

- **Attendance:**
  - Roger D. (Head), me, Keith G, Ioanis K., Cons G., Viai, B Mau, C Moore, Paul C, Paul D, Ron M, Eric P.
- **Machine Strategy:**
  - **Roger**
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  - **Operations**
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  - **Linac**
    - Ion pump situation.
    - Looking into alternate solutions.
  - **Booster**
    - Beam is better
    - A lot of the problems had to do with Linac instabilities.
    - Beam has been more stable.
    - Automated Orbit control - looking at this. Bill Marsh will do the program.
    - Gamma-T Jump - studies were written up.
      - Ioanis asks why we have transition loss.
      - Gamma-T will preserve emittances better?
  - **Pbar**
    - Debuncher DCCT to measure Pbars. This was scheduled to work at a Hz, and beam only there for 2 sec. Instrumentation has worked on. Noisy signal and drift. When no beam in Debuncher - get an offset. Production in Debuncher has been as high as 26. Been 20-22.
    - DCCT also looks at whole beam pipe, but we cool only a small part of that.
    - P1 BPMs - instrumentation split the signal in four, but still plot an ellipse when plot one vs another. Beam problems. 424MHz (6th harmonic of 53MHz). Module upstairs does not have a good filter with this. Different BPM plates act differently. Solution is to buy 150 low pass filters.
    - Momentum spread study - beam at the end of the Debuncher cycle. Look at the transfer as well as what ARF1 is doing to the beam. Switched ARF1 cavities. The other one needs four hours to fix. Crate was power cycled, did an 11 Hz jump.
    - Stacktail measured to see if we can build another equalizer for the system.
    - Stacktail slope,  $E_d$  is back to where it was in February.
    - Running overthruster, P2 and AP1. IF get enough filters, we will unmask P1 BPMs.
    - Looking at extraction. Not running the extraction kicker as hard as we were in February.
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  - **Main Injector**
    - Roger asks about quality after bunch rotation
    - Have multiwire info in 8GeV line on every beam event, and datalogs them. Need to calibrate this data still. Within a month or so, this will converge.
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    - Mini-ramp: 40MeV.
    - 1.5 second loss. Have the miniramp and freq of RF. Adjust the two so that beam does not go inside anymore.
    - Transfers from Accumulator to RR
      - From Accumulator
      - Mini-dip ramp
      - Frequency lock and cogging.
      - Loss when beam goes to the inside.
    - Try to move the ramp earlier to avoid ramp to the inside.
    - Cogging - have to accelerate or decelerate (inside or outside).
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  - **Recycler**
    - Did change the operating point. The first shot, did not get as cold initially, but also

