Endcap Feedthrough Production at Victoria

Status Summary

LARG week
07/01

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Component Status

- All flanges, funnels, bellows, and VCR T-glands in stock, cleaned, and tested.
- Heater parts ready for assembly; still waiting for final word from BNL on connectors for power and RTD's.
- All vacuum cables in stock (232 still to be tested).
- Pigtails - 1143 / 1725 received to date; arriving at steady pace.
- Pincarriers - 96 received to date, 24 more expected this week.
- Five feedthroughs completed since last LARG week; total of nine feedthroughs completed (three feedthroughs presently under construction).

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Pigtail Inventory

type	received *orsay + uvic - returned*	total	expected
T47	508+18	526	807
T48	438+12- 1(1)	449	642
T49	43	43	75
T50	16	16	39
T51	16+20	36	59
T52	33	33	63
LV	40	40	40

(1) - *returned to Axon for repair*

Vacuum Cable Inventory

(not all tested yet)

type	received	returned	expected
Signal	1750	0	1750
LV	40	0	40

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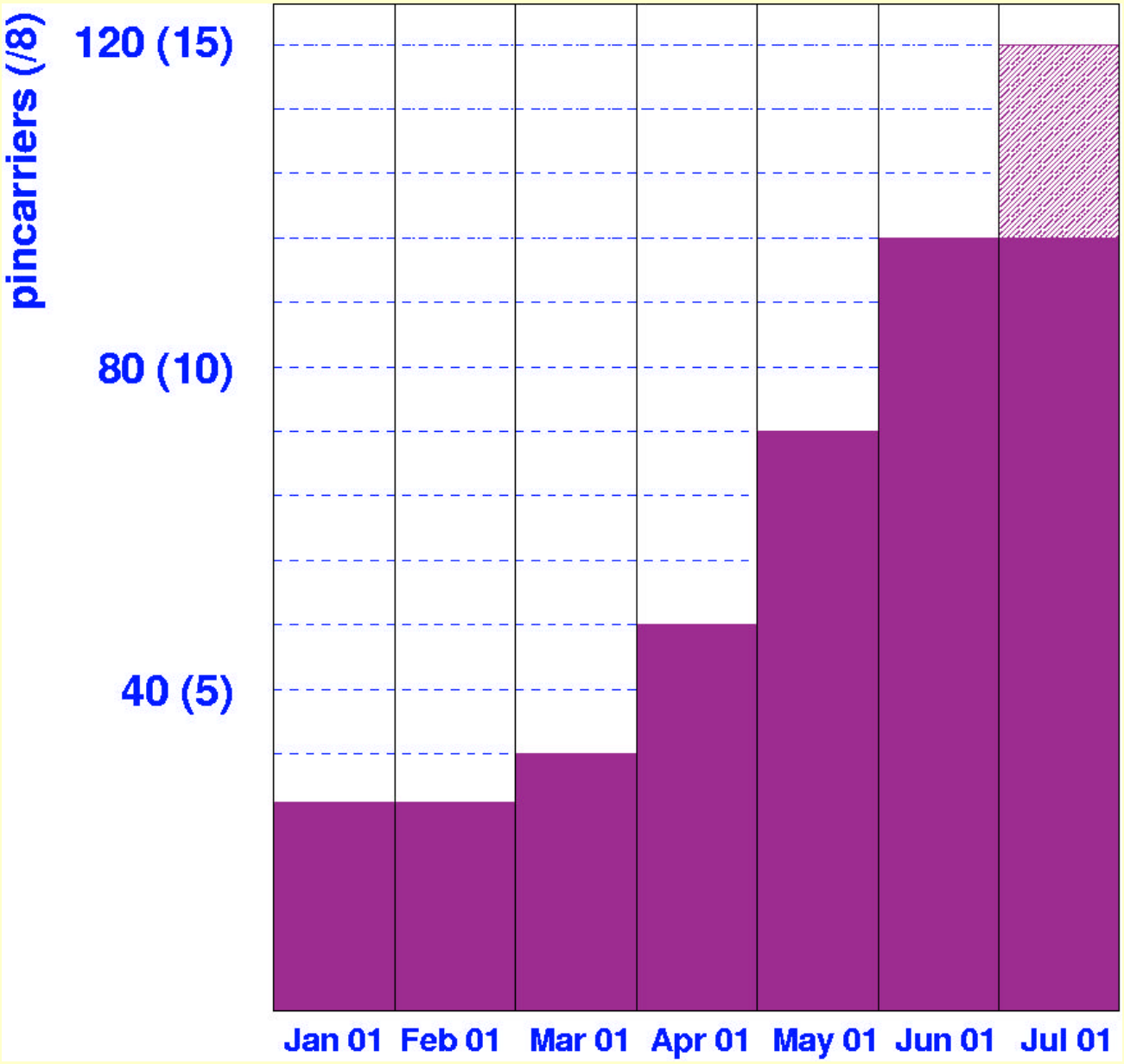
Integrated Victoria pincarrier receptions



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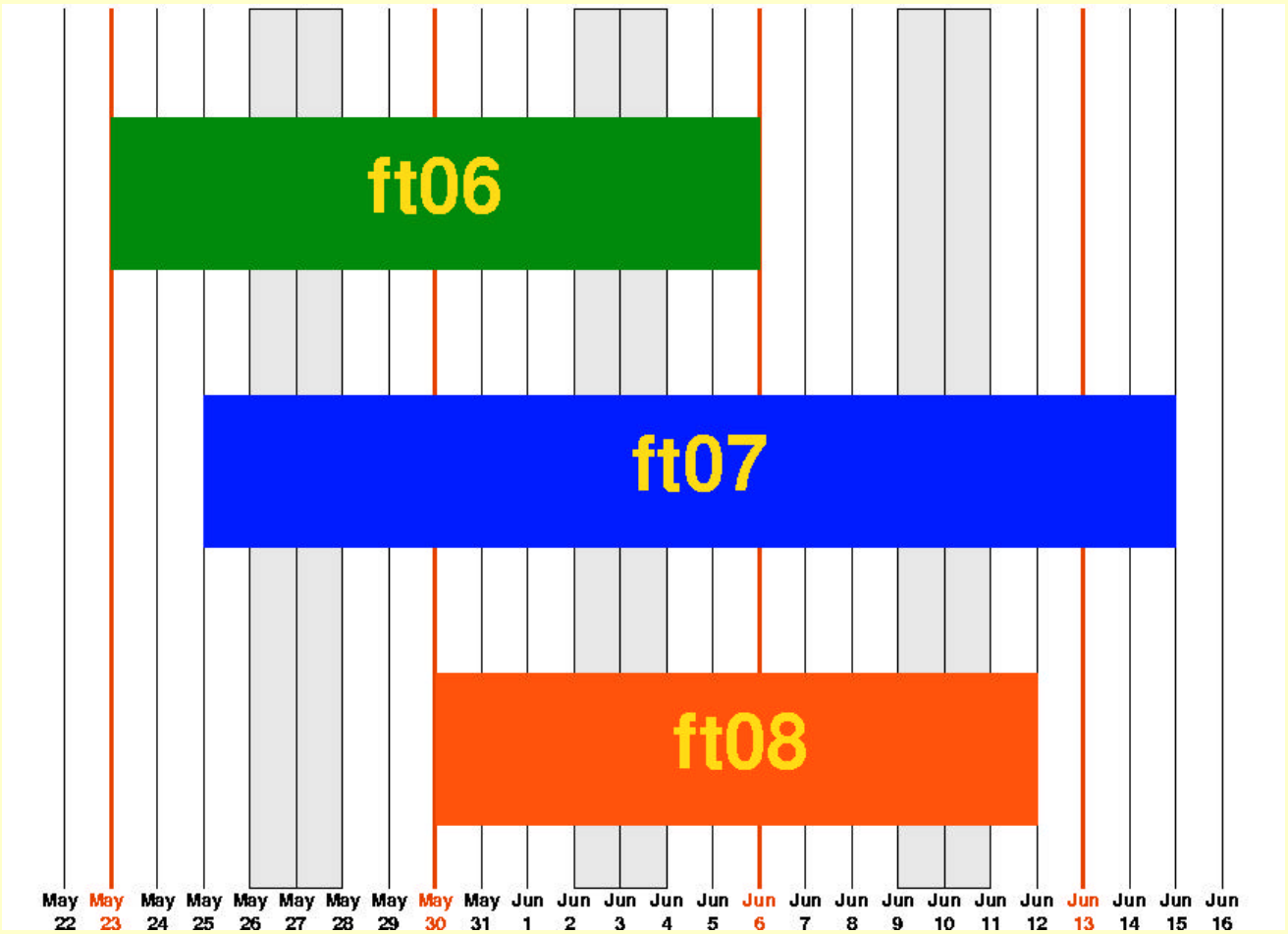
FeedThrough Production Rate



- **Batch of 24 pincarriers arrived in May**
- **3 FeedThroughs built in 23 day period**

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Projected Production Rate

Date	Build (total)	Type	At CERN
30-jun-2001	(9)	(9 STD built to date)	
31-jul-2001	2 (11)	(1 HEC, 1 SPCL)	
31-aug-2001	2 (13)	(1 HEC, 1 SPCL)	
30-sep-2001	3 (16)	(1 HEC, 2 SPCL)	
31-oct-2001	3 (19)	(1 HEC, 2 STD)	4
30-nov-2001	3 (22)	(2 STD, 1 FCAL)	16
31-dec-2001	2 (24)	(2 STD)	19
31-jan-2002	4 (28)	(4 STD)	23
28-feb-2002	3 (31)	(1 HEC, 1 SPCL, 1 STD)	27
31-mar-2002	3 (34)	(2 STD, 1 FCAL)	30
30-apr-2002	3 (37)	(2 HEC, 1 SPCL)	33
31-may-2002	3 (40)	(1 HEC, 2 SPCL)	35
30-jun-2002	4 (44)	(4 STD)	38
31-jul-2002	3 (47)	(3 STD)	42
31-aug-2002	2 (49)	(2 STD)	46
30-sep-2002	4 (53)	(4 STD)	46
15-oct-2002	2 (55)	(1 HEC, 1 SPCL)	50
15-nov-2002			55

- assumes continued supply of pincarriers

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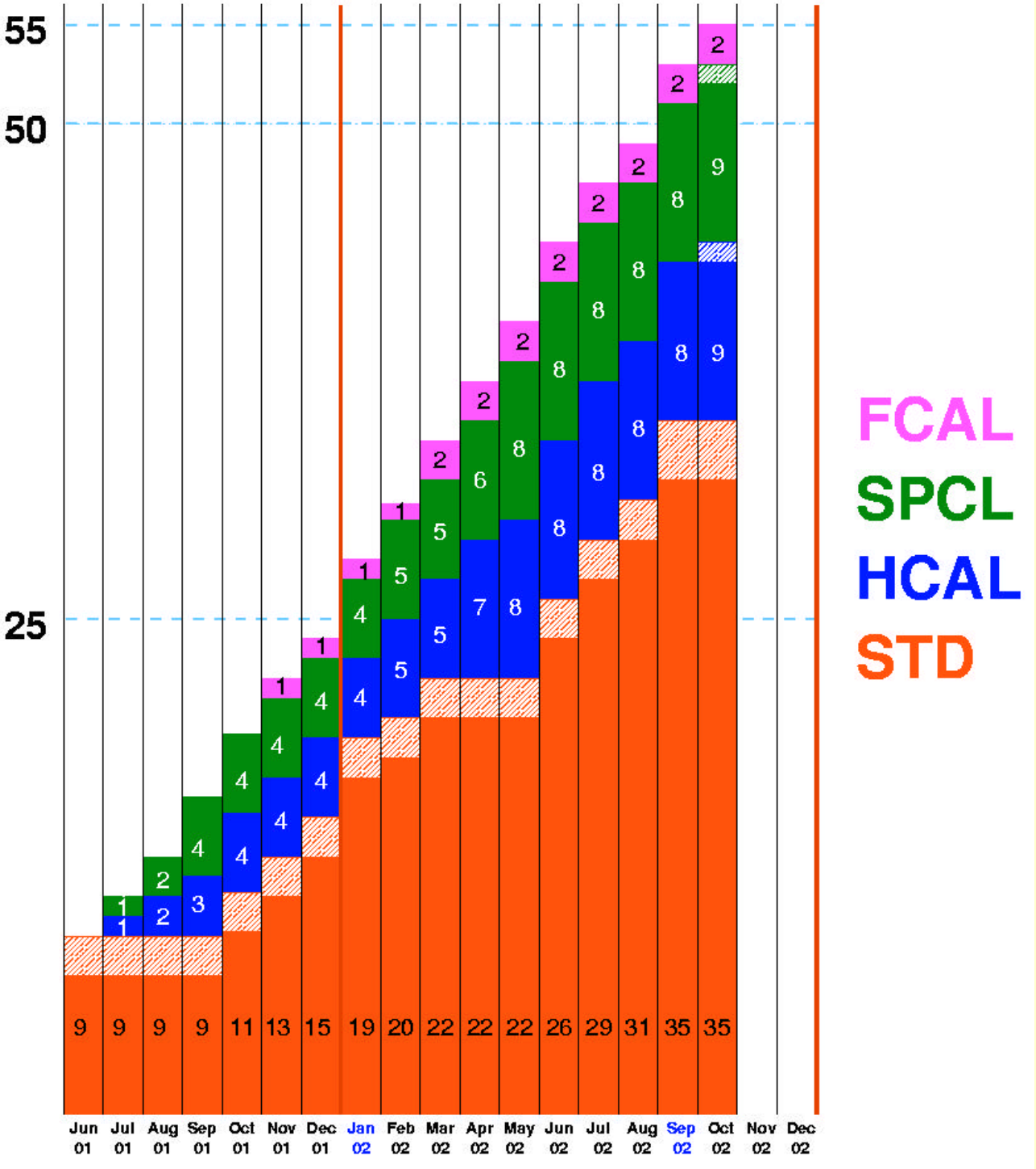
Projected Integrated Production Rate



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First HEC EndCap FeedThrough built in Victoria at end of June

ATL-AE-AN-0002

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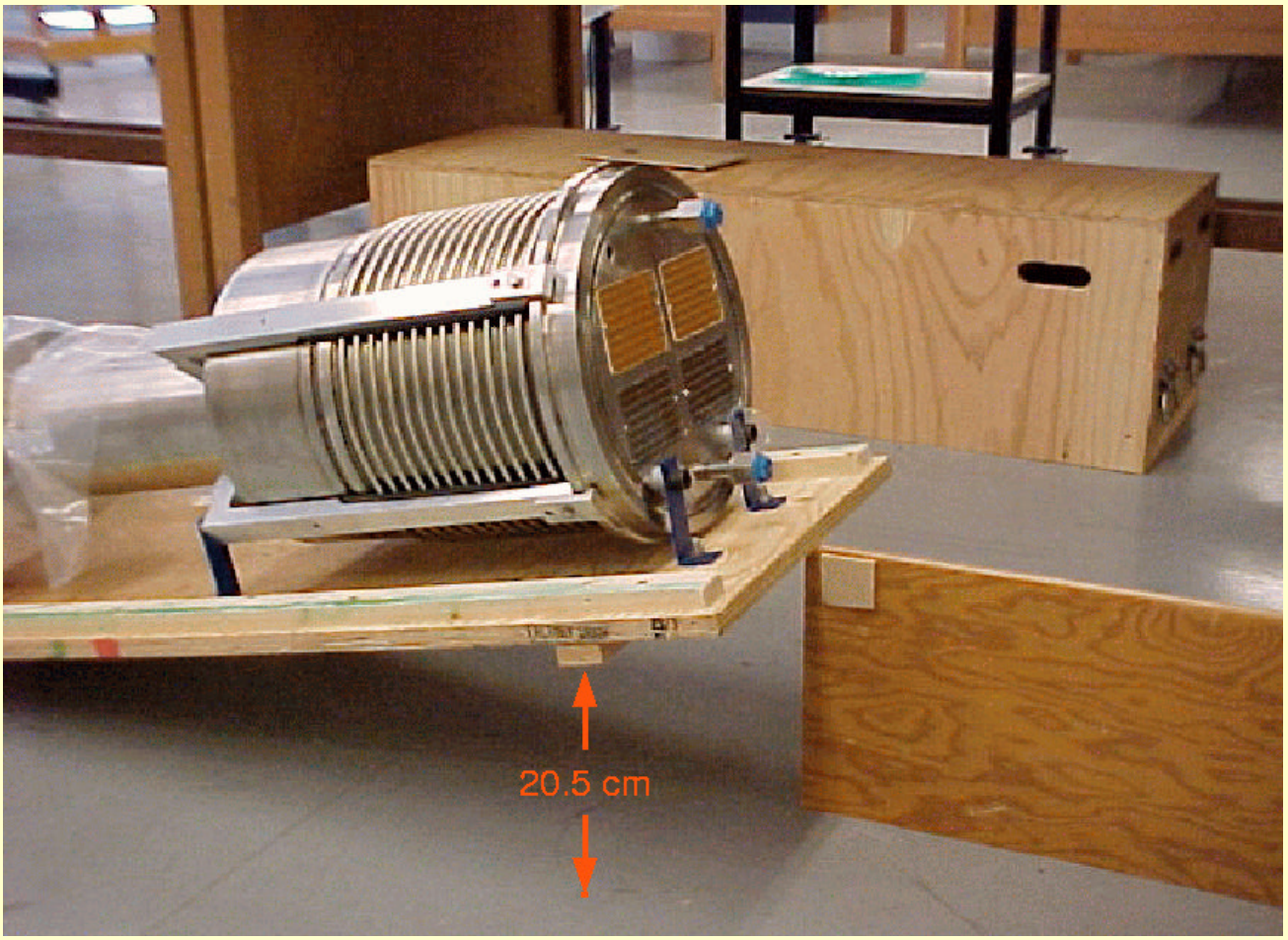
Plan to ship 4 feedthroughs to CERN in September, followed by electrical and vacuum reception test equipment



- **Shock test: FeedThrough dropped from 20.5 cm**
  - **no damage to bellows convolutions**
  - **bellows volume still leak tight**

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Electrical tests at CERN

- Most electrical test equipment has now been purchased or built.
- Some software development still remains to be done.

- Tests On Reception:
  - Crosstalk plus precision resistance
  - Require 1 *long* day per feedthrough

- Tests After installation:
  - Crosstalk plus precision resistance
  - Require 1 *long* day per feedthrough
  - *Requires close access to feedthroughs from scaffolding*

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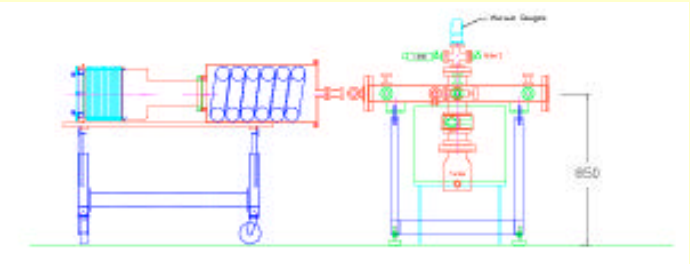
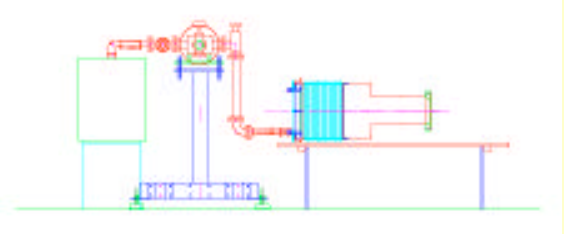
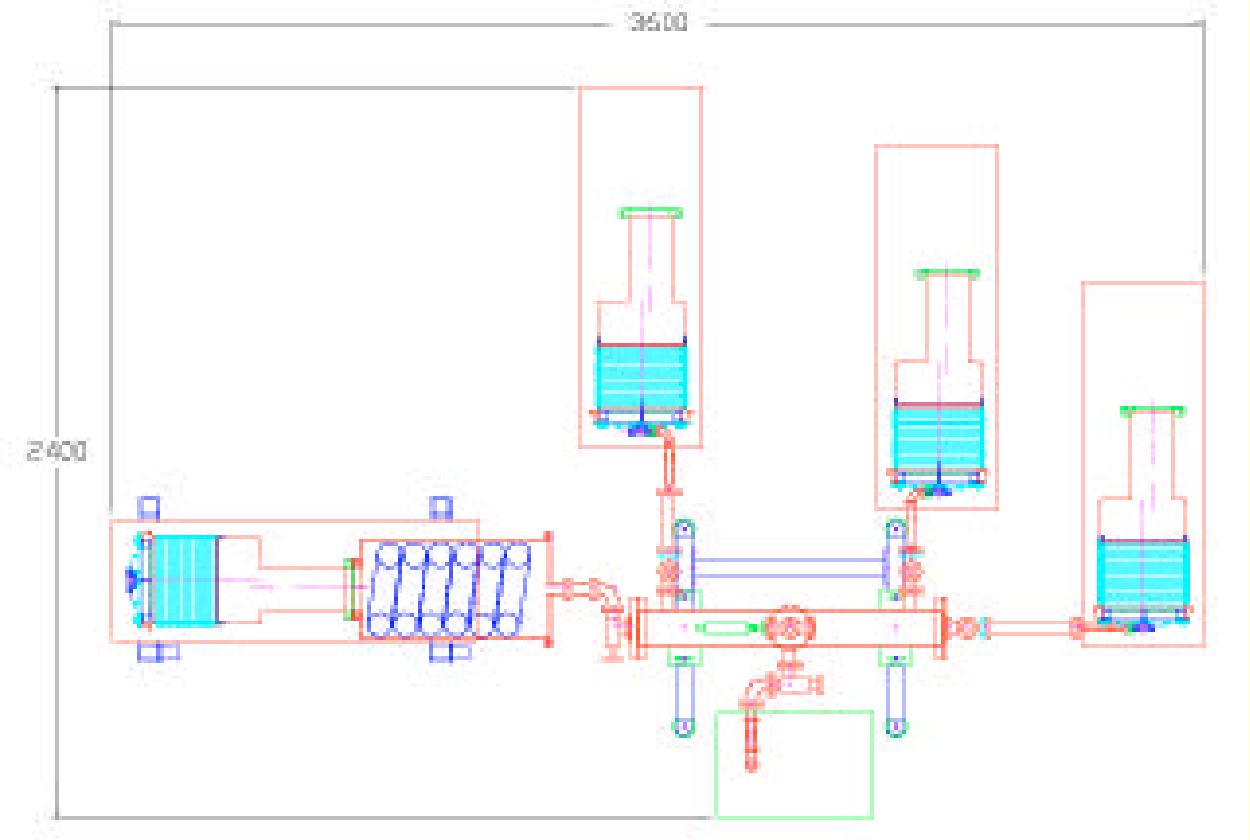
Vacuum tests on reception at CERN







- **CERN provides:**
  - **Helium leak checker**
  - **Vacuum pump**

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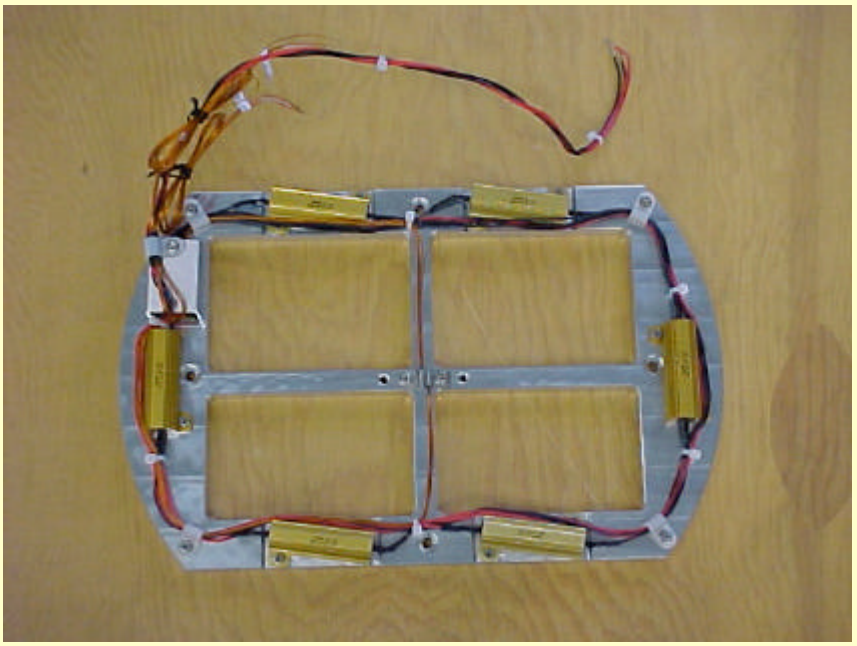
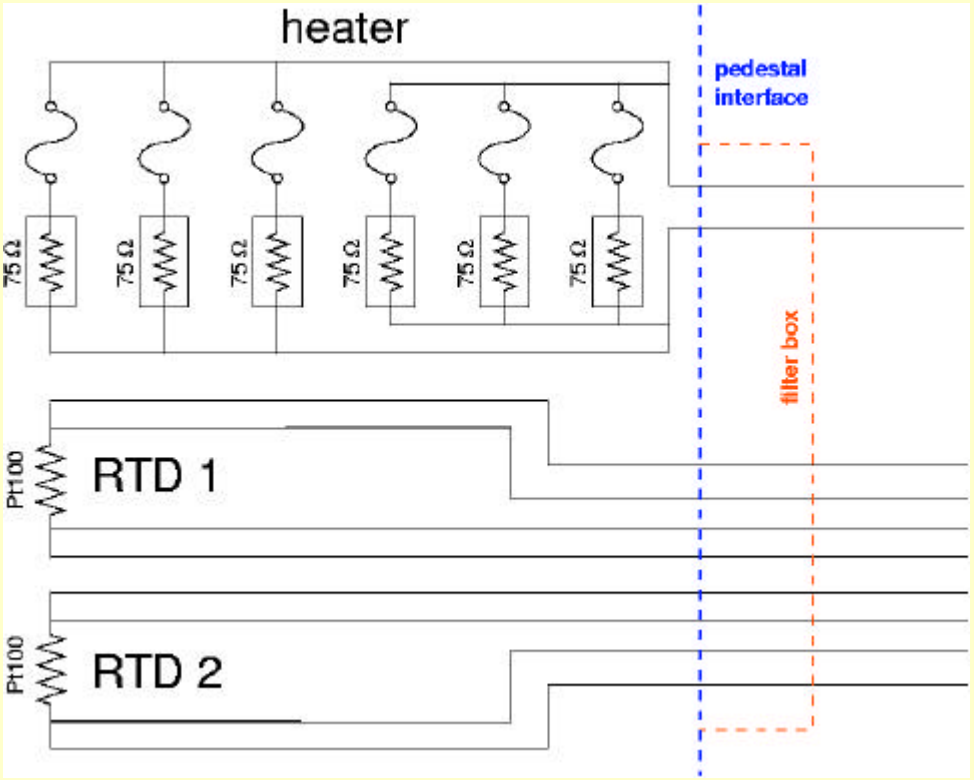
EndCap Feedthrough
Ambient Flange Heaters



- 12.5 Ohm equivalent
- Two 4-wire RTD's



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EndCap Feedthrough
Ambient Flange Heater
Power Supply Recommendations

- STD, SPCL, FCAL (good vacuum):
  - * heat leakage = 16 - 20 Watts
    - $\Rightarrow$ power supply = 40 - 50 Watts
- HCAL (good vacuum):
  - * heat leakage = 24 - 28 Watts
    - $\Rightarrow$ power supply > 40 - 50 Watts

- STD, SPCL, FCAL (1 bar in bellows):
  - * heat leakage ~ 75 Watts
- STD, SPCL, FCAL (1.5 bar in bellows):
  - * heat leakage ~ 120 - 150 Watts

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Site Visit by Chris Oram
29 May

- Overall impressions
  - — *clean, well organized assembly site*
- Safety issues
  - — *no safety hazards found*
- Additional check list items
  - — *implemented*
- Traveler summary sheets
  - — *implemented*

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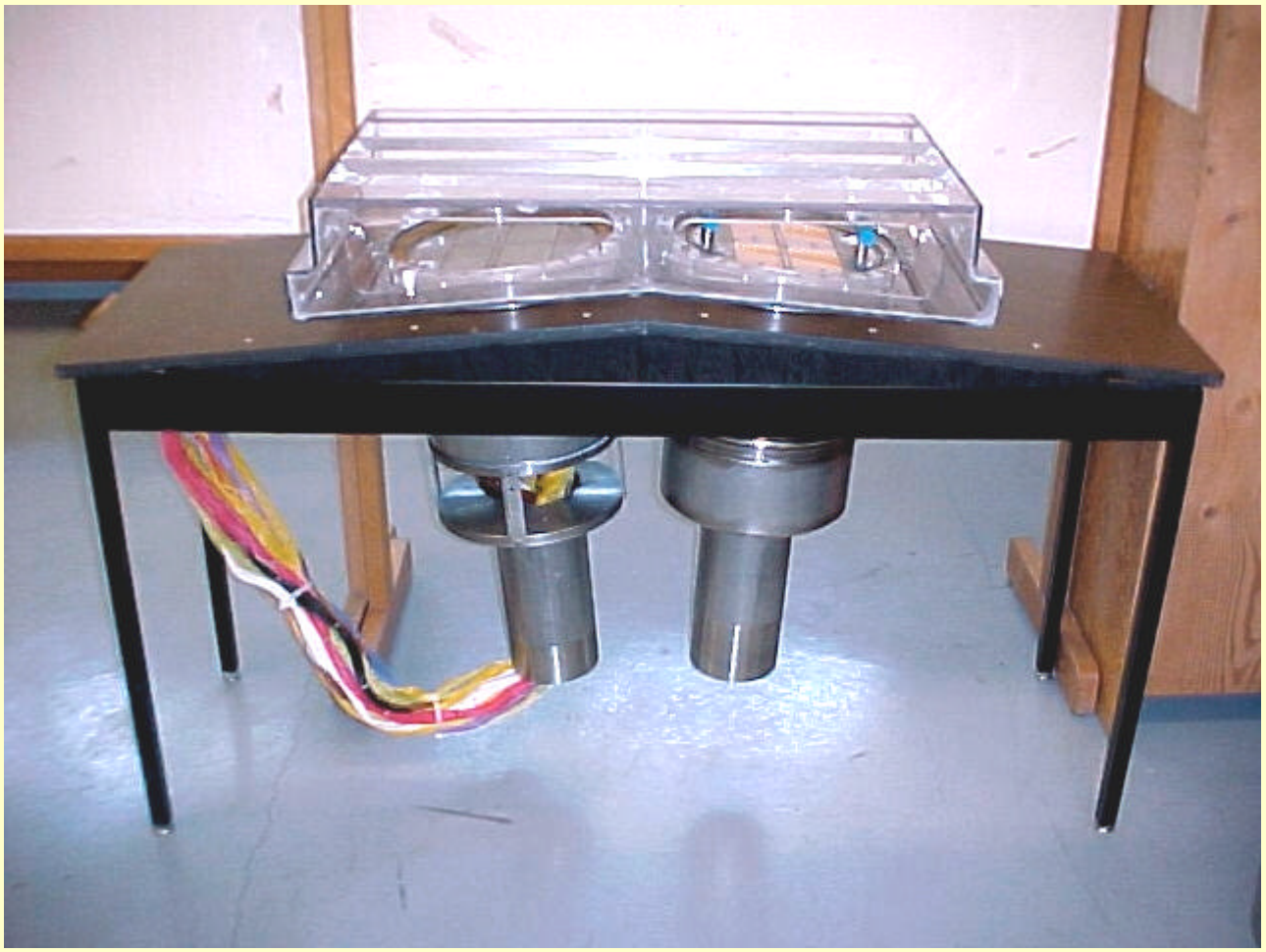
Pedestal Mockup



- **Alberta (Jan Soukup): pedestal mockup**
- **Victoria: prototype feedthroughs and stand**

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