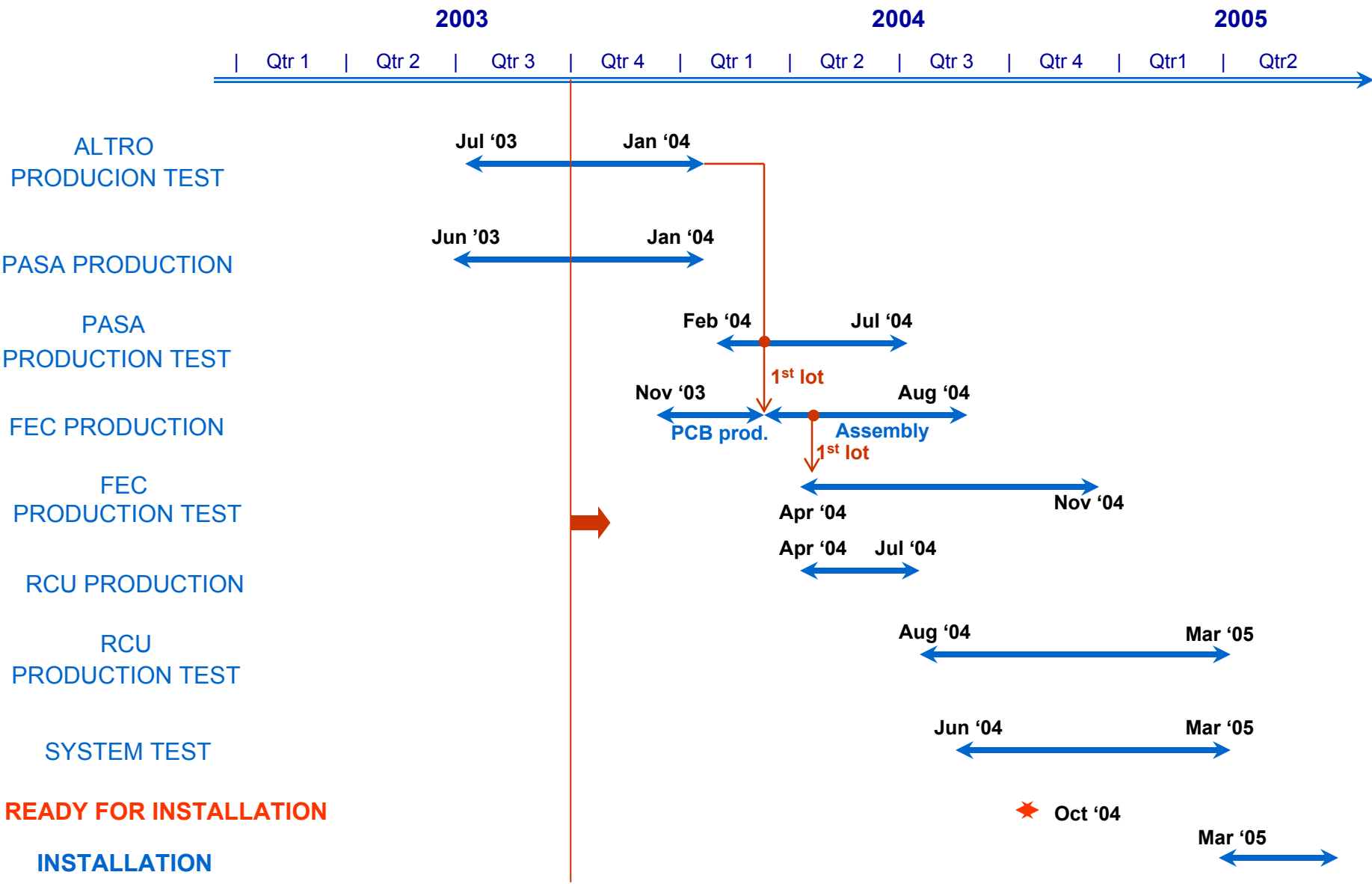


## OUTLINE

- Milestones Review
- Remaining work

# FEE Planning Update



# TPC FEE MILESTONES

## Milestone

## Status / New date

### ❑ PASA (40 000 chips)

- End Prototyping: done (Mar '02)
- Engineering run (Start prod.): done (May '03)
- End production: **Jan '04 (on schedule)**
- End of production test: **Jul '04 (6wks/lot ⇒ start prod. test Feb '04)**

### ❑ ALTRO (40 000 chips)

- End Prototyping: done (Mar '02)
- Engineering run (Start prod.): done (May '02)
- End production: done (Dec '02)
- End of production test: **Jan '04 (on schedule)**

### ❑ FEC (4500 boards)

- End Prototyping : done (Jun '03)
- Production: **Nov '03 – Aug '04 (assembly starts Mar '04)**
- Production test: **Apr '04 – Nov '04**

# TPC FEE MILESTONES

## Milestone

## Status / New date

### ❑ Readout Bus (216 units)

- End Prototyping: done (Dec '01)
- New Design: done (Dec '02)
- Production: **Jan '04 – Jun '05**

### ❑ RCU (216 boards)

- End Prototyping: **Mar '04**
  - RCU-I (PLDa-based RCU) done
  - RCU-II delivery done (Jan '03)
  - Final design done (Sep '03)
  - Characterization **Oct '03 – Mar '04**
- Production: **Apr '04 – Jul '04**
- Test: **Aug '04 – Mar '05**

# remaining work

## PASA

### □ Production

- Series Lot Production (25 + 10 wafers) Oct '03 – Jan '04
- Series Production Test (4 lots of ~ 10,000 chips) Feb '04 – Jul '04

### □ Automatic Test Equipment (ATE)

- Optimization of ATE (Software): in progress
- Integration of PASA ATE and Lund ATE (Robot) by Jan '04

## ALTRO

### □ Test Equipment

- Optimization of ATE by Oct '03

### □ Mass Production Test by Jan '03

# remaining work

## FEC

- ❑ Irradiation tests
  - TID, SEL and SEU effects studies completed for all components
  - Measurement of FRAM FPGAs (ACTEL ProAsic+) to be done by Oct '03 (Oslo)
  
- ❑ New small-series production (15 + 35 boards) (Lund - CERN)
  - 15 FEC loaded with all components but PASAs Oct '03
  - 35 FEC fully loaded Nov '03
  
- ❑ Call for Tenders (Lund) Oct '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

- ❑ Firmware (Bergen – CERN – Heidelberg) Oct '03
- ❑ Qualification of final design (Bergen – CERN) Oct '03 - Mar '04
- ❑ Production (CERN) Apr - Jul '04
- ❑ Mass Production test (CERN) Aug '04 - Mar '05