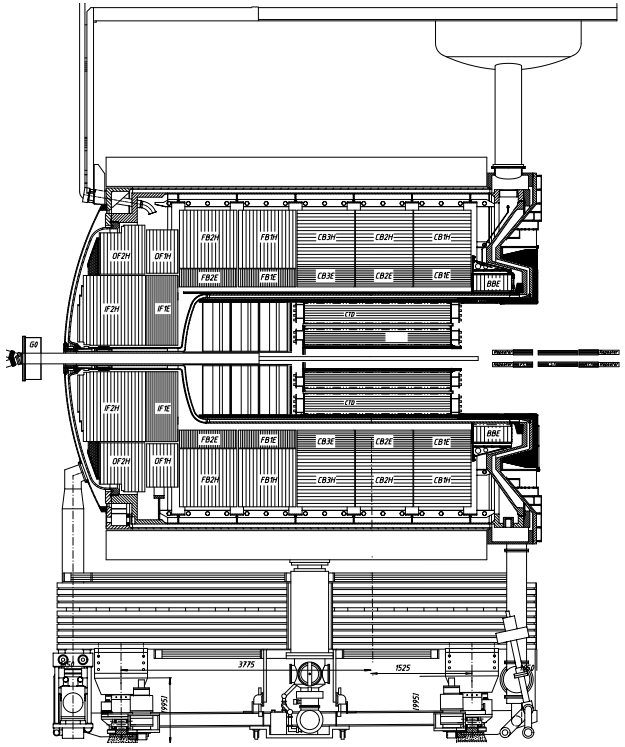
H1 Status Report

HERA Coordination Meeting 12.1.2001

…the brief summary:

- some very time critical items
- on schedule for turn on



Contents

- Beam pipe
- Silicon detectors BST/FST and CST
- CIP
- Schedule
- Wishes for start up

AlBeMet Beam Pipe

Status

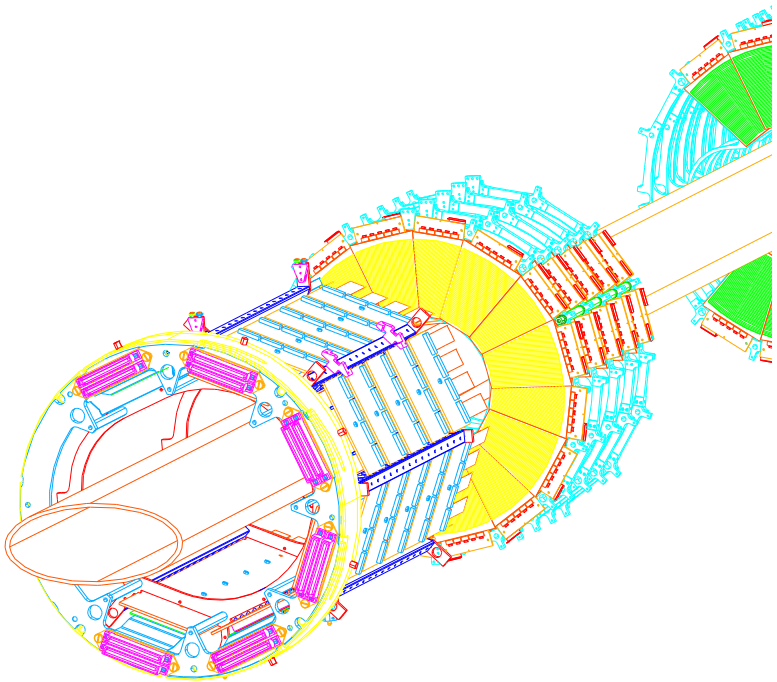
- ok

- bake out to reduce water con-tent

BST/FST

Status

- Bonding procedure established
- on track



Schedule

Jan-Feb strip bonding at DESY
Jan-Mar wheel assembly
Feb repeater test (drive electronics)

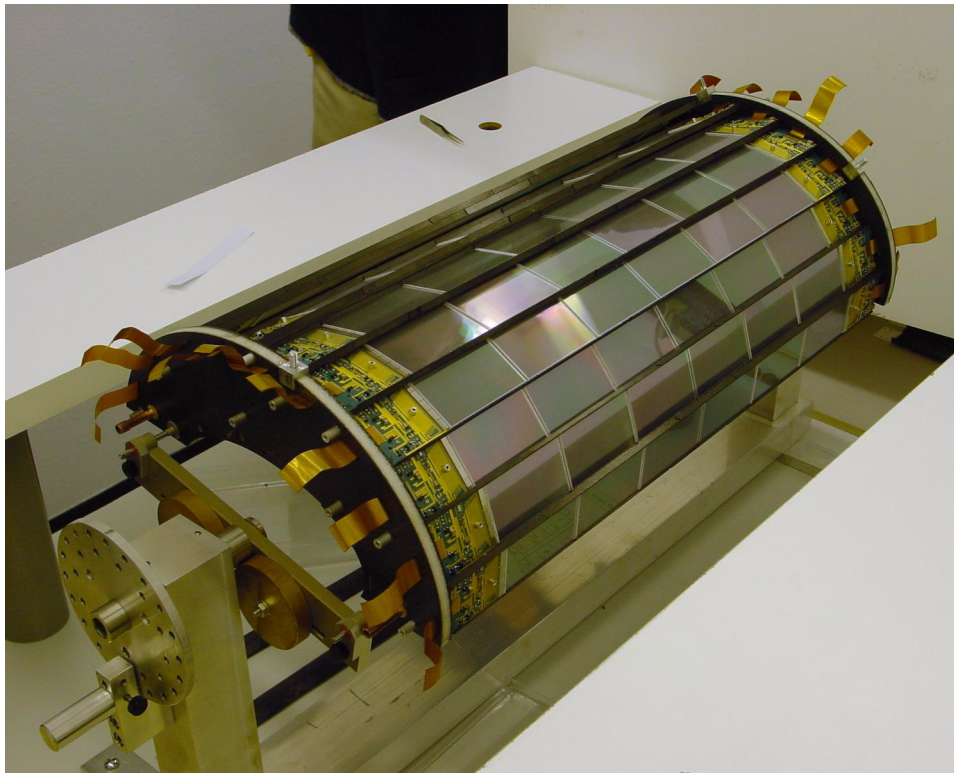
Feb pad module tests (trigger of the BST)
Feb-Mar pad assembly

Mar FST test
End Mar FST installation
Mar BST test
Apr BST Installation

CST

Status

- Detector assembly complete
- rad hard electronics very late



Schedule

mid Feb delivery of rad hard pipeline chips
Mar sawing of ladders, gluing and bonding of new chips
Apr installation

- **very time critical**
- fallback solution
  use less rad hard electronics (old process, new chips)

Central Proportional Chambers (CIP)

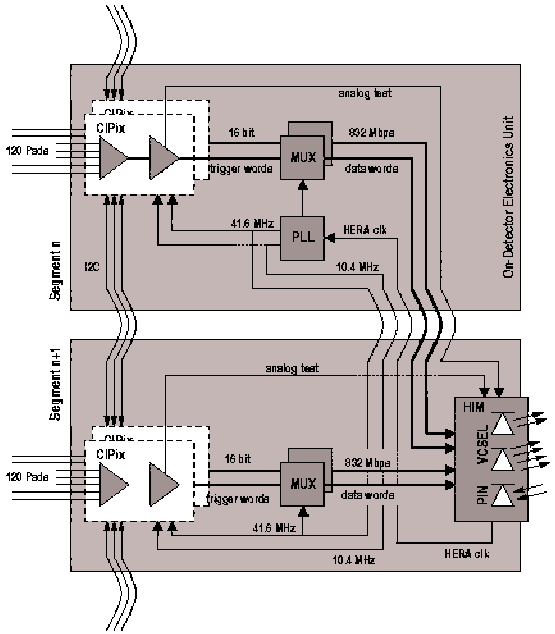
Status

- Chambers ready
- components for optical readout not up to specs
- final electronics installation now at DESY (internal rearrangement of schedule)

Schedule

-Jan	HV tests in Zurich
mid Jan	segment test with full electronics chain
end Jan	shipping of chambers and installation w/o electronics
till end Feb	VCSEL (re)ordering and selection for high light yield. repair of faulty fibre components (90 deg bend).
Mar	fitting of electronics in situ

CIP Optical Readout

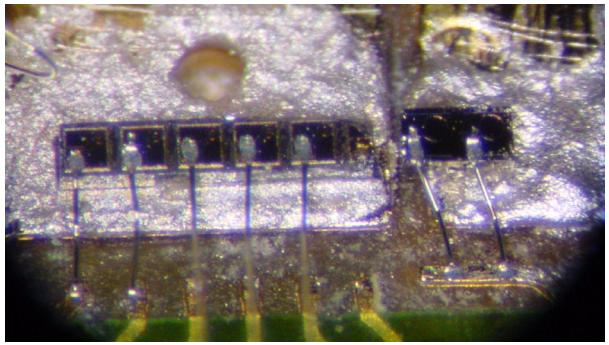


Chamber Readout:

- 4 × 625 Mbps (effectively)
- 2 × analog signals

Chamber side:

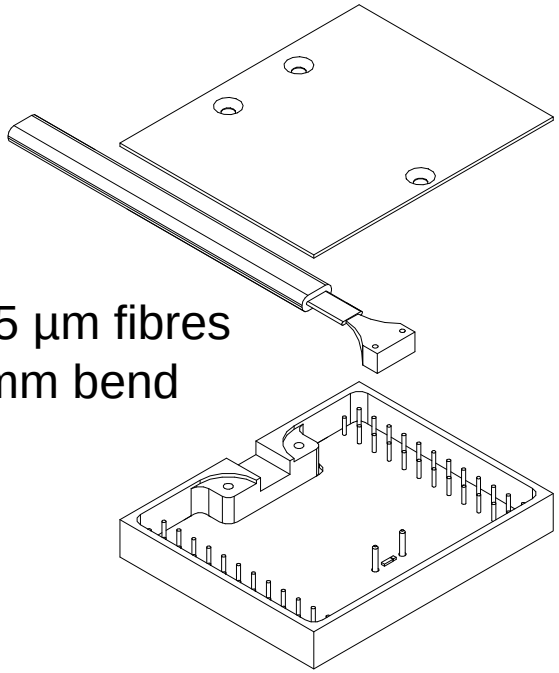
6 VCSELs, 2 pin diodes
5 µm alignment



VCSEL

- prototype ok
- 1st batch could not be bonded
- 2nd batch showed 30% lower gain
- 10 days delivery

8 fibre connector

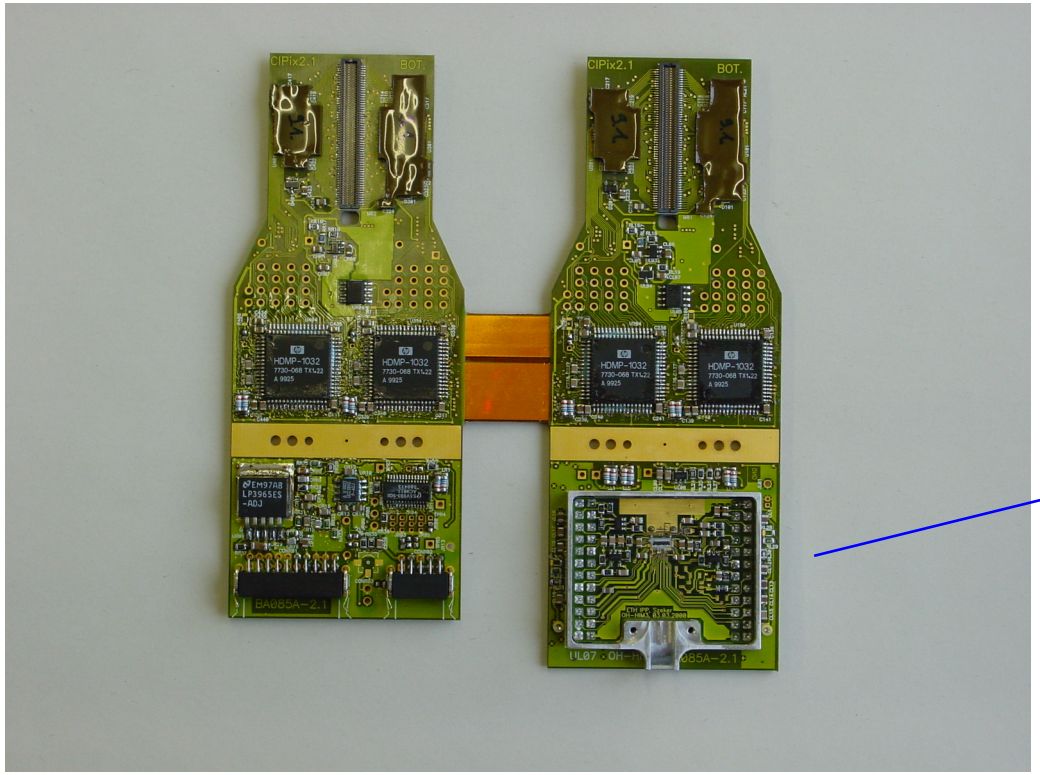


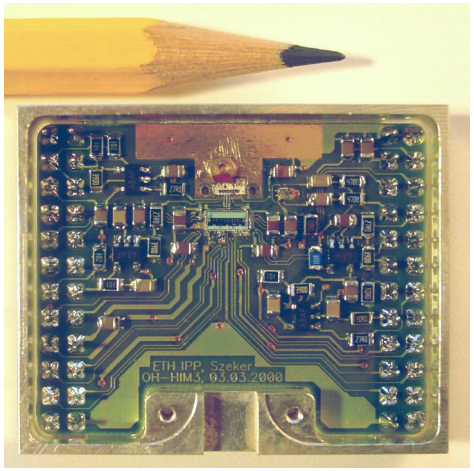
125 µm fibres
2 mm bend

Fibres

- prototypes ok
- 18/50 useable, need 40
- 10 days for repair

CIPiX Board



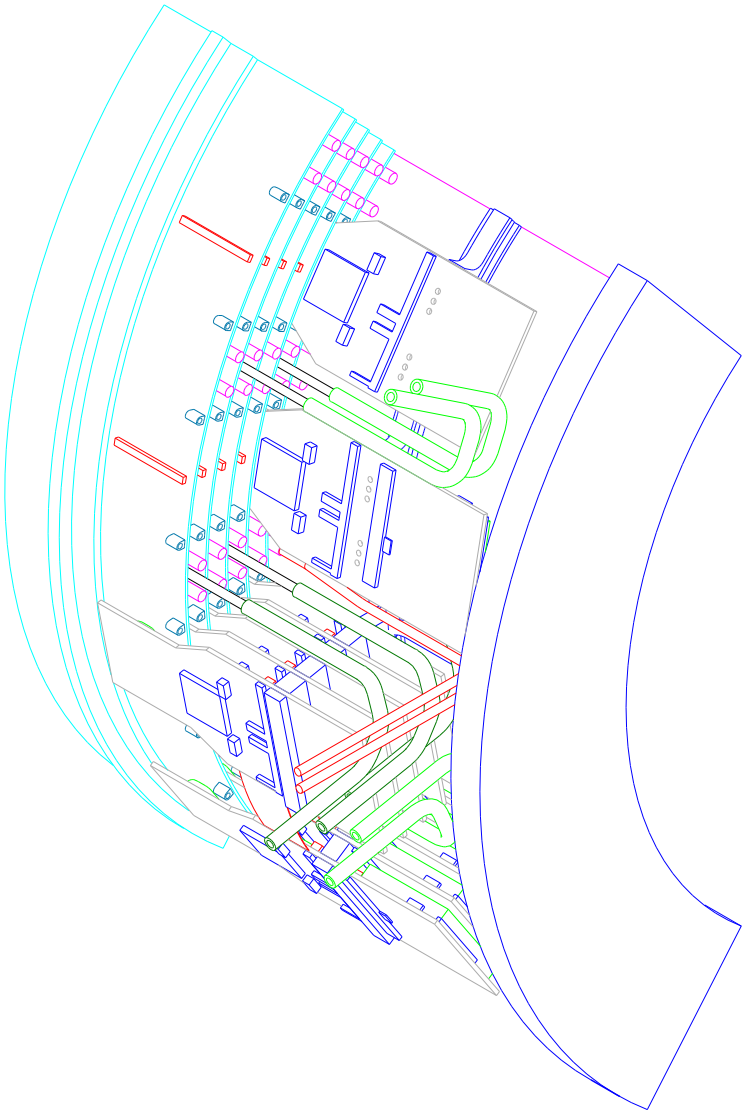


- multilayer Kapton link
- 120 channel each
- each pair controlled by 8 optical fibres

Present plan:

- fit all CIPix boards individually w/o optical hybrid
  (have to sit tight to establish good contact)
- install boards in situ

CIP Endflange



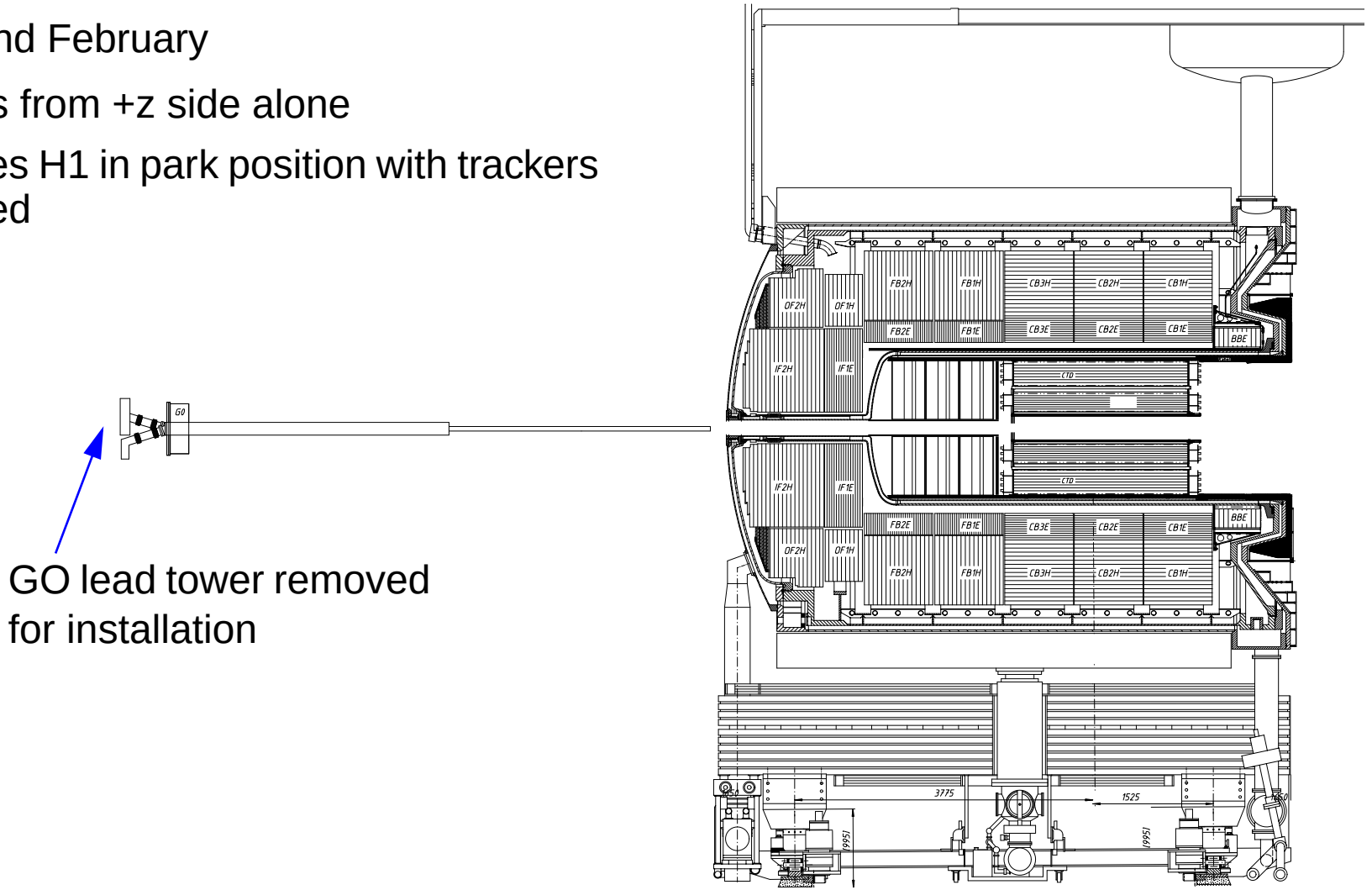
Mounting of Electronics

- 40 modules
- 300 W
- water cooling (maintain good surface contact)

GO Insertion

Status end February

- access from +z side alone
- requires H1 in park position with trackers installed



GO lead tower removed for installation

Installation Schedule

4.1. Transport CTD to Hall North
15.-24.1. Install new CIP in CTD
15.-17.1. Mount GOB fixture to LAr cryostat
25.1.-5.2. Cable and test CTD
30.1. Transport FTD to Hall North
7.-9.2. Install GOA support at LAr cryostat
7.2.-9.3 Install and test GO/GG subcooler box
8.2. Transport GO#3 magnet to Hall North
13.-21.2 Mount and test new central beam pipe
14.2. Move FTD, GOB support, CTD into cryostat
22.2. Move GO magnet with beam pipe into cryostat

28.2. Move H1 into beam position
5.-13.3. Connect GO supplies
1.-18.3. Installation of CIP electronics
14.-18.3. GO magnet cold test
19.-29.3. Install and test FST
30.3.-6.4. Install and test CST
9.-16.4. Install and test BST
10.4 Transport GG magnet to Hall North
15.4. Easter Sunday
17.-25.4. Install and connect GG magnet
26.4.-2.5. GG magnet cold test
3.-13.5. Install and test new BPC
14.-29.5. Install and test Spacals
1.6 Close H1
2.-17.6. Cosmic test

Installation Scheduled cont'd

Tunnels 2001

22.-26.1. Install photon detector
5.-9.2. Install new FNC
19.-23.2. Install 60 m FPS pot
19.-23.3. Install ETAG-40
2.5. Close tunnel

HERA startup 2001

June H1 ready for machine startup

July luminosity measurement available

Shutdown 2001/2002

17.12.-2.1. Install FPS fibre detectors

Wishes for 2001

Some almost trivial remarks

H1

- complete and operating detector

in particular

- new CIP
- CST with rad. hard electronics
- FST/BST

Operation and Physics goals

- understand technical prerequisites for high luminosity running
- understand backgrounds
- establish high luminosity running

and then hopefully…

- establish polarization
- provide some data with polarized beams (a few pb^{-1}).