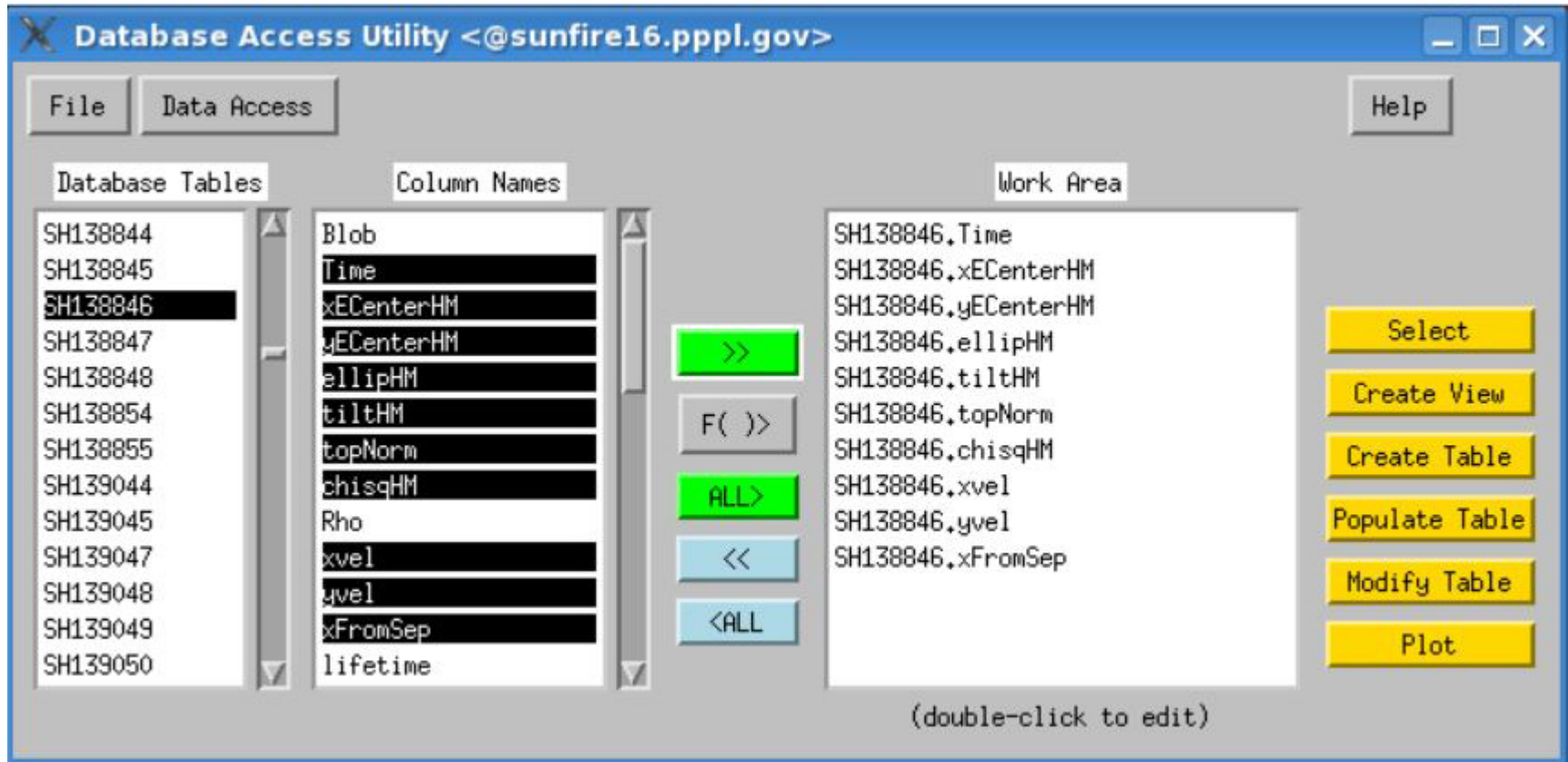


Database Access via Point-and-click

IDL> dbaccess, 'blobs'



Select desired "Column Names" and move them to the "Work Area" by clicking the ">>" button, Then click "Select" or "Plot"

Manual available at:

<http://nstx.pppl.gov/nstx/Software/Documents/dbaccess.html>

Key Column Definitions

- TIME - time of this blob instance (msec)
- xCenterHM - horizontal pixel value of maximum height (after smoothing) within blob for an elliptical fit of a contour at half-max of the peak of the blob
- yCenterHM - vertical pixel value of maximum height (after smoothing) within a blob for an elliptical fit at half-max
- ellipHM - ellipticity (larger radius/smaller radius) for a fit at half-max
- tiltHM - Ellipse rotation angle for a fit at half-max. 90 degrees is straight up, zero to the right (along horizontal axis) and -90 being is down.
- TOPNORM - height of blob (normalized #'s). E.g. a blob 50% higher than the average value (=1) of the normalized values would be 1.5.
- chisqHM - Chi squared from ellipse fitting routine, normalized by # of points, for a fit at half-max
- XVEL - horizontal velocity of blob (Km/s) from last location
- YVEL - vertical velocity of blob (Km/s) from last location
- XFromSEP - horizontal distance* (cm) from blob center to separatrix
- RADIUS1HM - longer radius of ellipse fit at half-max, in pixels
- RADIUS2HM - shorter radius of ellipse fit at half-max, in pixels
- XSTARTED - horizontal pixel value of where blob began
- YSTARTED - vertical pixel value of where blob began
- AREA - area of blob in square pixels at this time
- RISE - difference between TopNorm and BaseNorm (normalized #'s)
- AVEVALUE - roughly the average value of region enclosed by ellipse (normalized #'s)
- TILT - Ellipse rotation angle. 90 degrees is straight up, zero to the right (along horizontal axis) and -90 being is down.
- areaHM - same as area, above, but for a fit at half-max
- DELTAAREA - change in area from previous instance (square pixels)
- WHOLELIFE- entire length of time (in msec) blob tracked

Poloidal velocity vs. distance from separatrix

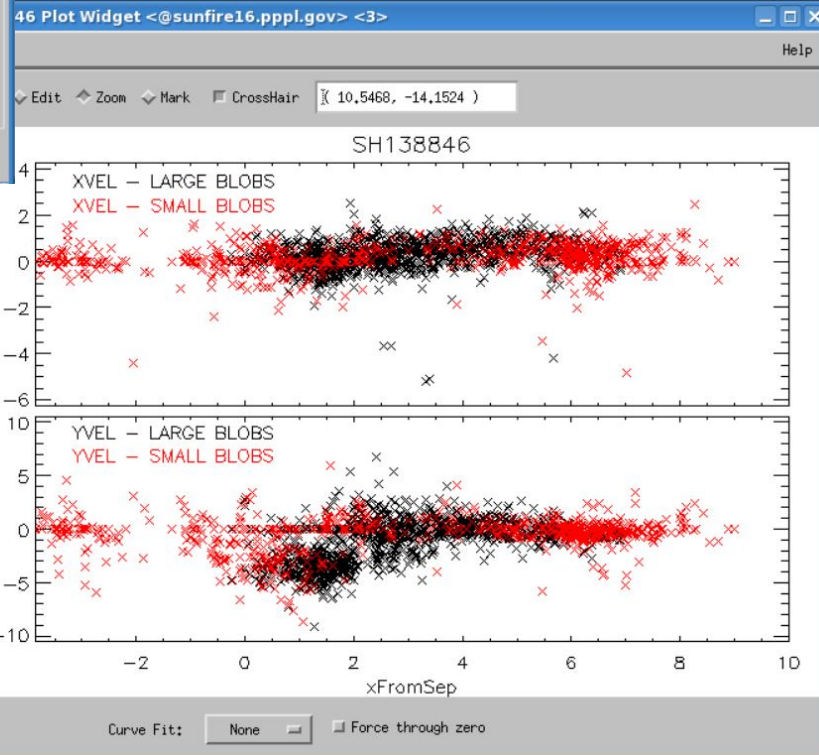
SH138846 Plot Setup <@sunfire16.pppl.gov>

Top Plot Title: SH138846

Plot #	Axis Title	Y:	Axis Title	Plot Style Constraint
	X:	SH138846.xFromSep	xFromSep	-----Plot Style Constraint-----
1	Y:	SH138846.xvel	xvel	1.5 < SH138846.topNorm =
2	Y:	SH138846.yvel	yvel	1.5 < SH138846.topNorm =
1	Y:	SH138846.xvel	xvel	< SH138846.topNorm < 1.5
2	Y:	SH138846.yvel	yvel	< SH138846.topNorm < 1.5
1	Y:	(Select)		< (Select) =

Dismiss Create Plot

Sample plot
from DbAccess



Plot Properties are configurable in DbAccess

(Uses GA Plot Objects)

GA Plot Properties Dialog

Select plot(s) to configure:

- 1 PLOT1
- 2 PLOT1

Deselect
Zoom
Copy
Delete

Plot Type: Surface

Slice mode: A

Configure: Signals Plot properties Ranges

Select signal to configure:

- IP; XP19.SHOT>106149 OK
- IP; XP19.SHOT<106149 OK

Deselect
Scale To
Copy
Delete

LABEL: ip; xp19.shot<106149 Set automatically

X scale factor: $X = X * 1.00000 + 0.00000$

COLOR: Red

LINE: Solid SYMBOLS: None

Symbol features: Fill Size: 1.000

Slice at: 0.00000

Done Apply Help

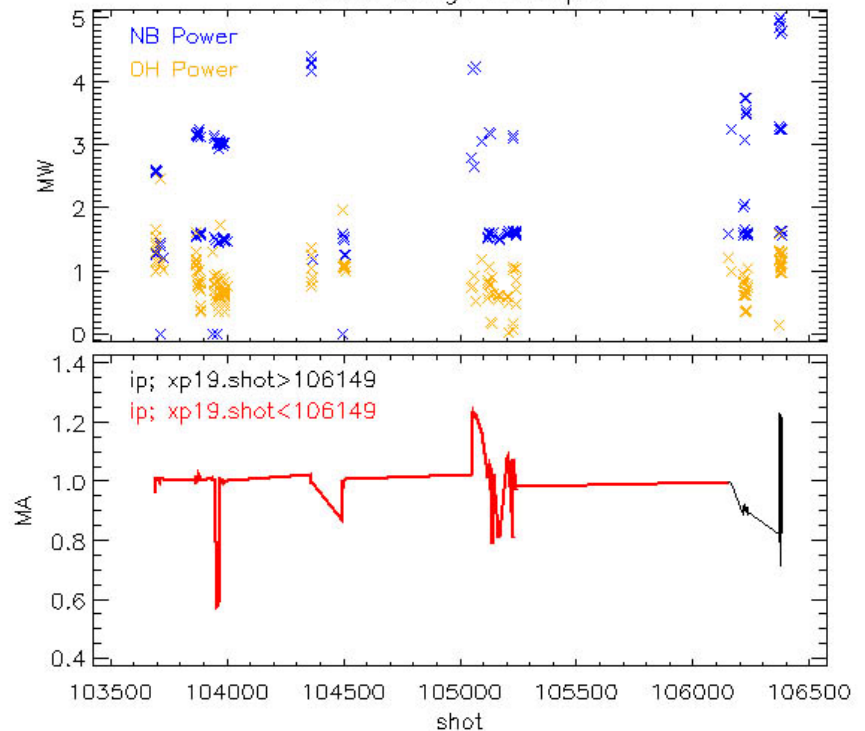
DbAccess Plot Widget

File Edit

Help

Select Edit Zoom Mark CrossHair 106793., -0.207645

Shot Range Example

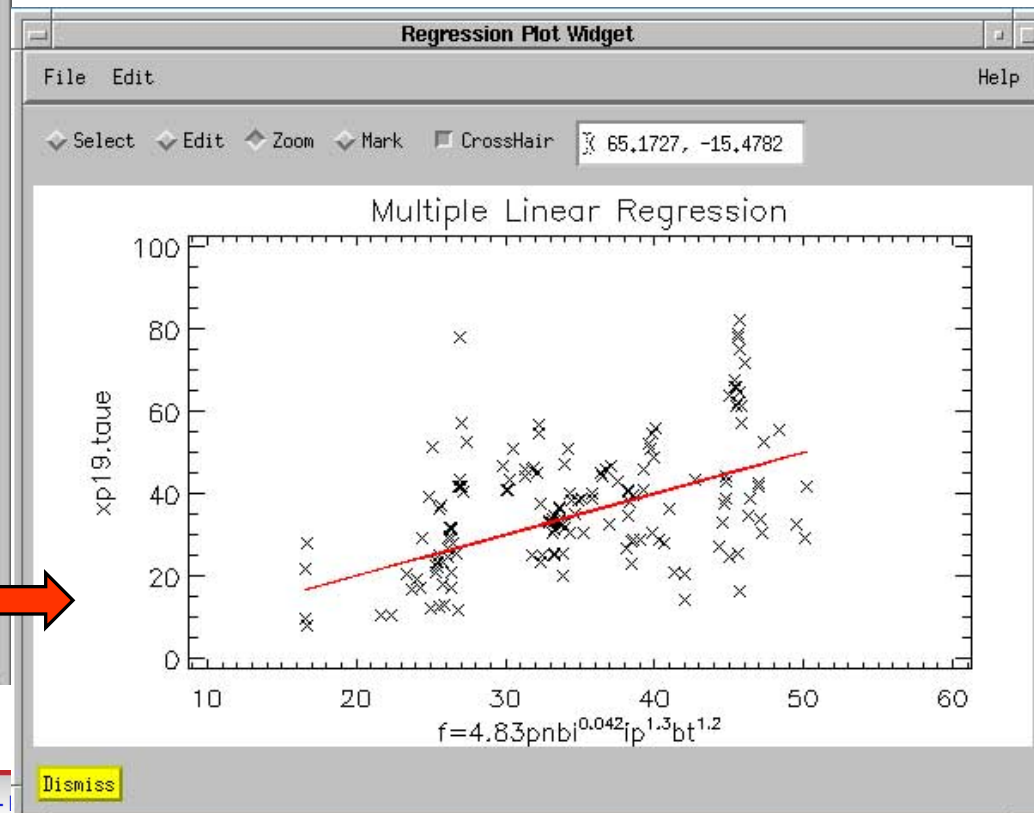


Dismiss

Statistical Interface in DbAccess

- Multiple Linear Regression
- Powers Optional
- Weighting Optional
- Distribution Plotting

The DbAccess Model window displays a list of variables on the left: xp19.DBkey, xp19.shot, xp19.time, xp19.phase, xp19.source, xp19.pnbi, xp19.poh, xp19.ip, xp19.bt, and xp19.q95. The variables xp19.ip and xp19.bt are highlighted. On the right, a green button labeled '> Y >' is positioned above a text box containing 'xp19.taue'. Below this, another green button labeled '> Weight >' is positioned above an empty text box. A yellow button labeled '<-Plot Distribution' is located below the variable list. Under the heading 'Effects in Model:', there is a green button '> Add >', a blue button '< Remove <', and a list box containing 'xp19.pnbi', 'xp19.ip', and 'xp19.bt'. A checkbox labeled 'Use Powers' is present. A text box for 'Comment for Hardcopy:' contains the text 'XP 19 Scaling Analysis'. At the bottom, there are three yellow buttons: 'Dismiss', 'Run Model', and 'Inet. of (Y-Model)'. An orange arrow points from the 'Run Model' button towards the adjacent window.



Statistical output from DbAccess

