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| **JIRA** | **Hutch** | **TILE** | **Condition** | **Approx. Date of Failure** | **Serial Number** | **Symptom** | **RCA** |
| ECS-5728 | TMO | HRM | **Broken** | 7/4/2024 | SLC1760ds-89 | Unresponsive stage | Piezo damaged, root cause unknown, but it occurred at 4:30 am on July 4th and corresponded to a large spike in MCS2 module temperature (65°C!) |
| ECS-5468 | TMO | EJX | **Broken** | 5/26/2024 | SLC1740ds-85 | Unresponsive, hanging after sticky movements | Piezo damaged. Possible user error, stage could be run indefinitely into the EJX enclosure |
| ECS-5468 | TMO | EJX | **Limping** | N/A | SLLV42lc-469 | Does not home properly for half of the stage's travel. Indicative of sensor or encoder strip damage | Possibly: encoder strip, sensor |
| ECS-4242 | TMO | HRM | **Broken** | 11/27/2023 | STT25.4v-21 | Unresponsive tilt axis | Piezo damage, possibly from Nov. power outage |
| ECS-4242 | TMO | HRM | **Broken** | 2/5/2023 | SLLV42sc-463 | Unresponsive linear stage | Piezo damage, likely from Feb 5th power outage |
| ECS-4242 | TMO | ATM | **Broken** | 11/27/2023 | STT25.4v-? | ATM\_MR0\_TIP1 unresponsive | Piezo damage, cause unknown |
| ECS-4242 | TMO | ATM | **Broken** | 11/27/2023 | STT25.4v-? | ATM\_MR1\_TILT1 unresponsive | Piezo damage, cause unknown |
| ECS-4476 | TMO | COM | **Resolved** | 1/30/2024 | SLC1780ds-? | Absolute positions changed unexpectedly | Calibration error caused by firmware update |
| ECS-4476 | TMO | COM | **Resolved** | 1/30/2024 | CLL42lc-? | Absolute positions changed unexpectedly | Calibration error caused by firmware update |
| ECS-4077 | cRIXS | ATM | **Limping** | 2/27/2024 | STT50.8iv-2? | Intermittent sensor failure on encoded tilt axis | Cause unclear, may be due to excessive weight of optic causing piezo slippage. Currently runs in open-loop mode |
| ECS-4496 | cRIXS | EJX | **Broken** | 2/5/2024 | STT25.4v-? | Unresponsive axes | Piezo damage, likely from Feb 5th power outage |
| ECS-4576 | cRIXS | COM | **Resolved** | 2/5/2024 | CLL42lc-47 | Stage would sporadically fail in closed-loop movement | Thought to be due to Feb. 5th power outage, turns out it was sensor-type incompatibility with an L-type sensor on a sensor-module with I-type sensors on it. Causes a diff. voltage float to sensors which can cause this symptom. Replaced ith SLLV42sc-655, which is an S type sensor, now placed on a different sensor module. |
| ECS-5213 | cRIXS | EJX | **Resolved** | 4/22/2024 | SLC2445ds-? | Stage would sporadically fail in closed-loop movements including "homing" | Wrong positioner type assigned — also had a sensor type conflict with neighboring stages on the sensor module. Rearranged cabling & assignments to keep all L-type and S-type stages with compatible types |
| ECS-5564 | cRIXS | EJX | **Broken** | 6/12/2024 | SLLV42lc-473 | Unresponsive movement | Piezo damage. Very unexpected, as the stage was powered off for approximately 1 month before this failure occurred, as EJX controls were disabled during OPA install. |