HERA B FLT

Hardware Status

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28 - February - 2000

FLT network I

Track Finding Unit (TFU):

OTR ⊕ μ-tubes = 55

OTR ⊕ μ = 61

OTR ⊕ μ ⊕ ITR = 73

❋ 65 TFU.V4 delivered to DESY ✔

❋ ∑ = 89 expected mid May '00

➜ HW commissioning of 3 TFU's/week accomplished !!!!!!!!!!!!!!!!!!!!!!!!!!!!

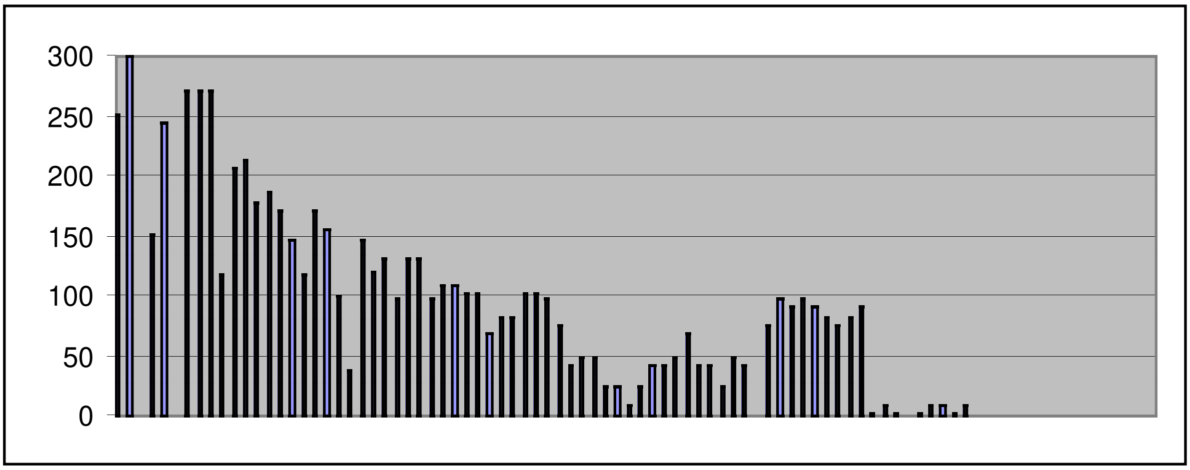
(2.5/week including repairs; start week 41 '99)

❋ 60 TFU MB V.4 (LVDS) delivered to DESY ✔

❋ ∑ = 80 expected mid May '00

Peter, see we did it!

Days at DESY versus TFU #



FLT network II

Track Parameter Unit (TPU):

4

- **4 TPU .V4 delivered to DESY ✔**
- 2 spares ready in MA

Trigger Decision Unit (TDU):

1

- **1 TDU .V1 delivered to DESY ✔**
- **4** (4) **LUT sub cards** (pair trigger) **delivered ✔**
- 1 spare TDU.V1 spares ready in MA
- 3 spare LUT sub cards ready in MA
- 4th spare LUT sub card expected end March '00

- **6+1 TPU/TDU MB V.4 delivered to DESY ✔**
- 3 spare boards ready in MA

Ready to rumba?

FLT network III

Additional Messaging System:

✪ **18** (20) 2:1 MUX & converter @ DESY (✔ ECAL&μ)
✪ **2** (2) 4:1 MUX @ DESY (μ) ✔
✪ **75** repeater & fan out **BOT** @ DESY ✔
✪ **278** repeater & fan out **TOP** @ DESY ✔
✪ **ALL** LVDS cables @ DESY ✔
✪ **1** (1) 2:1 PECL^2 **fan out** → design phase
(high pT + ECAL M,P,1 @ 40 MHz) expected end **March '00**

Optical Links (μ, μ-pre, hipT-pre, OTR, ITR, FLT):

♥ **1271** opttra11 (Mitel, TX) delivered ✔
♥ **1000** opttra13 (Honeywell, TX) delivered ✔
♥ **2150** optrec8 (Honeywell PIN, RX) delivered ✔

Ready to rumba!

Autobahn Chips

Group	A/B's (1999)	ϑ [°C]	δt	accidents	loss operation	failure: opert'n **loss**	failure: δt @ loss [wk]	failure: **failure symptoms**	spares: # of spares	spares: sufficient	request
μ pre	787	60	< 3m	16	14	**10%**	**0-?**	**did not work**	?	?	**50**
high pT pre	1241				20			> just starting <		?	**-**
ITR	244	< 50	< 9m		4	**5%**	**1-5**	**did not work**	4	yes	**0**
FLTLB	1833	55	< 6m		**?**	**≈1 % ?**	**?**	**?**	**3**	**no**	**?**
TFU	2287	55	< 9m		15	**1%**	**0-1**	PLL, TTL hi too low, TTL I/O cell	81	yes	**0**

Σ **6392**

Notes:
- FLT_LB situation not clear at all! Diagnostics?
- FLT_LB does not work with "**ZRAE9718**" batch.
- Total extra need not clear.

- **failures** show no pattern, **except certain batch + FLT_LB**
- **unwarranted panic ?**
- **some FLT_LB information is missing**

Latency

☛ **sub systems please check you numbers!**

http://www.desy.de/~gerndt/papers/HB_notes/latency.ps.gz

available = **10.2 μs**

“realistic average latencies”

muons: **10.5 μs**
electrons: 9.0 μs
highpT: 6.4 μs

- consider **removing MU4** from FLT
- **consider making the FCS faster**

Still ***ready*** *to rumba,*
but maybe we need to dance a little ***faster!***