



A Pipeline for the Minor Planet Center

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Why?

- To encourage amateur astronomers to submit their findings to the MPC.
- Mike Hankey – TU alum
 - Creator of the Fireball app – for reporting meteors



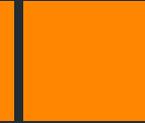
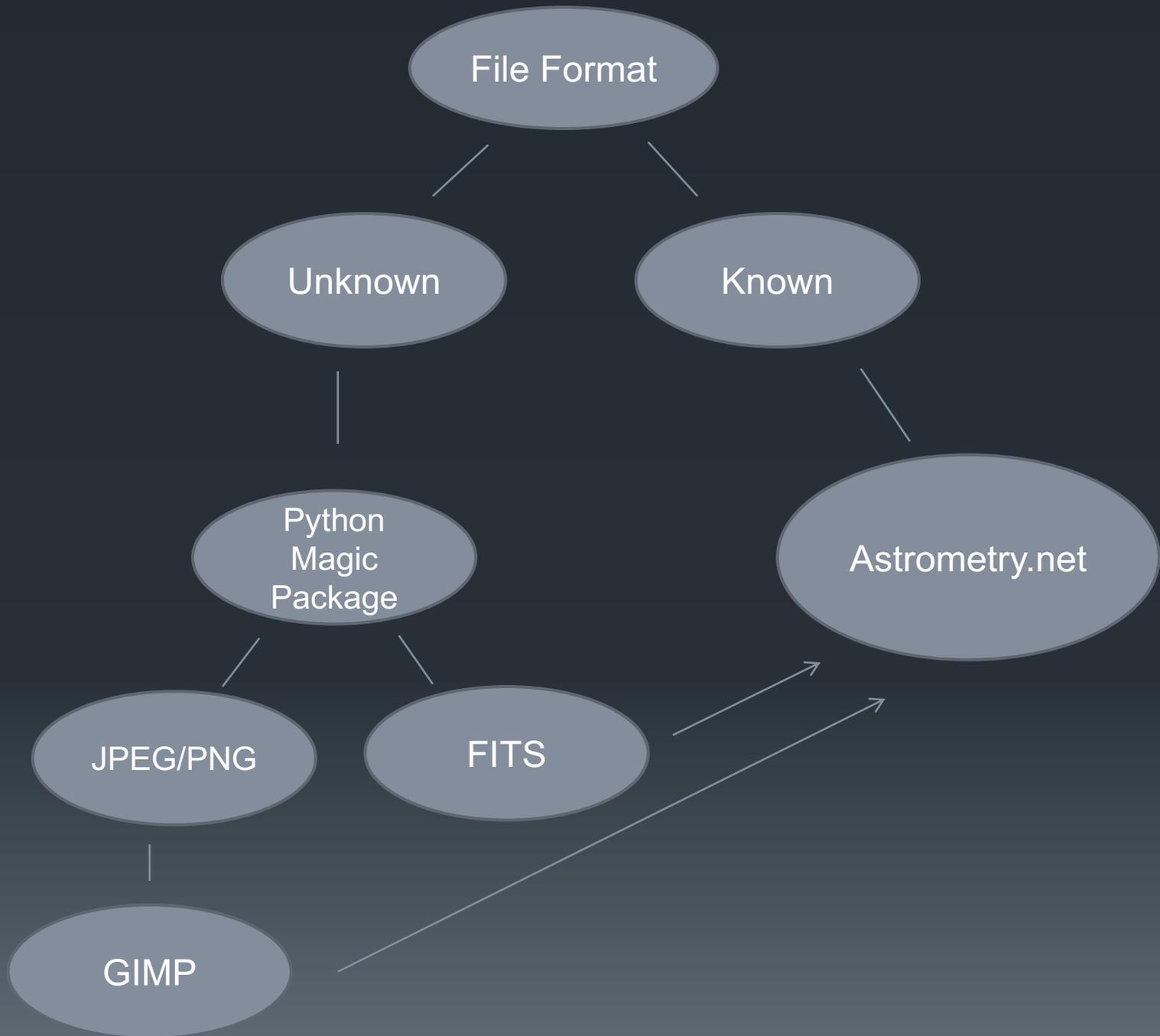
How?

- By creating a program that can analyze an image and extract the necessary information for submission to the MPC.



Using Open Source Resources

- We are not trying to reinvent the wheel, instead we are using what's already available to us.
- We used an Ubuntu OS to create a Python wrapper that will integrate existing tools
 - GIMP – converts JPEG/PNG to FITS
 - Astrometry.net – figures out where we are in the sky
 - Pipeline Photometry
 - Source Extractor – creates a source catalog
 - SCAMP – provides astrometric solutions, to GAIA standards





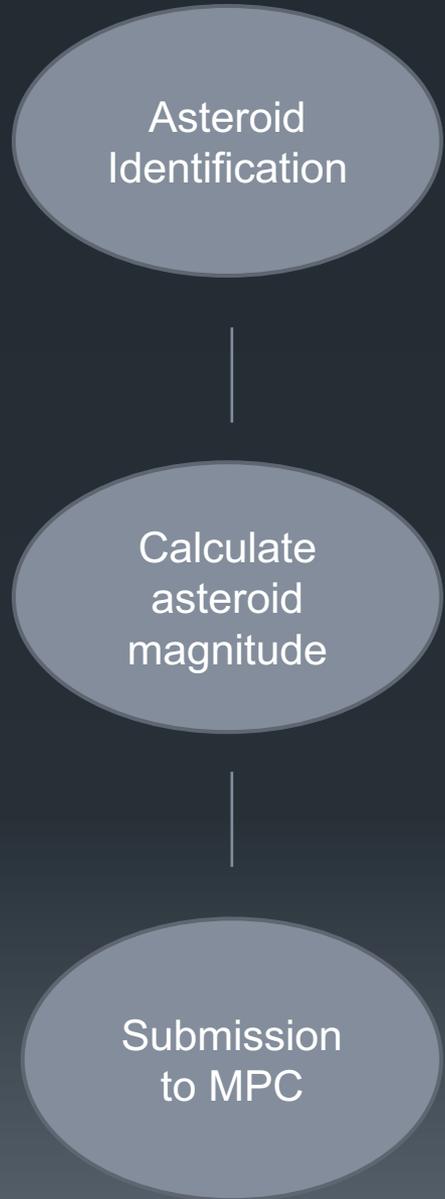
Astrometry.
net



Pipeline
Photometry-
Source
Extractor



Pipeline
Photometry-
SCAMP





Resources

- Mike Hankey - <https://www.amsmeteors.org/home.html>
- Ubuntu - <https://mongoose.ubuntu.com/>
- Python - <https://www.python.org/>
<https://github.com/ahupp/python-magic>
- GIMP - <https://www.gimp.org/>
- Astrometry.net - <http://astrometry.net/>
- Pipeline Photometry - <http://photometrypipeline.readthedocs.io/en/latest/install.html>
- Source Extractor and SCAMP - <https://www.eso.org/sci/software/scisoft/>