

## **Appendix B - GNIRS Configuration Files**

This appendix contains listings of the various GNIRS configuration files referenced in the text. These should be updated whenever these files are altered permanently.

The following files are listed:

- **gnirsConfig**
- **gnirsFilters**
- **fw1.lut**
- **fw2.lut**
- **gnirsMechanisms**
- **mechanisms.pv**

## gnirsConfig

```
#####
# GNIRS Configuration file
#
# Read with readConfig("gnirsConfig")
#
# '#' marks the beginning of a comment; everything in the remainder of the
# line is ignored.
# Blank lines are ignored.
#
# '[' Marks the beginning of a section, and the end of the previous one.
#
# Commas are optional when there are multiple values per line; for
# strings, the enclosing '"' are required.

# True is non-zero, false is zero.
# For home switch type, use 0 for normal home switch, 1 for (positive) limit
# The Limit offsets are the distances from the soft limit to the hard limit.

# Bit settings --- The initial value is not used for input ports, but is
# needed in order that the software doesn't have to distinguish between
# input and output in the scanf statement that reads these lines.
# "reset" is set high (disabled) while "enabled" is set low
# which is also the disabled setting.

#####
[Motor 0]
name = "Cover"
type = Binary
controller = 0
axis = 3
homeLevel = "L"
fullTravel = 140000
backlash = 200
parkposition = 0

# Next 4 items have two parameters: acceleration, then velocity
seek = 2400, 4000
backoff = 200, 800
probe = 20 40
probeH = 1, 5

# True is non-zero, false is zero.
# For home switch type, use 0 for normal home switch, 1 for (positive) limit
# switch, position, aux offset, port, bit, altInUse?, type
home = 0, -42, 7, 2, 0 1
posLimit = 0, 1240
negLimit = -139800, -1730

# port bit initial value
enable = 7, 0, 0
reset = 7, 1, 1

isenabled = 2, 4, 0
```

```

fault =      2,      5,      0

#####
[Motor 1]
name = "Filter Whl 1" # limited to 12 XXX characters
controller = 1
axis = 0
type = Rotary
homeLevel = "L"
fullTravel = 41600          # full distance between switches
backlash = 50
initString = "SL"
parkposition = 0

# Next 4 items have two parameters: acceleration, then velocity
seek = 2000, 5000
backoff = 400 800
probe = 40,80
probeH = 1, 5                # careful probe of home switch position

# True is non-zero, false is zero.
# For home switch type, use 0 for normal home switch, 1 for (positive) limit
# switch position  aux offset  port  bit  altInUse?  type
home =           0,          6,          4,      5,          0 0

#
#      port  bit  value
enable =      4,      3,      0
reset =      4,      4,      1

isenabled = 0,      4,      0
fault =      0,      5,      0

#####
[Motor 2]
name = "Filter Whl 2"          # limited to 12 XXX characters
controller = 2
axis = 0
type = Rotary
homeLevel = "H"
fullTravel = 41600          # full revolution for rotary device
backlash = 50
initString = "SL"
parkposition = 0

# Next 4 items have two parameters: acceleration, then velocity
seek = 2000, 5000
backoff = 400 800
probe = 40,80
probeH = 1, 5                # careful probe of home switch position

# switch position  aux offset  port  bit  altInUse?  type
home =           0,          -2,          8,      4,          0      0

#
#      port  bit  value
enable =      4,      6,      0
reset =      4,      7,      1

```

```

#isenabled = 2,    6,    0
isenabled = 0,    6,    0
fault =    0,    7,    0

#####
[Motor 3]
name = "Slit slide"
controller = 0
axis = 0
type = Linear
homeLevel = "H"
fullTravel = 2300000
backlash = 1000
initString = "SL"
parkposition = 0

# Next 4 items have two parameters: acceleration, then velocity
seek = 3000, 7000
backoff = 400 800
probe = 40, 80
probeH = 1, 5                                # careful probe of home switch position

# switch position  aux offset   port   bit   altInUse?  type
home =           0,          881,     4,    2,         0    0
posLimit = 1133000,          17800 #WARM 2-5
#posLimit =    0,          1240
negLimit = -1120000,        -23000 #WARM 2-5
#negLimit = -139790,        -1730

# Bit settings --- The initial value is not used for input ports, but is
# needed in order that the software doesn't have to distinguish between
# input and output in the scanf statement that reads these lines.
# "reset" is set high (disabled) while "enabled" is set low
# which is also the disabled setting. "selHome" is cleared, to use the
# 'default' home position switch. 'altInUse' above will override this if
# necessary.

#           port  bit  initial value
enable =    4,    0,      0
reset =    4,    1,      1

isenabled = 0,    2,      0
fault =    0,    3,      0

#####
[Motor 4]
name = "decker"
controller = 1
axis = 1
type = Linear
homeLevel = "H"
fullTravel = 95000
backlash = 250

```

```

parkposition = 0

# Next 4 items have two parameters: acceleration, then velocity
seek = 3000, 6000
backoff = 200 800
probe = 40, 40
probeH = 1, 5          # careful probe of home switch position
initString = "SL"

# switch position  aux offset  port  bit  altInUse?  type
home =           0,      19,    6,    2,        0        0
#posLimit = 73945,      2000

posLimit =      74209,    3000  #WARM
#negLimit = -18280,    -1500
negLimit = -22942,    -1700    #WARM

#          port  bit  value
enable =    6,    0,    0
reset =     6,    1,    1

isenabled = 1,    6,    0
fault =     1,    7,    0

#####
[Motor 5]
name = "acq"
type = Binary
controller = 0
axis = 2
homeLevel = "L"
fullTravel = 200000
#fullTravel = 140000
backlash = 1000
parkposition = 0

# Next 4 items have two parameters: acceleration, then velocity
seek = 16000, 5000
backoff = 200, 800
probe = 1200 400
probeH = 1, 5
initString = "SL"

# switch position  aux offset  port  bit  altInUse?  type
home =           0,      130,    8,    5,        0        1
#negLimit = -2000,    -150
negLimit = -180000,    -1400
#183400
posLimit = 0,      3040

#          port  bit  value
enable =    5,    6,    0
reset =     5,    7,    1

isenabled = 1,    4,    0
fault =     1,    5,    0

```

```

#####
[Motor 6]
name = "xdisp"
controller = 0
axis = 1
type = Rotary
homeLevel = "H"
fullTravel = 540000          # full distance between switches
backlash = 500
initString = "SL"
parkposition = 0

# Next 4 items have two parameters: acceleration, then velocity
seek = 2000, 7000
backoff = 200 800
probe = 40,80
probeH = 1, 5                # careful probe of home switch position

# switch position  aux offset  port  bit  altInUse?  type
home =           0,      130,    5,    5,         0      0

#           port  bit  value
enable =      5,    3,    0
reset =      5,    4,    1

isenabled = 1,    2,    0
fault =      1,    3,    0

#####
[Motor 7]
name = "grating"
controller = 1
axis = 2
type = Rotary
homeLevel = "L"
fullTravel = 540000          # full distance between switches
backlash = 3000
parkposition = 0
initString = "SL"

# Next 4 items have two parameters: acceleration, then velocity
seek = 1000, 7000
backoff = 200 800
probe = 40,80
probeH = 1, 5                # careful probe of home switch position

# switch position  aux offset  port  bit  altInUse?  type
home =           0,      255,    5,    2,         0      0
#           port  bit  value
enable =      5,    0,    0
reset =      5,    1,    1

isenabled = 1,    0,    0
fault =      1,    1,    0

#####

```

```

[Motor 8]
name = "camera"
controller = 2
axis = 1
type = Rotary
homeLevel = "L"
fullTravel = 384000          # full distance between switches
backlash = 1000
initString = "SL"
parkposition = 0

# Next 4 items have two parameters: acceleration, then velocity
seek = 2000, 7000
backoff = 200 800
probe = 40,80
probeH = 1, 5                # careful probe of home switch position
# switch position  aux offset  port  bit  altInUse?  type
home =           0,      159,    6,   5,      0      0
#           port  bit  value
enable =         6,    3,    0
reset =          6,    4,    1

isenabled = 2,    0,    0
fault =         2,    1,    0

#####
[Motor 9]
name = "focus"
seek = 10000, 10000
backoff = 200 800
probe = 40,80
probeH = 1, 5
controller = 2
backlash = 2000
parkposition = 0
axis = 2
type = Rotary
fullTravel = 675000
initString = "SL"
# switch position  aux offset  port  bit  altInUse?  type
home =           0,      130,    8,   6,      0      0
#           port  bit  value
enable =         6,    6,    0
reset =          6,    7,    1

isenabled = 2,    2,    0
fault =         2,    3,    0

#####
# Temperature sensors
[temperature 0]
name = "Pre-Slit Offner"
offset = 7.55
[temperature 1]
name = "Bench Pre-Slit"
offset = 7.49

```

```

[temperature 2]
name = "FWD Active Shield"
offset = 7.49
[temperature 3]
name = "Slit Slide Motor"
offset = 7.49
[temperature 4]
name = "FW1 Motor"
offset = 7.49
[temperature 5]
name = "FW2 Motor"
offset = 7.49
[temperature 6]
name = "Decker Motor"
offset = 7.49
[temperature 7]
name = "Bench Collimator"
offset = 7.88.
[temperature 8]
name = "Bench Underside"
offset = 7.49
[temperature 9]
name = "AFT Active Shield"
offset = 6.54
[temperature 10]
name = "Bench TempControl Point"
offset = 7.38
[temperature 11]
name = "spare"
offset = 0.
[temperature 12]
name = "spare"
offset = 0.
[temperature 13]
name = "spare"
offset = 0.
[temperature 14]
name = "Cryo #1 1st Stage"
offset = 7.49
[temperature 15]
name = "Ground (A), Primary Bd"
offset = 0.
[temperature 16]
name = "Cryo #2 1st Stage"
offset = 7.49
[temperature 17]
name = "Cryo #1,2 2nd Stage"
offset = 7.49
[temperature 18]
name = "Thermal Bus Bar Stbd"
offset = 7.49
[temperature 19]
name = "Cryo #3 1st Stage"
offset = 7.49
[temperature 20]
name = "Cryo#4 1st Stage"
offset = 7.49

```



```

[temperature 21]
name = "Thermal Bus Bar Port"
offset = 7.49
[temperature 22]
name = "Prism Motor"
offset = 7.49
[temperature 23]
name = "Grating Motor"
offset = 7.49
[temperature 24]
name = "Camera Motor"
offset = 7.49
[temperature 25]
name = "Acq Mirror Motor"
offset = 7.49
[temperature 26]
name = "Focus Motor"
offset = 7.49
[temperature 27]
name = "spare"
offset = 0
[temperature 28]
name = "Diode on Primary Board"
offset = 0
[temperature 29]
name = "100K on Primary Board"
offset = 0
[temperature 30]
name = "1 Volt on Primary Board"
offset = 0.
[temperature 31]
name = "Ground (B), Primary Bd"
offset = 0.
[temperature 32]
name = "spare"
offset = 0.
[temperature 33]
name = "Mid Active Shield"
offset = 5.55
[temperature 34]
name = "Slit Slide Motor Mnt(D)"
offset = 5.55
[temperature 35]
name = "spare"
offset = 0.
[temperature 36]
name = "spare"
offset = 0.
[temperature 37]
name = "FW1 Housing"
offset = 5.55
[temperature 38]
name = "FW2 Housing"
offset = 5.55
[temperature 39]
name = "Decker Motor Mount(D)"
offset = 6.58

```

```

[temperature 40]
name = "Prism Motor Mount(D)"
offset = 5.55
[temperature 41]
name = "Grating Motor Mount(D)"
offset = 5.55
[temperature 42]
name = "Bench WFS Gimbals"
offset = 5.04
[temperature 43]
name = "Bench WFS Mount"
offset = 5.37
[temperature 44]
name = "Molecular Sieve"
offset = 5.04
[temperature 45]
name = "spare"
offset = 0.
[temperature 46]
name = "Dewar Shell"
offset = 0.53
[temperature 47]
name = "Ground (A), Diag Board"
offset = 0.
[temperature 48]
name = "Passive Shield"
offset = 1.15
[temperature 49]
name = "G10 Truss #1"
offset = 5.55
[temperature 50]
name = "G10 Truss #2"
offset = 5.55
[temperature 51]
name = "G10 Truss #3"
offset = 2.38
[temperature 52]
name = "spare"
offset = 0.
[temperature 53]
name = "spare"
offset = 0.
[temperature 54]
name = "spare"
offset = 0.
[temperature 55]
name = "Camera Motor Mount(D)"
offset = 5.55
[temperature 56]
name = "Camera Turret"
offset = 5.55
[temperature 57]
name = "Focus Motor Mount(D)"
offset = 5.55
[temperature 58]
name = "spare"
offset = 0.

```

```

[temperature 59]
name = "spare"
offset = 0.
[temperature 60]
name = "Diode on Diag Board"
offset = 0.
[temperature 61]
name = "100K on Diag Board"
offset = 0.
[temperature 62]
name = "1 Volt on Diag Board"
offset = 0.
[temperature 63]
name = "Ground (B), Diag Board"
offset = 0.

# Grating specifics for each of gratings 0 - 3
[grating 0]
# Grating constant (d * cos(K) ), and zero point (steps from home )
# Constant is zero for mirror.
constant = 0
zero = 873
# For preferred order setting, the boundaries of each order in wavelength:
# First entry is wavelength equal to which, or greater than, the wavelength
# is rejected. Last entry is wavelength less than which is rejected.
# Other entries define the boundaries of orders 1-8. A given order
# accepted if wavelength passes tests preceeding and falls between entries
# such that left_entry > requested <= right_entry
bounds = 5.71, 4.7, 3.8, 3.1, 2.5, 1.9, 1.5, 1.05, 0.8

[grating 1]
# Grating constant (d * cos(K) ), and zero point (steps from home )
# Constant is zero for mirror.
constant = 44.1
zero = 874
# For preferred order setting, the boundaries of each order in wavelength:
# First entry is wavelength equal to which, or greater than, the wavelength
# is rejected. Last entry is wavelength less than which is rejected.
# Other entries define the boundaries of orders 1-8. A given order
# accepted if wavelength passes tests preceeding and falls between entries
# such that left_entry > requested <= right_entry
bounds = 5.71, 4.7, 3.8, 3.1, 2.5, 1.9, 1.5, 1.05, 0.8

[grating 2]
# Grating constant (d * cos(K) ), and zero point (steps from home )
# Constant is zero for mirror.
constant = 44.2
zero = 875
# For preferred order setting, the boundaries of each order in wavelength:
# First entry is wavelength equal to which, or greater than, the wavelength
# is rejected. Last entry is wavelength less than which is rejected.
# Other entries define the boundaries of orders 1-8. A given order
# accepted if wavelength passes tests preceeding and falls between entries
# such that left_entry > requested <= right_entry
bounds = 5.71, 4.7, 3.8, 3.1, 2.5, 1.9, 1.5, 1.05, 0.8

[grating 3]

```

```

# Grating constant (d * cos(K) ), and zero point (steps from home )
# Constant is zero for mirror.
constant = 44.3
zero = 876
# For preferred order setting, the boundaries of each order in wavelength:
# First entry is wavelength equal to which, or greater than, the wavelength
# is rejected. Last entry is wavelength less than which is rejected.
# Other entries define the boundaries of orders 1-8. A given order
# accepted if wavelength passes tests preceeding and falls between entries
# such that      left_entry > requested <= right_entry
bounds = 5.71,  4.7,  3.8,  3.1,  2.5,  1.9,  1.5,  1.05,  0.8

[cryo ]
# select is computer/manual switch
# manual is the readback from the manual switch
# computer is the computer control of the cryohead on/off state
# name      port    bit    level
select =    0,     0,     0
manual =    0,     1,     0
computer =  8,     0,     0

```

## gnirsfilters

```
#####
# GNIRS Filter Configuration file
#
# Read with readConfig("gnirsFilters")
#
#
# '#' marks the beginning of a comment; everything in the remainder of the
# line is ignored.
# Blank lines are ignored.
#
# '[' Marks the beginning of a section, and the end of the previous one.
#
# Commas are optional when there are multiple values per line; for
# strings (ie, names), the enclosing '"' are required.
#
# Define filter information only in this file (That's to keep it all in
# one place, and to avoid possibly corrupting the other config files.)
#####

[mechanism filter wheel 1]
#-----name - position - Focus shift
position = "a1"      0,      0
position = "b1"     4000,      0
position = "c1"     8300,      0
position = "d1"    12300,      0
position = "e1"    16550,      0
position = "f1"    20730,      0
position = "g1"    24880,      0
position = "h1"    29050,      0
position = "i1"    33210,      0
position = "j1"    37380,      0

[mechanism filter wheel 2]
position = "a2"      0,      0
position = "b2"     4250,      0
position = "c2"     8400,      0
position = "d2"    12550,      0
position = "e2"    16700,      0
position = "f2"    20900,      0
position = "g2"    25020,      0
position = "h2"    29180,      0
position = "i2"    33350,      0
position = "j2"    37500,      0
```

## fw1.lut

```
# $Id: filt1.lut,v 1.13 2000/08/07 21:28:36 yamada Exp $

#
# Filters loaded on GNIRS filter wheel 1.
#
# List the most common name for a position first, followed by alternate
# Filter Wheel 2
# Note that a1=1-0, b1=1-1, ... j1=1-9

#number      name           pos      lowtol      hightol
1            Open           a1        0          0
2            Pupil_Viewer   b1        0          0
3            XD_blocker     c1        0          0
4            L_(order_2)    d1        0          0
5            Vacant4        e1        0          0
6            Vacant5        f1        0          0
7            Vacant6        g1        0          0
8            Dark           h1        0          0
9            Left_mask      i1        0          0
10           Right_mask     j1        0          0
#10          L_sort         k1        0          0
#11          M_sort         l1        0          0
#12          blanking       m1        0          0


#datum  1  home  0  0
#home    1  home  0  0


#park    1  park  0  0
```

## fw2.lut

```
# $Id: filt1.lut,v 1.13 2000/08/07 21:28:36 yamada Exp $

#
# Filters loaded on GNIRS filter wheel 1.
#
# List the most common name for a position first, followed by alternate
# Filter Wheel 1
# Note that a2 = 2-0, b2=2-9 ... j2=2-1

#number      name                pos          lowtol          hightol

11           Open                 a2           0              0
12           Vacant9              b2           0              0
13           Vacant8              c2           0              0
14           XD_Blocker           d2           0              0
15           x_(order_6)          e2           0              0
16           J_(order_5)          f2           0              0
17           H_(order_4)          g2           0              0
18           K_(order_3)          h2           0              0
19           L_(order_2)          i2           0              0
20           M_(order_1)          j2           0              0
#0   datum   1   home   0   0
#0   home    1   home   0   0
#0   park    1   park   0   0
```

## gnirsMechanisms

```
#####
# GNIRS Mechanism Configuration file
#
# Read with readConfig("gnirsMechanisms")
#
#
# '#' marks the beginning of a comment; everything in the remainder of the
# line is ignored.
# Blank lines are ignored.
#
# '[' Marks the beginning of a section, and the end of the previous one.
#
# Commas are optional when there are multiple values per line; for
# strings, the enclosing '"' are required.
#
# For the environmental cover and the acquisition mirror, it is REQUIRED that
# the closed/out positions be defined at zero, which is the home position;
# the other limiting position must be -99999 or more negative.
#
# All mechanisms EXCEPT filters are defined here.
#####
[mechanism cover]
name = "Cover"
motor = 0
#####
      name          position      focus shift
#position = "a"          15100,          0
#position = "b"         -14500,          0
position = "Closed"           0,          0
position = "Open"         -99999          0

####
# For definitions of filter positions, see the file "gnirsFilters"
####

[mechanism filter wheel 1]
name = "Filter Wheel 1"
motor = 1

[mechanism filter wheel 2]
name = "Ferris Wheel"
motor = 2

####
[mechanism slit]
name = "Slit"
motor = 3
position = "Low_res_IFU"      870000          1
position = "6mm"             345000          0
position = "185u"            320000          10
position = "94u"             295000          10
position = "61u"             270000          10
position = "30u"             245000          10
position = "acquisition"      167000          10
position = "small_Pinholes"   120000          10
```



```

position = "large_Pinholes"      95000      10
position = "horizontal"          69500      10
position = "Pupil_Viewer"        -10500      2
position = "High_res_IFU"         -710000     1

```

####

[mechanism decker]

motor = 4

name = "Decker"

```

position = "ifu1"                73400      0
position = "LC_XD"               62730      0
position = "SC_XD"               52100      0
position = "Wollaston"           41700      0
position = "LC_Long"             31000      0
position = "SC_Long"             20250      0
position = "acquisition"         5000      0
position = "ifu2"                -5500      0
position = "Pupil_Viewer"        -16300     0

```

####

[mechanism acquisition]

name = "Acquisition Mirror"

motor = 5

```

position = "Out"                 0,          3
position = "In"                 -178000,     -5

```

####

[mechanism cross-dispersion]

name = "Cross Dispersion Prism"

motor = 6

```

position = "short_xd"            102500      10
position = "mirror"              246700      20
position = "long_xd"             373400      30
position = "wollaston"           490700      40

```

####

[mechanism grating]

name = "Grating Turret"

motor = 7

# There are 4 main, never to be changed positions, which correspond to  
# the gratings themselves. Tilts of a particular grating to center a  
# wavelength are specified by the wavelength and not by a name.

```

position = "111/mm"              0          270800
position = "10/mm"               1          443800
position = "32/mm"               2          81500

```

####

[mechanism camera]

name = "Camera Turret"

motor = 8

```

position = "Short_Red"           -96700      0

```

```

position = "Long_Red"      -1200      222
position = "Short_Blue"    95000      333
position = "Long_Blue"     190700     444
position = "open"          48000      444

```

```

[mechanism focus]
name = "Detector Focus Control"
motor = 9
zeropoint = 33

```

```

position = "auto"          0          0
position = "manual"        0          0

```

## mechanisms.pv

```
group
{
    # acq names
    string $(top)acqSelect.ZRST = "In";
    string $(top)acqSelect.ONST = "Out";
}

group
{
    # camera names
    string $(top)cameraSelect.ZRST = "Short_Red";
    string $(top)cameraSelect.ONST = "Long_Red";
    string $(top)cameraSelect.TWST = "Short_Blue";
    string $(top)cameraSelect.THST = "Long_Blue";
    string $(top)cameraSelect.FRST = "open";
}

group
{
    # cover names
    string $(top)coverSelect.ZRST = "Closed";
    string $(top)coverSelect.ONST = "Open";
}

group
{
    # decker names
    string $(top)deckerSelect.ZRST = "ifu1";
    string $(top)deckerSelect.ONST = "LC_XD";
    string $(top)deckerSelect.TWST = "SC_XD";
    string $(top)deckerSelect.THST = "Wollaston";
    string $(top)deckerSelect.FRST = "LC_Long";
    string $(top)deckerSelect.FVST = "SC_Long";
    string $(top)deckerSelect.SXST = "acquisition";
    string $(top)deckerSelect.SVST = "ifu2";
    string $(top)deckerSelect.EIST = "Pupil_Viewer";
}

group
{
    # focus names
    string $(top)focusSelect.ZRST = "auto";
    string $(top)focusSelect.ONST = "manual";
}

#group
#{
## fw1 names
#
#    string $(top)fw1Select.ZRST = "J";
#    string $(top)fw1Select.ONST = "H";
#    string $(top)fw1Select.TWST = "K";
```

```

#     string $(top)fw1Select.THST = "Open";
#     string $(top)fw1Select.FRST = "K_prime";
#     string $(top)fw1Select.FVST = "L_prime";
#     string $(top)fw1Select.SXST = "M_prime";
#     string $(top)fw1Select.SVST = "J_sort";
#     string $(top)fw1Select.EIST = "K_sort";
#     string $(top)fw1Select.NIST = "L_sort";
#
#}
#group
#{
## fw2 names
#
#     string $(top)fw2Select.ZRST = "Open";
#     string $(top)fw2Select.ONST = "H_cont";
#     string $(top)fw2Select.TWST = "Fe_II";
#     string $(top)fw2Select.THST = "H2_1-0";
#     string $(top)fw2Select.FRST = "K_cont";
#     string $(top)fw2Select.FVST = "Br_gamma";
#     string $(top)fw2Select.SXST = "blanking";
#     string $(top)fw2Select.SVST = "fw07";
#     string $(top)fw2Select.EIST = "fw08";
#
#}
group
{
# grating names
    string $(top)gratingPos.ZRST = "TILT";
    string $(top)gratingPos.ONST = "WAVELENGTH/ORDER";
    string $(top)gratingPos.TWST = "WAVELENGTH";
    string $(top)gratingSelect.ZRST = "111/mm";
    string $(top)gratingSelect.ONST = "10/mm";
    string $(top)gratingSelect.TWST = "32/mm";
#     string $(top)gratingSelect.THST = "";
#     string $(top)gratingSelect.FRST = "";
}

group
{
    #slit names
    string $(top)slitSelect.ZRST = "Low_res_IFU";
    string $(top)slitSelect.ONST = "6mm";
    string $(top)slitSelect.TWST = "185u";
    string $(top)slitSelect.THST = "94u";
    string $(top)slitSelect.FRST = "61u";
    string $(top)slitSelect.FVST = "30u";
    string $(top)slitSelect.SXST = "acquisition";
    string $(top)slitSelect.SVST = "small_Pinholes";
    string $(top)slitSelect.EIST = "large_Pinholes";
    string $(top)slitSelect.NIST = "horizontal";
    string $(top)slitSelect.TEST = "Pupil_Viewer";
    string $(top)slitSelect.ELST = "High_res_IFU";

}

group
{

```

```

# xdisp names
string $(top)xdispSelect.ZRST = "short_xd";
string $(top)xdispSelect.ONST = "mirror";
string $(top)xdispSelect.TWST = "long_xd";
string $(top)xdispSelect.THST = "wollaston";
# string $(top)xdispSelect.FRST = "";
# string $(top)xdispSelect.FVST = "";
}

string $(top)mechApply.DIR = "CLEAR";

string $(top)dirLut = "/home/gemini/gnirs/control/data";

# mechanism names
string $(top)getNames.DIR = "MARK";
string $(top)getNames.DIR = "START";

```