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1. Professor Sinha (Calcutta) was introduced as a visitor.
2. E1030, decay modes of ^{11}Li : report on completed run (Andrei Andreyev)

 - * goal was to investigate $^9\text{Li} + d$ and $^8\text{Li} + t$ in beta decay of ^{11}Li
 - * method was to implant a defocussed beam in a 48-strip x 48-strip Si detector and measure the distributions in time and energy of particles detected following beta decay(s).
 - * out of a nominal 288 hours of scheduled beam, the actual beam on target amounted to 202 hours (>80% delivery). Beam tuning accounted for about 40 hours of the total.
 - * Between 70 and 80 million ^{11}Li were implanted. The run was very successful.
 - * the expected decays through resonances in ^{11}Be , ^{10}Be , ^9Be were seen with the correct half-life.
 - * analysis used energy cuts on the first or second decay product. Gating on the second decay will be very useful in interpreting the spectra of the first decays.
 - * direct implantation of beams of ^8Li and ^9Li was done as calibration. In contrast to earlier measurements, this experiment was able to measure a complete energy spectrum down to very low energy.
 - * the $^8\text{Li} + t$ branch (30% of the data) was selected by first-decay energy, with much cleaner selection than in previous work.
 - * the $^9\text{Li} + d$ branch was harder to see in on-line spectra, but is definitely shown in the time-dependence of the decays.
3. Beta NMR/NQR: report on completed run (Rob Kiefl)

 - * 48 hours of beamtime were lost due to a lightning strike
 - * the Ta target gave good beta rates, but the asymmetry glitches associated with front-end sparking were again seen at ITW. In contrast to earlier runs, a spark sometimes resulted in an increase in beta counting rates.
 - * a new ring electrode was installed, permitting bias to be applied to the final einzel lens as called for in calculated beam tunes. The result was a more compact spot as viewed by scintillator/CCD.
 - * on the NQR side rates were typically 1-2 MHz
 - * Giant Knight Shift in Pd film
 - sample was 10 nm Au | 100 nm Pd | substrate
 - temperature dependence of shift was like that of the bulk susceptibility of Pd
 - * Mn12 monolayer on Si substrate
 - in an earlier run, mapped how the width of the resonance peak varied with implantation energy (i.e. nearness to the Mn12 layer)
 - this time looked at Si alone. At higher implantation energies (deeper into the Si) the Si-only resonance tracks with Mn+Si.
 - * Temperature dependence of a fast-sweep resonance study in NbSe2
 - repeated fast (5 second) sweeps allow many systematic effects to be averaged out
 - the NbSe2 resonance peaks show at tail on the "late" side of the sweep. This is due to a memory effect: the ^8Li half-life is non-negligible compared to the sweep time. It can be dealt with by straight-forward deconvolution procedure.
 - below the transition temperature of 7K there is a low-field tail

possibly due to vortex-surface correlation.

- dependence on the rf power, at 5K, was used to learn about the London penetration depth

* Long-pulse measurement of polarization in NbSe₂

- by doing a beam-on resonance scan of ~4 seconds followed by a beam-off measurement of T₁ relaxation, it is possible to shoe-horn two measurements into 1 cycle.

- could alternate such beam on/off cycles with two stations, resulting in fully-efficient use of beam -- "Four experiments at a time."

* the desirability of investigating the cause of asymmetry glitches (but in "beam development" time, not "bNMR" shifts) was agreed to, in principle.

4. E1024, Ca beam for 40Ca(alpha,gamma)44Ti (Christof Vockenhuber)

* during a day of OLIS development, a beam of 40Ca (2+) was obtained from the surface/hybrid source, starting from Ca metal.

* the beam was accelerated to 1.13 MeV/u and sent through DRAGON to an ionization chamber. E-dE data showed 40Ca ions clearly separated from 40Ar and 20Ne. These contaminants were at the level 0.01% of 40Ca.

* beam intensity out of OLIS was 1 nA (2+) but due to difficulties in tuning accelerators with a low-intensity, fluctuating beam only 0.1 nA (8+) reached the DRAGON target

* modifications to both the surface and microwave sources are being installed in OLIS.

5. Upcoming ECR tests (Pierre Bricault)

* conditioning of the ECR should begin this afternoon (25th)

* after conditioning, ECR operation will be demonstrated with stable beams

* RIB measurements would commence after stable beam work

6. Upcoming run for E909, 34Ar lifetime (Gordon Ball)

* goal of the experiment is to test calculations of the isospin-mixing correction to the super-allowed beta decay rate, which is a theoretical uncertainty in determination of the |V_{ud}| element of the CKM matrix.

* 34Ar case is complicated because the daughter 34Cl also beta decays with comparable lifetime. The solution is to use the 8*pi to detect 666 keV gamma rays from a 2.5% branch to an excited state of 34Cl.

* the 8*pi group have gained experience in this type of experiment in earlier studies of 26Na ("easy" case) and 18Ne (closer to 34Ar case). The 18Ne initially had a problem with diffusion out of the transport tape, but the problem was solved by going to tape with a thicker Al layer.

* the estimated uncertainty in result includes: 5.8E4 yield from CaZrO₃ at 2.6 uA; 2% detection efficiency; Beam-On/Beam-Off cycle 3 sec / 17 sec; 120K photpeak counts per 12 hours. In 24 shifts with no down-time, this would give a 0.06% measurement, to be compared with the goal of 0.05%.

7. The draft summer beam schedule (Jean-Michel Poutissou)

* E920 is first up with the Ta target in ITW because they need to do calibrations using stable La beam from a "salted" on-line source.

* 8*pi have 3 weeks in August with a mid-way break to reconfigure

* E1023 is scheduled for late August/early September. This time is in

conflict with a request for stable beam to TUDA, with no obvious way to resolve the conflict. E1023 will have the time, provided they can show readiness to run.

8. CAP Congress (Jean-Michel Poutissou)

- * Congress runs at UBC from Sunday June 5 through Wednesday June 8
- * Sunday includes special lecture and musical premiere for the International Year of Physics
- * poster session is on Monday
- * banquet is on Tuesday
- * on Saturday June 4th UBC Physics will hold an Open House, for which TRIUMF will run regular tours (beam not turned off). A call will go out for volunteers.

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