# Engineering Update

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DDPI Breaking and Subsequent Fix

- DDPI broke when we attempted to force it beyond it's mechanical limits
  - Fundamental limit to how far the stage can move
  - Required partial disassembly to fix
  - Luckily only a screw came loose – but something could have broken

- This revealed a previously unknown issue with the DDPI
  - There is no safety "endswitch"
  - Engineering flaw – not the fault of the operator

- Until I come up with a permanent solution, please be mindful of how you are moving the stage. This can happen on **any axis**
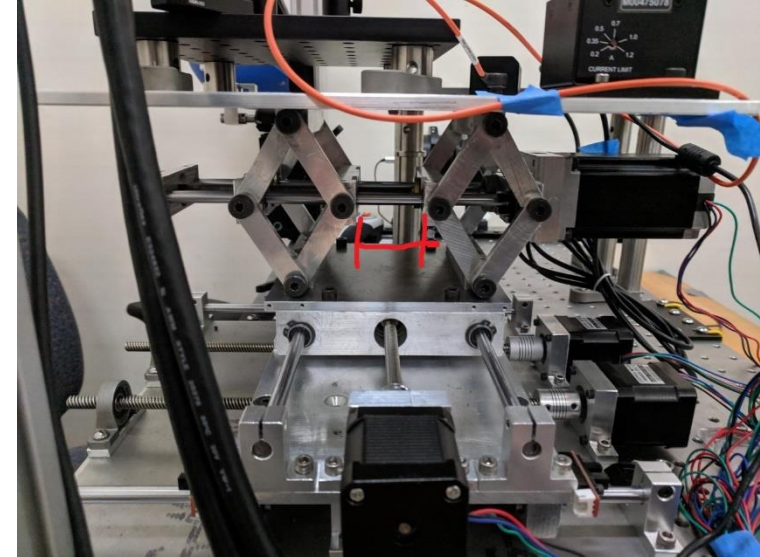
Last week

- Developed Designs for dependent motion for the new bitebar station
- Setup new coils, and amplifiers – Leaving at 1:00 to complete case for coils and case at the CVS shop
- Caught up on organization, cleaning, and documentation
- Fixed the server
- Fixed the DDPI – also learned a lot about it and its issues.

Quick Note:

- If you don't have access to the wiki, please contact Chris to reset your password.

Active Projects

High Priority

- New Bitebar Station
  - Design is Done except for the bitebar mount + headrest
  - Ready to start ordering components
- Coil Calibration
  - Collected preliminary data last week
  - Need to make a new 'hammer'
- Plastic Stage for replicable coil movements
  - Design on paper, currently no way to measure Z axis

Low Priority

- Documentation (this is just a perpetual item)
- DDPI safety endswitch
  - Should be able to use piezoelectric pressure pads. Circuit is fairly straightforward
- Binocular DDPI stage
  - Jon is almost done with the 2nd layer

Backburner

- Eyeris Driver
- Eyeris & Insight Gstreamer integration

Server

- I want to encourage people to start using Argus (the server)
  - More efficient and cheaper overall
  - It's also just more typical in science and industry
- How-to is here
- I made a flashdrive that contains everything you need to connect