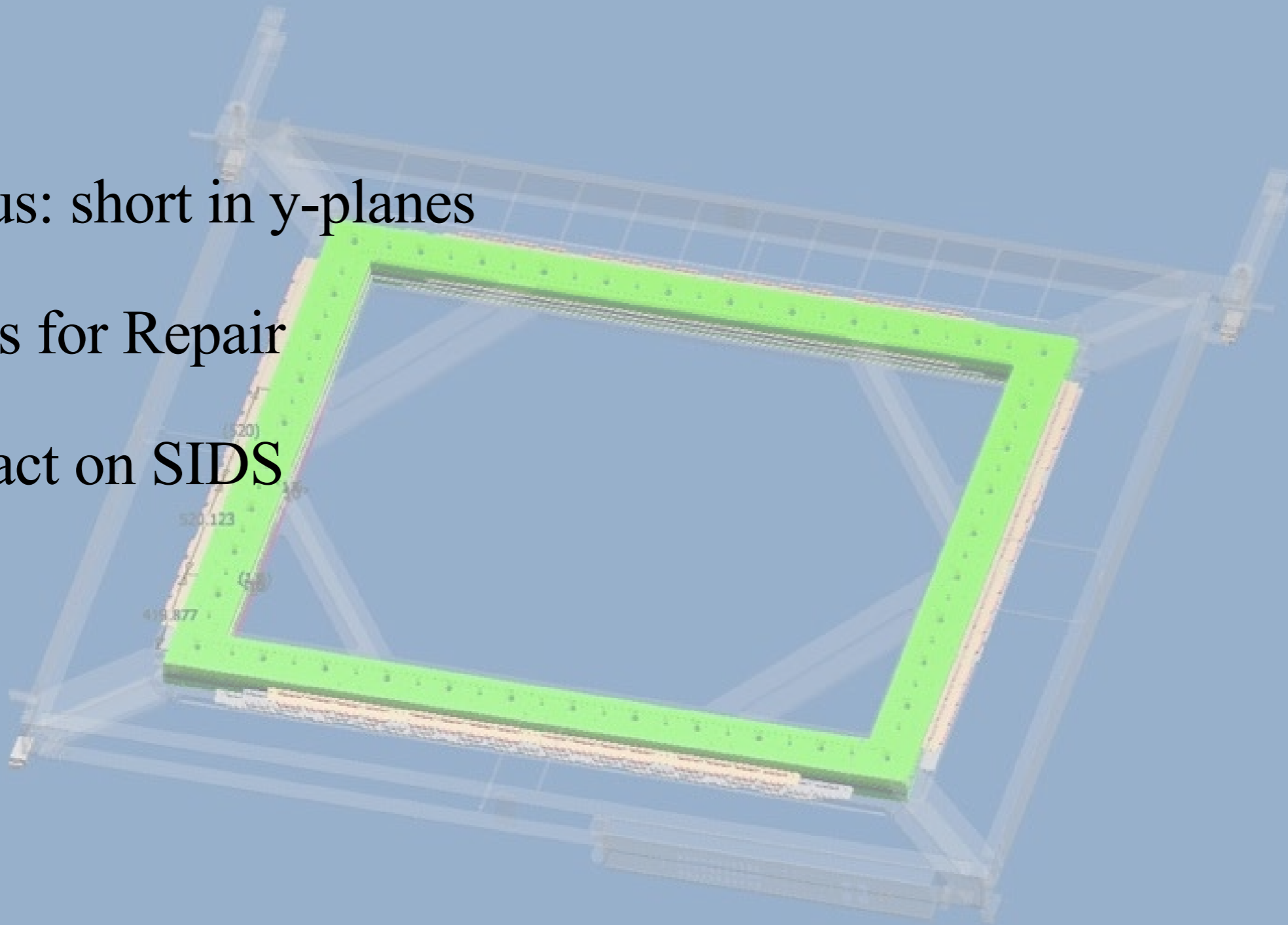
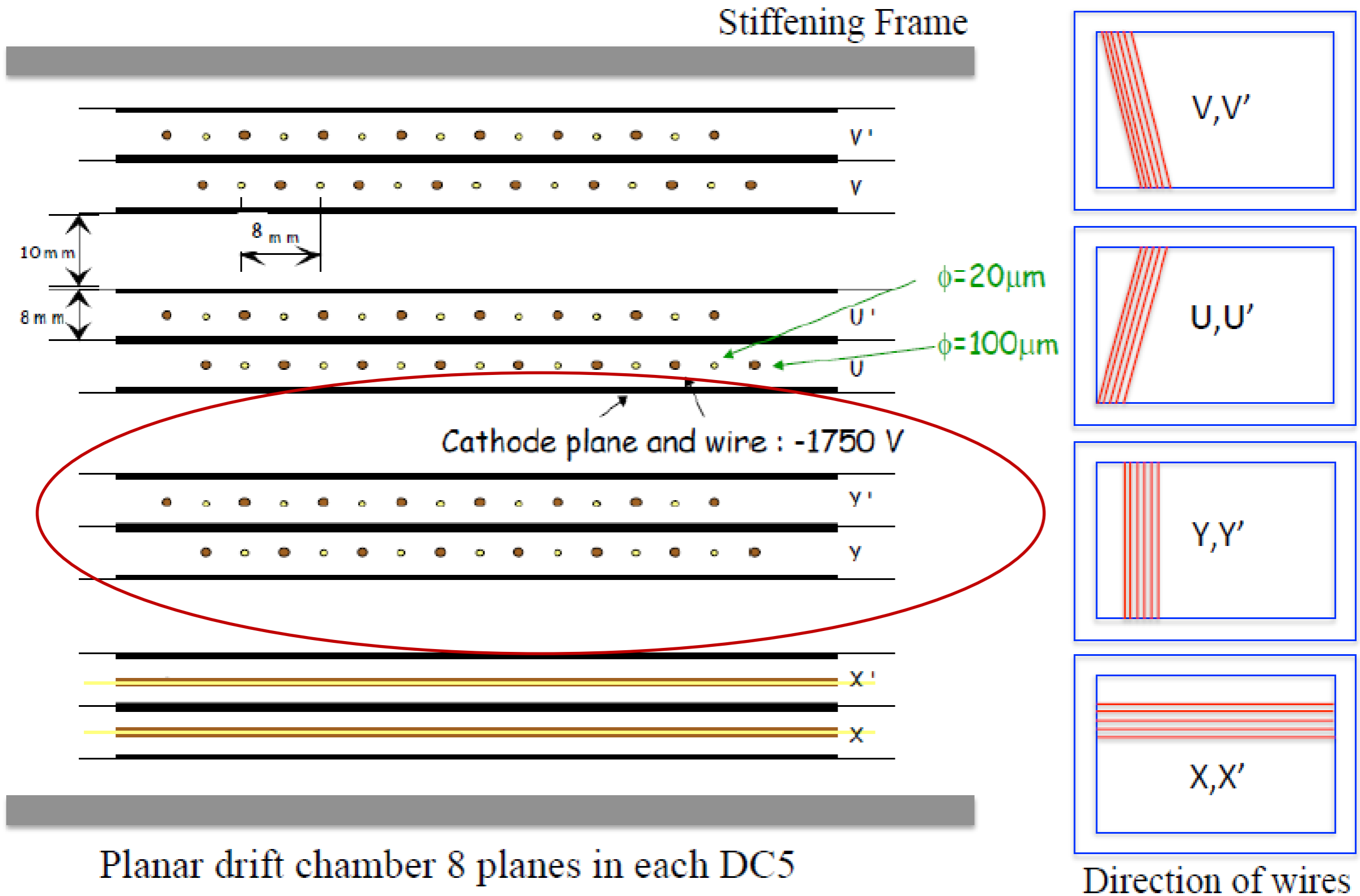


DC5 Status and Repair Plans

- Status: short in y-planes
- Plans for Repair
- Impact on SIDS



Short in DC5 Y planes makes Y and Y' unusable



Planning for Possible Repair

→ Possible repair

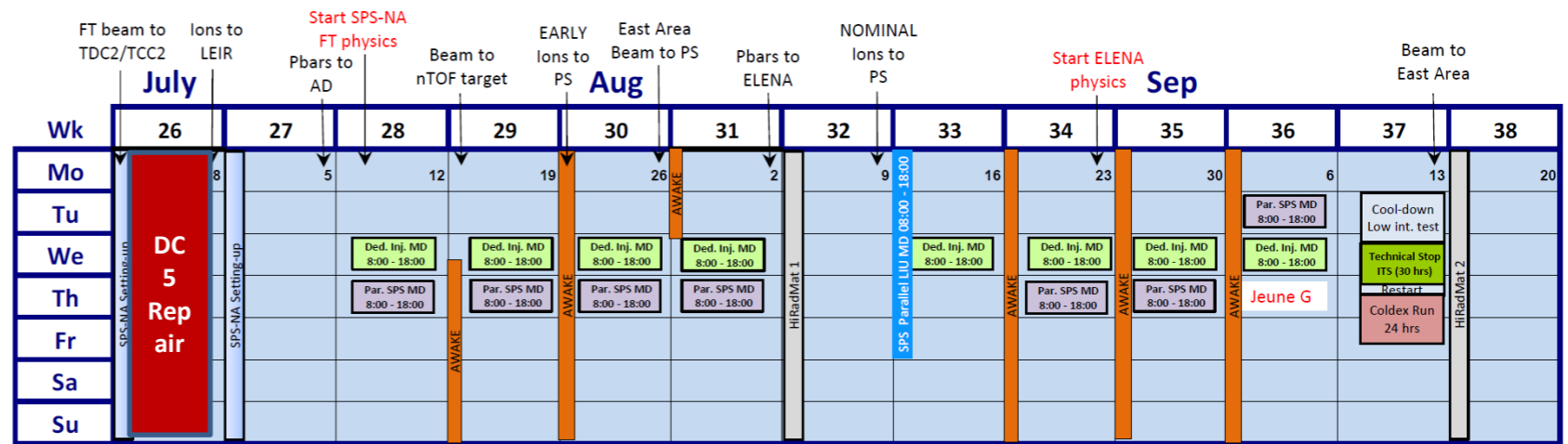
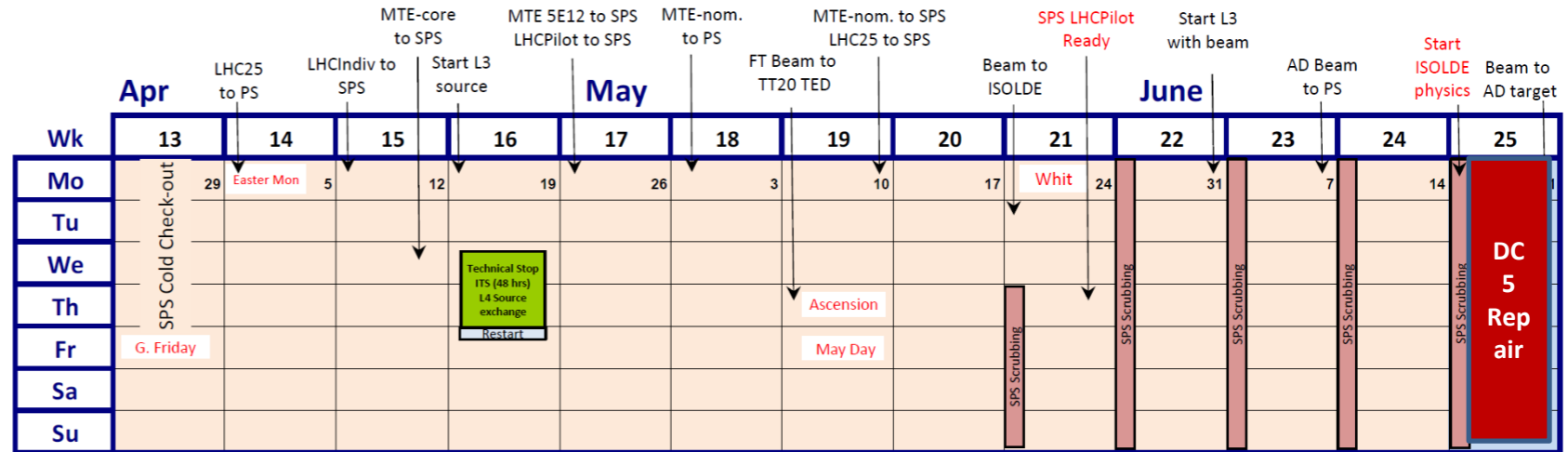
- Duration: 2 weeks
- Team of 4-5 from UIUC
- Requires clean area
- Schedule: as soon as COVID travel restrictions allow

→ Travel restriction

- Travel restrictions in Europe and US, depending on citizenship or visa status. US consulates in many countries are closed, travel of non-US citizens require National Interest Exception from consulates.
- 10-day quarantine, CERN (can be waived)
- 14 days of quarantine, UIUC
- Vaccinated volunteers only
- Travel restrictions may be eased in summer (and if vaccination programs progress well).
- DC5 repair team members have significant local responsibilities.

→ Vaccination

- Starting 3-22 available to all UIUC employees, limited availability.
- DC5 repair team will be fully vaccinated by mid to late-May.



Possible DC5 repair to be scheduled as soon as COVID related limitations can be overcome. Need maximum flexibility, including the ability to waive quarantine on CERN side.

What if Travel Remains Impossible?

Impact of absent Y,Y' evaluated using 2016P09 (Riccardo Longo):

- (1) DC05 Y off : 0.54% SIDIS events lost
- (2) DC05 Y off + DC04 Y1 off: 1.45% SIDIS events lost
- (3) DC05 Y off + DC5 X off: 0.7% SIDIS events lost

Detailed distributions for different kinematic variables in different x-bins available at [DC05 Studies | Powered by Box](#)

Example:

Change in z-vertex distribution
for DC05 Y off + DC05 Y1 off

Additional Studies by Andrea Bressan:
ST03XY missing, ST03 all planes are missing leads
to unacceptable losses!

- Plan: (1) keep DC05 installed
(2) take advantage of possible window for
travel under COVID-19 for repair
(3) use DC05 as is if no travel window appears
and repair DC05 in late November/early
December

