UNIVERSITÉ DE GENÈVE

LEIBNIZ-INSTITUT FÜR SONNENPHYSIK (KIS)

GREGOR:
Starting a GRIS scan at a different position

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Signatures & Approval

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Change Log				
Vers.	Date	Author	Description of Changes	Sect./Para.
1	11.5.22	L. Kleint	copied and expanded moveslitscanner.docx	

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1 Scope

Sometimes the observers would like the GRIS slit somewhere else, but the AO may not lock there. This document explains how to move the GRIS slit to another position using the Conductor.

blue = tasks of the assistant. green = tasks of the observer

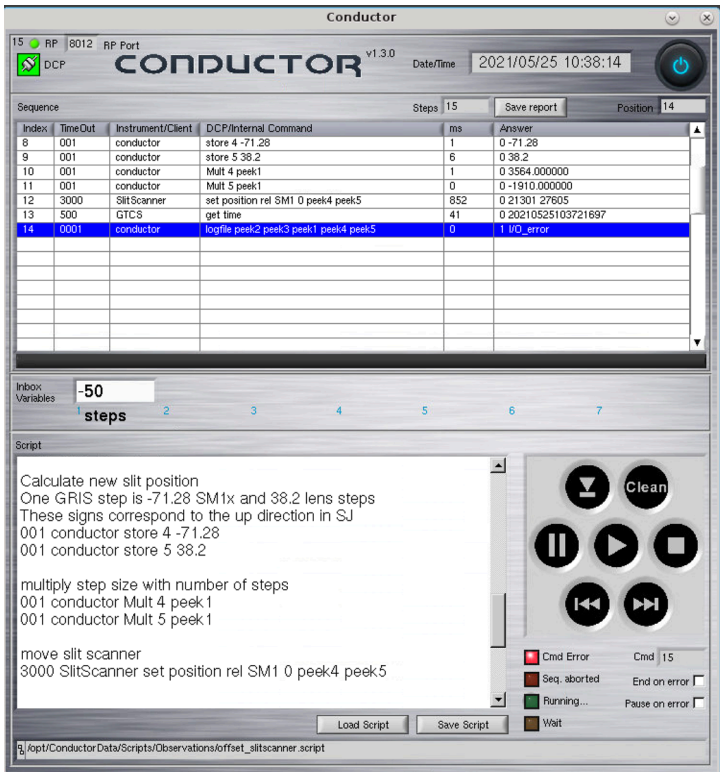
2 Warnings and Preparation

The original GRIS slit position is not saved (accessible to you - I have a backup log). This means

- write down the SM1x and lens focus values of the slit scanner before you start. They are displayed in the slitscanner Labview GUI.
- always go back to the original position after you finish with the scan.
- do not move the slit by more than ~200 (~30") steps this way. Ideally stay below 100 steps.

3 Procedure

- lock the AO on a good spot near the desired observing region
- In Conductor, open and load the script offset_slitscanner.script
- enter the number of steps that you want to offset GRIS. One step is 0.135". Positive numbers move the slit "up" in SJ images.
- run the script
- it's possible that "Cmd Error" is red in the end. According to Olivier, this can happen and does not impact any of the procedure.
- start the GRIS scan. It will start from this position. Edge/Center in the GRIS menu still work as usual.
- after the GRIS scan is finished, move the slit scanner back. You can do this either by putting the inverse number of steps (i.e. if you moved by 50 in the beginning, now move by -50), or this can also be done by putting the original values that you noted down into the Labview Slitscanner GUI.



4 Source Code of slitscanner.script

```
#Offset slit scanner, Lucia Kleint, Test May 2021
New named of:
SetSlitScanner noWarning WithLog and tracking
---------------------------------
Declaration:
:inbox1:steps
:logfile:append/SlitOffset
---------------------------------
Please, use the step box to enter
the offset in number of GRIS steps
Make sure to go back to the original position
manually in the end by entering -1 * the steps!
>STORE THE SCRIPT AND START THE SEQUENCE
---------------------------------

Store the step offset in memory M1:
001 conductor store 1 inbox1

Set sequence error behavior:
001 conductor PauseOnError Off

Clearing result memories
001 conductor store 4 0
001 conductor store 5 0

The original zero position of the slit and lens:
1000 SlitScanner get position abs SM1 1
001 conductor store 2

1000 SlitScanner get position abs SM1 3
001 conductor store 3

Calculate new slit position
One GRIS step is -71.28 SM1x and 38.2 lens steps
These signs correspond to the up direction in SJ
001 conductor store 4 -71.28
001 conductor store 5 38.2

multiply step size with number of steps
001 conductor Mult 4 peek1
001 conductor Mult 5 peek1
```

```
move slit scanner
5000 SlitScanner set position rel SM1 0 peek4 peek5

500     GTCS get time

Write to log file Date/Time/origslitpos/offsetinsteps/offsetpos:
0001 conductor logfile peek2 peek3 peek1 peek4 peek5

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 Help and comments
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```