Monday - April 17, 2017

Updates

- Colin has successfully created a VM with the PP and VARTOOLS running. He can distribute it to you if you want it.
- I have uploaded the test data (3 nights worth) to monsoon. You can find it under /scratch/ag765/manos/. Feel free to copy the data to wherever is most convenient for you to work with it.
  - I will try to download the entire dataset from Nick or Audrey ASAP.
- The PP is uploaded to Monsoon in /packages/photometrypipeline/. The syntax to run the pipeline is "python pp_run /data/*.fits". There is currently an error on the monsoon side of things that has yet to be resolved. They haven't emailed me back since Thursday.
- Michael says he is making last minute tweaks to his code which searches for known asteroids. He says I will have this today (Monday) for Chris.
  - Do not to distribute this code to anyone outside of our group. Michael wants to keep it to himself and has decided not to put it on his GitHub site.
- In order to characterize the light curves, we have been advised to use Lomb-Scargle periodograms to determine the rotation period. Colin has installed VARTOOLS to the VM and run through the 399.dat file to get a period.
- For determining the axis ratio, we need to determine the amplitude of the light curve and use that to estimate or constrain the axis ratio. One paper that includes some of that formalism is Masiero et al. 2009 Icarus 204, 145 (You can find it here: https://github.com/ast-520/NEA/blob/master/Masiero09.pdf).
- I have uploaded a few examples of light curve outputs from the photometry pipeline to the GitHub page for reference.
- I have requested a project area from HPC Support but have not heard back.
- We are looking into using MODS (Trujillo), HOTPANTS or MOPS for locating unknown asteroids in the field.