

SXRSS-II

Useful info on SXRSS station (previous version), including motor controller manuals: https://slacspace.slac.stanford.edu/sites/controls/Pages/controls_ops_maint_docs.aspx?RootFolder=%2Fsites%2Fcontrols%2FControls%20Operations%20and%20Maintenance%20Documents%2FSXRSS&FolderCTID=0x012000744B460676FF8B4E93C32481DA33D454&View={B1383413-F36B-4C80-A458-99D04B3253F7}

SLIT X

No physical limit switches on these slits.

02/02/2024: Position limits:

Slit fiducialization motion measurements in Jan/24/2024 can refer to slide: [Slit_fiducialization_motion.pptx \(sharepoint.com\)](#)

- 0.915mm (High limit)
- -1.292mm (Low limit)

10/10/2022: Position limits:

- 2.34mm (High limit)
- -0.3mm (Low limit)

9/9/2022: Position limits:

- 0.938 mm (High limit)
- -1.547 mm (Low limit)

For regular moves, use 0.2mm/sec speed

Ensure retry count is reduced to 1

When the motor is power cycled, the motor needs to be calibrated and homed by following the instructions:



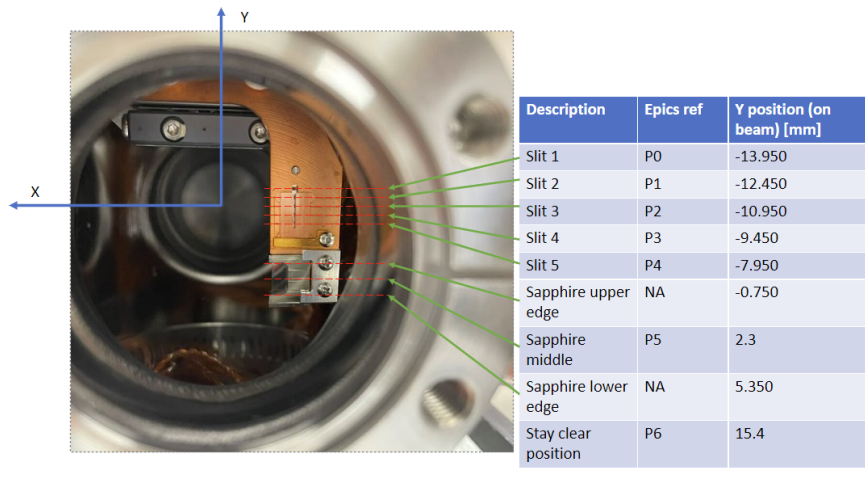
SLIT Y:

No physical limit switches on these slits.

02/02/2024: Position limits:

Slit fiducialization motion measurements in Jan/24/2024 can refer to slide: [Slit_fiducialization_motion.pptx \(sharepoint.com\)](#)

- 15.455mm (High limit)
- P6: Stay clear position: 15.4mm
- Sapphire lower edge: 5.350mm
- P5: Sapphire middle: 2.3mm
- Sapphire Upper edge: -0.750mm
- P4: Slit 5: -7.950mm
- P3: Slit 4: -9.450mm
- P2: Slit 3: -10.950mm
- P1: Slit 2: -12.450mm
- P0: Slit 1: -13.950mm



10/10/2022: Position limits:

- 15.09mm (High limit)
- 10.06mm(MPS is NOT IN for IN limit switch)
- 10.05mm (MPS is IN for IN limit switch)
- 2.5mm (MPS is NOT OUT for OUT Limit switch)

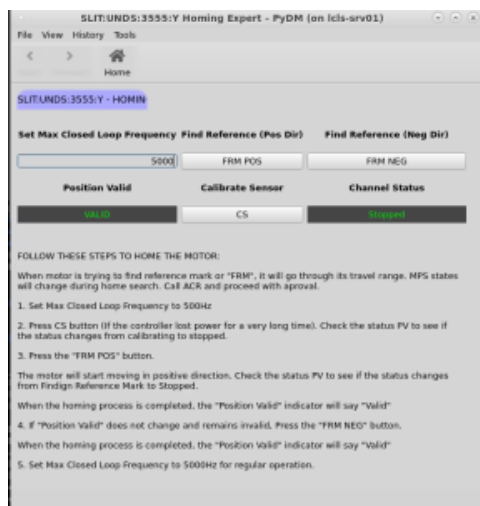
9/9/2022: Position limits:

- 15.478 mm (High limit)
- Low limit did not check
- HomeF: went into zero position positive direction

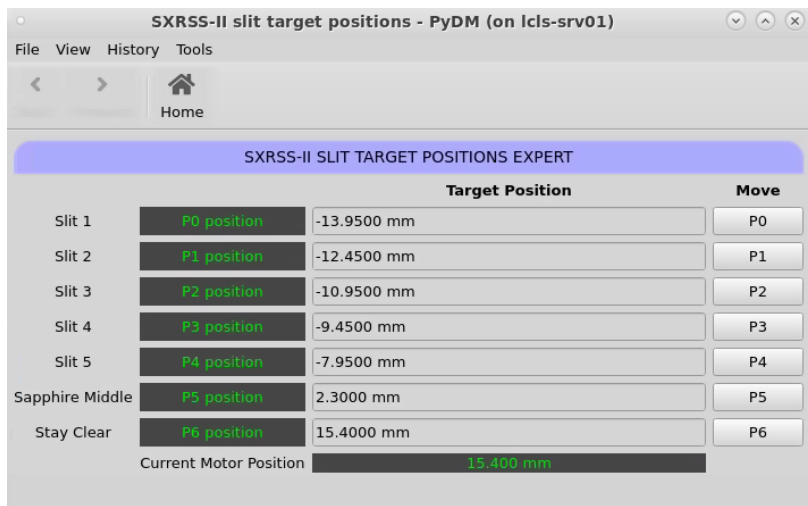
For regular moves, use 0.2mm/sec speed

Ensure retry count is reduced to 3

When the motor is power cycled, the motor needs to be calibrated and homed by following the instructions:



In addition, a slit target positions GUI is added for users convenience, they can just press P* buttons to move the motor to setting positions.



BOD1 X:

9/27/2022: Position limits: after rotation!

- 55.0332 mm (High limit) – aisle side limit;
- 32.9301 mm (Low limit) - wall side limit;

NEED to confirm what value is OUT of beam

9/9/2022: Position limits:

- 55.0591 mm (High limit) – wall side limit; out of beam
- 32.9278 mm (Low limit) - aisle side limit

BOD1 Y:

9/27/2022: Position limits: after rotation!

- 22.8696 mm (High limit)
- 20.4399 mm (Low limit)

9/9/2022: Position limits:

- 23.3240 mm (High limit) - top limit
- 20.9312 mm (Low limit) -bottom limit

M3Pitch and M3Yaw

Motors were not driven to the limit switch. Only to the position where alignment was able to give data. So when the device is IN(?)

M3P: Moved from 36.6 to 38mm

M3Y: Moved from 34.7 to 35.9mm

Disable Torque on M3Y while moving the motor M3P.

Disable Torque on M3P while moving M3Y.

