

# discussion of HERD beam request

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# update since beam request form-v1

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- ▶ remove gamma-ray requirement at PS
  - ▶ by considering the challenges of beam tuning and gamma-ray tagging, the feasibility and necessity in a limited beam time
- ▶ request 14 days at PS
  - ▶ SCD, PSD, FIT would also like to participant
  - ▶ low energy electrons and hadrons for calibration and equalization study

# one submission or multiple submissions?

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- ▶ one submission
  - ▶ HERD integrated tests(HERD) at both PS and SPS
- ▶ multiple submissions
  - ▶ HERD integrated tests at SPS
    - ▶ e.g. HERD-INT at SPS?
  - ▶ HERD separated(standalone)
    - ▶ e.g. HERD-CHD/HERD-TRK at PS?
    - ▶ experts familiar with the facilities at PS leads the coordination

# priorities and beam window

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- ▶ PS will be opened from week 41-45, SPS opened until week 45
  - ▶ October 18th to November 15th
- ▶ PS at first and then moved to SPS
  - ▶ parameter tuning, calibration and equalization trigger logical tests firstly done at PS and well prepared
  - ▶ five weeks beam window, two choice
    - ▶ three consecutive weeks
    - ▶ four weeks scheduled as
      - two weeks at PS first
      - then one week break
      - and final week at SPS

# the Cherenkov detector

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- ▶ mandatory requested for PID at PS
  - ▶ electrons heavily contaminated by hadrons
  - ▶ counters inside beam hall and can be connected with 10-20m long cables, the signal should be involved in real-time trigger
- ▶ do we need Cherenkov for PID at SPS?
  - ▶ offline usage, since the counters are placed on average (70m -100m) upstream
  - ▶ special care in the trigger board for the Cherenkov signal synchronization

# issues at PS

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- ▶ why T9 preferred
  - ▶ since T10 is crowded with immovable staffs?
- ▶ preferred beam size and intensity should be presented
- ▶ preferred beam particle
  - ▶ electrons, charged hadrons (0.5 – 15 GeV/c)
  - ▶ do we need muons?
    - ▶ low event rate

# remaining issues in beam request form

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- ▶ detectors
  - ▶ 2-3 layers of SCD
  - ▶ 1 layer of PSD bar/tail
  - ▶ 3-5 layers of FIT (fiber mat)
- ▶ layout at SPS
  - ▶ integrated test, 2D translation locally for each detector
- ▶ layout at PS
  - ▶ special request? or standalone run?
- ▶ purpose at PS
  - ▶ TRD performance study
  - ▶ calibration and equalization study?
  - ▶ energy response at low energy?

# logistics

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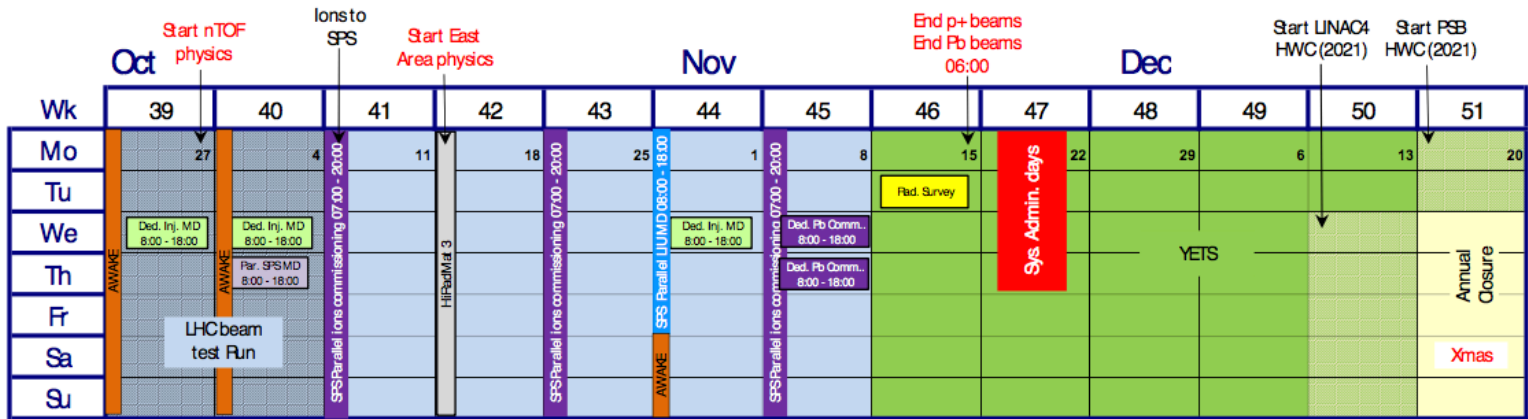
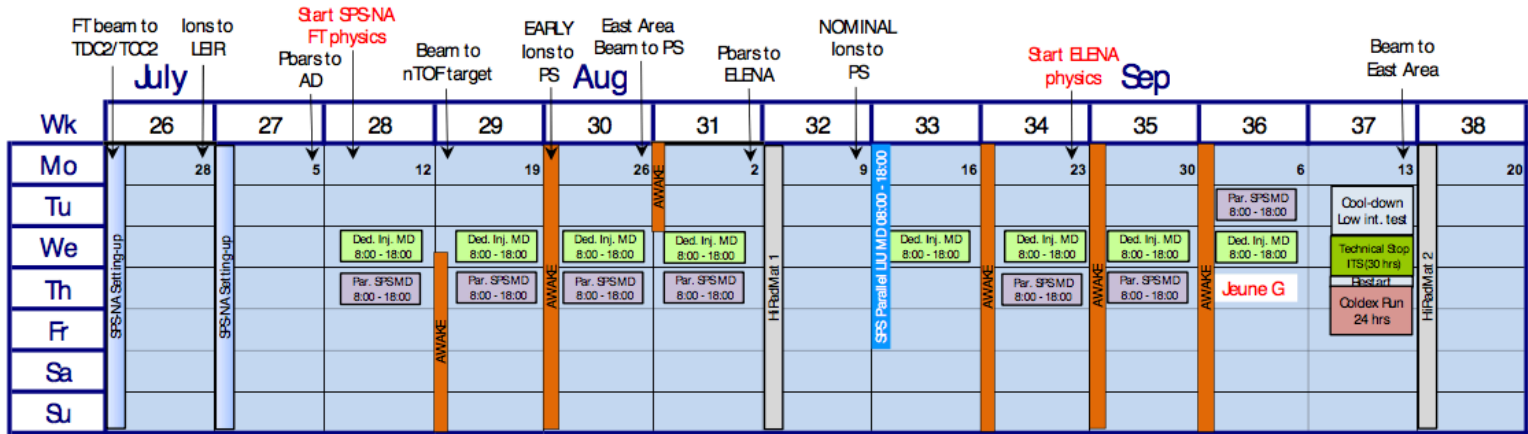
- ▶ mail list (herd-tb@ihep.ac.cn) have been set up for further communications, please send me an email for subscription



# back up

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# injector schedule released on 2<sup>nd</sup> Dec. 2020



- Injector Complex MD Block (dedicated)
- Injectors Technical Stop
- Protons physics
- LHCbeam test period
- Special Run
- HiRadMat Run
- AWAKE Run
- LIU parallel MD
- Pb ion commissioning
- Special interventions/stops
- CERN Official Holidays
- Controls system interventions
- SPSMD block (parallel)
- YETS& HWC2021