

Jastrocam – stan obecny

Wersja 2.3 – (uważana za stabilną) zamrożona

Wersja 3 (alpha 3.02 - “jac3”) działa, bez
Redukcji on-line

Testowa (beta, obecny build 26) -> sterowanie
teleskopami (a-g), ogniskiem (OAUJ), redukcja
on-line (moduł Photm)

Kolejne wersje do testów “jac3test”

Jastrocam 2.3

Obserwator wybiera urządzenia!
Jest redukcja on-line

Nie ma sterowania teleskopem – musi być “zewnętrzny”
auto-guider

The screenshot displays the 'Astronomical images acquisition program, Version 2.3.0' interface. The main window is divided into several panels:

- Left Panel (Acquisition Settings):** Includes tabs for 'ARES', 'PhotoM', 'FITS Header', and 'Active tasks'. Under 'Acquisition', there are options for 'Exposure sync.' (Enabled), 'Output directory' (File: [o]g[0]i.fits, Path: /home/zola/110627), and 'Exposure settings' (Frame mode: BIAS, Repetitions: 1, Filter: N, Time: 5, Gain: 2, Count: 1). Buttons for 'Acquire', 'Abort', 'Load', and 'Save' are at the bottom.
- Top-Right Panel (Andor Control Panel):** Shows 'System Control' with a grid of green digital readouts: CCD Temp. [-52.0], Req. Temp. [-70], Ambient Temp. [+309.3], Min Temp. [-120], Max Temp. [-10], Fan speed [HI], Keep cool [ON], Cooler Enabled [ON], Cosmic filter [OFF], Rotation [OFF], Flip [OFF], Read speed [2], High Capacity [OFF]. Below this, it indicates 'System: IDLE' and 'Cooler: Requested level not reached'.
- Right Panel (Preview):** Titled 'Preview 0s in filter N', it shows a dark, noisy image. It includes 'Scaling: Min-Max', 'Rectangle' selection tool, and 'Cuts: 928 - 958'. The status bar at the bottom of this panel shows 'Image pixel: 36: 354 Value: 947 Selection: - - Zoom: 1/2'.
- Bottom Panel (System Status):** A red bar shows 'IDL'. Below it, a status bar displays 'Filter: N', 'MEM U: 038 / A: 090 / M: 227', and the date/time '27/02/2012 16:59:04'. A log window at the very bottom shows 'REQUEST = 957ff008 / 1048576 from [1024 x 1024]'.

Jastrocam v.3 (ciagle test!)

The screenshot displays the Jastrocam v.3 software interface, titled "Astronomical images acquisition program. Version 3.0.0-alpha". The interface is divided into several panels:

- Left Panel (Acquisition Settings):**
 - Exposure sync:** Enabled. **Settings** button.
 - Output directory:** File: `{o}{g}{f}{i}.fits`, Path: `/home/zola/test`. Save acquired data?
 - Exposure settings:** Frame mode: **BIAS**, Repetitions: **1**.
 - Filter table:**

Filter	Time	Gain	Count
B	60	1	1
V	3	1	0
R	20	1	0
BG	10	1	0
y	0	1	0
 - Common gain for all filters
 - Buttons:** Acquire, Abort
- Top Panel (System Control - Apogee Alta 1):**
 - System Control:**
 - Heatsink Temp. [C]: **+21.4**
 - CCD Temp. [C]: **-20.0**
 - Cooler power: **+42.8**
 - Regulation: **ON**
 - Setpoint: **-20.0**
 - Backoff point: **+02.0**
 - Fan speed: **MED**
 - Voltage: **+12.03**
 - Camera ADC resolution (12 or 16 bit): 12-bit enabled.

- Right Panel (Preview 0s in filter B):**
- Image: **1230** - **1235** (Cuts)
- Scaling: **Histogram**
- Rectangle: **Rectangle**
- Cross-section:
- Image pixel: 4: 290, Value: 1222.00, Selection: -, Zoom: 1/2

The bottom status bar shows: IDLE, Filter: B, MEM U: 024 / A: 089 / M: 227, 27/02/2012 17:02:43, and system tray icons for Applications, Places, System, and network status.

JAC3 zmiany

1. Dodany “discovery service”
2. Konfiguracja urządzeń gdy program jest uruchomiony
3. Możliwie małe zmiany w interfejsie użytkownika
4. Duże zmiany w logice i sposobie działania programu!

FITS Header | **Active tasks** | **Preview**

Acquisition | **CCD Area** | **Preview**

Exposure sync:
 Enabled Settings

Output directory:
 File:
 Path: ...
 Save acquired data?

Exposure settings:
 Frame mode: **BIAS** ▾
 Repetitions:

Filter:	Time:	Gain:	Count:
B	<input type="text" value="60"/>	<input type="text" value="1"/> ▾	<input type="text" value="1"/>
V	<input type="text" value="3"/>	<input type="text" value="1"/> ▾	<input type="text" value="0"/>
R	<input type="text" value="20"/>	<input type="text" value="1"/> ▾	<input type="text" value="0"/>
BG	<input type="text" value="10"/>	<input type="text" value="1"/> ▾	<input type="text" value="0"/>
y	<input type="text" value="0"/>	<input type="text" value="1"/> ▾	<input type="text" value="0"/>

Common gain for all filters

Acquire Abort

Apogee Alta 1

System Control:

Heatsink Temp. [C]	CCD Temp. [C]	Cooler power
+21.2	-20.0	+42.0
Regulation	Setpoint	Backoff point
ON	-20.0	+02.0
Fan speed	Voltage	
MED	+12.07	

Camera ADC resolution (12 or 16 bit): 12-bit enabled.

Preview 0s in filter B

Image | Keywords

Scaling: **Histogram** ▾

Cuts: -

Rectangle ▾
 Cross-section ▾

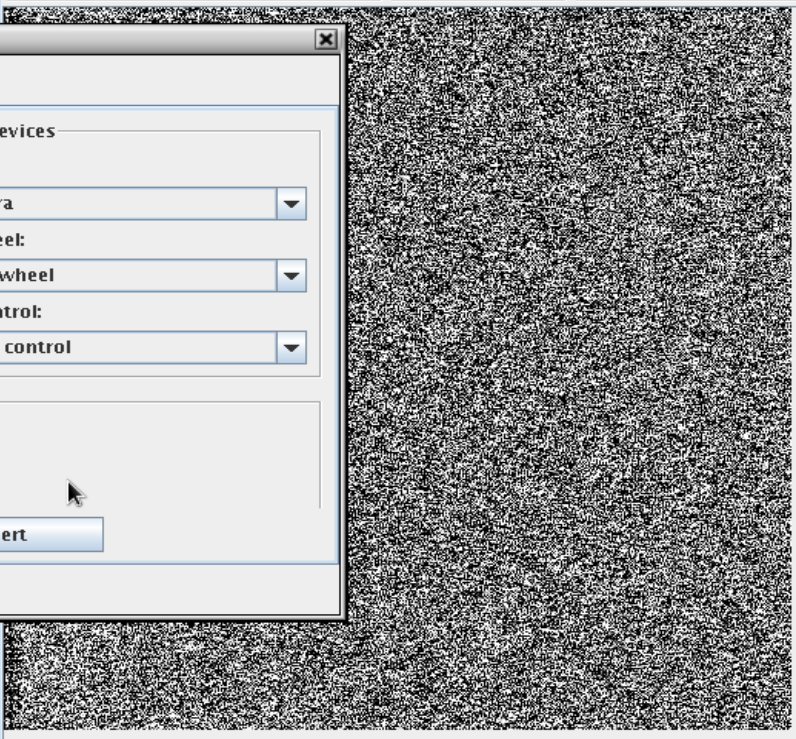


Image pixel: 8 : 462 Value: 1242.00 Selection: - - Zoom: 1/2 ▾

AstroCam Devices settings

Working devices | Settings

Primary devices Camera: Apogee Alta 1 ▾ Filter wheel: IFW (ttys2) ▾ Focus control: No focus control ▾	Guiding devices Camera: No camera ▾ Filter wheel: No filter wheel ▾ Focus control: No focus control ▾
Other devices Dome control: No dome control ▾ Telescope control: OA50 Telescope ▾	

Apply Revert

Close

FITS Header | **Active tasks**

Acquisition | CCD Area | Preview

Exposure sync:
 Enabled Settings

Output directory:
File:
Path: ...
 Save acquired data?

Exposure settings:
Frame mode: **BIAS** v
Repetitions: v

Filter:	Time:	Gain:	Count:
B	<input type="text" value="60"/> v	<input type="text" value="1"/> v	<input type="text" value="1"/> v
V	<input type="text" value="3"/> v	<input type="text" value="1"/> v	<input type="text" value="0"/> v
R	<input type="text" value="20"/> v	<input type="text" value="1"/> v	<input type="text" value="0"/> v
BG	<input type="text" value="10"/> v	<input type="text" value="1"/> v	<input type="text" value="0"/> v
Y	<input type="text" value="0"/> v	<input type="text" value="1"/> v	<input type="text" value="0"/> v

Common gain for all filters

Acquire Abort

Apogee Alta 1

System Control:

Heatsink Temp. [C]	CCD Temp. [C]	Cooler power
+21.0	-20.1	+42.2
Regulation	Setpoint	Backoff point
ON	-20.0	+02.0
Fan speed	Voltage	
150	12.05	

Camera

AstroCam Devices settings

Working devices | **Settings**

Device classes: **All devices** v

Devices: **Andor DZ936_BV #21E5** v Reset driver

Control settings | Custom properties | Information

Shutter close time:

CosmicRay filter: **False** v

High capacity: **True** v

Andor startup v

Fan: **HI** v

Initial temperature:

Andor startp v

Cooler ShutDown: **False** v

Other settings v

Save Refresh Apply Revert

Close

Preview 0s in filter B

Rectangle v

Cross-section v + + +

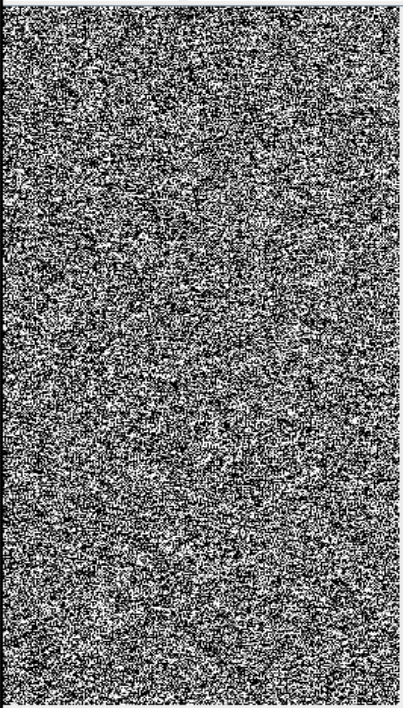


Image pixel: 8 : 462 Value: 1242.00 Selection: - - Zoom: 1/2 v

FITS Header | **Active tasks**

Acquisition | CCD Area | Preview

Exposure sync:
 Enabled Settings

Output directory:
 File: {o}{g}{f}{i}.fits
 Path: /home/zola/test ...
 Save acquired data?

Exposure settings:
 Frame mode: BIAS
 Repetitions: 1

Filter:	Time:	Gain:	Count:
B	60	1	1
V	3	1	0
R	20	1	0
BG	10	1	0
y	0	1	0

Common gain for all filters

Acquire Abort

Apogee Alta 1

System Control:

Heatsink Temp. [C]	CCD Temp. [C]	Cooler power
+20.9	-20.1	+42.0
Regulation	Setpoint	Backoff point
ON	-20.0	+02.0
Fan speed	Voltage	
MED	+12.04	

Camera ADC resolution (12 or 16 bit): 12-bit enabled.

AutoGuider

Settings | Guiding method | Preview

Guiding hardware:
 Primary devices Guiding devices

Guider CCD area:
 X: 0 Y: 0 From preview
 Width: 0 Height: 0
 Exposure filter: B binn: 1 gain: 1 time: 0

Star coordinates on CCD:
 Ra: 00h 00m 00.00s Dec: 00° 00' 00.00" From FITS
 X: 0.00 Y: 0.00 Pick star
 Search radius: 20
 Threshold: 20 Min sigma: 3

Calibration data:
 Transformation: [] [] [] Load
 Asymetry: [] [] [] Save
 Step (RA/Dex): 10.00 10.00 Calibrate

Enable guiding

Preview 0s in filter B

Image | Keywords

Scaling: Histogram

1252 1254
1233 1235
1214 1216

Rectangle
Cross-section

1235

1234.00 Selection: [674,138 ; 307x297] Zoom: 1/2

FITS Header | **Active tasks**

Acquisition | CCD Area | Preview

Exposure sync:
 Enabled Settings

Output directory:
 File: {o}{g}{f}{i}.fits
 Path: /home/zola/test ...

Save acquired data?

Exposure settings:
 Frame mode: BIAS
 Repetitions: 1

Filter:	Time:	Gain:	Count:
B	60	1	1
V	3	1	0
R	20	1	0
BG	10	1	0
y	0	1	0

Common gain for all filters

Acquire Abort

Apogee Alta 1

System Control:

Heatsink Temp. [C]	CCD Temp. [C]	Cooler power
+20.8	-20.2	+41.7
Regulation	Setpoint	Backoff point
ON	-20.0	+02.0
Fan speed	Voltage	
MED	+12.03	

Camera ADC resolution (12 or 16 bit): 12-bit enabled.

AutoGuider

Settings | Guiding method | Preview

Selected guiding method: Basic Auto Guider

Guider plugin parameters:

Minimal movement	0
Step modifier	0.9
Apply drift	False
Drift min movement	0
Drift points	5

Apply Cancel Defaults

Enable guiding

Preview 0s in filter B

Image | Keywords

Scaling: Histogram

1252 1254
1233 1235
1214 1216

Rectangle
Cross-section

1235

due: 1234.00 Selection: [674,138 ; 307x297] Zoom: 1/2

Zakłócenia

Testy na Suhorze: działa po kilkanaście godzin
dowolna wersja gdy nie ma napięcia na teleskop
i kopułę (testy z grudnia i lutego)

Komputer “gubi” kamerę gdy poruszany jest
teleskop (z myszy) i ruszana jest kopuła
(częściej!)

Kolejne etapy

1. Ustabilizowanie pracy wersji testowej
2. Dodanie obsługi stacji meteo
3. Sterowanie kopula w OA + DDW
4. Sterowanie ogniskiem

....

Pipeline redukcji obserwacji WET

Maestro – program napisany przez J. Dalessio
(matlab)

Zainstalowany na komputerach na Suhorze
(beta i omega)

Poszczególne kroki dopasowane do poprzedniej
redukcji obserwacji (QED)

Maestro

Zastępuje całą redukcję wstępną (IRAFEM)
Wykonuje aperturową redukcję obserwacji w
wielu aperturach jednocześnie
Format plików po redukcji wymaga napisania
interface'u do wyboru optymalnej apertury,
przeliczenia do wielkości gwiazdowych ..
Już może być użyteczny:
“maestro inspect @dark.lst”