* make poster
  + setup, run, and plot simulations
    - improve aurora.m input functions
      * include
        + knight: E0 -> precip part of j||
        + robinson 1987 / Galand and Richmond 2001: E0, Q -> SIGP, SIGH (for electrons and protons) see marghitu eqs (6-8)
        + kelley: lat cuts of SIGP + j||(bulk + precip) -> phi

use

* + - * allow for simply giving phi, not E
      * ensure j|| still integrates to zero
    - define runs
      * null:
        + Q: what happens to a super boring arc when given 3D?
        + A: Maxwells eqns are 3D, current finds path into 3rd dim. least resistance
      * mallin 2d v 3d
        + Q: how well does this picture hold up? are there eddies?
        + A: eddies likely a result of dimensional constraint
      * high Q low E0
        + Q: what's the altitude dependence of precip?
        + A: the higher the ionization dump, the more like mallincrodt, less J\_H
        + Q: do U-shape potentials form to allow for more J\_H i.e. less joule heating? Is this energy difference balanced by j|| \* E||?
      * sharc
        + Q: what happens to the current closure path when it cant no more
        + A: ???
      * high precip arc
        + Q: what happens to the current closure path when we have local gradients?
        + A: ???
* write proposal
  + read mike's examples
* write paper