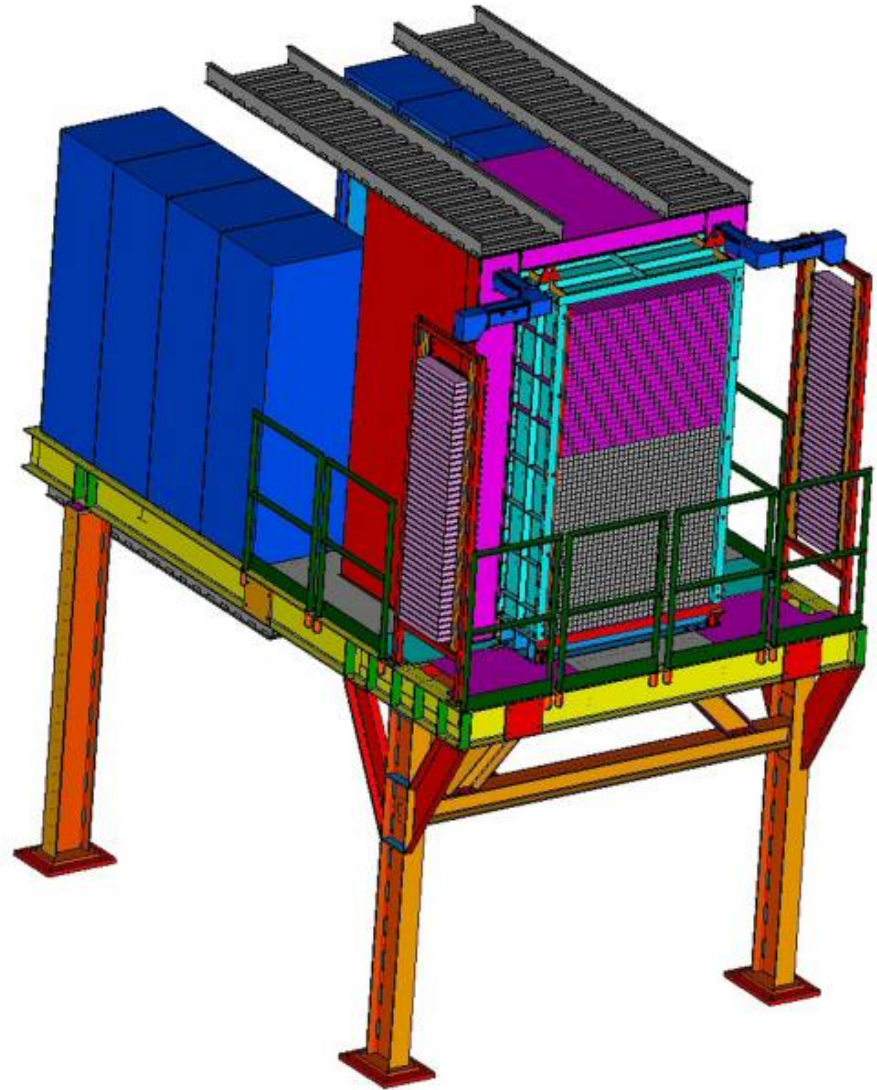


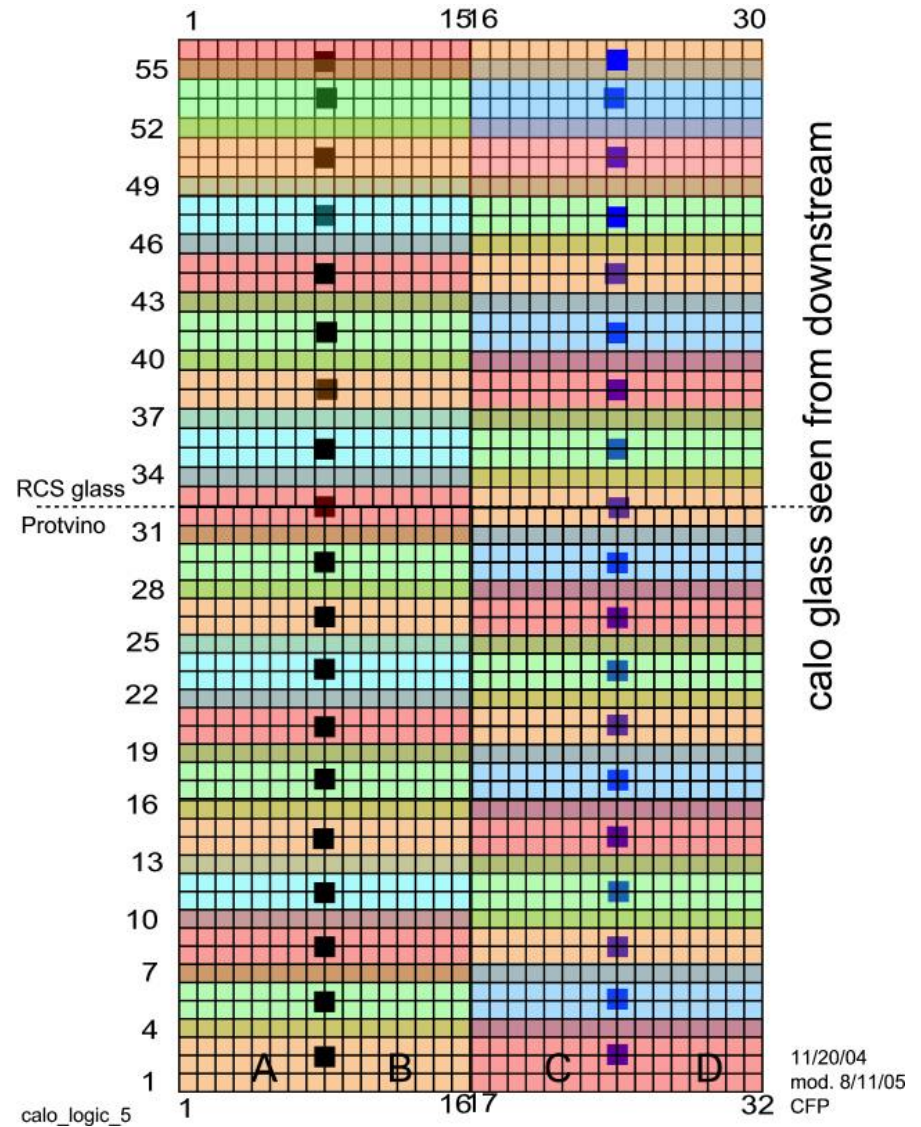
Update on BigCal

- Lubomir Pentchev finished testing the Protvino part of BigCal.
- Since Jan. 2006, Andrei Davidenko worked with Lubomir on connecting and testing the RCS part of BigCal. **Finished!**
- Vladimir Kravtsov has worked on improving cosmic gain matching software and software for matching with elastics.



Gep-3 trigger

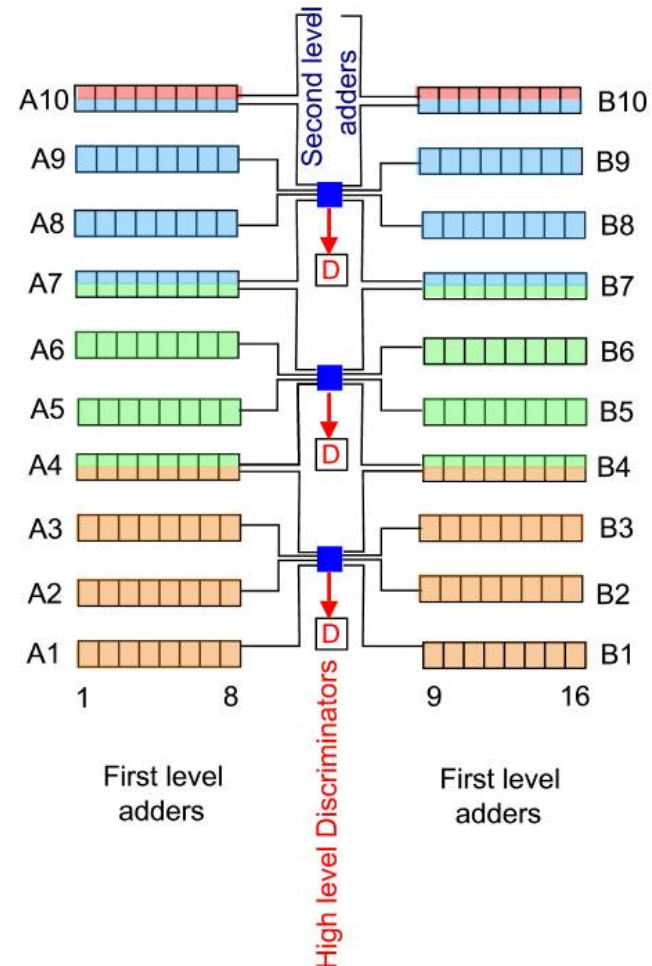
- Each PM signal goes to input of a **first summing module**.
 - A summing module takes 8 inputs and produces eight individual output signals (5x larger) for ADC and 6 summed outputs.
 - Need 224 **first summing modules**.



Gep-3 trigger

- Then 8 outputs from first summing module are put into a 2nd summing module (With only gain of 1x).
 - Each 2nd summing module is sum of 64 signals.
 - Every 4th row is placed in two of the 2nd summing modules
 - Need 38 2nd summing modules.

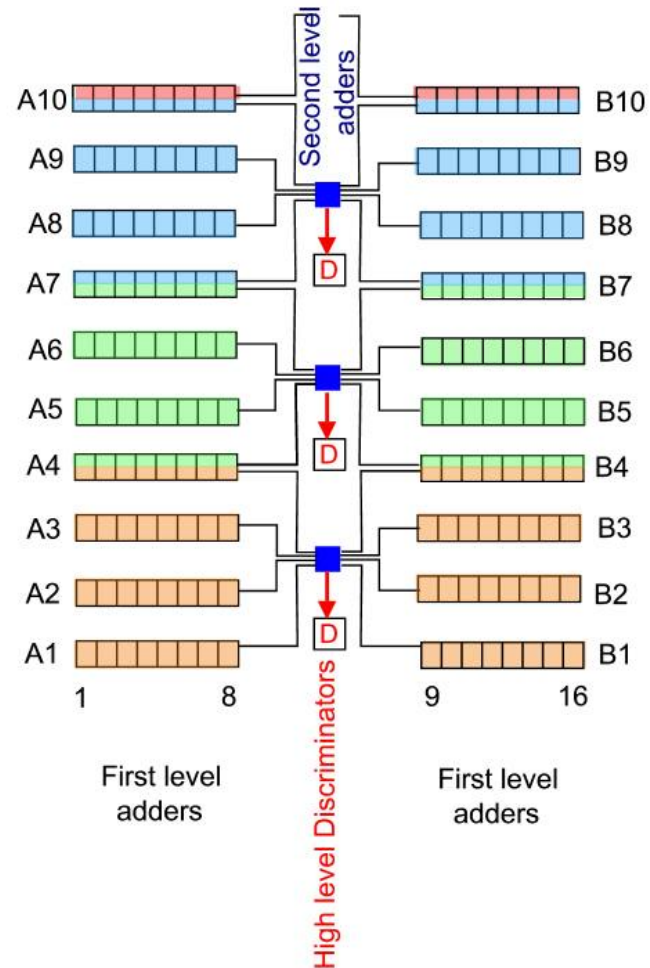
First and second level Adders, high level Discriminators



Gep-3 trigger

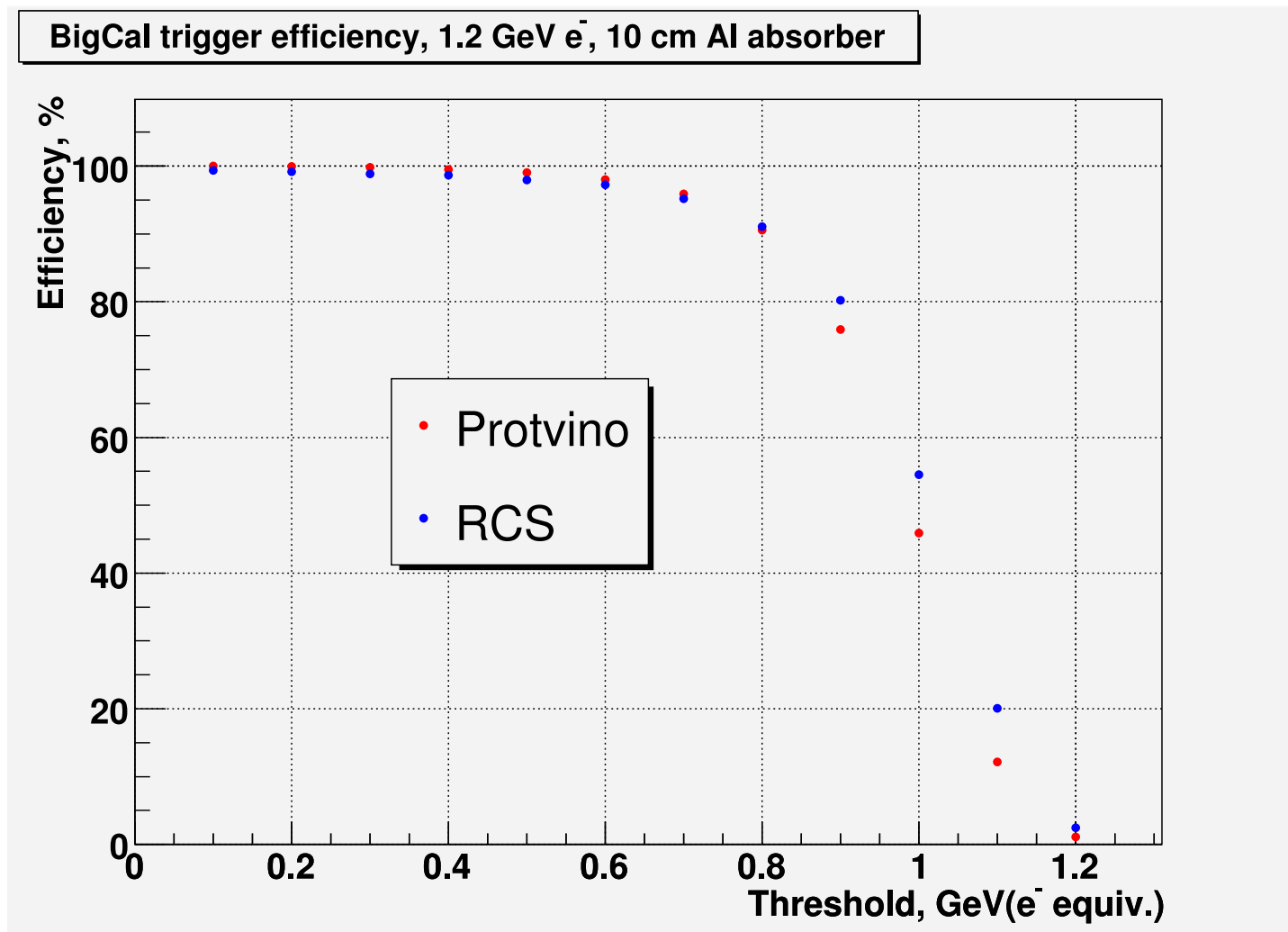
- Output from **2nd summing module** sent to a discriminator.
- **Trigger** is OR of discriminator outputs.
- Electronics purchased by W&M and have arrived. Cabling has been purchase by NSU.

First and second level Adders, high level Discriminators



Trigger tests in Monte Carlo

- Using IHEP MC for the BigCal, Andrew Puckett redid trigger efficiency.



Trigger and background

- Andrew Puckett investigated expected trigger rate for different discriminator thresholds.
 - Uses Pavel's code to generate particles in BigCal.
 - Uses IHEP code to simulate the particles in BigCal and the trigger.
- For SANE, have Pavel's code to generate particles into BETA. Need to interface results into IHEP code to look at background trigger rates.

Trigger and background

Total Trig. Rate, $Q^2 = 9.0 \text{ GeV}^2$ Kinematics and 10 cm Al absorber, BC = $100 \mu\text{A}$

