

Padova

## **STATUS OF BMUON CHAMBERS TRIGGER AND CONTROL ELECTRONICS**

### ***ASICS:***

- BTI	Bunch and Track Identifier	
	full performance chip	DONE
	5 tested prototypes in PLCC68 ceramic package	ARRIVED
	200 tested pcs in TQFP64 plastic package	ARRIVED
	200 tested dies	ARRIVED
	54000 kgd (tender+production)	6/00-12/01
- TRACO	Track Correlator	
	full performance chip signoff	DONE
	5 tested prototypes in QFP240 plastic package	6/99
	50 tested pcs in QFP240 plastic package	9/99
	5100 tested pcs in QFP240 (tender+production)	1/01-12/01
- TS	Track Sorter	
	full performance chip but 5V technology (TSS)	DONE
	10 TSS prototypes in CQFP ceramic package	ARRIVED
	full performance prototype submission	9/99
	10 tested prototypes	1/00
	2000 tested pcs (tender+production)	1/01-12/01
- TT	Theta Tagger	
	full performance chip (FPGA/pASIC)	1/00
	600 pcs (tender+production)	1/01-12/01

### ***PCBs and Modules:***

- CB	Control Board	
	I prototype with test pulse, clock distribution, monitoring and JTAG controller; 1 piece	DONE
	I prototype test	DONE
	II prototype for chamber control during production and irradiation tests	DONE
	Slow Control optical link test	DONE
	irradiation tests (neutrons)	5-6/99
	full performance Test Pulse Unit test	9/99
	full performance board	12/99

	260 pcs (tender+production)	3/01-9/02
- BTI board	I prototype: 4 BTIs in ceramic package with FIFOs; 1 piece test with simulated tracks	DONE DONE
	II prototype: 2 BTIM (16cm x 1 Slayer) test with simulated tracks test on MB96 with cosemics; 3pcs	DONE DONE DONE
- BTI Modules	I prototype: 4 BTIs in plastic package 66mm x 24mm on FR4 substrate 100pins SMT type; 25 pcs test with simulated tracks irradiation tests in gamma cell 5krad and 10krad Steady-State Life test (2000h at 125°C) MIL-STD-883E Method 1005.8 irradiation tests (neutrons)	DONE DONE    5/99 6/99
	II prototype: 4 BTI dies on LTCC substrate 50mm x 22mm 80pins SMT type full performance; 40 pcs test with simulated tracks irradiation tests (neutrons) 12000 pcs (tender+production)	5/99 6/99 6/99 9/00-3/03
- PHITRB128	128 channels phi view Trigger Board full performance with 5V/3.3V mixed power supply test with simulated tracks test on MB96 irradiation tests (neutrons) 1000 pcs (tender+production)	6/99 7/99 9/99 3/00 3/01-9/03
- PHITRB32	32 channels r-phi side Trigger Board test with simulated tracks test on MB96 irradiation tests (neutrons) 90 pcs (tender+production)	12/99 3/00 6/00 3/00 3/01-3/02
- THETATRB	128 channels theta view Trigger Board test on chamber irradiation tests (neutrons) 350 pcs (tender+production)	9/99 12/99 3/00 3/01-9/03

- SB	Server Board	
	I prototype: for TRB test	6/99
	II prototype: full performance board	12/99
	test on chamber	3/00
	irradiation tests (neutrons)	6/00
	240 pcs (tender+production)	3/01-9/02
- SCB	Sector Collector Board	
	Trigger optical link prototype: 4.5Gbit/s	6/99
	full performance board	6/00
	test on chamber	9/00
	irradiation tests (neutrons)	3/01
	65 pcs (tender+production)	6/02-12/03
- SCM	Slow Control Master	
	Master Control Board prototype	6/00
	full performance MCB	3/00
	test on chamber	6/00
	irradiation tests (neutrons)	3/01
	35 pcs (tender+production)	6/03-6/04

***Mechanical parts – Minicrate design***

- Minicrate	aluminum profile extrusion	9/99
	cooling tests (Trigger and Readout)	12/99
	MB1 minicrate assembly	6/00
	Tender+production	9/01-12/03