

CERN Contribution

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January 30th 2009

Introdcution

- According to Eckhard full EU contribution could not be spent by all institutes
- Some institutes could claim more than foreseen in the consortium
- CERN is one of them
- How could that happen?
 - Technically
 - Budget wise

Deliverables

- Non-linear collimation system
 - Delivered, concept investigated for LHC collimation system upgrade
 - Additional: MAPCLASS
- New electron cloud code
 - Factor 2
- Prototype phase monitor
 - Novel concept developed complementing coupled local oscillators
 - Delivered and tested with beam
- Prototype precision BPM
 - Developed, bench tests, several beam tests, some problems with beam losses
 - New concept developed, will be built and tested after FP6
- Prototype wide band current monitor
 - New concept developed to avoid problems of previous design, RF expertise needed to be added
 - Bench tests validate design concept
 - Some problems with feedthroughs to be solved

Deliverables (cont)

- Halo and tail generation library
 - Available
- Collimation system studies
 - Collimator modelling
- Failure modes
 - Contributions to ILC main linac and CLIC drive beam decelerator and collimation system
- Luminosity performance studies
 - Very significant role in emittance preservation studies for ILC and CLIC
 - Additional: experiments in CTF3
 - Additional: Fast beam-ion instability in the CLIC main linac has been identified as a critical issue
 - A dedicated program has been developed and the problem studied with it, exported to Cornell
 - Additional: CLIC parameter optimisation
 - Significant theoretical beam dynamics studies
 - Understanding of very short range wakefields

CERN Spending

- Overall planned CERN contribution has been 2200k€
 - Overspending is officially 260k€, traced via budgets
 - Conservative estimate, additional effort not traced
- CERN management allowed me to spend the full EU contribution to CERN for EUROTeV
 - Hence, I planned to use the full 1482k€ from the EU, money has been traced via EU accounts
 - E.g. originally estimated 180 fellow months, with reduction to 9M€ changed to 150 (+30 assumed from overheads), spent 176
- Consequently, CERN happened to be able to claim the 1640k€ including overheads
 - No adjustment has been made when Eckhard announced the potential underspending of some institutes