FIELDMAPPER PROGRESS – WEEK ENDING 05/01/98

1 Magnet Meeting

Adam, Miguel, and Rich met Wednesday and discussed fieldmapper progress:

- Adam and Miguel have the new NEC PC (finally) installed, with Labview up and running. They borrowed Rich's Zip Installer to get that drive going (the vendor didn't ship this disc). They have applied for an IP address so for the time being cannot connect to the network.
- Pat's drawing incorrectly depicts the trough holder brackets, but Miguel has modified the "center" one to properly support the caterpillar gripper brackets.
- Adam can proceed to glue on the second trough, on the way to getting the z-handler operational and tested.
- For the time being the moving end of the z-handler can be connected to Ryuji's cable carriage. It inteferes with the trough brackets but Miguel and Rich worked out a change to make it fit properly. "Kludges" will be necessary to get the z-home fingers installed and the z-home circuit boards reattached so the carriage can be moved with the motors. Also a "kludge" will be needed to get the braid attached to it.
- There is some operational inteference in IB1 between Ryuji and Miguel, but Rich will talk to Ryuji and arrange to share time and floor space there.
- We agreed that we should by 1 more G3 hall probe. There is at least an 8 week delivery on these so time is of the essence.

2 Cable Handler Redesign

3 Hall Probe Carriage

- Rich met with Pat and we discussed progress on her probe carriage design. She has specified some of the components but we need to order things soon. Rich asked her to make a side elevation so we are ready to drill holes in the brass bars as soon as they come in.
- On 04/21 Rich asked Ron Gonzales of Stock Drive for a quote on a 10' rack and anti-backlash pinion; he called 04/29 asking again what shaft size is required for the pinion gear so it looks like his quote is still "in the works".
- Rich got an email from Gary Steinburg (Acurite). He notes the engineers guess titanium might work for the spring but he is not sure the company wants to take time to engineer a special one-off unit. He will see if they will let him develop one as a consultant!

- Rich replied to Gary that indeed we only wanted one unit, and time was of the essence. But if they could give us the spring details perhaps we could make one here. He replied that indeed Acurite would not bid, but gave some details and said Mike McArthur would send a data sheet.
- Rich called Velmex for their M-97 cataloge re motorized sliders. Maybe Rich can learn about their choices of encoders and readouts.
- Rich also sent an e-mail to Metronic to see if their readout (QC-1000) was compatible with Renco encoders.
- Miguel met with Pat and started her toward sketching his hall-probe mounting ideas. Rich later told her to concentrate on the carriage first leaving the hall probe mounting as a second priority.
- Pat noticed on Friday PM that Rich's order for the brass rods was for 10' lengths, and she thinks we will need at least 11'. Rich looked at an old drawing, then went to Lab F – we will need about 137" length! Rich will call Nelson first thing next Monday AM!

4 Hall Probe Arm

- Miguel and Rich selected the Velmex A15 slide for the arm, and Rich placed an order for one. Rich had called them earlier and found they wanted 4-5 weeks for delivery.

5 Hall Probe Calibration

- On Monday Miguel and Rich visited Lab A but Greg was out. The place is stuffed with equipment and maybe we can use one of the rotary tables we saw there. Gary returned on Thursday and Miguel and Rich agreed that his 3-axis table with PC and Labview is quite appropriate for Hall probe work. Miguel will calibrate it for him and we can borrow it for a month or so.
- Rich had talked with Butch Bianchi in IB1 about borrowing another Velmex slide outfit stored on his mezzanine, and he said OK. His man Mark Thompson found me a glass-scale readout for it and agreed to help work on getting it set up. Since we now will use Greg's outfit, we won't need the old stuff from IB1.

6 Field Calculations

- Alexander Gulyaev wants to read the fieldmap so Rich referred him to the Mapplot program. Of course he cannot access the files as they are protected, and he may also need a fnalu account. Rich got off a call to Stan Naymola about the AFS ACL privilege issue on the mapplot stuff, then an email.

- Stan Naymola got the ACL provileges set to "anyuser" so everyone can read/execute in the mapplot area.
- It happens that Adam and Dan assumed that the user would work in his root directory, so the Mapplot2 program crashes if used in a subdirectory. Adam will fix this, but in the meantime it can be used OK with this limitation. (Rich notes that the 3D stuff is gone from this version!).

7 NMR R & D

- Rich talked with Ryuji about time-sharing the lab magnet in IB1. There shouldn't be any real interference as both groups will work only part-time there. Ryuji and Jim have removed the HP circuit analyzer and put in a signal generator instead, and now see very clean resonance peaks from the Swiss NMR device.

8 Schedule

9 Installation

10 New Collaborators

- Rich began to review the radiation damage issue per Frank Linde's (NIKHEF) note this week about the ATLAS test coil at Saclay.