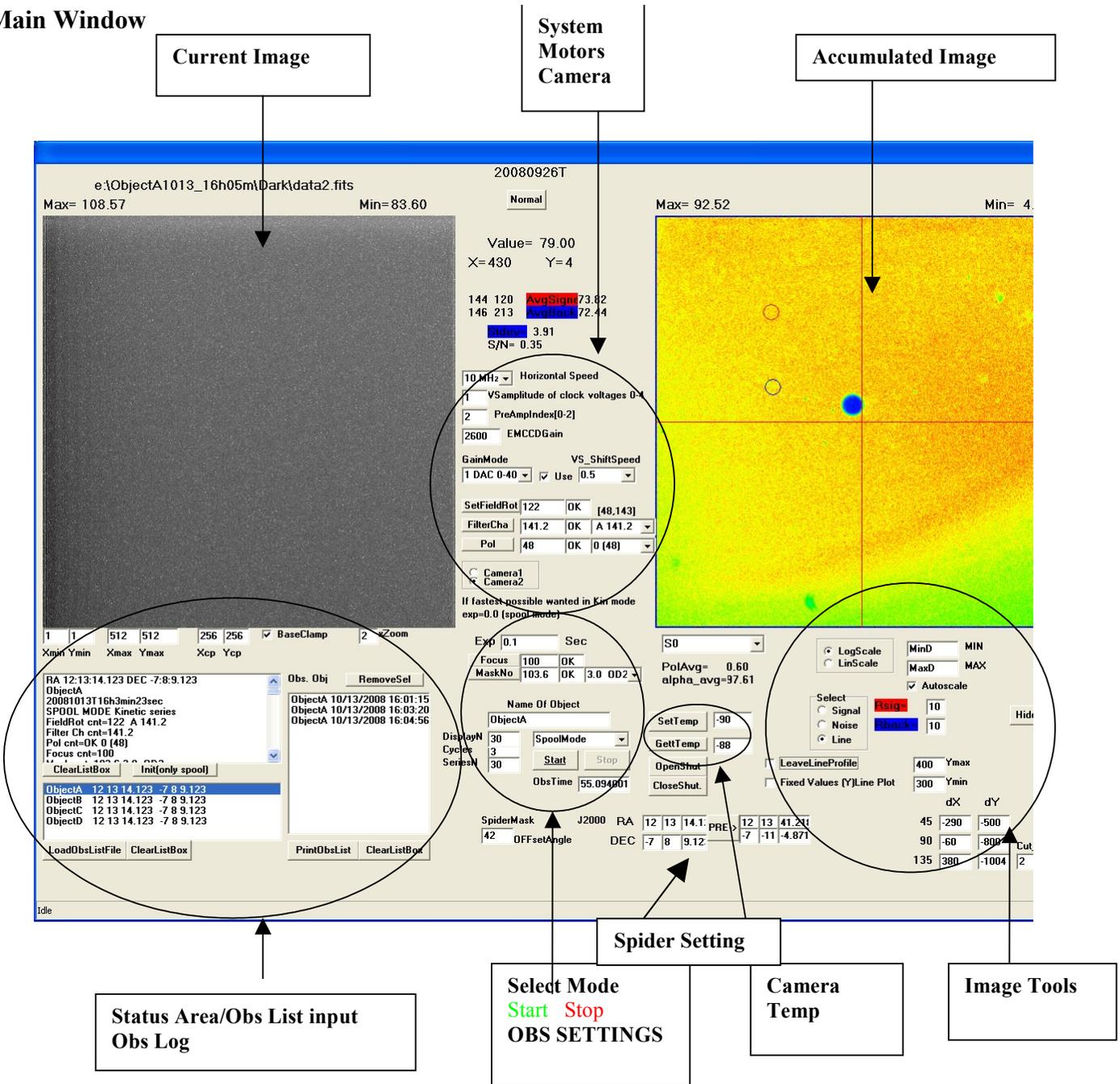


Main Window



If everything is connected

Double click on "Diskmaskin" you should see the above command window. (Expert mode) The layout could be changed by toggle between two buttons **expert/normal** and **show/Hide image tools**. The above layout shows Expert mode on and show image tools = maximum number of controls.

Start-up 0

0.1 Click on GetTemp (Camera Temp area) check that you get a reasonable temperature value.

Start the cool-down by clicking on SetTemp (default -90) .After a short while click on GetTemp Again to see that the cooler is responding (temperature going down)

0.2 Status area LoadObsListFile (ObsListFile is a text file that should contain information about objects to be observed it should be on the following format
objectName h min sec deg min sec) J2000

Click on desired object Check that the software fills in the correct name and RA/DEC coordinates (spider settings) ! If not you should enter J2000 RA/DEC manually (Don't forget to press PRE buttons coordinates)

You have now completed the first step for an observation
 Check that the temperature has stabilized around -90 !

Mode Selection 1

The screenshot shows the Mode Selection 1 interface with several callout boxes:

- Exposure time mode dependent**: Points to the Exp field (0.1) and Sec field.
- Normally Tested in neakUn**: Points to the S0 dropdown menu.
- Choose Mask (Star-damping) or Open**: Points to the MaskNo field (103.6).
- Show S0,S1,S2 (right image)**: Points to the S0 dropdown menu.
- SeriesN and Display N Should normally be The same value. SeriesN >= DisplayN**: Points to the DisplayN (3) and SeriesN (30) fields.
- Offset angle for mask**: Points to the OffsetAngle field (42).

Key interface elements include:

- Exp: 0.1 Sec
- Focus: 100 OK
- MaskNo: 103.6 OK
- 3.0 OD2
- S0 dropdown
- PolAvg= 0.60
- alpha_avg=97.61
- Name Of Object: ObjectA
- DisplayN: 30
- Cycles: 3
- SeriesN: 30
- SpoolMode dropdown (selected)
- PeakUpMode
- Classic Mode
- SpoolMode
- BurstMode
- SetTemp: -90
- GetTemp: -88
- SpiderMask: 42
- J2000 RA: 12 13 14.1
- DEC: -7 8 9.12
- OffsetAngle: 42
- PRE-> button

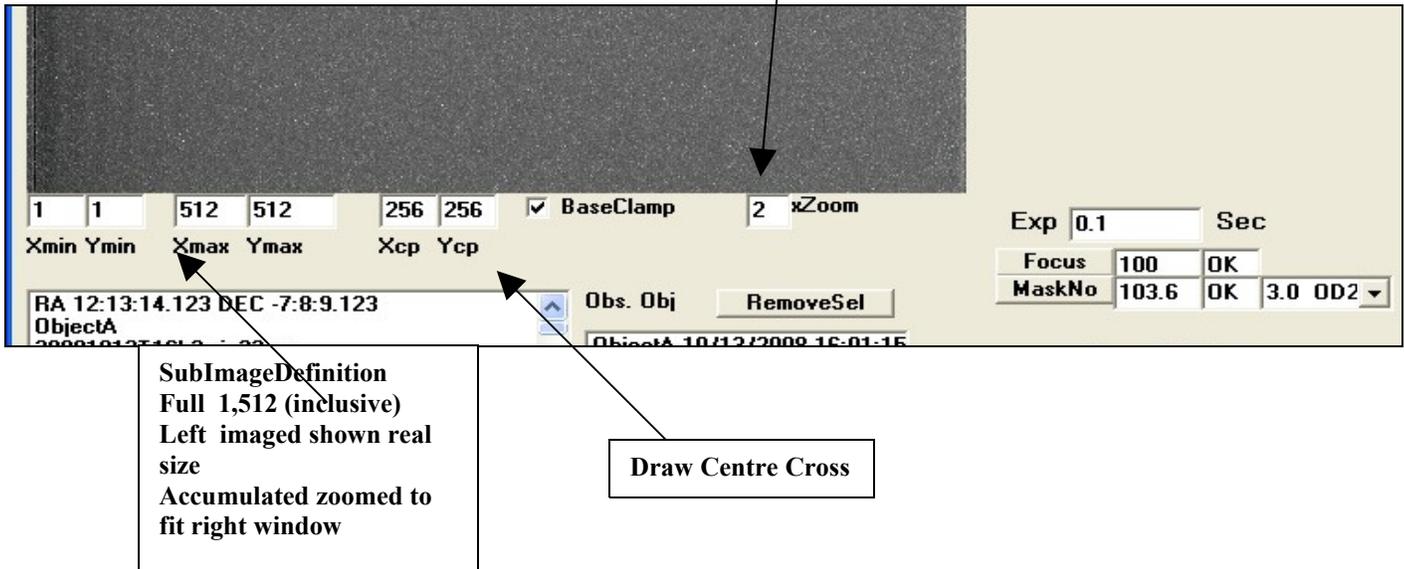
Default values are assigned to different modes. Please check to see selection.

Peak Up Mode 1.1

Used for refocusing (should not be needed so often)
 Finding new objects /checking signal strength/ centering masks.

Default exposure time is 1sec
 SeriesN are arbitrary. Nothing is stored to disk

NOTE the zoom factor could be helpful during PeakUp



Spool Mode (Standard polarization measurement) make sure polarization wheel is in position !

Data is stored to disk in directories 0 45 90 135 dark = 1 cycle
Default exposure = 0.1 sec (full frame 512x512)
Nseries=30
Cycles=3 (a short test run) (~60 sec)

Right images show accumulated image in S0 (,S1,S2)
In each position Nseries images are exposed (using a kinetic series Mode for the Ixon camera)

Exposure in each position = exp_time x Nseries

Spool Mode SUB 1.2

[Spool mode +subimage]
a special option if faster exposure is desired.

Example Defining a smaller image (100x100)
and Nseries=300 and exp_time=0.01

Classic Mode (polarization measurement) make sure polarization wheel is in position !

Same as the spool mode but only one image in each position.

Exposure in each position = exp_time

(exposure time should normally be increased)

Default = 1sec

Burst Mode (remove polarization wheel)

5 kinetic cycles + one dark

Accumulated image showed to the right

Default Nseries=300

Exposure=0.01

Fast exposure mode (no polarization measurement)

NOTE in order to achieve fast exposure please define sub image. (100x100)

Starting an observation 1.3

After defining the above parameters press Start.

You will see a warning box (error box) showing you the temperature.

If the the temperature is correct proceed.

If an additional error box pops up it might be a good idea to abort.

“Error detected proceed ?”



The init procedure is logged in the left listbox. Scroll through and check For errors (EMCD out of range etc, invalid sub image definition etc...) Also check that correct camera is selected (camera1 camera2 expert mode)

IF OK the observation should start and object should be added to observed object list

You could follow the observation cycle above the left window (showing current file stored to disk)

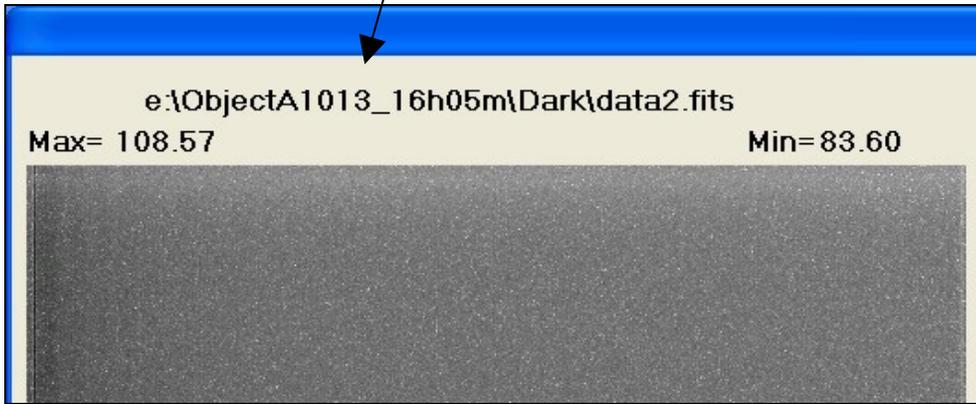


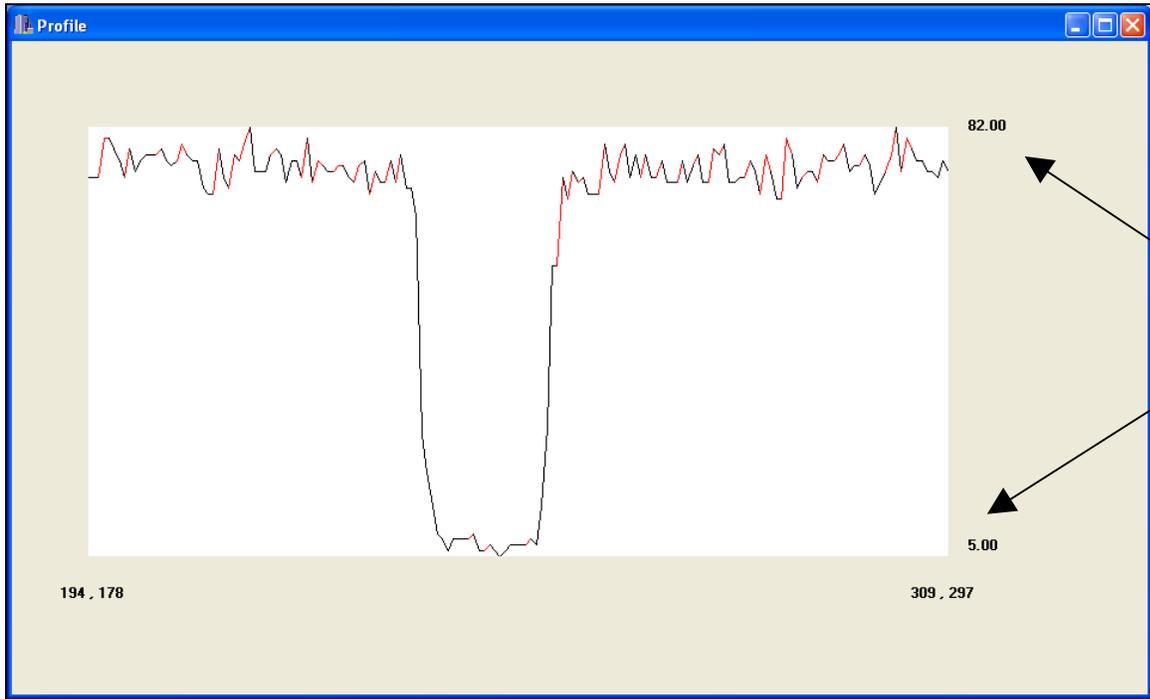
Image Tools (if not shown click on show image tools)

Display Scale

The screenshot shows the "Image Tools" dialog box with several annotations:

- Choose what A single click in window will mean**: Points to the "Select" section with radio buttons for "Signal", "Noise", and "Line".
- Line click drag release**: Points to the "Line" radio button.
- If checked the marked line will be updated each cycle [could be used in PeakUp.]**: Points to the "Fixed Values (Y) Line Plot" checkbox.
- Prismatic correction in millipixels Relative image0 (polarizing mode)**: Points to the "dX" and "dY" input fields.
- CutMaxXY cuts off a frame around The entire image. Should be higher Than maximum dX & dY**: Points to the "Cut" input field.
- If autoscale unchecked User def. Max,Min**: Points to the "Autoscale" checkbox.
- Radius of Rsignal Rback avg. boxes S/N calculation**: Points to the "Rsig=" and "Rback" input fields.
- Line profile Y values (used if Fixed Values Checked)**: Points to the "Ymax" and "Ymin" input fields.

	dX	dY	Cut
45	-290	-500	
90	-60	-800	
135	380	-1004	2



Line Profile Plot

Expert Mode

Value= 79.00
X= 430 Y= 4

144 120 AvgSignal 73.82
146 213 AvgBack 72.44

Stdev= 3.91
S/N= 0.35

10 MHz Horizontal Speed

1 VS amplitude of clock voltages 0-4

2 PreAmpIndex[0-2]

2600 EMCCD Gain

GainMode VS_ShiftSpeed
1 DAC 0-40 Use 0.5

SetFieldRot 122 OK [48,143]

FilterCha 141.2 OK A 141.2

Pol 48 OK 0 (48)

Camera1
 Camera2

If fastest possible wanted in Kin mode
exp=0.0 (spool mode)

Rsig Rback
Calculation result
S/N

Different for camera1
& Camera2

Testing spider mask

A&B position Filter

Testing polarization wheel

Camera1 (default)
Camera2

Motor counts

