Michael’s 2017 Summer Goals:

1. **Finish proposal**
   1. Clearly delineate feldspar chapters……………………………………..…...…………………**05/26**
      1. What is the (primary) crustal composition as a function of depth?
         1. Peridotite (dunite + pyroxenite)? LMI?
      2. What are the VNIR feldspar anomalies on the Hellas rim?
         1. Gabbroic? Anorthositic? Basaltic (i.e., extrusive)? Ferroan Granite?
   2. Incorporate :: by………………………………………………………………………………………….**06/12**
      1. comments from Hap and committee meeting
      2. potential feldspar lab component (should it be in the proposal?) It’s easier to add than to subtract from what’s in a proposal…
   3. Proposal finished on……….………….……………….………….……………….………….………**06/16**
2. **Write first feldspar paper**
   1. Clear delineation of “new science”……………………………………………………………..**05/26**
      1. Clear hypothesis(es) (what we talked about at Hap meeting)
         1. This will drive **what facts need to be collected** and therefore **what methods to employ** (i.e., CRISM only? TIR? CTX/HiRISE/DEMs?)
   2. Introduction/background/motivation/hypothesis(es)…………………………………**06/05**
   3. Data collection and analyses finished, methods section written………………….**07/31**
   4. Conclusions discussion written……………………………………………………………………**08/16**
3. **Write NAI-related paper** (*we could split this up into photogeologic and spectral…)*
   1. Finish paper outline…………………………………………………………………………………….**05/19**
   2. Finish introduction/background/motivation……………………………………………….**06/05**
   3. Complete data analyses and writing methods section……………………………….**07/15?**
      1. DEM analyses
         1. In-depth characterization of each analog habitat, 3D models
         2. Correlation of inhabited areas on features of interest with:
            1. Topography
            2. Sun exposure
      2. Spectral analyses
         1. Orbital
            1. Broad assessment of context mineralogy?
            2. HYPERION?
         2. Field
            1. Minerals found immediately above/below/within inhabited areas
            2. How many bands and at what wavelengths are necessary to detect these minerals
            3. How much :: before gypsum is obscured?

mixture of mafic material

dust cover

* + - * 1. If the rest of the scene is bland, how much of a CRISM pixel needs to be filled by gypsum to see it?
    1. Image analyses
       1. Detailed morphologic characterization of analog habitats
          1. Compile set of diagnostic characteristics for object-based analysis (multivariate analysis)
          2. Measure certainty of characterization with decreasing resolution
  1. Finish paper….………….………….……………….………….……………….………….…………….**07/31**