maxvideo.

> **CAUTION:** MaxVideo.tcl is in ~mccops/tcl_apps/Diagnostic_Tools and only works from **felsrv1** station (so you will have to telnet to felsrv1)
> The calibration file it uses are stored in the iocfel4 under ITV*.cal and have been generated with the "calib.adl" maxvideo script.

Prerequisites

beam on an OTR in the OTR-limited mode.

Procedure Steps

1. turn off beam

2. insert the viewer you want to look at, turn off the light, and connect the video output to the maxvideo input (channel 15).

3. Pull up the maxvideo medm screen "advanced.adl", enable background and push the copy to background button. (this will copy the background in a buffer and subtract it from the images)

4. Pull up the MaxVideo.tcl script.

— Maxvideo Firer—					
Viewer: ITV0F04	Grabb Image	See Image	Plot Profiles		Quit
Save Image in:	/usr/feluser/mccops/tmp/image				
Save X&Y Proj. in:	/usr/feluser/mccops/tmp/proj				

from the Viewer menu button select the viewer you are currently looking at (note that the viewer with the (OK) mentions are the one you could use i.e. the calibration has been downloaded, for the one with no OK mentioned, it has not been done because of HARDWARE mis-functions).

5. Turn beam on

6. To grab a picture press the "Grab Image" button, to see it use "See Image", this button will launch an XV window.

7. To measure RMS value (the one that are given by the MAXVIDEO) and see profile, push "Plot Profiles"

8. You can save the image, and the two profile in file whose file name are displayed in the two entry widget. Remember that the 2D image take a lot of memory.

PROBLEMS

THIS VERSION IS STILL A β−version with uncorrected known bugs:

Sometime, due to timing between the transfer of file from the IOC fel4 and the ~mccops/tmp directory, the code give an error message "glob....." meaning that it does not find the file. In a such event:
- kill the code (ctrl C)
- go in the ~mccops/tmp/ director and type "rm maxvide*"
- restart MaxVideo.tcl