Introduction to CIMA

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ALFALFA Undergrad Workshop

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Happy Birthday PJ!

CIMA version selection

Select which of the available versions of the CIMA software You want to use:

A 'smart' version of CIMA   (Ver. 3.1.02 2008-12-29 17:19)

The normal (default) version of CIMA   (Ver. 3.0.10 2008-12-29 17:18)

An old version of CIMA   (Ver. 2.2.38 2008-10-21 17:38)

A DANGEROUS version (Do NOT use!)   (Ver. D.D.DD 2008-11-14 15:29)

CIMA version 3.1 is a new version containing improved Mock spectrometer support and the new smart basketweaving mode.

CIMA version 3.0 is the next generation of CIMA and has now become the default version.

CIMA version 2.2 is the old version of CIMA.

NOTE: configuration files and command files from CIMA 2.2 are NOT compatible with CIMA 3.0 and 3.1. Users of version 3.0 and 3.1 SHOULD consult the CIMA web page (http://www.naic.edu/~cima) to check out the details.

Observers who want help migrating to version 3.0 and 3.1 can contact the CIMA administrator (lerner@naic.edu).

CIMA

Welcome to CIMA!!!

Cancel   Help

Show version descriptions

Receiver selection menu

Available receivers:

Carriage House 430/47	S-Band High
327 MHz	C-Band
430 MHz	C-Band High
L-Band Wide	X-Band
S-Band Low (wide)	S-Radar transmitter horn
S-Band Narrow (radar)	ALFA

Make quick Tsys measurement: Yes   No

Rotate receiver into position: **Yes**   No

Retrack source if selected: **Yes**   No

Accept   **Dismiss**   **Help**   Current
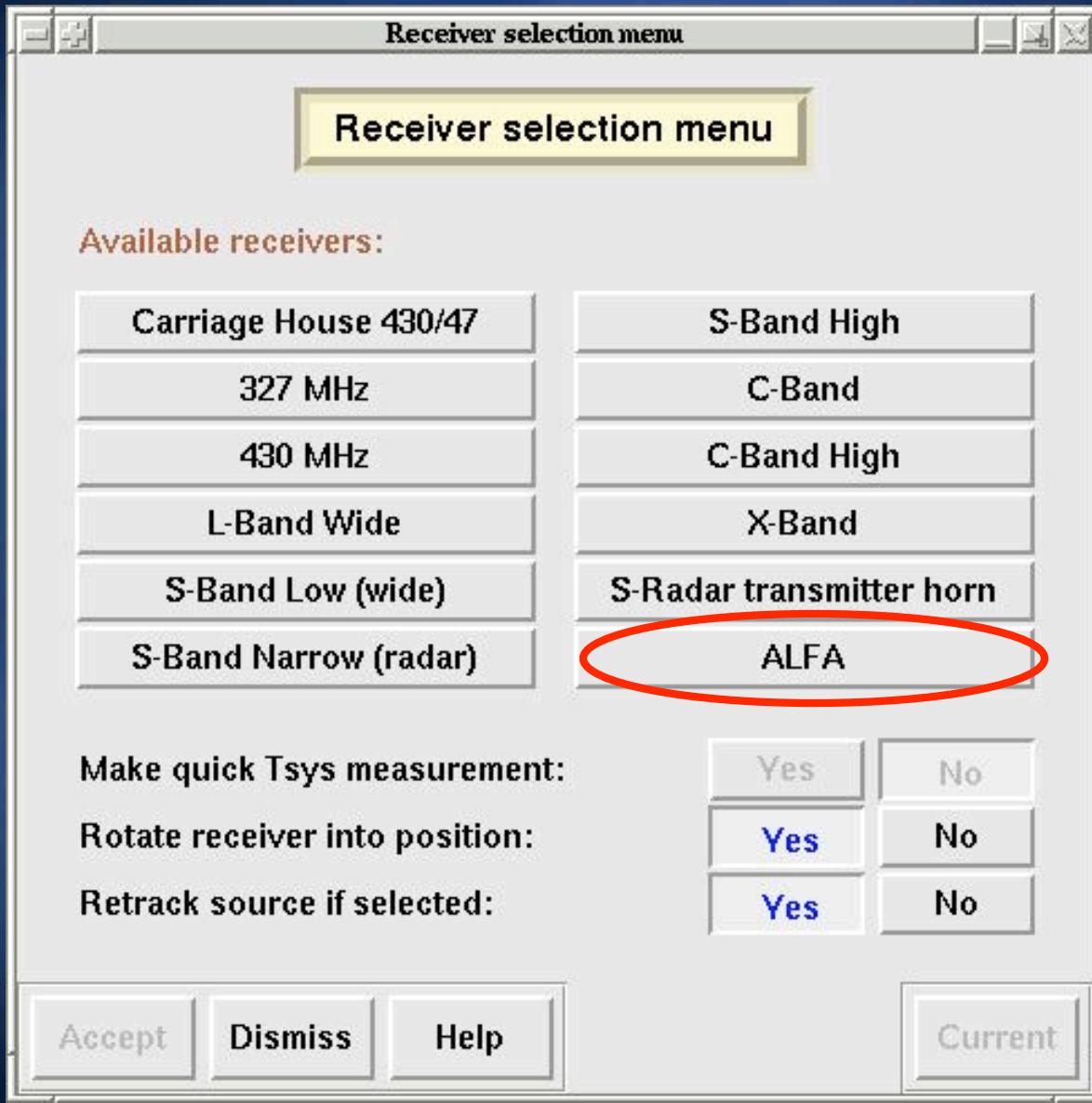
CIMA observation status window

CIMA observation status

drift9p2   Fixed azimuth drift map

Making drift scan followed by CAL

Taking drift scan ...

DRIFTING
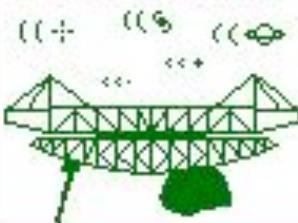
Loop: 21 / 99

Timer   10 min

00:02:43

03:29:37

File: wapp.20090111.a2010.0020.fits   189.55 MB

Source sets in = 00:45:29

|		
RA = 10:48:43	Dec = +02:11:26	On source
Az = 359.66°	ZA = 16.19°	Error = 0.4"
UT = 07:52:23	AST = 03:52:23	LST = 10:49:12

| Close | Help | Telescope | IF/LO |

18:43:46 exec
18:43:46 exec
18:43:46 exec
18:43:46 exec
18:43:46 exec
18:43:46 exec
18:43:46 exec
18:43:46 exec
18:43:46 exec
18:43:47 front

Help   Filter

CIMA observing session main menu

CIMA main menu

Version 3.1.02 "smart"

Observing modes:

- Spectral line observing
- Calibration
- Command file observing

Set-up:

- Pointing control
- Receiver IF/LO control
- Backend control
- Power control

Utilities:

- Load configuration
- Save configuration
- Utilities

Exit   Help

CIMA utilities menu

CIMA utilities

General utilities:

- Add comment to log
- Send e-mail comment
- Change preferences

Help tasks:

- IDL control window
- Start obs status display
- Restart the log display
- Open error log display
- Restart the WAPPs
- Restart GPIB program
- Restart ALFA programs

Monitor displays:

- AO status display
- Scram pointing monitor
- Scram telescope monitor
- Bandpass monitor control
- Graphic IF/LO display
- Scram IF/LO monitor
- Scram tie-down monitor

Direct commands: (be careful not to make any mistakes!)

- Send to frontend
- Send to executive
- Send to VX-works

Close   Help   Restart parts of CIMA

Galactic HI Line Peak Brightness – LAB Survey

Load configuration file

Load CIMA configuration file

Stored CIMA configurations: /share/obs4/usr/a2010

```
<jan09>
<oldcats>
<oldcimalogs>
<oldconfs>
<oldguis>
<oldtogs>
<year08>
<years05-07>
a2010_az180_2009.conf   Config CIMA 3.1.02 at Az=180 (Dec > +18)
a2010_az360_2009.conf   Config CIMA 3.1.02 at Az=360 (Dec < + 18)
togs_09.conf            TOGS configuration for CIMA 3.1
```

Contents of file: a2010_az360_2009.conf

Comment:	Config CIMA 3.1.02 at Az=360 (Dec < + 18)
Receiver:	ALFA --- 'Full width'
IF/LO:	standard 'ALFA' at 1385.00 MHz
Backend:	WAPP 1+2+3+4 '2 chan, 3-level' --- 100 MHz
Source:	
Catalog:	'a2010.cat'
ALFA:	centered on beam 0 with rotation angle 19 degrees
Calibration:	
Obs mode:	Fixed azimuth drift map --- 99 J2000 600-sec loops @ Az = 360.0

Last loaded configuration file: NONE

Close   Help   Load only   Load and apply

Observing menu

CIMA observing menu

Observing mode: Fixed azimuth drift map   **Description**

Number of loops:	99	Start position:	drift9p2
Strip time:	600 secs	Calibration type:	Hcorcal
Azimuth position:	360.0 degs	Calibration time:	1 sec
ALFA rot angle:	19.0 degs	Calibrate when:	On @ loopend
Winking cal:	Off	Add extra cal:	No
Winking cal type:	Lcorcal	Adjust power:	First loop only
Drift type:	Follow Dec J2000	Data taking:	1 loop / file

Adjust power   **Power control**   **Power monitor**   **New file**

Close   **Help**   **Observe**   **Stop**   **Abort**

ALFA data display window

ALFA on-line data display

Beam selection:

Plot type:	Diagrams
Data type:	Types
Refresh rate:	Rates

Beam selection: 0A 1A 2A 3A 4A 5A 6A
0B 1B 2B 3B 4B 5B 6B
0A+B 1A+B 2A+B 3A+B 4A+B 5A+B 6A+B

Frames: columns x rows

1 2 3 4
x 1 2 3 4
or **ALFA pattern**

Time period: Time spans **Period:**

Plot options: Plot styles | Symbols | Plot units | Plot labels | Lay-outs | Colors

Colors:

Current frame:

| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |

Use crossline cursor

Keep full plot when zooming

Include zero level in plot

Show color gradient scale

Freeze y-scale

Modify all plots

Gradient scale:

Waterfall spectra from ALFA channel 4A

Waterfall spectra from ALFA channel 3A

Waterfall spectra from ALFA channel 5A

Waterfall spectra from ALFA channel 0A

Waterfall spectra from ALFA channel 2A

Waterfall spectra from ALFA channel 6A

Waterfall spectra from ALFA channel 1A
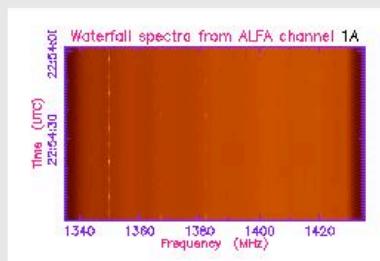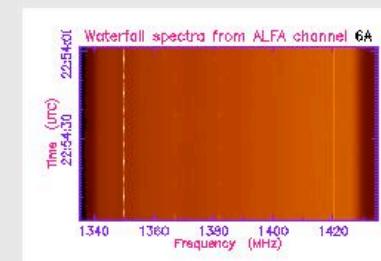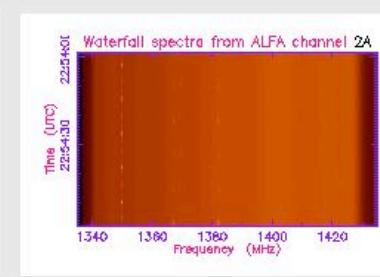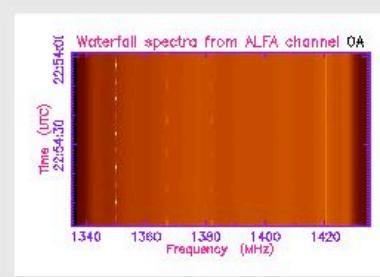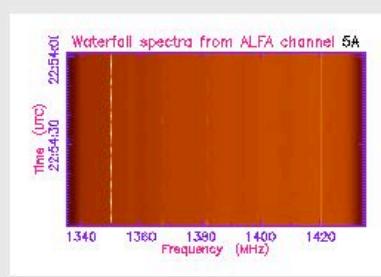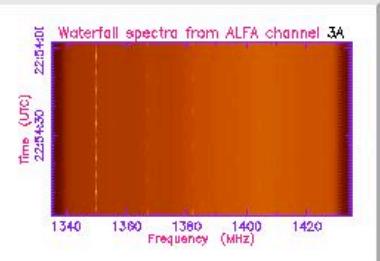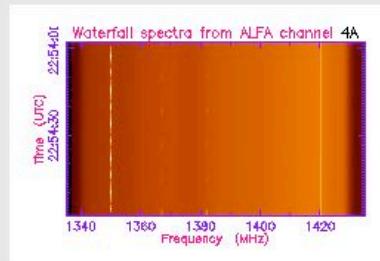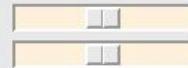
1	0A	Drop
2	1A	Drop
3	2A	Drop
4	3A	Drop
5	4A	Drop
6	5A	Drop
7	6A	Drop

Position:

x =

y =

Exit | Help | Hold display | Hide all menus | Dump plot | View data info | Restart grabber | Set preferences

ALFA observation monitor window

ALFA observation monitor

		Beam 0		Beam 1		Beam 2		Beam 3		Beam 4		Beam 5		Beam 6	
Polarization		A	B	A	B	A	B	A	B	A	B	A	B	A	B
Tsys:	[K]	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Trec:	[K]	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Power:	[dB]	0.910	1.080	1.113	1.044	0.980	0.973	1.054	1.076	1.054	1.090	1.017	0.981	0.927	1.080

Exit   Help   View Tsys history   Open ALFA instrument monitor window