AWAKE Summer Laser Propagation

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19 June 2019

Program and Task List

- **Full System shakedown (combined)**
  - (1-2 weeks)
  - Laser systems
  - Access systems
  - Controls
  - Vapor source
  - *Triggers*
- **Vacuum Propagation studies**
  - Previous measurements showed energy, profile discrepancies (1 week)
  - Careful cross calibration of energy meters
  - Careful setting of imaging
- **ns time resolved measurements:**
  - Transverse Profile
  - Spectrum
  - Transverse Profile from Schlieren
  - 1 week
- **ps time resolved (streak camera):**
  - Same as ns measurements
  - 1 week
- **Backward Propagating diode laser**
  - 2 weeks

Summer Program: PreRequistes

Systems Needed

Access:
Need to open LSSP2 to get laser pulse out

Controls and DAQ:
Need pyJAPC working and control of all mirrors for alignment

Laser system:
Ready to go

Triggers:
1. 10ps-stable triggers from streak room to LBDP3 / Schlieren setup (2)
2. Energy meter triggers (3)
3. PXI camera triggers that are locked to laser

Vapor Source:
Functional and tested

PXI Cameras:
1. Laser room Camera
2. Virtual line
    1. CAM03
    2. CAM04
    3. CAM05
3. Pickoff Camera

Gated Camera and Spectrometer:
Need 10ps stable trigger
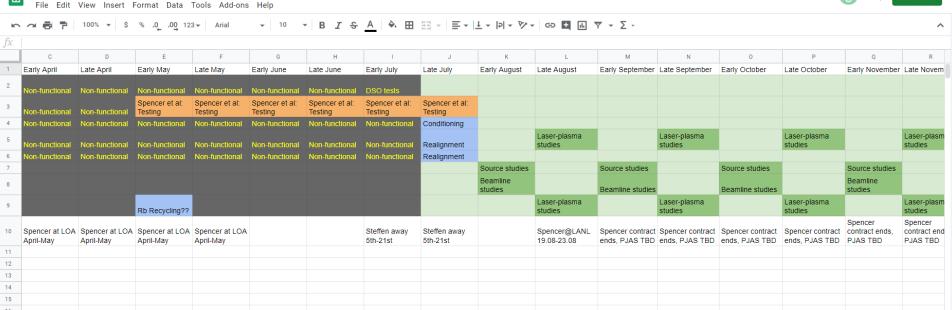
Summer Program: Timetable

- Can we condense our programs instead of alternating?

- Laser propagation program is complicated