08.12.99
LARG Elec
Meeting

HEC Preshaper
Main Steps of the Project

Preshaper functions:

- signal inversion
- gain to adjust amplitude ranges
- compensate sampling ratio in HEC-2
- compensate preamplifiers rise time
- additional integration in order to reach 50 ns peaking time

Preshaper occupies the place of 0T on the FEB

Design and production by JINR, Dubna

1. Preshaper v.0

Date	Action	Respons.
11.1999	**Lab tests of hybrids from CERN FEBs Data analysis**	**W.C, L.K, P.St**
11.1999	**Noise measurements in lab**	**L.K.**
12.1999	**Burn-in tests of 10 hybrids from spare**	**W.C, L.K.**
12.1999	**During LARG week present and discuss the project in LARG ELEC**	**L.K.**
12.1999	**Radiation tests of 10 hybrids**	**M.K., E.L.**
02.2000	**Prepare documents for DR**	**All**
03.2000	**Design Review**	**All**
04.2000	**Equip 3 FEBs, test and install at CERN**	**W.C, L.K., E.L.**

2. Preshaper v.1

Date	Action	Respons.
01.2000	**Design and simulations**	**E.L.**
02.2000	**Documents for DR**	**All**
03-04.2000	**Prepare 28 hybrids (~1 of each type) and test in lab**	**E.L.**
06.2000	**Test 28 hybrids in beam setup**	**L.K., E.L.**
07-12.2000	**Produce additional 112 hybrids**	**E.L.**
10-12.2000	**Lab tests; burn-in; radiation; in beam setup with FEB-1**	**L.K., E.L., P.St, ...**
12.2000	**Equip 4 FEBs for combined test (FEBs will be tested in Kosice)**	**E.L.**
01-04.2001	**Prepare documents for PRR**	**All**
05.2001	**Production Readiness Review (to be organized by HEC, invite all people concerned)**	**All**
07-11.2001	**First production batch ~300 hybrids, QC tests**	**E.L.**
12.2001	**"2 FEC milestone" Equip 6 FEBs for 2 FE crates**	**E.L.**

Date	Action	Respons.
01-12.2002	**Production and QC tests of 1400 hybrids**	**E.L.**
02.2002	**Test setup for wheel assembling**	**L.K., E.L.**
01-06.2003	**Produce 300 hybrids, complete QC tests, deliver all hybrids (to be ready for ATLAS installation)**	**E.L.**

3. Summary

- Production volume

  For ATLAS: 1536 hybrids
  Plus: study, spare, TB, wheel tests setup
  Production: 2000 hybrids

- Important dates

  03.2000 Design Review
  12.2000 Equipment for combined tests
  05.2001 Production Readiness Review
  12.2001 2 FE crates milestone
  06.2003 ATLAS installation