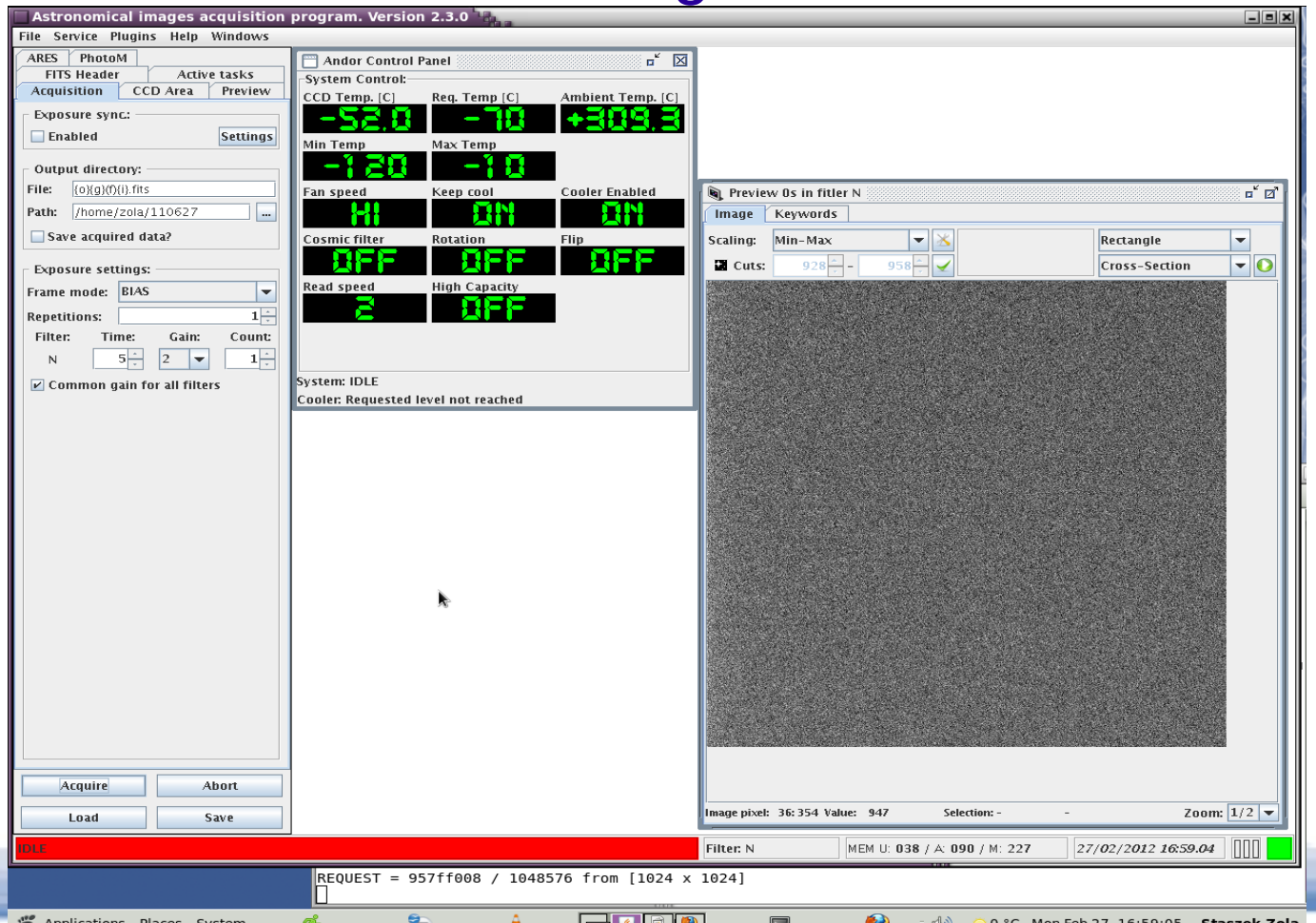
Jastrocam – stan obecny

Wersja 2.3 – (uważana za stabilną) zamrożona

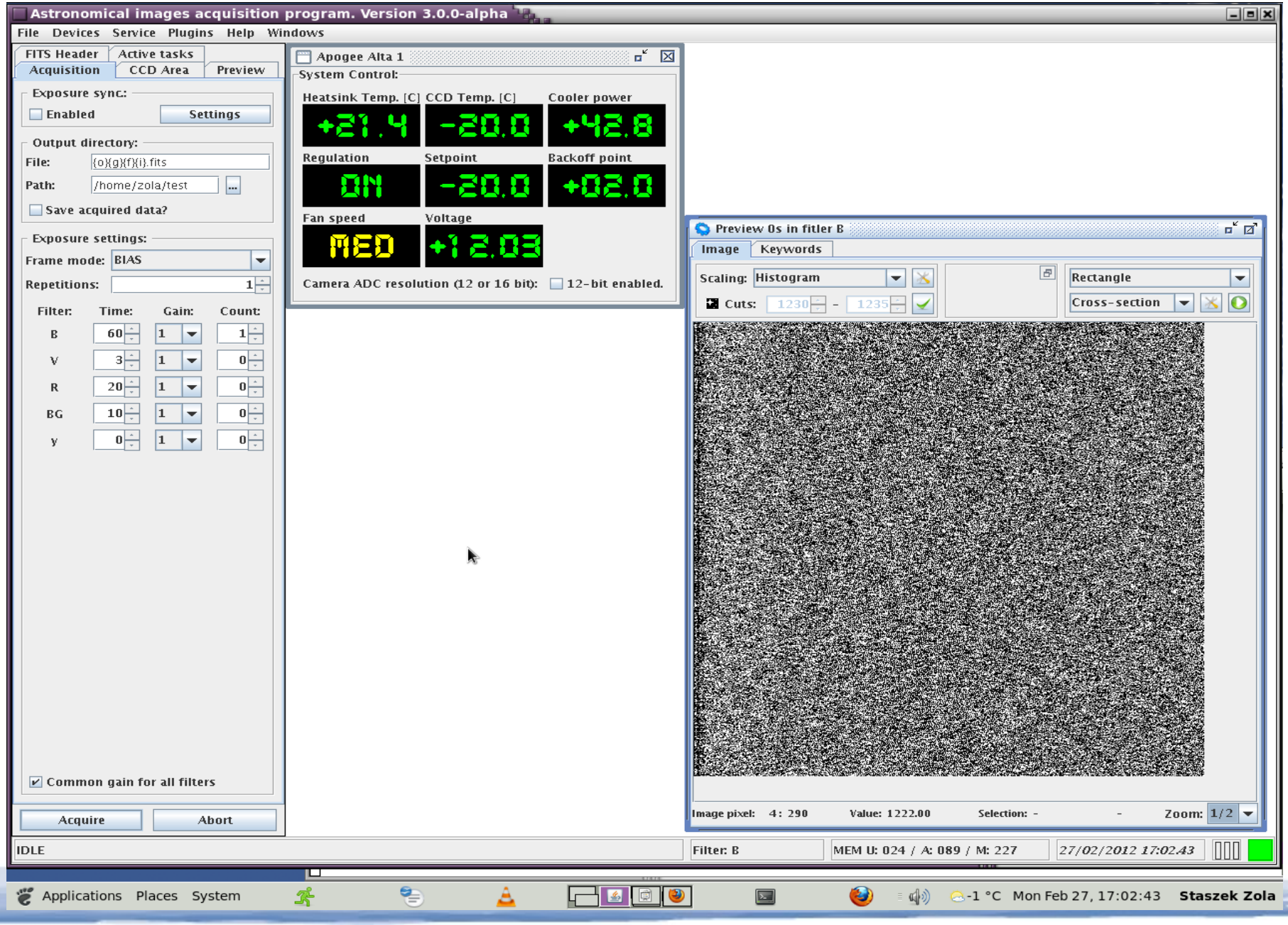
Wersja 3 (alpha 3.02 - “jac3”) działa, bez Redukcji on-line
Testowa (beta, obecny build 26) -> sterowanie teleskopami (a-g), ogniskiem (OAUJ), redukcja on-line (moduł Photm)
Kolejne wersje do testów “jac3test”

Jastrocam 2.3

Obserwator wybiera urządzenia!
Jest redukcja on-line
Nie ma sterowania teleskopem – musi być “zewnętrzny” auto-guider



Jastrocam v.3 (ciągle test!)

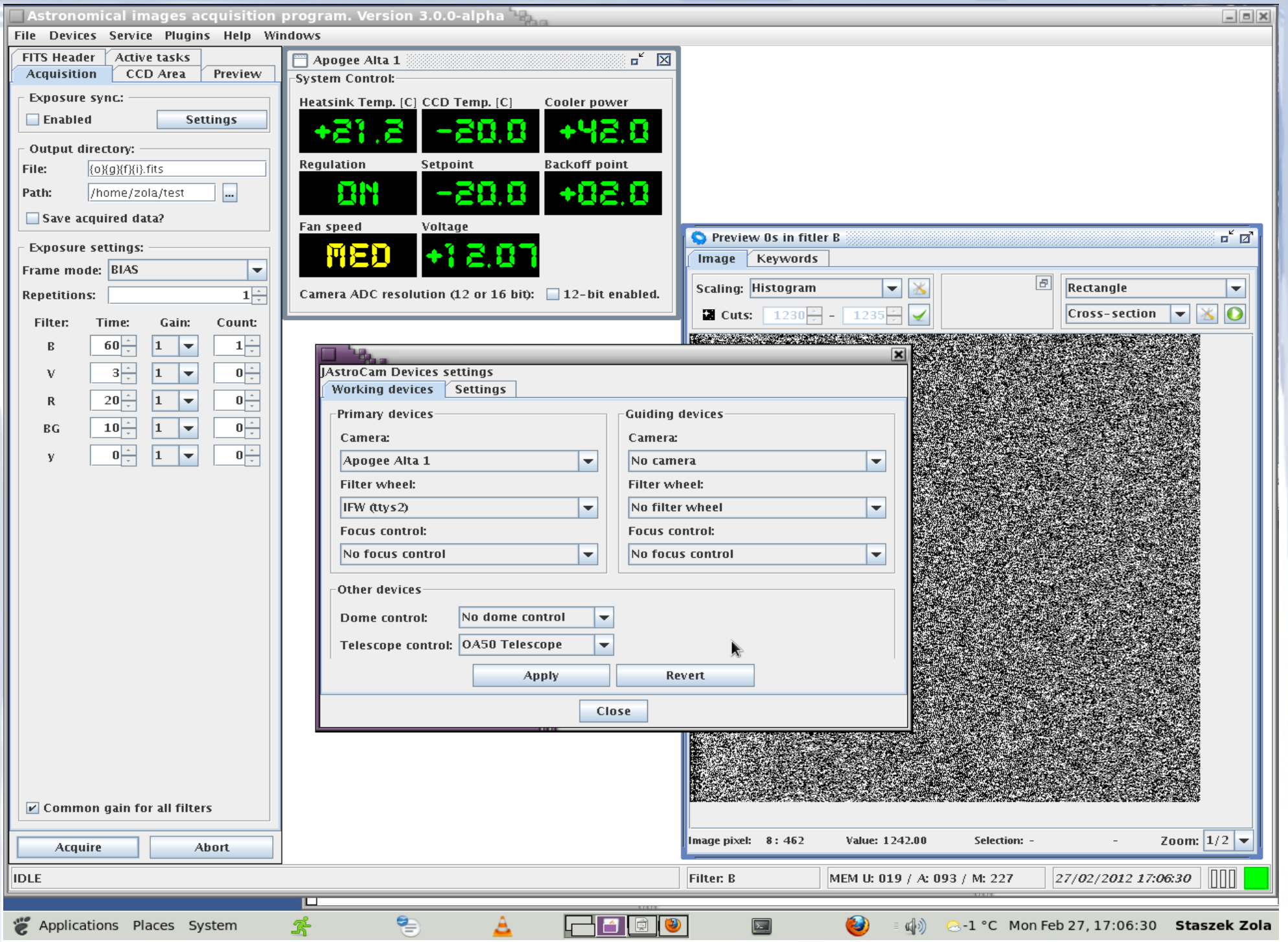


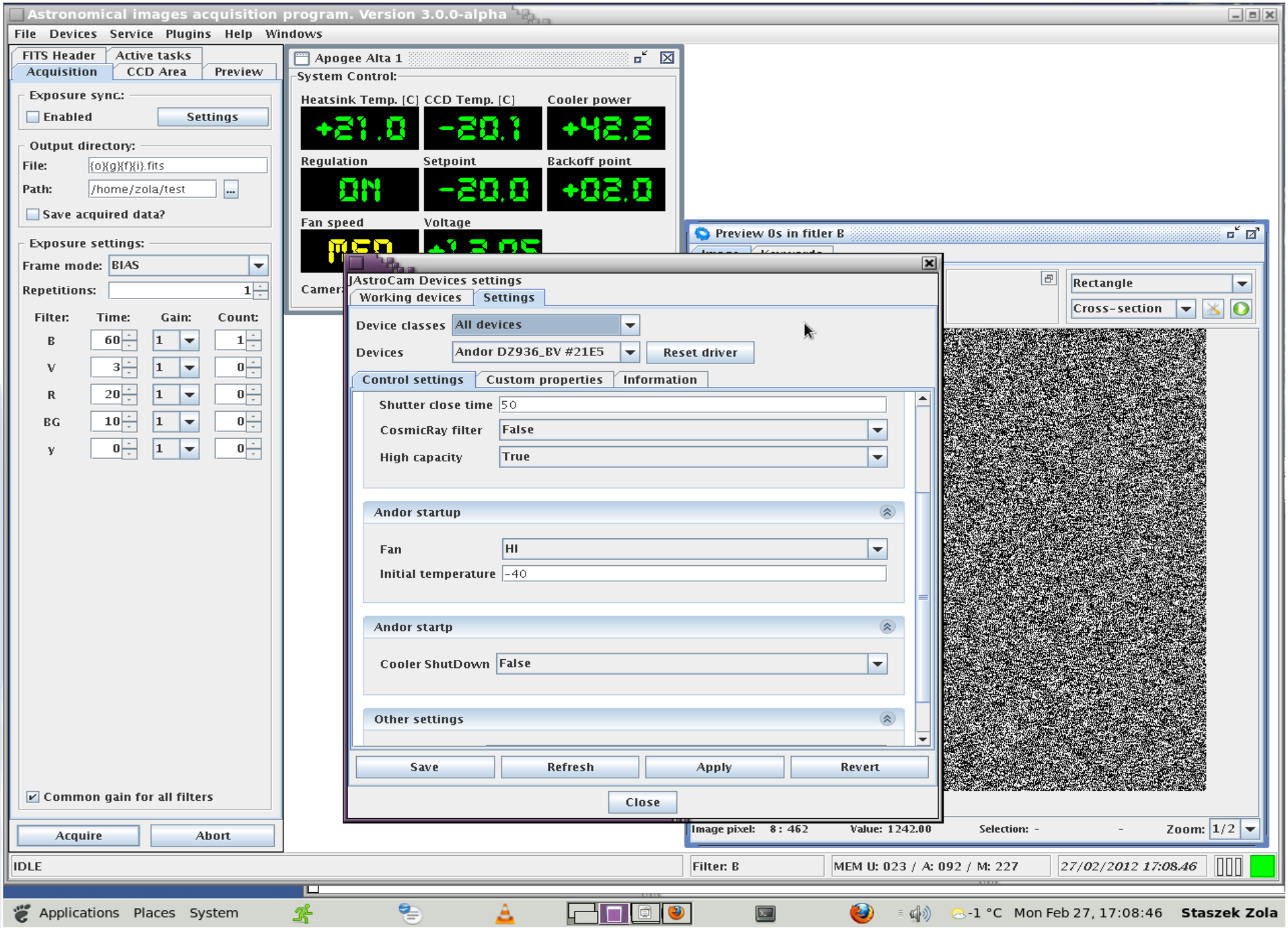
JAC3 zmiany

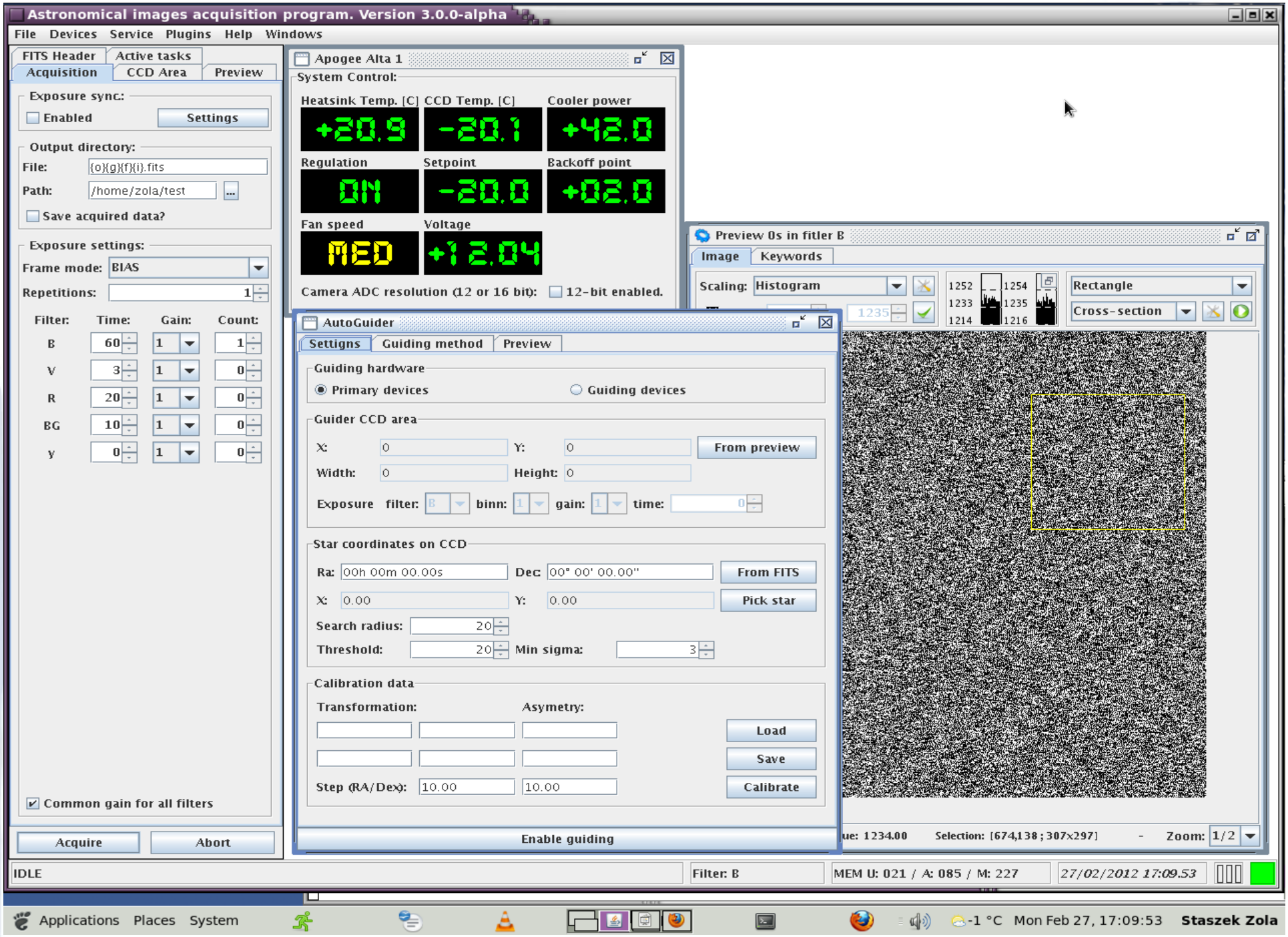
1. Dodany “discovery service”

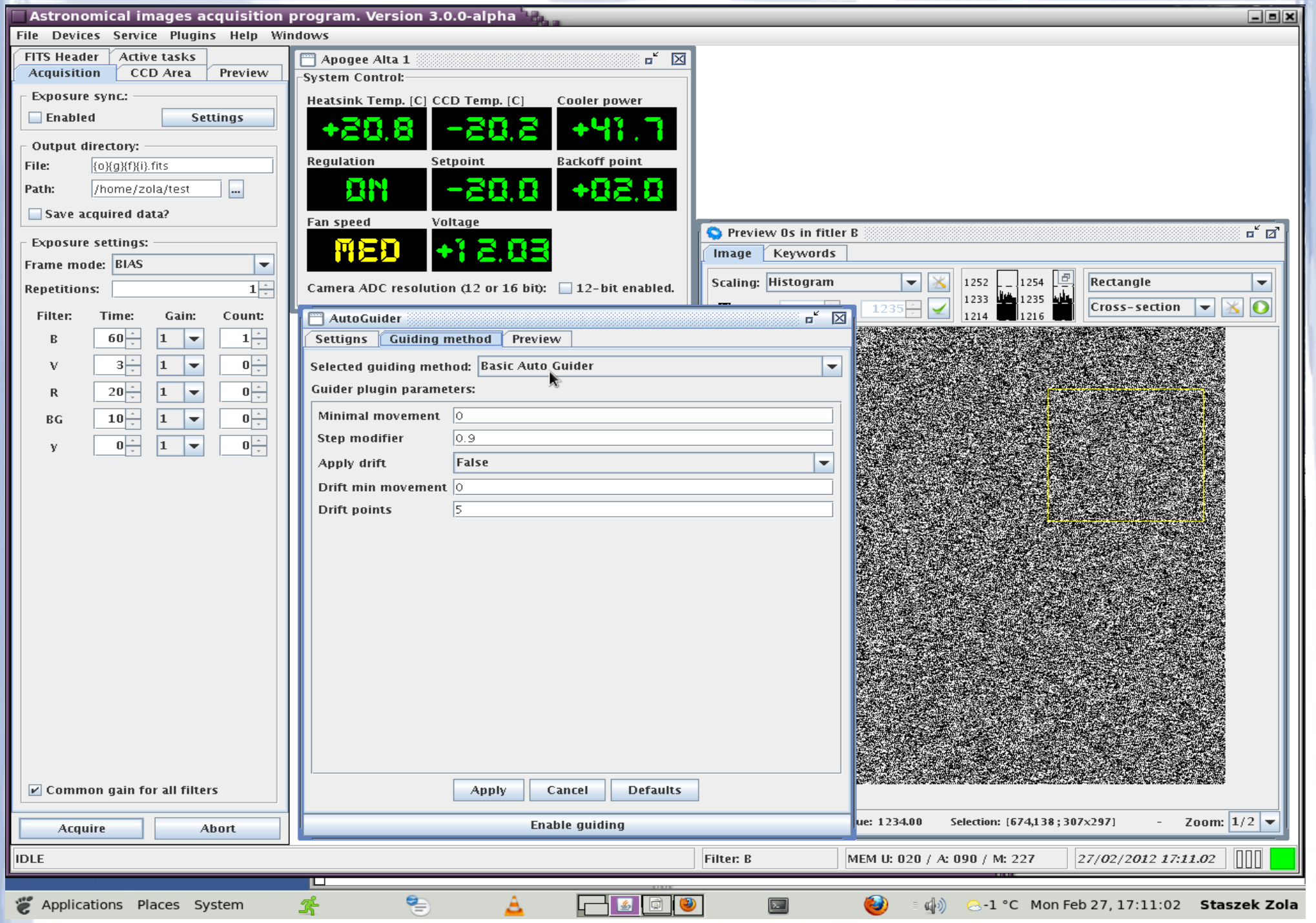
2. Konfiguracja urządzen gdy program jest uruchomiony

3. Możliwie małe zmiany w interfejsie użytkownika
4. Duże zmiany w logice i sposobie działania programu!


Astronomical images acquisition program. Version 3.0.0-alpha
File Devices Service Plugins Help Windows
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
+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.
JAstroCam 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
Preview 0s in fitler B
Image Keywords
Scaling: Histogram
Cuts: 1230 - 1235
Rectangle
Cross-section
Image pixel: 8 : 462 Value: 1242.00 Selection: - - Zoom: 1/2
IDLE
Filter: B
MEM U: 019 / A: 093 / M: 227
27/02/2012 17:06:30
Applications Places System
-1 °C Mon Feb 27, 17:06:30 Staszek Zola


Astronomical images acquisition program. Version 3.0.0-alpha
File Devices Service Plugins Help Windows
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]
+21.0
CCD Temp. [C]
-20.1
Cooler power
+42.2
Regulation
ON
Setpoint
-20.0
Backoff point
+02.0
Fan speed
Voltage
JAstroCam Devices settings
Working devices Settings
Device classes All devices
Devices Andor DZ936_BV #21E5
Reset driver
Control settings Custom properties Information
Shutter close time 50
CosmicRay filter False
High capacity True
Andor startup
Fan HI
Initial temperature -40
Andor startp
Cooler ShutDown False
Other settings
Save Refresh Apply Revert
Close
Preview 0s in fitler B
Rectangle
Cross-section
Image pixel: 8 : 462 Value: 1242.00
Selection: - -
Zoom: 1/2
IDLE
Filter: B
MEM U: 023 / A: 092 / M: 227
27/02/2012 17:08.46
Applications Places System
-1 °C Mon Feb 27, 17:08:46 Staszek Zola


Astronomical images acquisition program. Version 3.0.0-alpha
File Devices Service Plugins Help Windows
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: Asymetry:
Load
Save
Step (RA/Dec): 10.00 10.00 Calibrate
Enable guiding
Preview 0s in fitler B
Image Keywords
Scaling: Histogram
1252 1254
1233 1235
1214 1216
Rectangle
Cross-section
1235
Selection: [674,138 ; 307x297]
Zoom: 1/2
IDLE
Filter: B
MEM U: 021 / A: 085 / M: 227
27/02/2012 17:09.53
Applications Places System
-1 °C Mon Feb 27, 17:09:53 Staszek Zola


Astronomical images acquisition program. Version 3.0.0-alpha
File Devices Service Plugins Help Windows
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
Settigns 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 fitler B
Image Keywords
Scaling: Histogram
Rectangle
Cross-section
Selection: [674,138;307x297]
Zoom: 1/2
IDLE
Filter: B
MEM U: 020 / A: 090 / M: 227
27/02/2012 17:11.02
Applications Places System
-1 °C Mon Feb 27, 17:11:02 Staszek Zola

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 (mathlab)

Zaistalowany na komputerach na Suhorze (beta i omega)

Posczególne 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”