

# NIRES checklist

# NIRES Intro

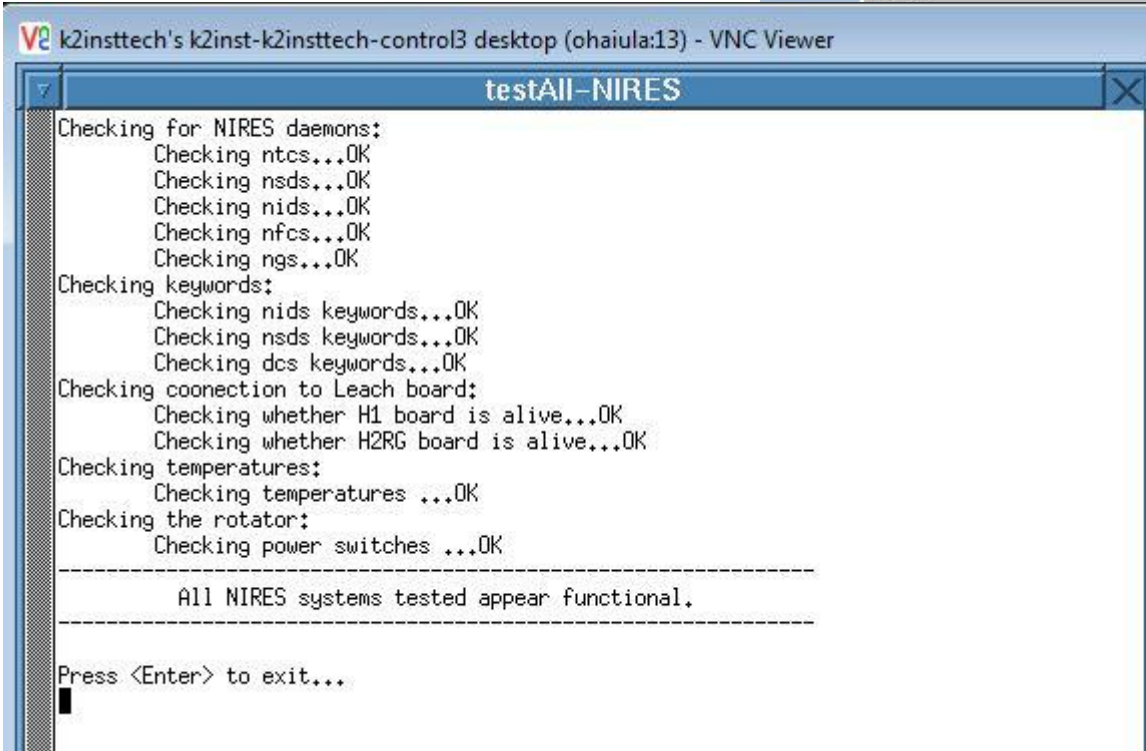
- It is a low resolution echelle spectrometer
- It has two main cameras:
  - Slit viewing camera
  - Spectrometer
- Operationally it has two LN2 tanks: A main tank and an aux tank (connected to the spectrometer detector)

# NIRES details

- The rotator is a facility rotator with two power switches.
- For night operations:
  - Check if Instrument and rotator ready
  - Detectors OK?

# Instrument and Rotator Ready?

- Run testAll



# Detector



# Slit viewing camera

k2insttech's k2inst-k2insttech-control3 desktop (ohaiula:13) - VNC Viewer

nires\_check-BringThisToFront

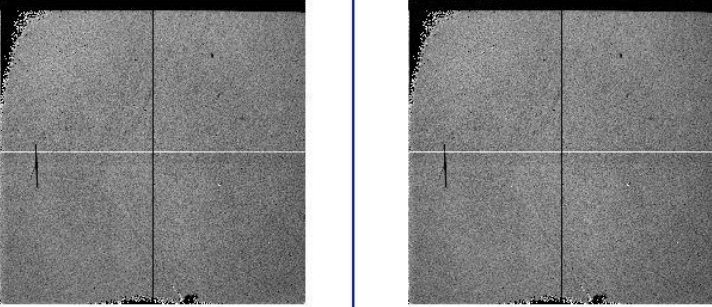
```
Checking the slit viewing camera
=====
[1] 2437
setting itime = 2 (wait)
setting coadds = 1 (wait)
setting object = nires viewer check (wait)
Taking frame #70
ufgv: Time estimate = 35 seconds (includes 30 seconds for overhead,
ufgv: Waiting for exposure to end.
.....OK
Took file /s/sdata1500/nires2/2018Feb04//v180205_0070.fits
/s/sdata1500/nires2/2018Feb04//v180205_0070.fits
Does the right image look like the left? (y/n) [y]: █
```

SAOImage ds9

File Edit View Frame Bin Zoom Scale Color Region WCS Analysis Help

File good\_v.fits  
Object reference slit viewing camera  
Value  
WCS  
Physical X Y  
Image X Y  
Frame 1 Zoom 0.250 Angle 0.000

file edit view frame bin zoom scale color region wcs help  
about open save image header page setup print exit



2803 3076 3352 3624 3900 4173 4445 4721 4994

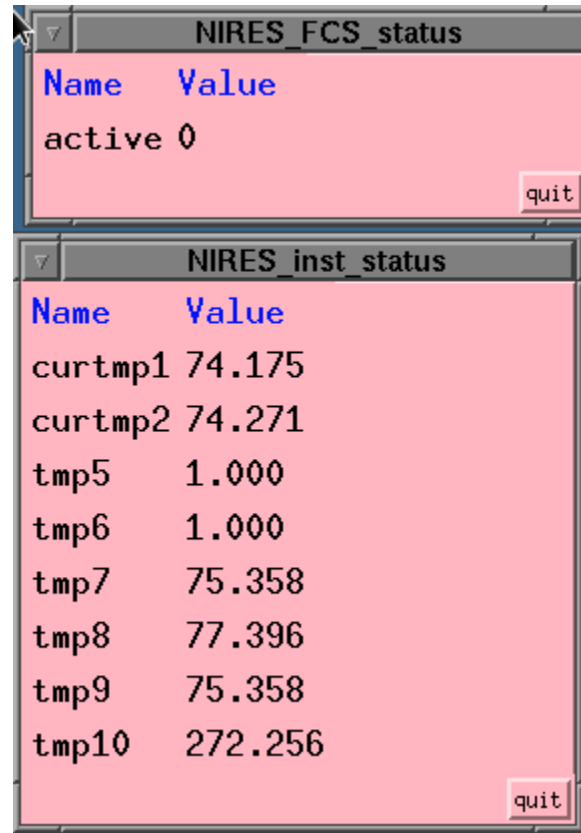
# Spectrometer

The image shows a screenshot of the SAOImage ds9 software interface. On the left, a terminal window titled "nires\_check-BringThisToFront" displays the following text:

```
Checking the slit viewing camera
=====
[1] 2437
setting itime = 2 (wait)
setting coadds = 1 (wait)
setting object = nires viewer check (wait)
Taking frame #70
wfgv: Time estimate = 35 seconds (includes 30 seconds for overhead.)
wfgv: Waiting for exposure to end.
.....OK
Took file /s/sdata1500/nires2/2018Feb04//v180205_0070.fits
/s/sdata1500/nires2/2018Feb04//v180205_0070.fits
Does the right image looks like the left? (y/n) [y]: y
Checking the spectrometer
=====
[1] 2548
setting itime = 2 (wait)
setting coadds = 1 (wait)
setting object = nires H2RG check (wait)
setting numfs = 1 (wait)
setting sampmode = 3 (wait)
Taking frame #198
File /s/sdata1500/nires2/2018Feb04//s180205_0198.fits
Monday, February 5, 2018 12:43:25 PM HST
wfgs: Time estimate = 35 seconds (includes 30 seconds for overhead.)
wfgs: Waiting for exposure to end.
.....OK
Monday, February 5, 2018 12:43:37 PM HST
/s/sdata1500/nires2/2018Feb04//s180205_0198.fits
Does the right image looks like the left? (y/n) [y]: █
```

The main window, titled "SAOImage ds9", shows a dark image with a cyan box highlighting a region. The interface includes a menu bar (File, Edit, View, Frame, Bin, Zoom, Scale, Color, Region, WCS, Analysis, Help) and a toolbar with buttons for file, edit, view, frame, bin, zoom, scale, color, region, wcs, help, about, open, save image, header, page setup, print, and exit. The main image area displays a dark field with a cyan box and a coordinate system (X, Y, E) overlaid. The bottom status bar shows pixel coordinates: -8, 4, 16, 28, 40, 52, 64, 76, 88.

# We plan to add:



The image shows two screenshots of a graphical user interface. The top screenshot is titled "NIREs\_FCS\_status" and displays a table with two columns: "Name" and "Value". The table contains one row: "active 0". A "quit" button is located in the bottom right corner of the window.

Name	Value
active	0

The bottom screenshot is titled "NIREs\_inst\_status" and displays a table with two columns: "Name" and "Value". The table contains ten rows of data. A "quit" button is located in the bottom right corner of the window.

Name	Value
curtmp1	74.175
curtmp2	74.271
tmp5	1.000
tmp6	1.000
tmp7	75.358
tmp8	77.396
tmp9	75.358
tmp10	272.256



# Telemetry

https://www.keck.hawaii.edu/realpublic/inst/nires/temp\_plots.html

print variable python scrip →

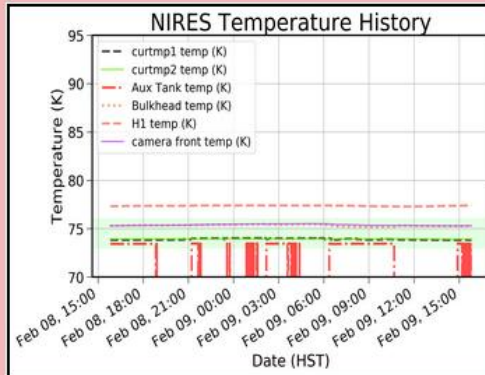


## NIRES: TELEMETRY

Welcome to the temperature monitoring portal of the NIRES web pages. These pages are meant to give technical information about NIRES cryogenics.

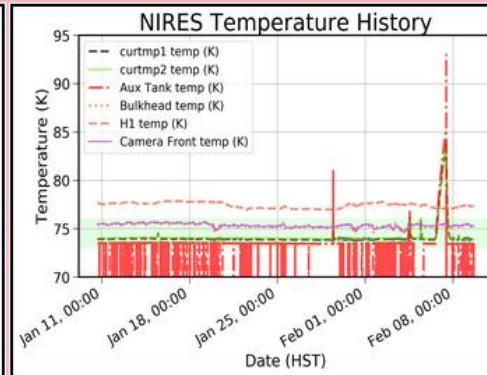
### Instrument Temperatures

#### Daily



Updated every 5 min

#### Monthly



Updated every 30 days

# From command line:

- Log as nireseng@niresserver1
- Temps (temperatures)

```
[1054] nireseng@niresserver1: temps
System          Current Temp  Acceptable Range  Status
-----
Detector temp 1      74.2    73.0 to 75.0    OK
Detector temp 2      74.3    73.0 to 75.0    OK
Auxiliary Tank       1.0     72.5 to 74.5    ERROR: temp too low!
H1 cold finger       77.4    76.0 to 78.0    OK
```

- Showv and goiv for slit viewing camera

```
[1056] nireseng@niresserver1: showv
      sampmode = 3
      itime = 2,0000000 seconds
      numreads = 2
      numfs = 1
      coadds = 1
      calcreads = 0
      writeall = 0
      readtime = 1,4800000 seconds
      rditime = 2,0000000
      cdsmode = 1
      framenum = 71
      outdir = /s/sdata1500/nires2/2018feb04/
      testdir = /tmp
```

```
[1057] nireseng@niresserver1: goiv
Taking frame #71
wfgv: Time estimate = 35 seconds (includes 30 seconds for overhead.
wfgv: Waiting for exposure to end.
.....OK
Took file /s/sdata1500/nires2/2018feb04//v180205_0071.fits
[1058] nireseng@niresserver1: cdata
[1059] nireseng@niresserver1: ds9 v180205_0071.fits
```

- Shows and gois for spectrometer
- Can use ds9 to display images.

# Science: Brown Dwarfs and QSOs

