Anode Front-End electronics status.

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CERN
June 2002
Anode Front-End electronics status

- AFEB production status
  - CMP16-G ASIC
  - AFEB production
  - AFEB certification
  - AFEB shipment
- Documentation
- AFEB-ALCT cable production
- Delay chip DEL16 test status
AFEB production status

CMP16_G ASIC

- Produced quantity: 25,000
- Tested: 16,500
- Selected for soldering for US: 13,300
  sent to Dubna: 1,472

- Yield rate: 90%

We have to test more 8,500 chips
AFEB production display

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Total shipped out: 5786

Need to produce 12,000
Total ordered 12,200
Total delivered to FNAL 12,200

Certification statistic:
- Total measured 8600
- Total certified 8262
- Yield rate after cuts 96%
- Final yield rate (including chip selection) ~86%

Current situation is weekly updated on the following WEB page:

N.Bondar, June 10, 2002
AFEB production and shipment rate

AFEB production rate

- **Scheduled production**
- **Actual production**
- **Scheduled delivery**
- **Actual delivery**

**Graph Details**
- Y-axis: Units (0 to 14000)
- Colors and markers for different organizations:
  - PNPI
  - UF+UCLA
  - IHEP

**Years**
- **CY2001**
- **CY2002**
- **CY2003**

N.Bondar, June 10, 2002
Anode electronics assembly instructions.

The following instructions and manuals were prepared and located at the following WEB site
http://www-hep.phys.cmu.edu/cms/ :

AFEB AD16_F user manual

😊 Instruction for AFEB installation
Instruction for AFEB-ALCT cables installation for ME234/2 chamber
Instruction for AFEB-ALCT cables installation for ME1/2 chamber
Instruction for AFEB-ALCT cables installation for ME2/1 chamber
Instruction for AFEB-ALCT cables installation for ME3/1 chamber
Instruction for repair broken M4 thread.

Preparation in progress:
😊 Instruction for AFEB-ALCT cables installation for ME1/3 chamber - the chamber in Lab 7.
Instruction for AFEB-ALCT cables installation for ME4/1 chamber - the chamber in Lab 7.
### AFEB-ALCT cables display

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- Total cables to produce: 10760
- Total produced cables: 7554
- Production balance: 3206

- ME234/2 - 98 sets made, 83 shipped to FAST sites
- ME2/1 - completed, shipped to PNPI.
- ME3/1 - 34 sets made, shipment to PNPI.
- ME1/2 - completed, shipped to IHEP
- ME1/3 - 44 sets made, shipment to IHEP
- ME4/1 - standby position.

N.Bondar, June 10, 2002
Delay chip DEL16 status.

- Produced: 25,000
- Tested: 19,995
- Good chips: 17,138
- Rejected - parameters out of nominal and dead: 2,857

Yield rate (pass all cuts) ~ 86%

After about 1200 measured chips the adapter’s clamp shell connector began to loose contacts with chips. Reason - the gold plated surface of the connector contact degradation. We replaced the adapter with new one.

Current situation with the delay chip test is collected and weekly updated at the following WEB site:


N.Bondar, June 10, 2002
Delay chip DEL16 status.

Delay chip distribution along the groups

Expected number of good chips
Final yield rate after selection

~15900
~64%

Shipped to UCLA:

<table>
<thead>
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<th>Grope 5</th>
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