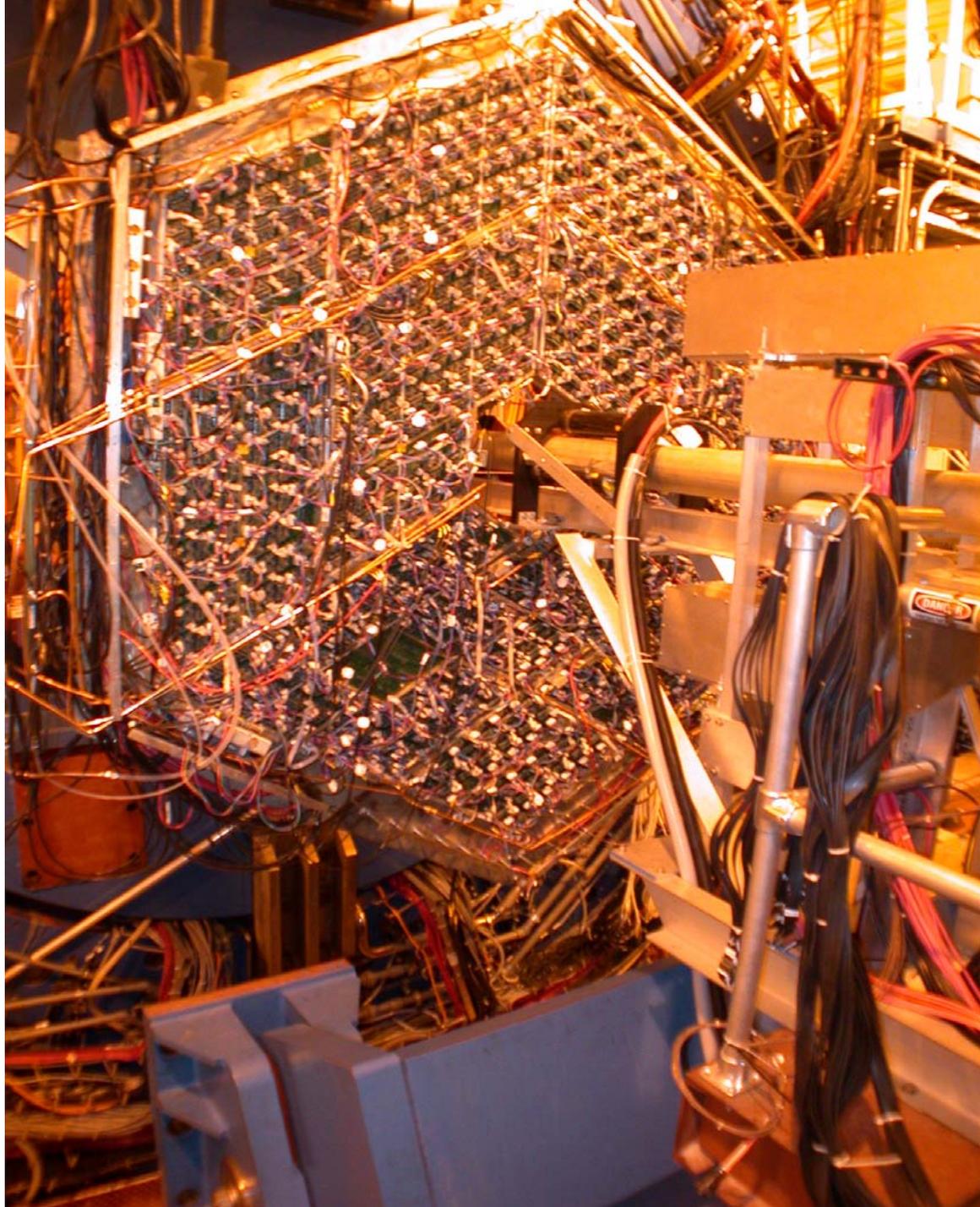


STAR
Photon Multiplicity Detector (PMD)

Experiences during 2004 run
&
Plan for 2004-05 Run period

DEBASISH DAS

View of the
Preshower Plane
of PMD from
the tunnel



Installations before the 2004 Run Period

1. Supermodules:
 - PMD consists of 24 supermodules (12 in each of the planes)
 - 22 Supermodules were installed
(10 in CPV plane and 12 in preshower plane)
2. A new 2-component gas system installed
3. All the Front-end electronics boards mounted
4. Low Voltage
 - Three new Weiner crates for LV installed
 - 12 new distribution boxes installed
5. DAQ with two VME crates (24 crams) functional

Other systems were similar to what they were for 2003 run.

Run-time Experiences:

The Good part:

1. Pre-trigger for Au-Au runs was made using ZDC coincidence signals
2. Pedestal program was setup to take PMD pedestals from run control
3. PMD included in online monitoring (Panitkin plots). In addition a separate online monitoring was used to control the quality of data.
4. Slow control for LV, HV worked fine
5. DAQ setup for PMD to run using one or two VME crates

Run-time Experiences, contd.

The not-so-good Part

1. Major problem during data taking:
 - PMD busy going close to 100% and making the data taking rate low. This problem is not yet fully understood.
 - Several supermodules couldn't be operated at designated voltage (-1450 volts). Most of the time PMD was run at 1400 volts.
2. Problem related to Front-end: many chains were not behaving properly and had to be eliminated during data taking.
3. Result of all the above is that most of the time we could run with half of the detector only.

Looking back & Plans for the upcoming run period:

- During 2004 run period PMD took a large amount of data during both 200GeV and 63 GeV runs. Analysis of the data is in progress.
- We gathered enough knowledge to debug the supermodules and electronics for the next run.
- We'll install 2 new SMs during the shutdown period
- We'll debug all the FEE boards and LV distribution boxes
- A new HV unit (CAEN-1527) may be installed which will have low current trip limit appropriate for gas detectors.
- Work on DAQ related (100% busy) problems. Tonko's suggestion and help will be very much essential.