# Surveying Experiments & Opportunities

- Want to review the state of hidden sector physics over the next several months: Natalia, Rouven, Philip will coordinate
  - what is the parameter space for <u>visible</u> and <u>invisible</u> A' decays?
  - what are some important targets in that parameter space to cover?
- EST are writing a review article to be finished by April
  2015 in any case
- Hope to start with two short talks and discussions during the NEXT meetings. May ask for help...

# Surveying Experiments & Opportunities

- In planning for the future, we should perhaps scrutinize what is currently being planned
  - Visible: SeaQuest, LHCb, Belle-II, Cornell, mu3e, meson decays, SHIP, LHC (higgs)...
  - Invisible: Direct detection (various), CERN missing energy, Neutrino beamdumps, BDX, Belle II, Cornell, DarkLight, LHC...
- As we've seen many times before, initial claims of reach are often overstated, or even badly wrong, so let's be careful
  - Suggestion: theorist + experimentalist (one each?) team up and scrutinize existing ideas, and report back
    - strengths and weaknesses?
    - useful take-away lessons?
    - a reason to focus elsewhere or not in future planning?

## New Experiments @ SLAC

3

### **What about ideas for SLAC?**

### **Beam dump LDM experiment at SLAC?**

– homework?

...?

- beam backgrounds?
- threshold vs. signal yield -- (Gordan & Eder)
- threshold vs. background?
- □ How to use the dark current?
  - Missing Momentum Exp?
  - Super-HPS (a la Snowmass Tim & Matt)?