

OUTLINE

- Milestones Review
- Remaining work

TPC FEE MILESTONES

| Milestone | Baseline | Status / New date |
|----------------------------------|-------------------|---------------------------|
| ❑ PASA (40 000 chips) | | |
| ▪ End Prototyping: | Jan '02 | done (Mar '02) |
| ▪ Engineering run (Start prod.): | Oct '02 | done (May '03) |
| ▪ End production: | Mar '03 | Jan '04 |
| ▪ End of production test: | Dec '03 | Jul '04 (6wks/lot) |
| ❑ ALTRO (40 000 chips) | | |
| ▪ End Prototyping: | Jan '02 | done (Mar '02) |
| ▪ Engineering run (Start prod.): | May '02 | done |
| ▪ End production: | Jan '03 | done (Dec '02) |
| ▪ End of production test: | Dec '03 | on schedule |
| ❑ FEC (4500 boards) | | |
| ▪ End Prototyping : | Dec '02 | done (but optimiz. cont.) |
| ▪ Production: | Jan '03 - Jan '04 | Nov '03 – Aug '04 |
| ▪ Production test: | Mar '03 – Feb '04 | Apr '04 – Nov '04 |

TPC FEE MILESTONES

| Milestone | Baseline | Status / New date |
|-----------|----------|-------------------|
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❑ Readout Bus (216 units)

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|--------------------|-------------------|-------------------|
| ▪ End Prototyping: | Sep '01 | done |
| ▪ New Design: | Dec '02 | done |
| ▪ Production: | Jan '03 – Jul '03 | Oct '03 – Mar '04 |

❑ RCU (216 boards)

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|--------------------------|-------------------|-------------------|
| ▪ End Prototyping: | Jun '03 | Mar '04 |
| • RCU-I (PLDa-based RCU) | Mar '02 | done |
| • RCU-II delivery | Sep '02 | done (Jan '03) |
| • Final design | Feb '03 | Sep '03 |
| ▪ Production: | Jul '03 – Oct '03 | Apr '04 – Jul '04 |
| ▪ Test: | Nov '03 – May '04 | Aug '04 – Mar '05 |

remaining work

PASA

□ Production

- Manufacturing of full-sheet wafer (AMS): Jun-Aug '03
(re-submission 27 May '03)
- Delivery of ER samples: Aug '03 (20 chips)
Sep '03 (500 chips)
- Test of ER samples (Heidelberg - Darmstadt - CERN) Sep '03
- Series Lot Production (25 + 10 wafers) Oct '03 – Jan '04
- Series Production Test (4 lots of ~ 10,000 chips) Feb '04 – Jul '04
(3mm cont.)

□ Automatic Test Equipment (ATE)

- Design and construction of ATE (Darmstadt): by Aug '03
well advanced
- Validation of ATE (Darmstadt – Heidelberg): in progress
- Test Software (Darmstadt): in progress

remaining work

ALTRO

❑ Test Equipment

- Design and construction of ATE (Lund): by end of June
(Pick&Place tool missing)
- Validation of ATE (Lund): in progress
- Software of ATE (Lund): done

❑ Mass Production Test (Lund)

Jul-Dec '03 (3 mm conting.)

remaining work

FEC

❑ Irradiation tests

- TID, SEL and SEU effects studies completed for all components
- Measurement of the critical charge for FPGAs **to be done by Aug '03** (Uppsala, PSI)

❑ New small-series production (15 + 35 boards) (Lund - CERN)

- 15 FEC loaded with all components but PASAs Jun '03
- 15 FEC fully loaded Sep-Oct '03

❑ Call for Tenders (Lund) Jul – Sep '03

❑ Mass Production (Lund) Nov '03 – Aug '04

❑ Mass Production Tests (Frankfurt) Apr '04 – Nov '04

remaining work

FEC

Automatic Test Equipment

- Design and construction of ATE (Frankfurt): by Oct '03
- Preliminary Version of Test Software (Frankfurt): by Oct '03
- Validation of ATE (Frankfurt): by Dec '03

RCU

- Specification Document for the final design (Bergen-CERN) done
- Engineering design of RCU (Bergen – Heidelberg) Jun '03
- Firmware (Bergen – CERN – Heidelberg) Sep '03
- Prototype ready for test Sep '03
- Qualification of final design (Bergen – CERN) Oct '03 - Mar '04
- Production (CERN) Apr - Jul '04
- Mass Production test (CERN) Aug '04 - Mar '05

FEE Planning Update

