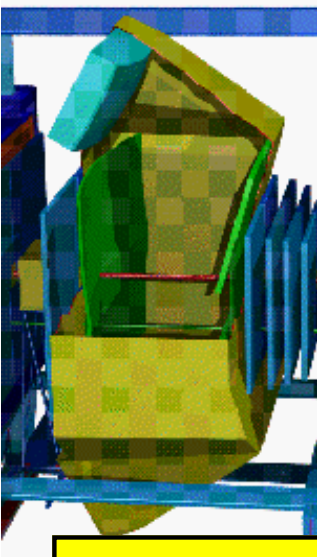


HERA-B Collaboration Meeting,
Hamburg, February 5, 1998



RICH Status Report

Peter Križan (Ljubljana)

- Mirrors
- Photon detector electronics
- Photon detector mechanics
- Radiator vessel
- Beam tests
- Installation time table

Mirrors



All 80 spherical mirror have [arrived](#) from Austin, and were mounted.

Planar mirrors were delivered, mounting structure is under construction.

Steering motors and corresponding mechanics expected by the end of Feb.

Mirror alignment: preparations started. Because of the 8mrad platform tilt when the vessel is in situ, the pannels with mirrors will move, so that no alignment makes sense before begining of March.

Photon detector: PMTs

PMT quality assessment turned out to be a real project, with several people sharing shifts.

M16: 1330 have been tested, out of which 25 tubes were dead, sent for exchange. Rest (160) will be tested until end of Feb.

M4: 694 out of 756 were tested, 8 were found dead.

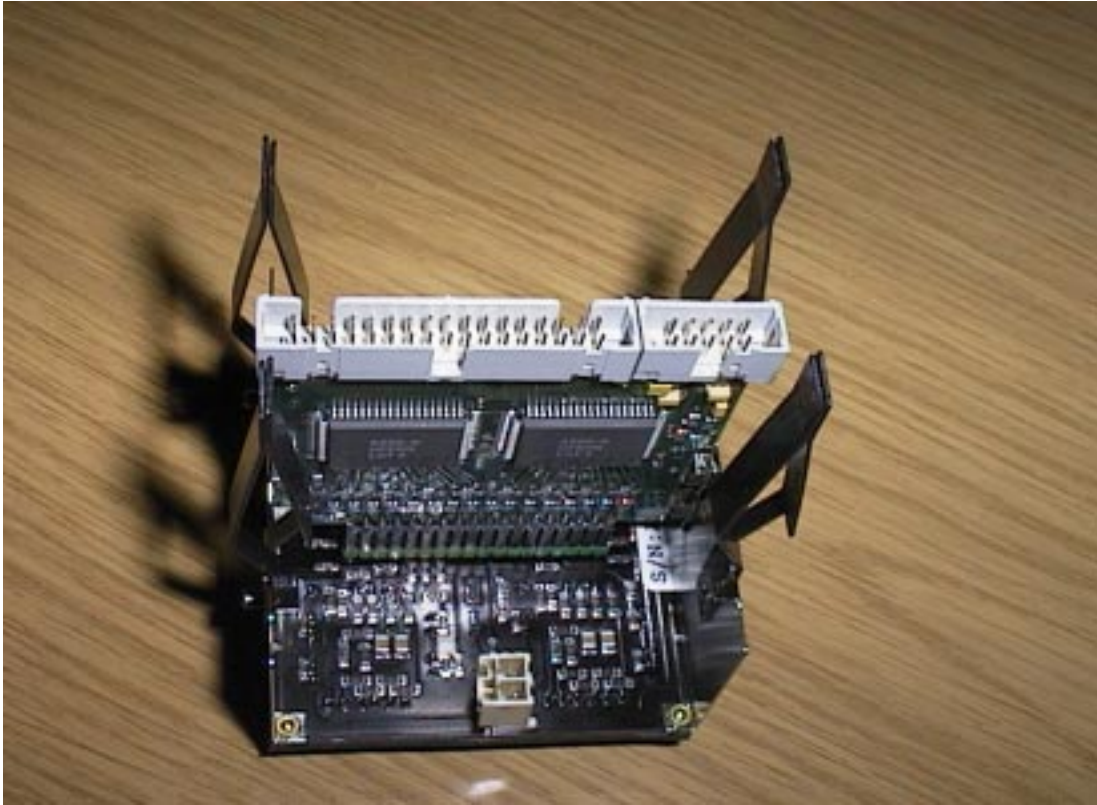
By using the results of MC studies, the tiling scheme was agreed upon.

[illegible]

Upper detector half

Photon detector electronics 1

Base boards



For the **M16 PMTs**: bare boards expected this week, the first 100 expected at DESY by Feb 16, after having been tested in Houston. Rest (300) one week later.

For the **M4 PMTs**: by the end of this week 100 (out of 200) are expected at DESY, of which the first 30 have arrived from Ljubljana yesterday.

L brackets - ASD8 board support and common ground: for M4 have been produced, and covered by Ni, for M16 under production.

Photon detector electronics 2

FE: ASD8 boards

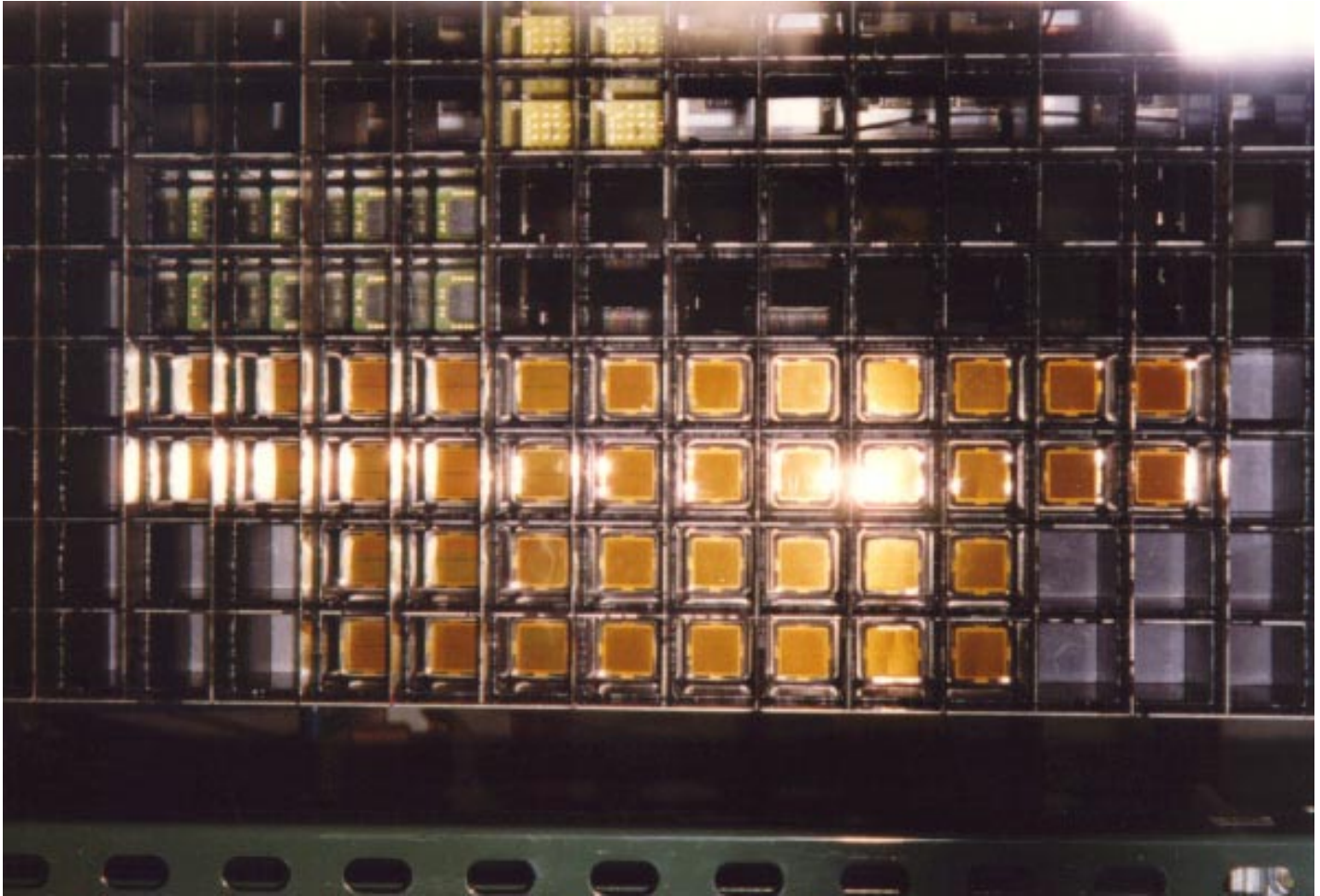
- All produced in Zeuthen.
- More than half tested in Barcelona, back at DESY. Rest being tested, expected at DESY by the end of February.
- QA results: boards are rather uniform.
- Low voltage and threshold distribution: provided via distribution boards on "cable holders", which have been assembled, and expected to arrive early next week.
- Low voltage power supply (linear): the first one (of six) delivered from KEPCO on Monday.

FED

- Final iteration successfully tested at the test beam T24.
- Ordered.
- Expected at DESY by the end of February.

Photon detector: mechanics

Supermodules (10 for the active part of the detector) have **arrived** from Austin.



The mounting mechanics has been produced. The first (empty) supermodule will be installed this week.

Radiator vessel

Assembled in autumn and closed.

Leak checks and search: the method is still the observation of overpressure drop rate (from 20mbar), and leaks are searched for by a leak spray. Leaks on the photon exit window and particle exit window were repaired. At the moment we have problems with the O-ring of the particle entry window, close to the survey mark holes (deformation of the frame around the tightly mounted mark bars, the groove too deep for the O-ring). Fixing the problem has a high priority.

Photon detector: optics

Lens system, lens holder with two lenses per baseboard module (4 PMTs) is under assembly at Northwestern.

After initial problems due to transport at low temperatures in the cargo part of the airplane, the next load comes in a temperature controlled part.

The production, essentially a delicate glueing procedure, has been sped up.

The first half (for the upper detector) expected by mid March, the last early in April.

Slow control

- photon detector monitoring: pulsed LEDs coupled to the plexi glass window: prepared in Coimbra, to be mounted last week of Feb.
- HV: CAEN system, OTR code adapted to the RICH needs
- ASD8 threshold setting, monitoring, and LV monitoring, FE environment temperature monitoring: FieldPoint system of NI, most parts delivered, tested
- radiator gas monitoring: under discussion

Software

- RICH fully part of ARTE
- iterative ring search procedure being built in
- photon detector calibration from data: the first working version was tested on data taken last summer
- alignment of the optical system from data: works in a standalone version, to be incorporated in ARTE
- MIZZI database for RICH under development
- installation data base is being set up

Conclusions

- Installation proceeds well.
- Expected to finish by mid April.
- Looking forward to data taking.