Minutes of the 151st Energy Calibration Meeting held on 6 March 1998

1 Review of error analysis and note for Moriond

A draft note describing the energy files and errors for Moriond can be found on the web. Comments should be sent to Pippa Wells by Monday 9 March.

The important new ingredients are described below.

2 NMR/flux-loop bias tests

Peter Renton has modified his comparison of flux loop and NMR magnetic fields. As before, he makes a fit to the NMR magnetic field as a function of flux loop field in the low energy region. However, instead of comparing with the average NMR field in physics, he now compares with the NMR field at the nominal physics energy, at the time of the flux loop measurement. This is the procedure used by Joerg, and compares "like with like".

Pete's results are listed here

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      fill    #NMRs      E(extrap) - E(flux loop)

      4000      16             -3.3 MeV
      4121       5             +5.5 MeV
      4206      13             -2.2 MeV
      4434(1)    3            +38.0 MeV
      4434(2)    3            +18.7 MeV

Using the subset of the 3 NMRs from fills 4434 gives:

      4000       3            +14.4 MeV
      4206       3            +23.3 MeV

(fill 4121 has no overlap in NMRs with 4434)
```

Peter proposed an uncertainty of 20 MeV for the NMR/flux-loop extrapolation. This was agreed by all present at the meeting.

3 Other dipole or normalisation errors

Guy Wilkinson has evaluated the scatter from using different polarisation fills. The dominant effect comes from whether the last (low quality) fill is included or not, and leads to a 5 MeV uncertainty. The dipole rise is much less in 1997 than in 1996, due to the bend modulation, and Guy suggests a 1 MeV error for this.

4 Horizontal corrector uncertainty for lower energies

It was pointed out in the meeting that the evolution of the horizontal corrector uncertainty with energy has not been checked. For the same corrector settings, the uncertainty should scale with energy. In addition, it should be checked what settings were used.

Action: Pippa will ask Joerg about this.

5 Next Meeting

The next meeting will be on Friday 20 March at 14:00 in the Pavillon.

Pippa Wells, 6 March 1997