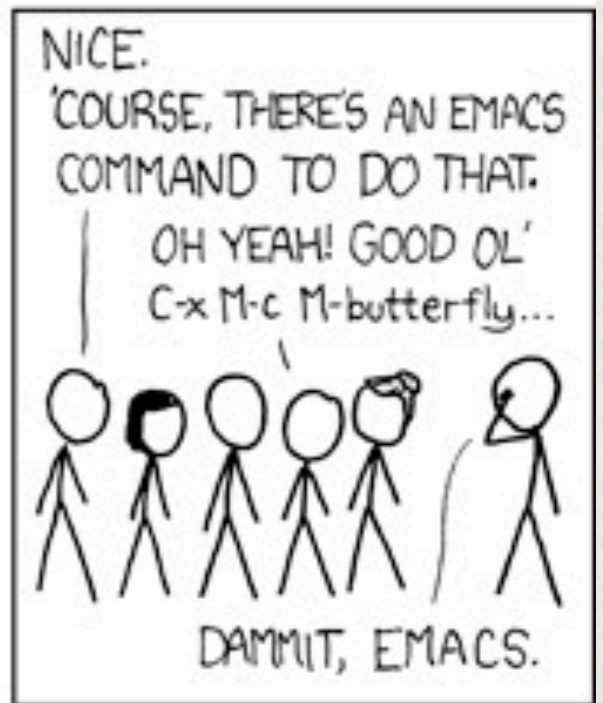
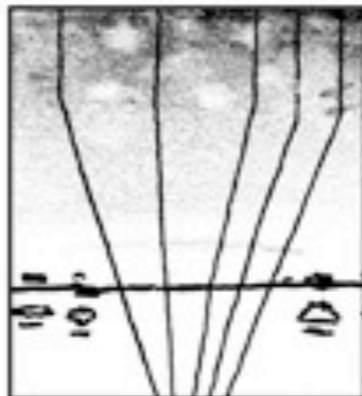


THE DISTURBANCE RIPPLES OUTWARD, CHANGING THE FLOW OF THE EDDY CURRENTS IN THE UPPER ATMOSPHERE.



THESE CAUSE MOMENTARY POCKETS OF HIGHER-PRESSURE AIR TO FORM,

WHICH ACT AS LENSES THAT DEFLECT INCOMING COSMIC RAYS, FOCUSING THEM TO STRIKE THE DRIVE PLATTER AND FLIP THE DESIRED BIT.



Getting Collaborators Productive

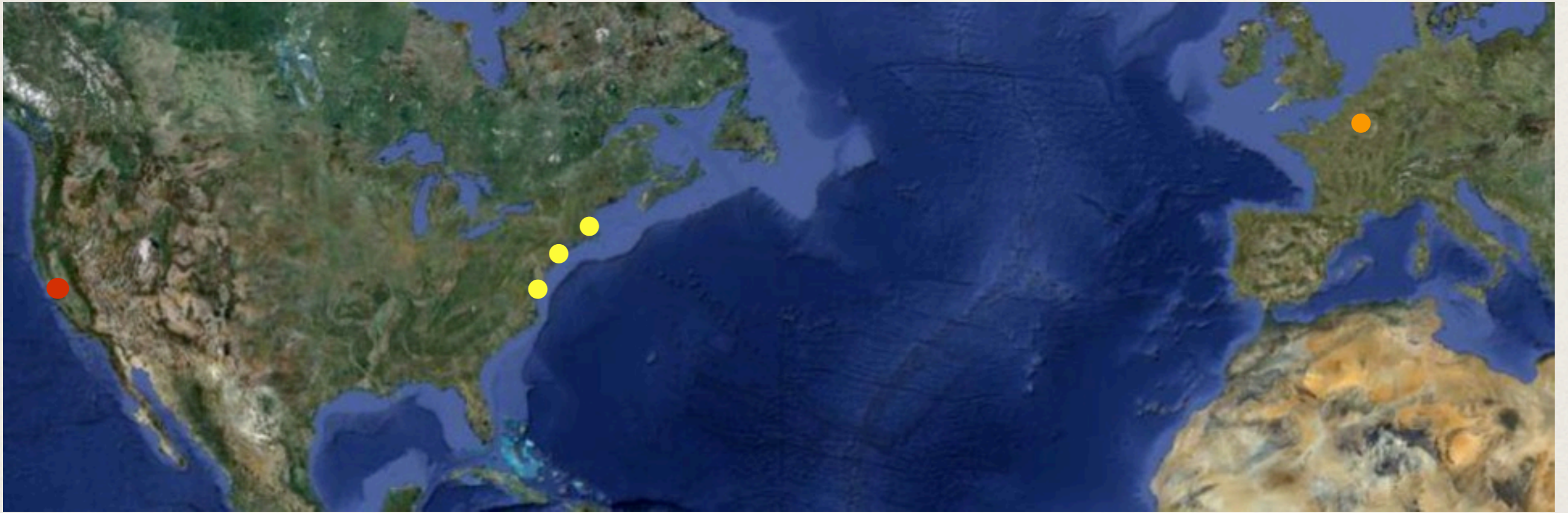
The next phase in HPS Software development

February 7, 2013

Current Status

- ❖ We were in a “rapid development” phase.
 - ❖ Many critical changes in a short period of time.
 - ❖ Only a few core developers working with/ on the code.
 - ❖ No releases, code is in constant flux.
- ❖ A lot of progress:
 - ❖ Tracking in good shape.
 - ❖ ECAL code & trigger simulation.
 - ❖ Initial monitoring software.
- ❖ A lot of improvements still to do:
 - ❖ See Software List: HPS Analysis and Software Topics.
 - ❖ <https://confluence.slac.stanford.edu/display/hpsg/HPS+Analysis+and+Software+Topics>

Current Status, Geographically



- ❖ SLIC + lcsim -- only productive use is at (near) SLAC.
- ❖ UNH / Jlab / Rutgers -- Using Gemc + ROOT
- ❖ INP d'Orsay -- What to use?
 - ❖ Needs simulation, tracking, ECAL trigger, readout.
 - ❖ Only familiar with ROOT.

Possible Causes

- ❖ SLAC people have been very forthcoming with help, BUT:
 - ❖ Asking in person takes ~ 5 min - 1 hour.
 - ❖ Asking via email takes ~ 1 hour - several days.
- ❖ Lcsim code is complicated = steep learning curve.
- ❖ Lack of stable release:
 - ❖ Examples often don't work.
 - ❖ Something that used to work is broken in a later update.
 - ❖ People using private copies?

Possible Remedies

❖ Stable Releases

- ❖ Stable verified release.
- ❖ Advertised on HPS-Software mailing list.
- ❖ All work is with respect to the stable release.
- ❖ All examples work with stable release.
- ❖ Release Master needed

❖ ROOT TTree output.

- ❖ ROOT is an excellent tool with a huge user base.
- ❖ Most researchers already know and use ROOT.
- ❖ TTree needs to contain all lcsim output.

Jobs:

❖ Release Master

- ❖ Familiar with the code and current development.
- ❖ Can check that the pre-release is fully functional.
- ❖ Keeps track of changes.

❖ Lcio2root

- ❖ Simple to use command line tool
- ❖ Converts all Lcio contents to a ROOT TTree

❖ Documentation:

- ❖ Something that says what detectors to use: in sync with Release.
- ❖ Keep it up to date.
- ❖ Give some background info on what happens in code?