Minutes of ATLAS SCT Barrel Module meeting at Valencia on Saturday June 15th.

Present: A Seiden, R Brenner, O Dorholt, Y Unno, J Carter, D Charlton, M Tyndel, S McMahon, A Carter.

The meeting was called to resolve the issue of module metrology, and Z-metrology in particular, following the module meeting of the previous day.

The meeting succeeded in achieving its aims, and it was agreed:

1. **Japan would continue with XY and Z metrology as they were currently doing it and the other sites would now move towards adopting their procedures for Z-metrology.**

2. **Japan would make available to all sites the details of their techniques, procedures and instrumentation for Z metrology; to include**

   (a) engineering drawings
   (b) sequence of operations in carrying out the metrology
   (c) all handling tools and procedures
   (d) sending samples of the plastic vacuum contact screw to all sites

3. **Nobu to provide the price for fabricating in Japan one complete Z-metrology jig set for each site, and the timescale for production: the information to be made available within 10 days if possible.**

4. **The objective is for the other three sites each to have a KEK kit delivered to them as rapidly as possible.**

5. **The UK-B and US would in parallel study possible modifications to their existing jig plates to satisfy the same mounting kinematics and overall procedures as currently provided by the Japanese kit for Z metrology.**

6. **The success of this agreement for uniformity in procedures and jigging will be checked by making repeated Z-metrology measurements on the same module(s) across the various sites : the target of agreement in Z is 20_m.**

7. **In XY measurements the target for site agreement is 2_m. A current discrepancy between UK-B and Japan at the 4_m must be rapidly resolved**

8. **All sites agreed to move towards this uniform approach as soon as possible. It is not a requirement for site qualification for the US and Nordic clusters.**

Additional QA points agreed:

(a) In hybrid QA, add cold running of hybrids for 10hrs at 0C (subtract time from 100hr warm test

(b) N.O. to be run continuously in LT test, as in the latest software

(c) HV capacitor height to be measured by Japan on bare hybrids (unless no further instruction from Japan) and also on completed modules at sites

(d) Visual inspection of cracks in pitch-adaptors to be made during reception of hybrids, and visual inspection of all hybrids after bonding to give final check of bonds, and to use 37C for burn-in

(e) As far as possible, the 4 sensors on a module should have the same manufacturer's substrate origin code, and similar depletion voltages. Also sensors labelled with an 'IV problem' in the database, if used, should be grouped together on a module

(f) For baseboard gold contacts: 3 wire-bonds at each HV pad on the large and small facing

(g) Peter P to be asked to quicken the IV scan (to be if possible same as done in detector QA) and to implement realistic current limits for –15C running with HW and SW interlocks

(h) Module electrical tests at 27±3C, with room temperature module tests having N_2 flow and cooling

(i) Standard module cure to be 8hr at 30C, with modifications in Japan (post-cure) to allow for higher assembly temperatures

Tony and Nobu