

## Test Stand status (03/31/03).....P1

### 1. Burn-in area

#### a. Two hybrid burn-in test stands for 16 chains each.

- *Both **HYBRID** racks are assembled.*
- *Cabling is done.*
- *Electronics rack with two VME crates and two separate LV power sources is ready. Need two Bit-3.*
- *Temperature and current monitor: all parts in hands.*

#### b. Two module burn-in test stand for 32 chains each.

- i. With cooling
  - ii. With some chains set up for biasing above 300V for L0 modules
- *All four **MODULE** racks are assembled.*
  - *Both electronics racks with VME crates and LV power sources are ready. Need two Bit-3.*
  - *Both HV crates are ready, Bi-Ra motherboards and pods have to be done in April.*
  - *Cooling plates will hopefully be at FNAL this week.*
  - *Spare chiller NESLAB M-75 will come to SiDet in April.*

## **Test Stand status (03/31/03).....P2**

### **c. One laser/repair test stand**

- i. No cooling
- ii. Biasing below 300V
- iii. connected to probe station for diagnostics

- *Laser test stand works.*
- *Connection to probe station is not done yet.*

### **d. One 1-saseq test stand for R&D.**

- i. No cooling
- ii. Biasing below 300V
- iii. connected to freezer for low temp sensor tests.

- *People work on it.*

## Test Stand status (03/31/03).....P3

### 2. Lab D

- a. Two 1-saseq test stands for fast functionality test of hybrids/modules during construction and for module debugging.
    - i. No cooling
    - ii. Biasing up to 1000V
- *These two **TWINS** are equipped with VME crates, LV power sources and built-in-rack computer desks. Need two Bit-3.*
  - *Two Bi-Ra motherboards with two pods need to be added to these TS.*

## Test Stand status (03/31/03).....P4

### 3. Lab C

- a. One 1-saseq test stand for fast functionality test of modules before being installed on staves.
    - i. No cooling
    - ii. Biasing below 300V
    - iii. additional Run 2A readout available (1 saseq/2 chains)
- *This **RUN2A** setup works and is fully equipped except Bi-Ra HV motherboard and ready to go to Lab-C.*
- b. One 2-saseq test stand for simultaneous readout of 1 stave.
    - i. With cooling
    - ii. Biasing below 300V
    - iii. With current and Temp monitoring
- *This **STAVE** setup is fully equipped except temperature monitor and located in Lab-C. Currently the standalone HV source is used.*
  - *Cooling issues need to be discussed.*

## **Test Stand status (03/31/03).....P5**

- c. One 3-saseq test stand for simultaneous readout of one L0/L1 sector (6 hybrids)
  - i. With cooling
  - ii. Biasing up to 1000V
  - iii. With current and Temp monitoring
  
- *This **SECTOR** test stand is the former **CASH\_MACHINE**. At the moment is under construction.*
- *All parts are in hands except Bi-Ra motherboard.*
- *Cooling issues need to be discussed.*

## **Test Stand status (03/31/03).....P6**

Software (Lisa).

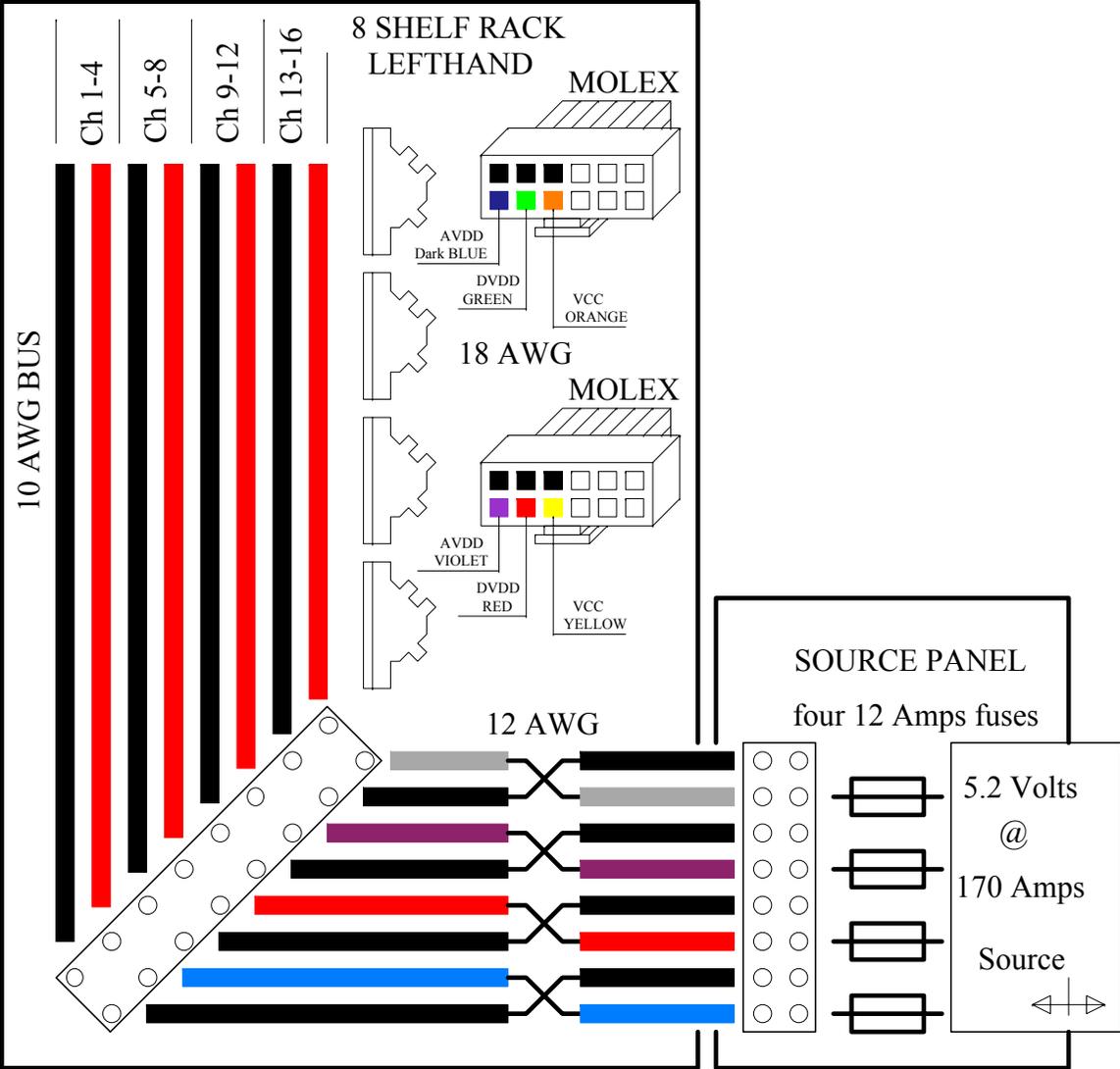
- All packages required by burn-in software (TCL/tk, cygwin, cernlib, fortran, C++, Bit3) have been purchased (C++ and fortran) or downloaded and installed .
- All pieces of software talking to SASeq work (initialization, download, data readout in Calinject and data modes).
- The program that creates download files has been modified and debugged and produces files identical to the spreadsheet.
- The pedestal values taken by burn-in software look the same as the ones taken using the spreadsheet with the same download file.
- Some modifications were introduced to the SASeq readout software to send identical commands with the spreadsheet (in calinject mode).
- The next package in the readout chain - ntuple maker newdaq - does not work since it requires correct chip IDs (>0x80). The patch needs to be introduced into Saseq readout software to fix this problem.

## **Test Stand status (03/31/03).....P7**

### Conclusions.

1. We need five more Bi-Ra motherboards and at least 12 positive pods. I'm not insisting on them now because D0 has very limited number of these parts and they are need for experiment.
2. We need six more Bit-3 in nearest future (ordered).
3. All six new computers are at SiDet.
4. Works on temperature/current monitor in progress.  
Have all parts.
5. Works on cabling on Module TS need to be done.
6. Works on cooling plates connection and high pressure Air test need to be done.

Appendix.



Low Voltage distribution

*Current and Temperature monitor*

<b>Voltage (2.5V) on load resistor</b>	<b>Load Resistor (1%)</b>	<b>Current (Amp)</b>	<b>V_monitor (V)</b>	<b>Comments (Purple Card)</b>
<b>The case of AVDD and DVDD are separated on Hybrid (channel-B)</b>				
<b>DVDD</b>	<b>10</b>	<b>0.25</b>	<b>0.297</b>	
<b>AVDD</b>	<b>5</b>	<b>0.50</b>	<b>0.536</b>	
<b>DVDD</b>	<b>5</b>	<b>0.50</b>	<b>0.538</b>	
<b>AVDD</b>	<b>10</b>	<b>0.25</b>	<b>0.293</b>	
<b>The case of AVDD and DVDD are shorted on Hybrid (channel-B)</b>				
<b>AVDD</b>	<b>3.333</b>	<b>0.75</b>	<b>0.039</b>	<b>F7 fuse removed</b>
<b>DVDD</b>			<b>0.789</b>	<b>Both J48 inserted</b>
<b>AVDD</b>	<b>3.333</b>	<b>0.75</b>	<b>0.784</b>	<b>Both J48 inserted</b>
<b>DVDD</b>			<b>0.044</b>	<b>F8 fuse removed</b>

- 64-channel scanning ADC , VMIVME-3113A, one per crate.
- Split 1.27mm ribbon cable.
- Four lines to every shelf.