

TOFr' Construction

October 2003
Houston, TX

Test Setup...

Freon

test gas box

LV

Scaler

HV

HV Current Monitor



New "Shoe-Box" design

Top Assy

Bottom Assy

Feet (plug-welded)

UHMW polyethylene strips



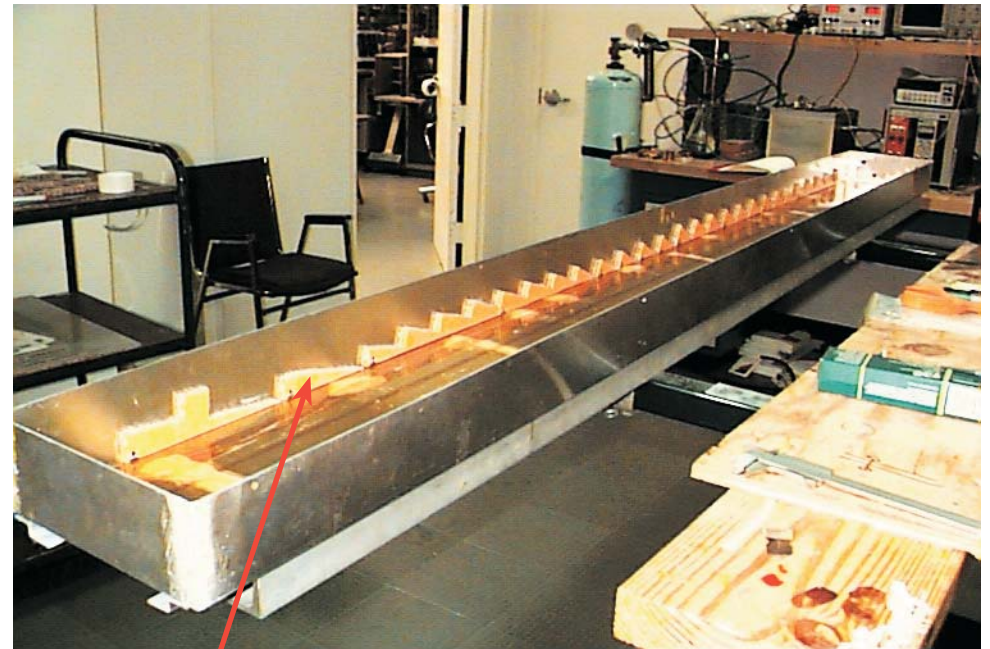
Bottom Assy....

Gas and HV feedthroughs

Kapton



all sawtooths



all lower sawtooths installed

MRPC installation into Bottom Assy

MRPCs

lower sawtooths

upper sawtooths

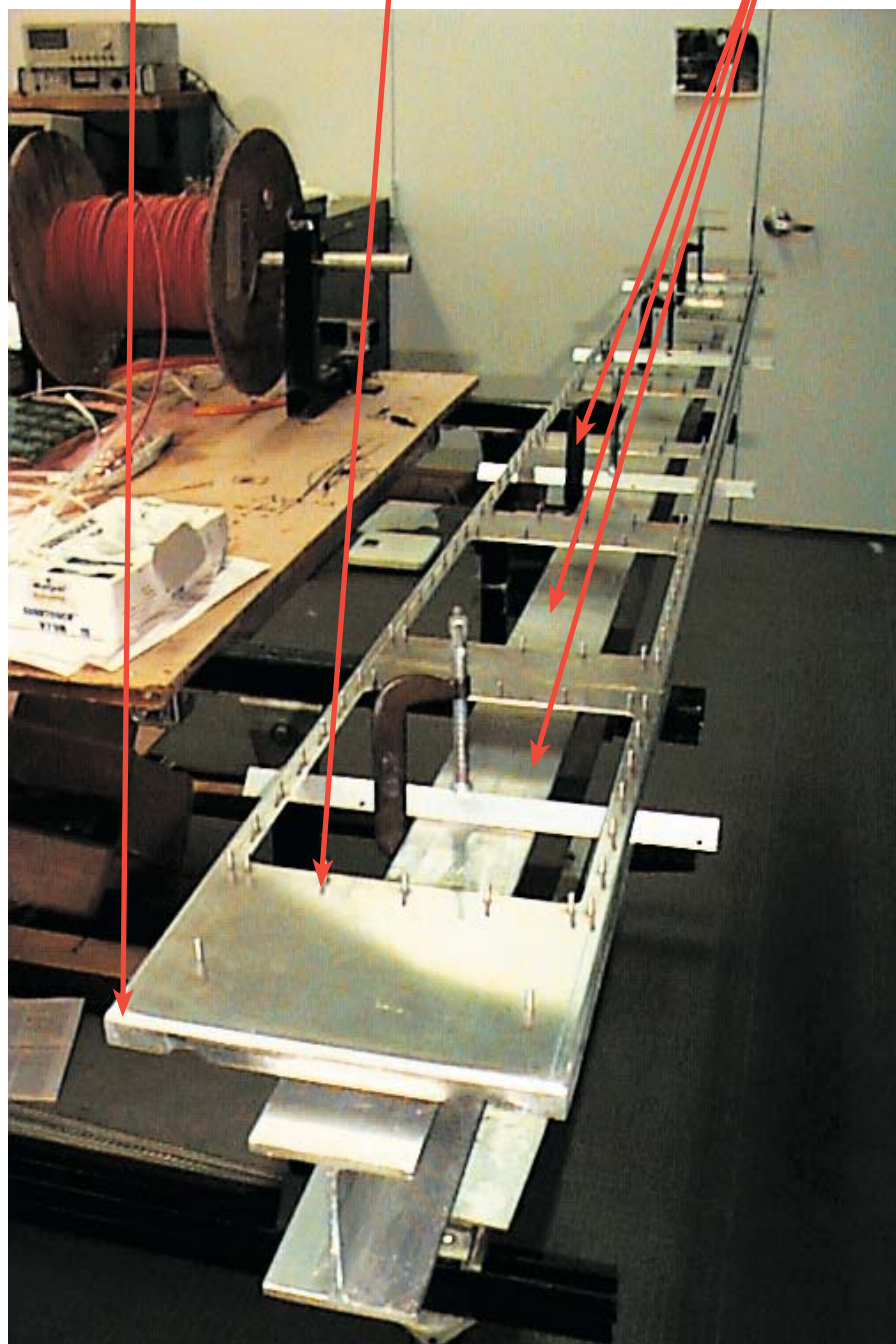


Top Assy

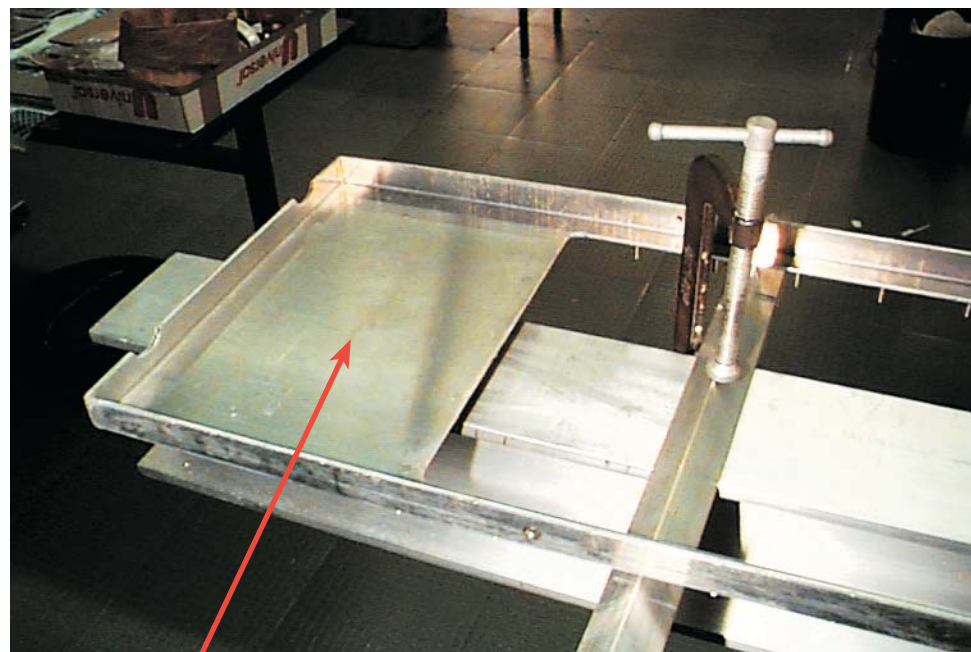
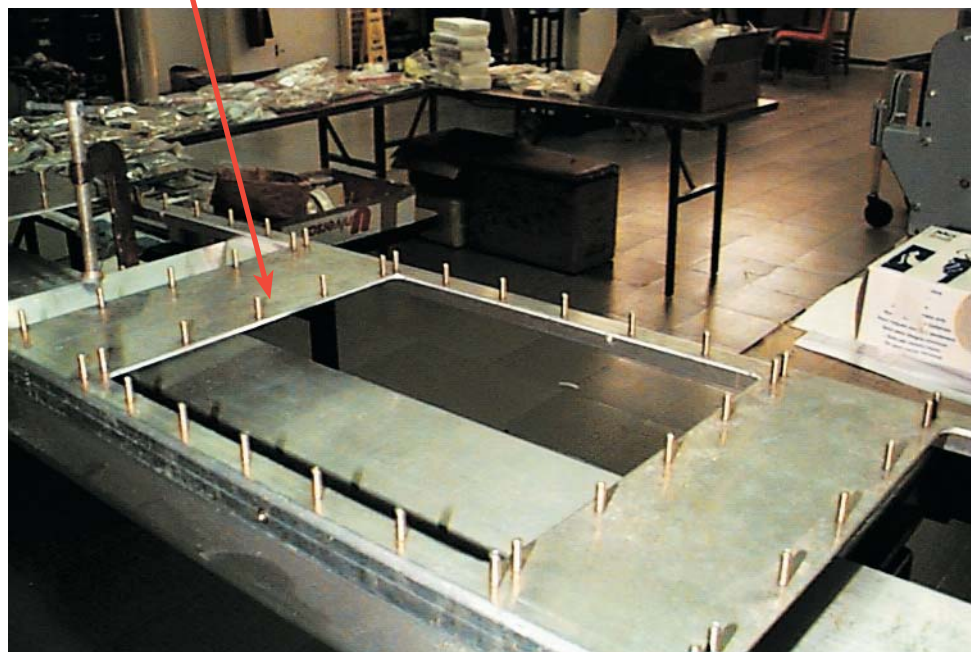
welded corners

PEM studs

TFEEp locations

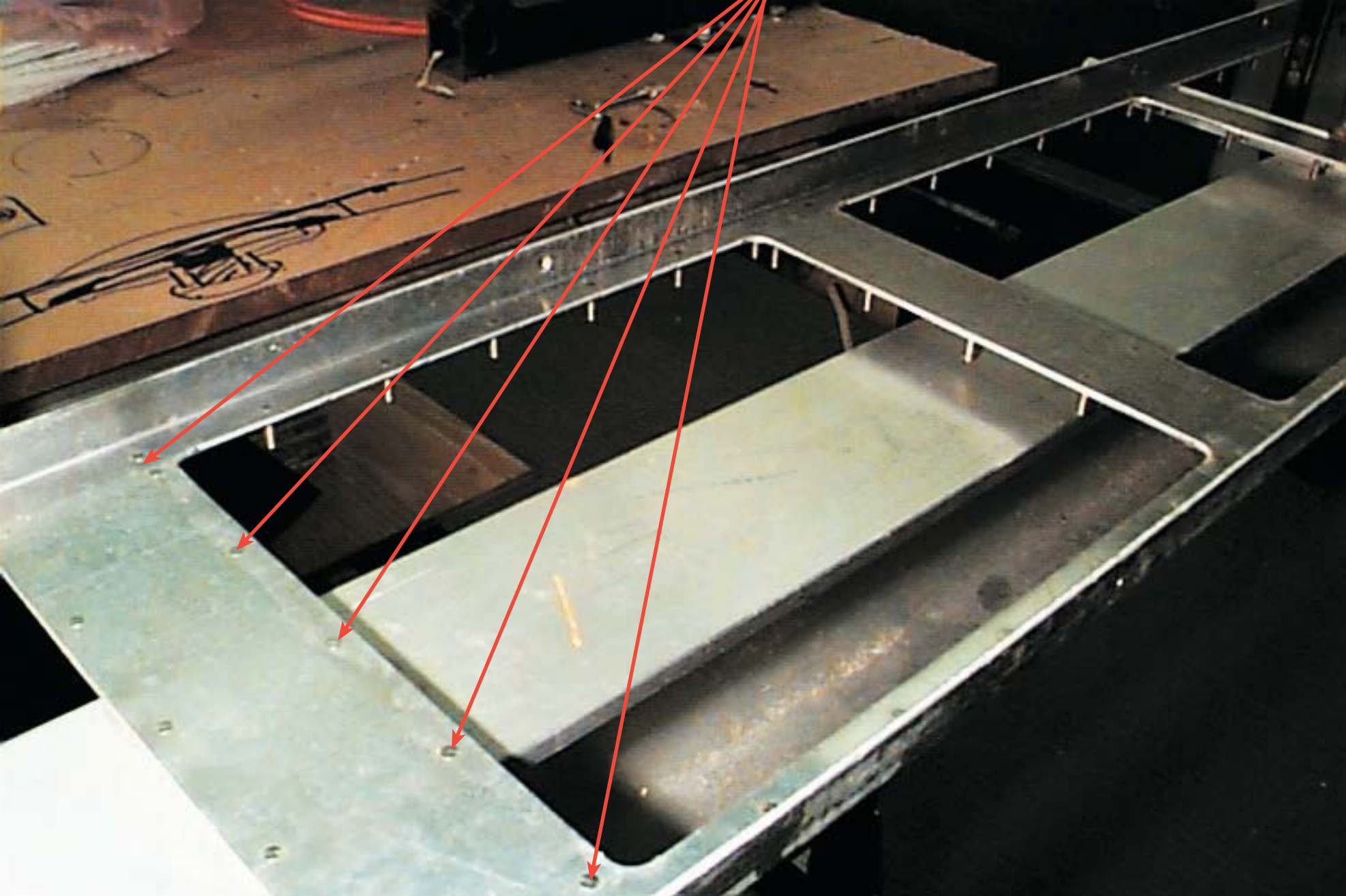


top side of top



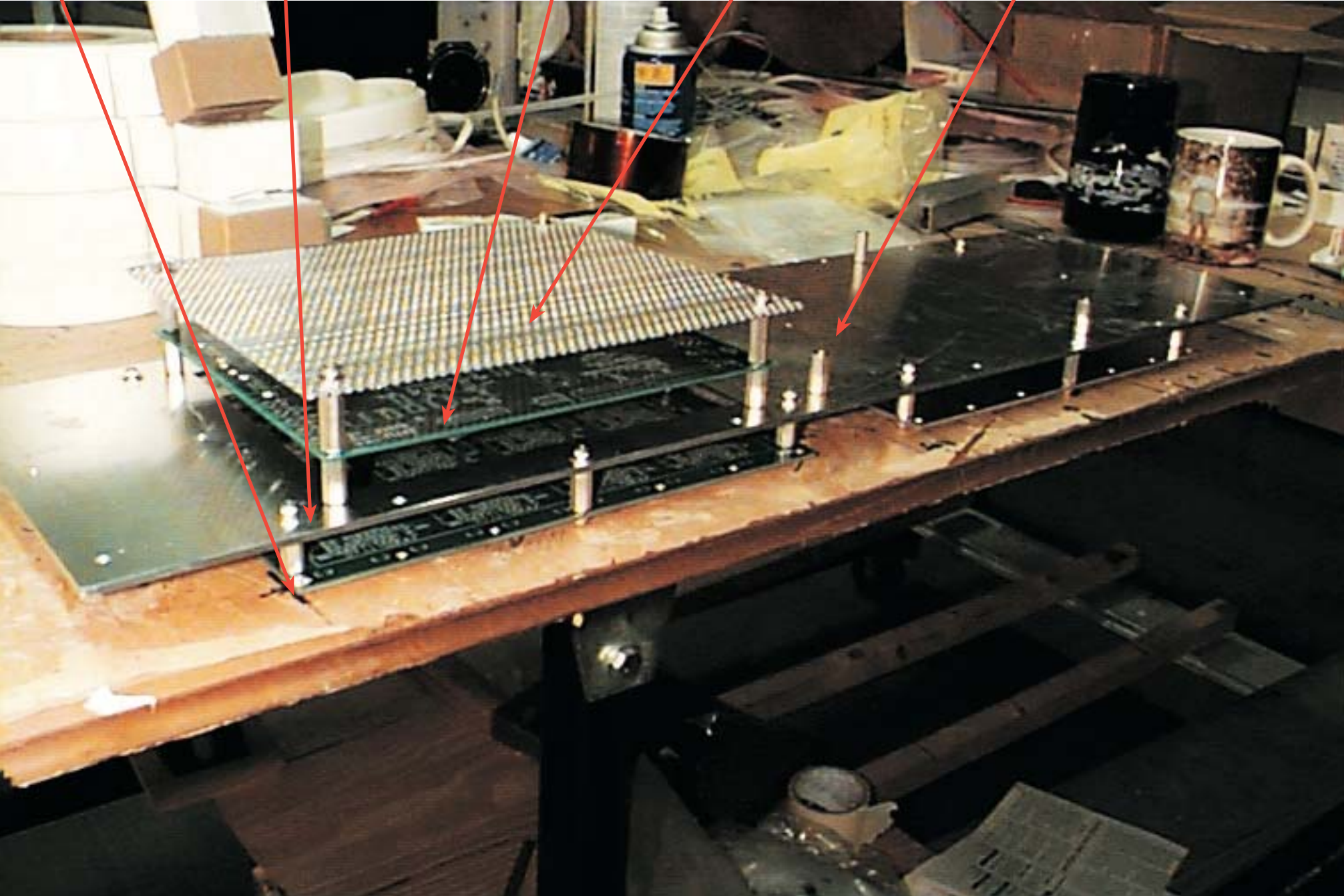
bottom side of top

PEM studs are perfectly flush - underside of top assy is smooth metal...



Jalepeno and TCDinterfaceboard mounting structure

TFEEp JalepenoInterfacePlate (JIP) Jalepeno ProtectiveCover TCDinterfaceboard locaton



Final Top Assy Installation

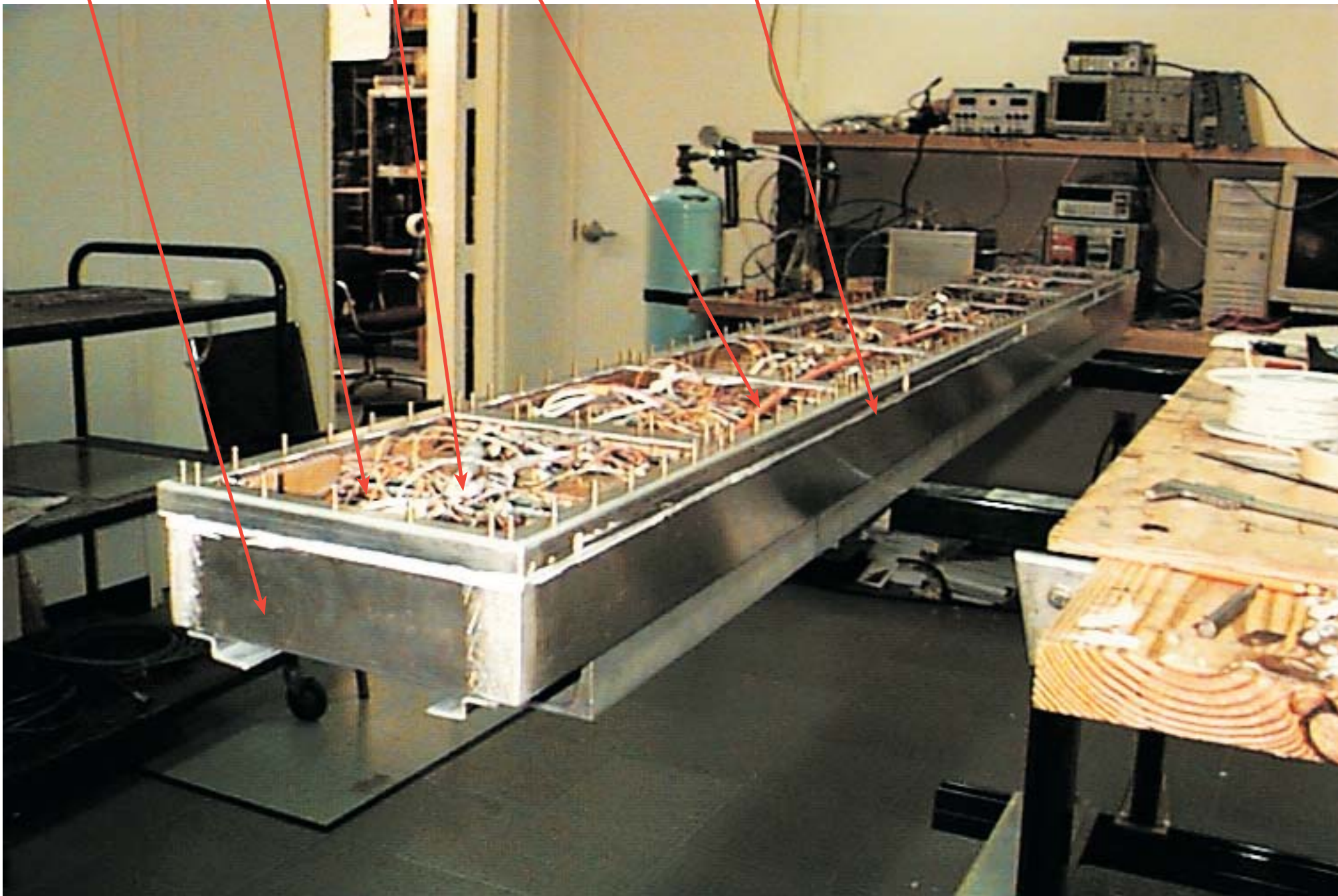
Bottom Assy

MRPCs

HV bus

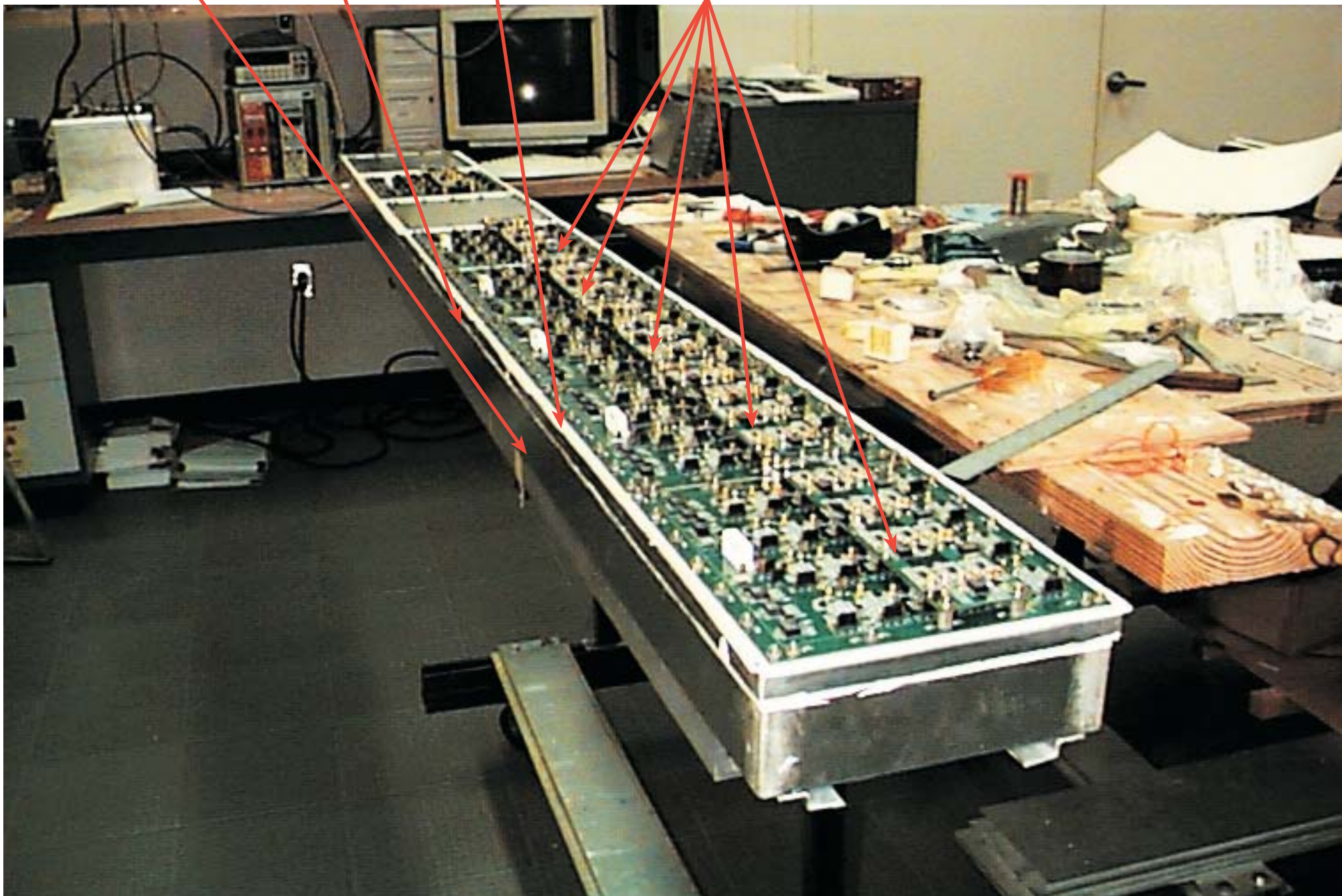
Gas tubing

Sealant



Temporary Box Sealing (using HD polyethylene foam as gasketing)

Bottom Assy Top Assy Foam gasket TFEEp

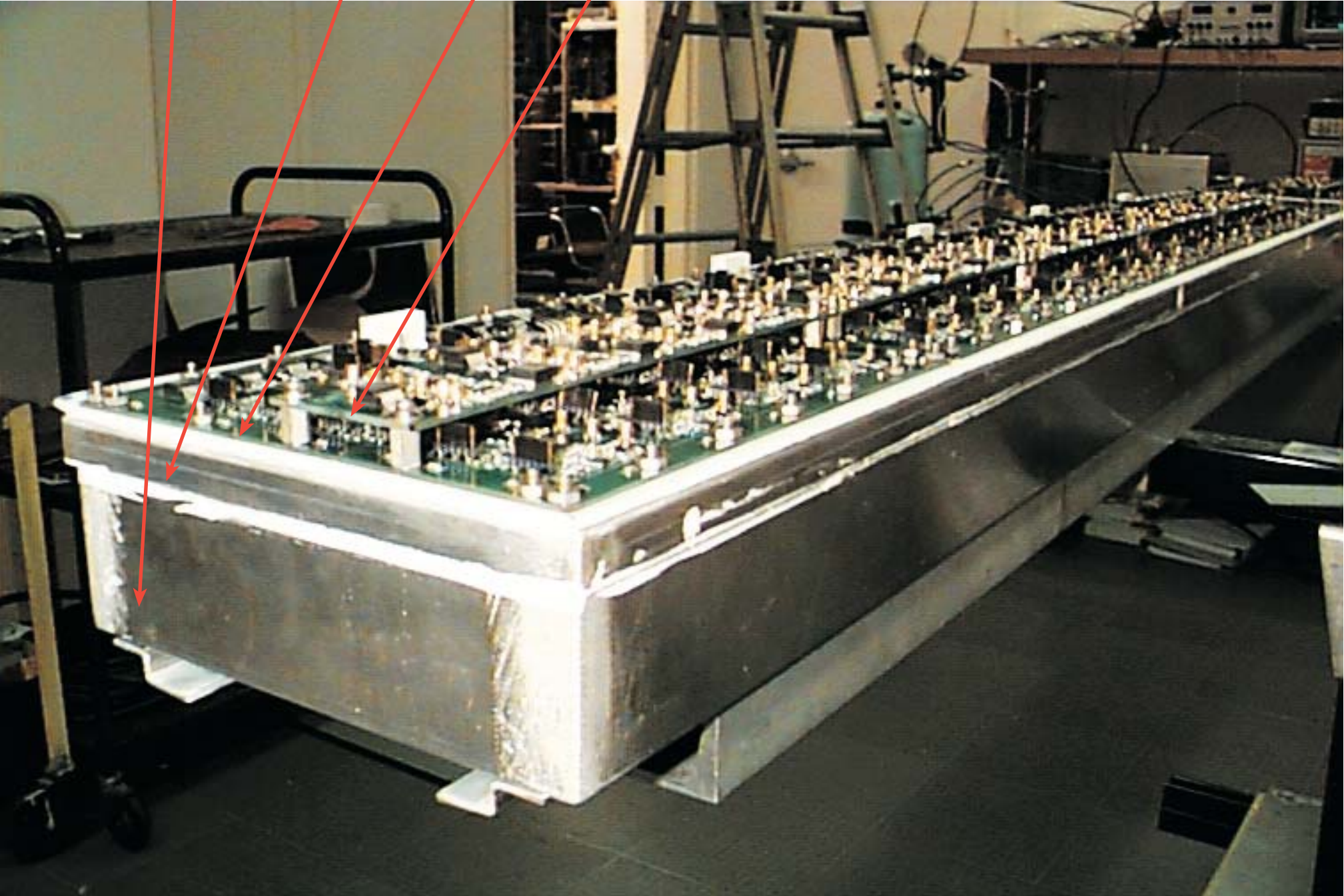


Flow Freon w/ temporary gaskets, to check if it can hold HV, also look for bad channels...

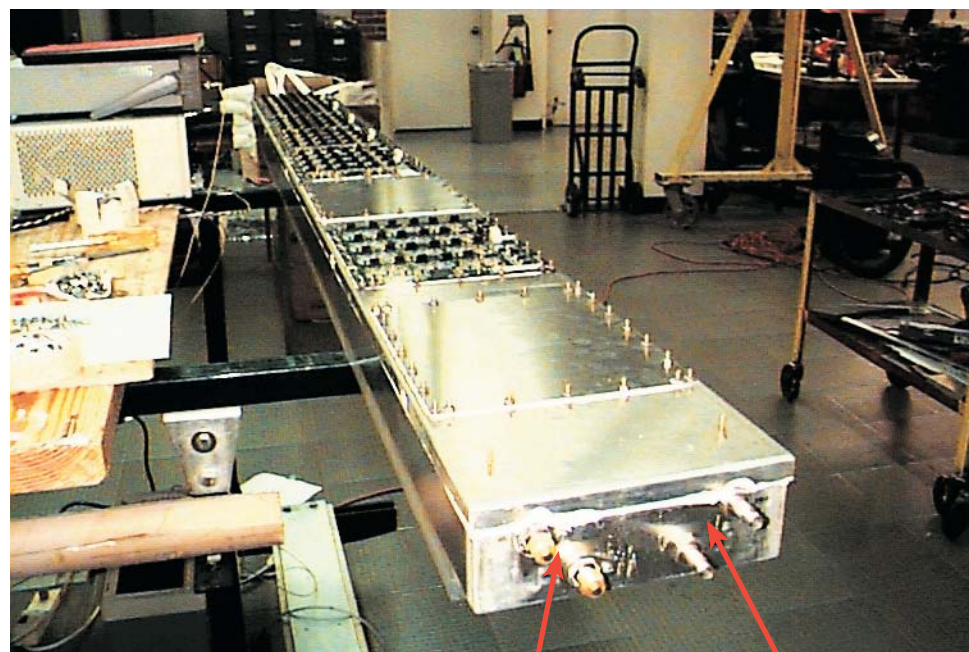
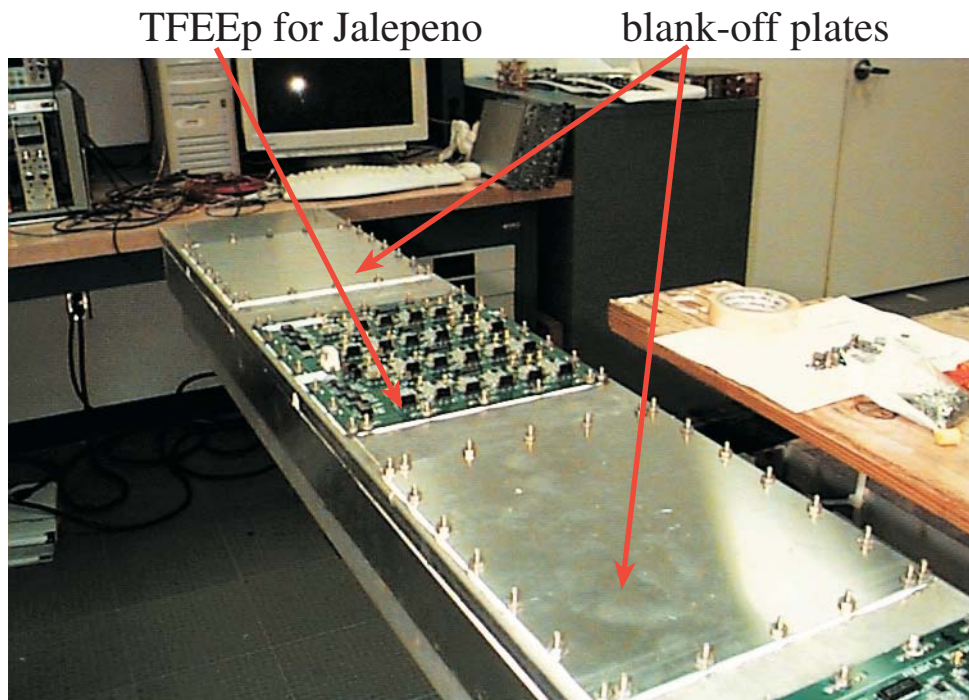
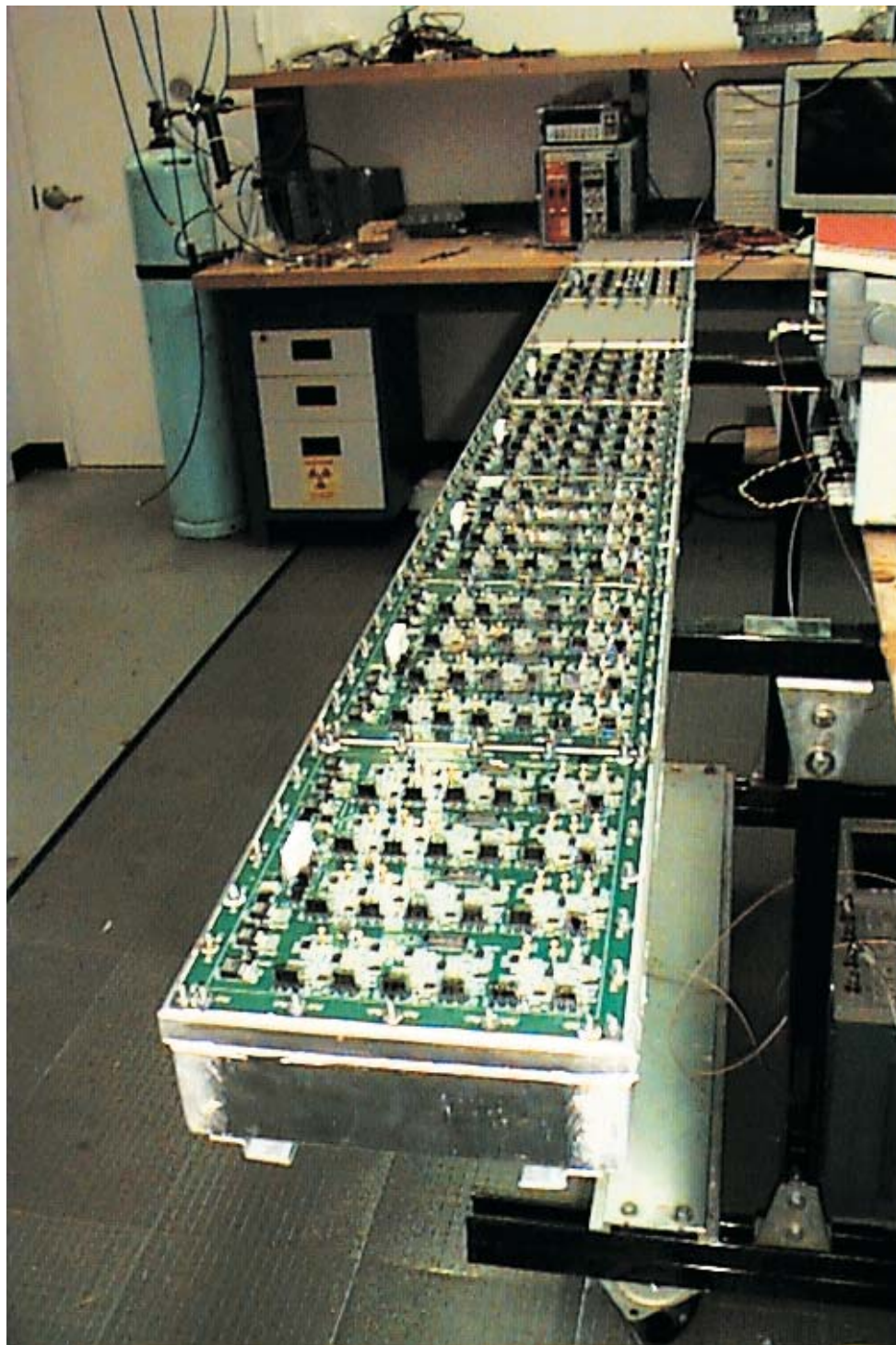


TFEEp and TTST during temporary gasket testing...

Bottom Assy Top Assy TFEEp TTST



Final Sealing...



gas in/out

HV +/-

Connector support

JIP

Jalepeno

protective grill

5 TFEEp's



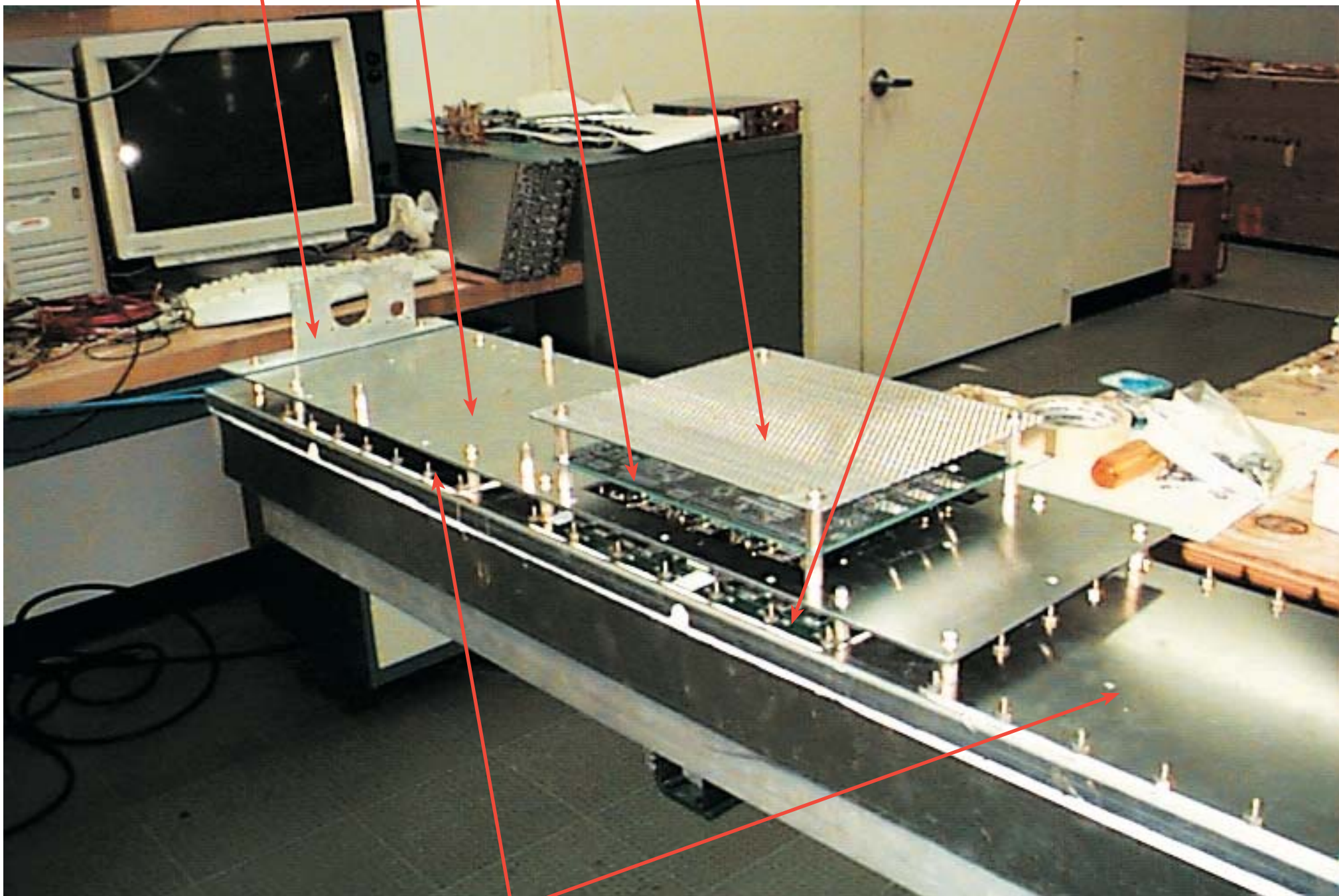
Connector support

JIP

Jalepeno

protective grill

TFEEp' (mod for Jalepeno)



blank-off plates

Connectors

Fuses

TCDinterfaceBoard

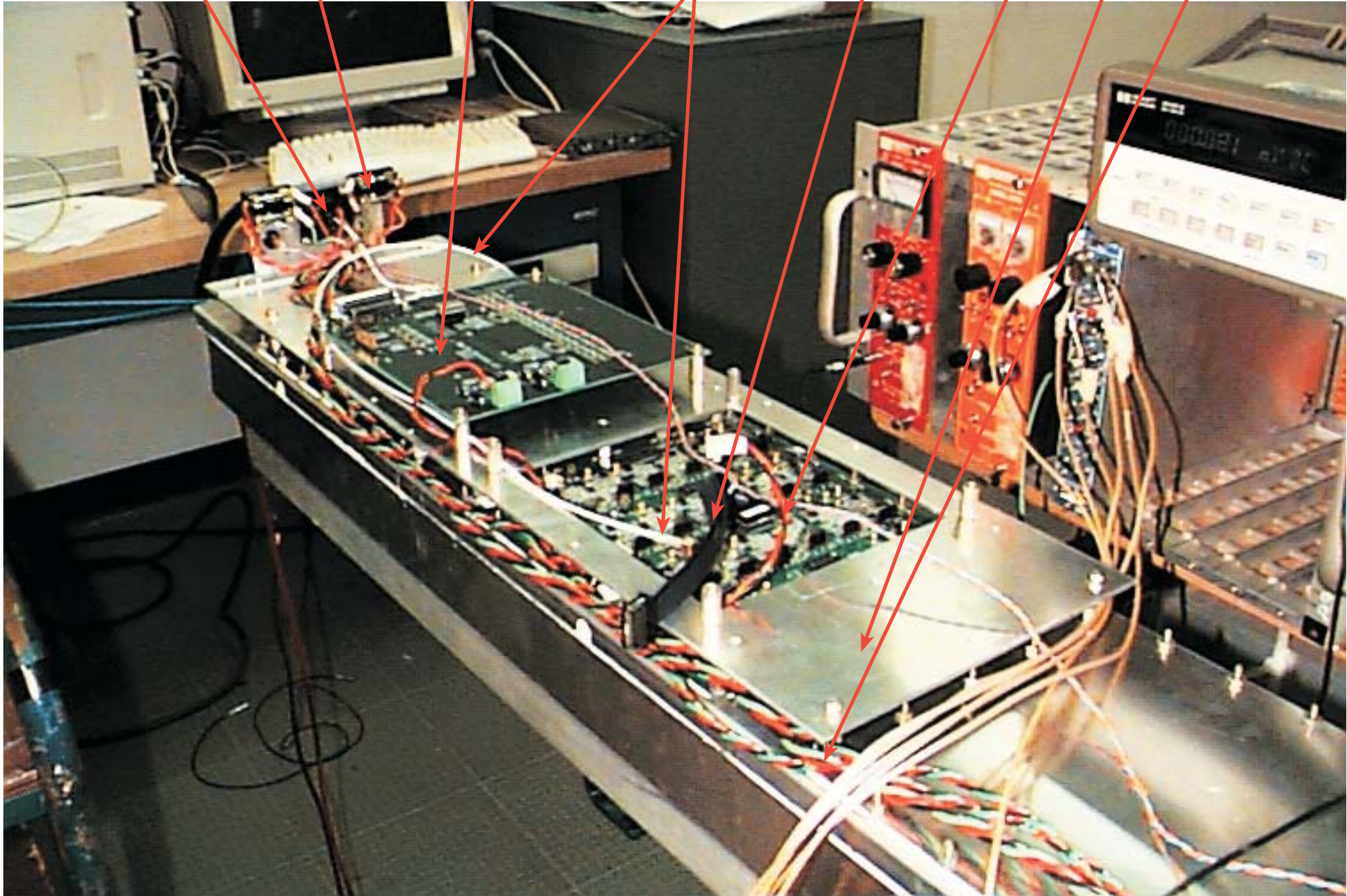
Start signal
for Jalepeno

Jalepeno
stop inputs

LV for
Jalepeno

JIP

LV
bus



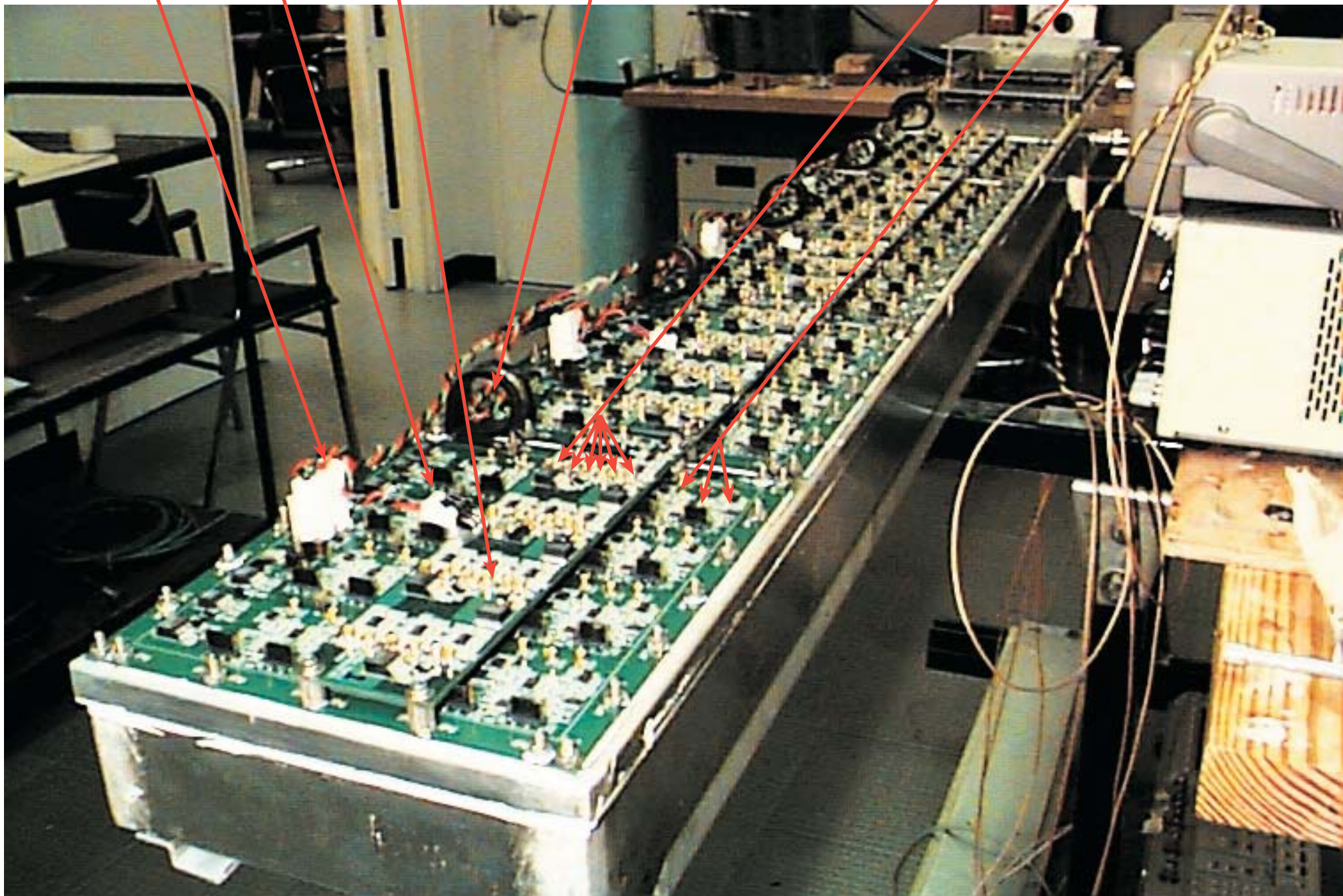
LV bus

TFEEp

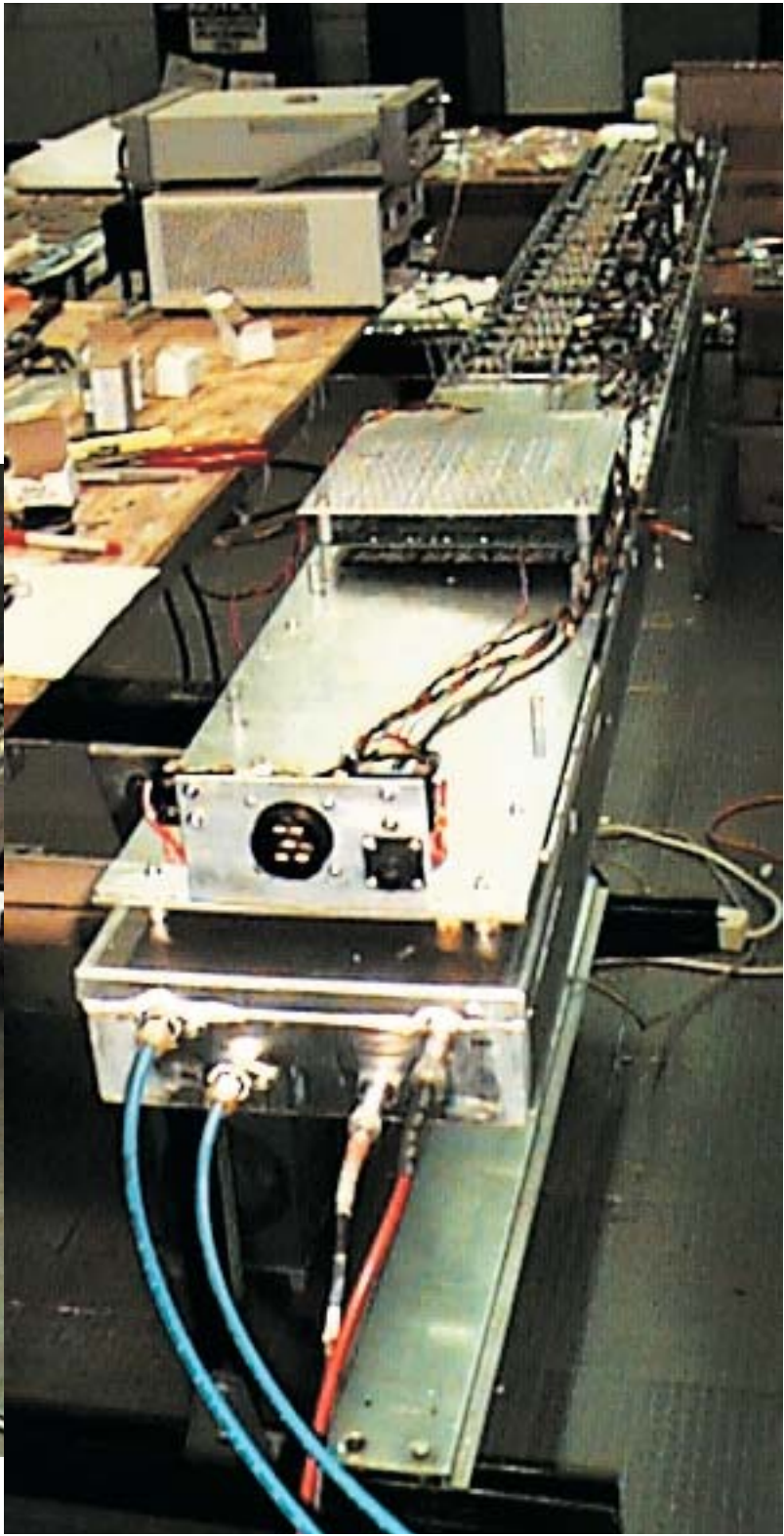
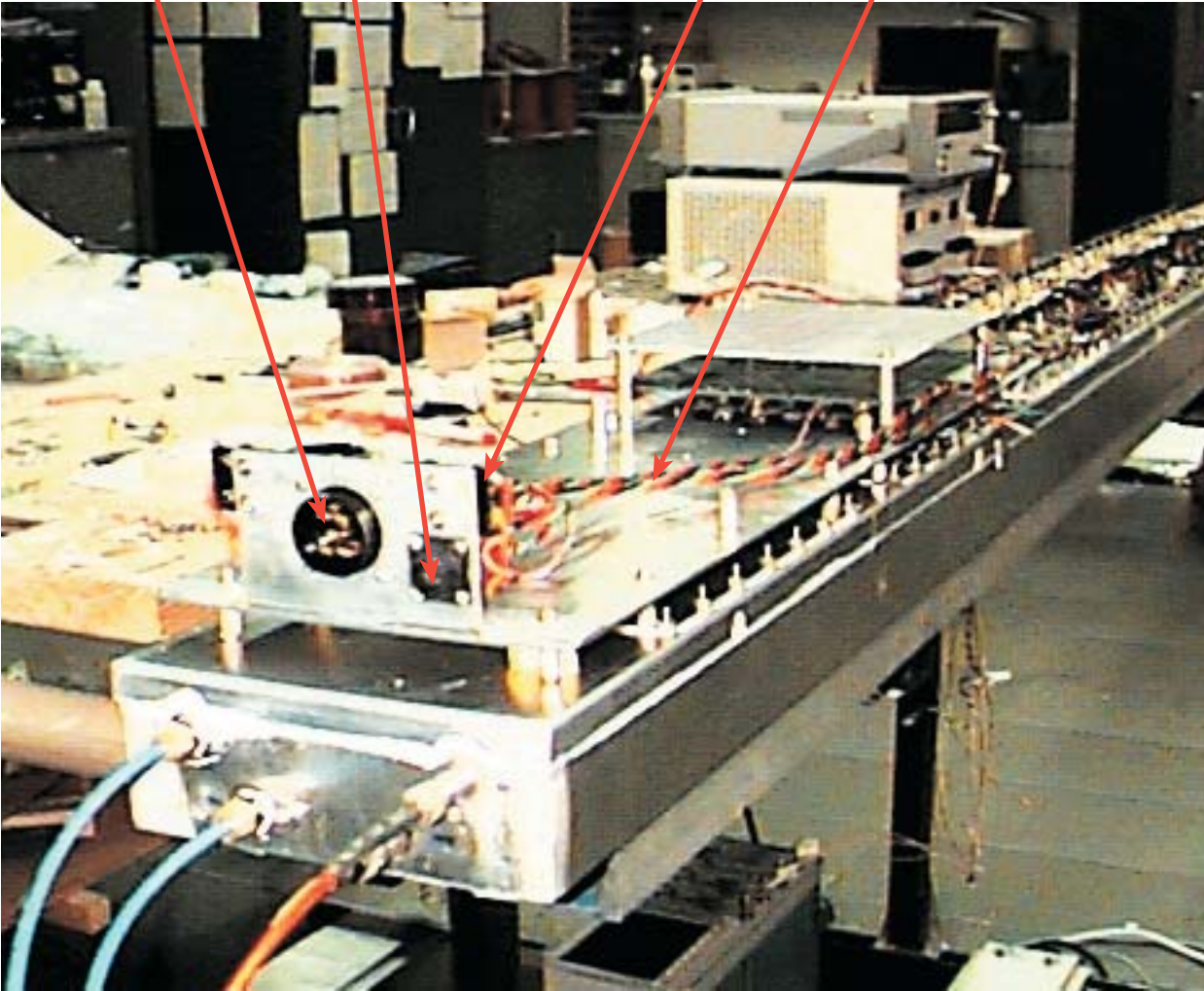
TTST

pigtail cable supports

outputs for TDCs & for ADCs



LV & Threshold connectors Fuses LV bus



Full-Tray Testing (i.e. all TFEE and MRPCs powered up)

LV supplies

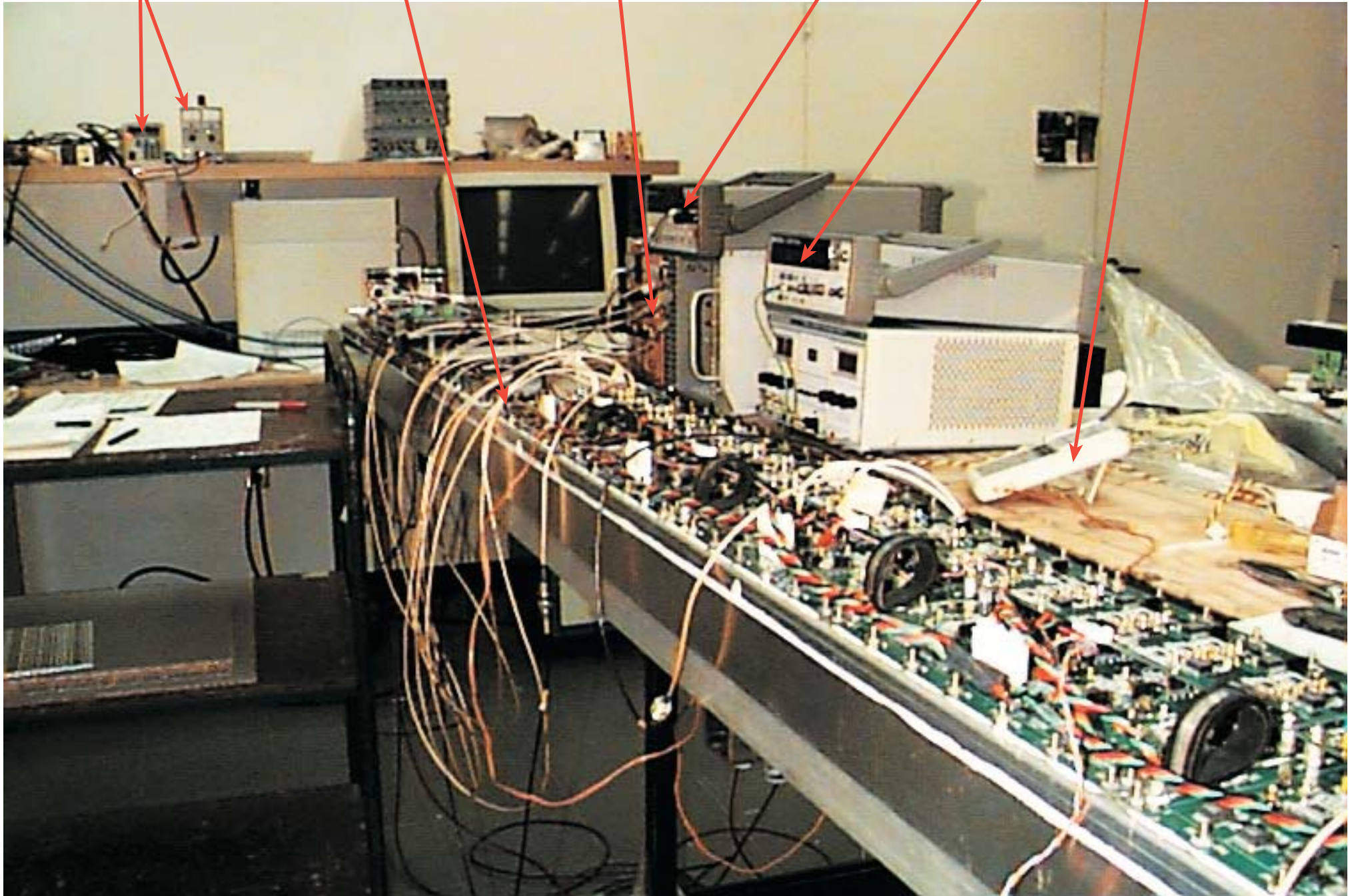
pigtail cables

NIM HV&logic

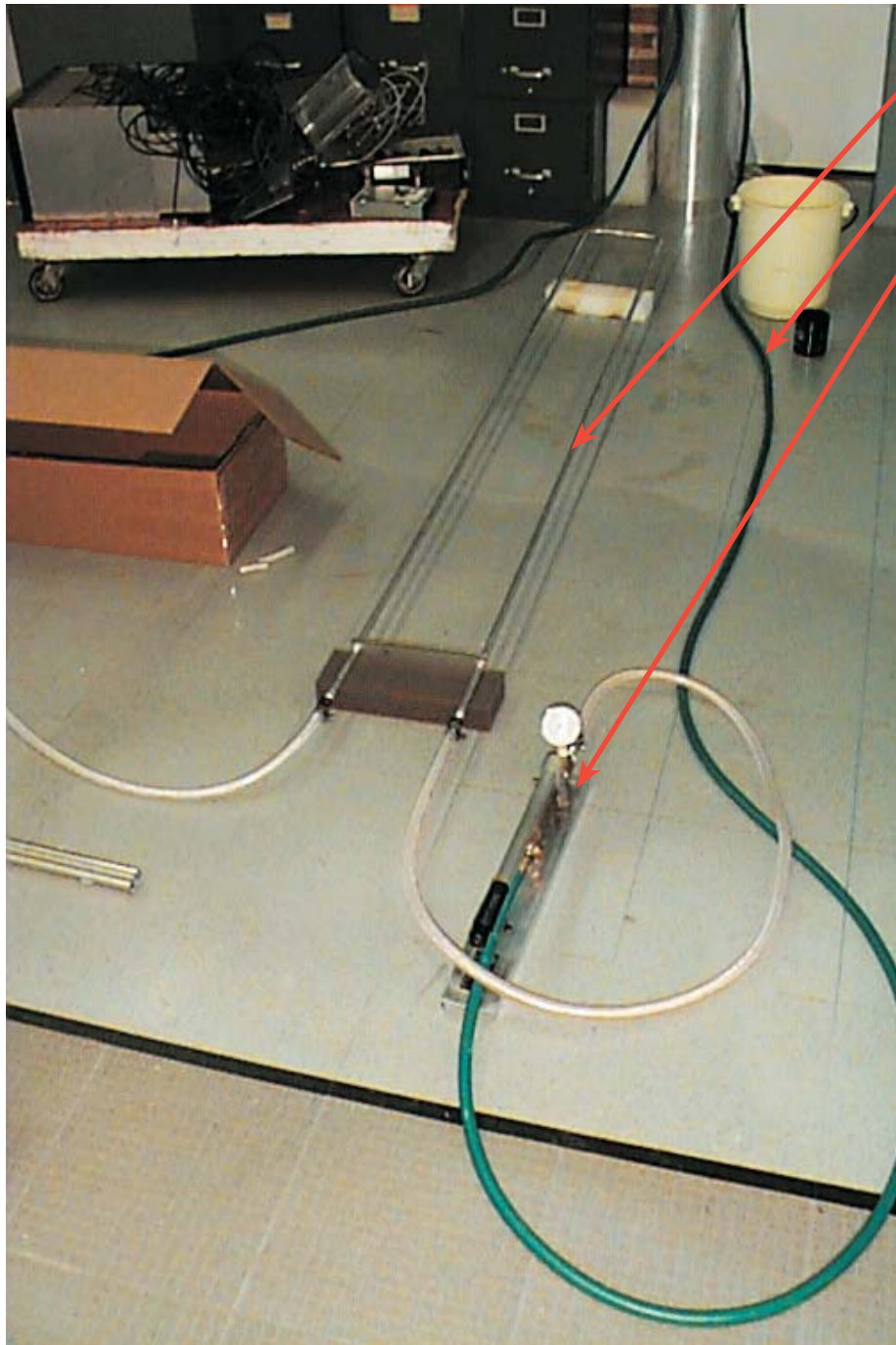
HV current mon

scaler

thermocouple R/O

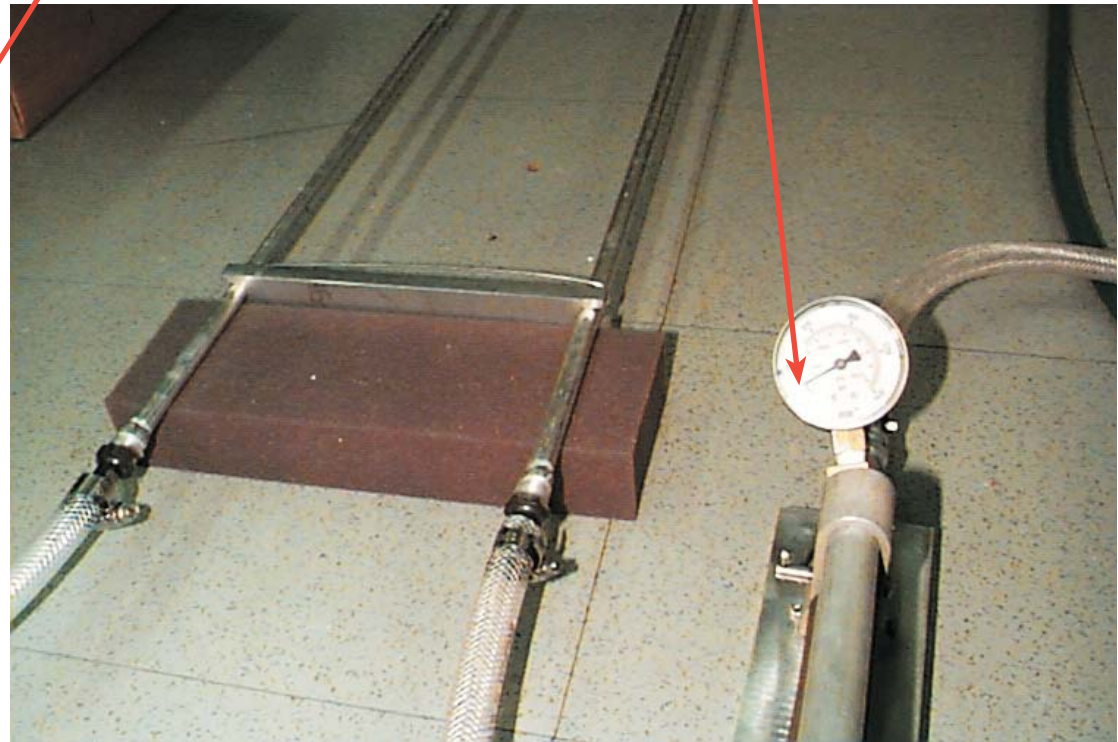


Cooling loop pressure test

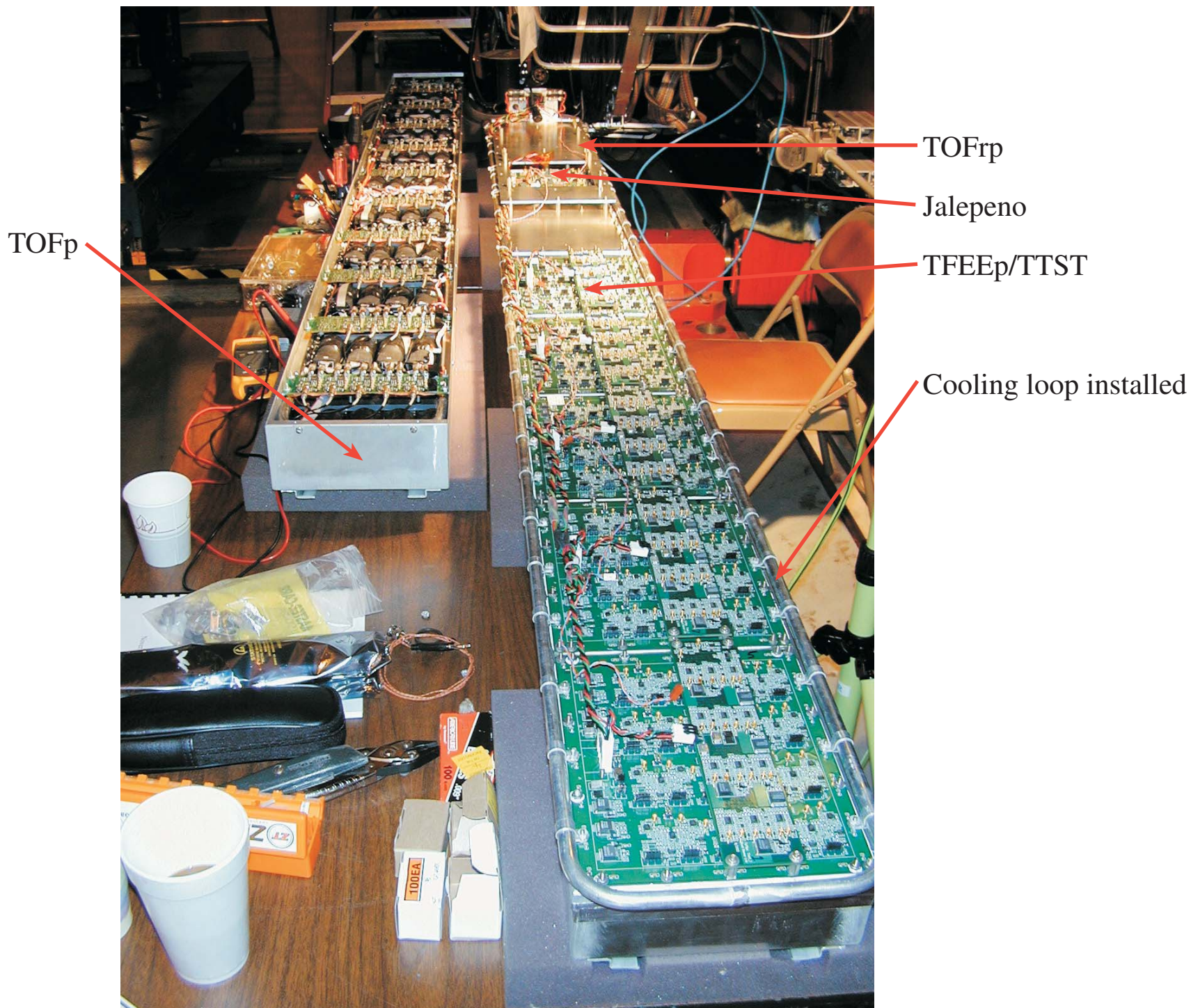


Cooling loop
water in
pump/gauge

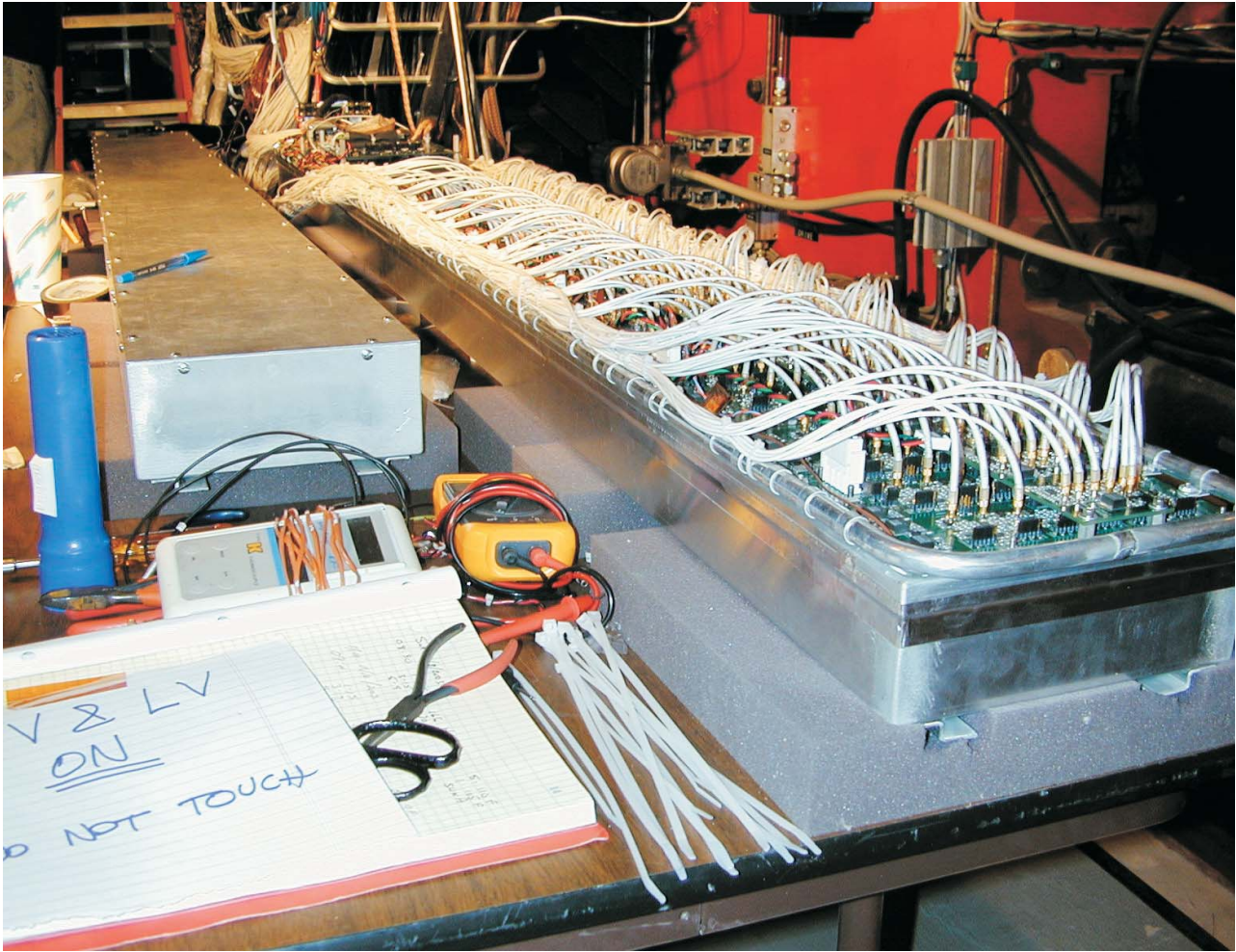
...holding 200psi



...Now in the WAH....



Pigtails installed...

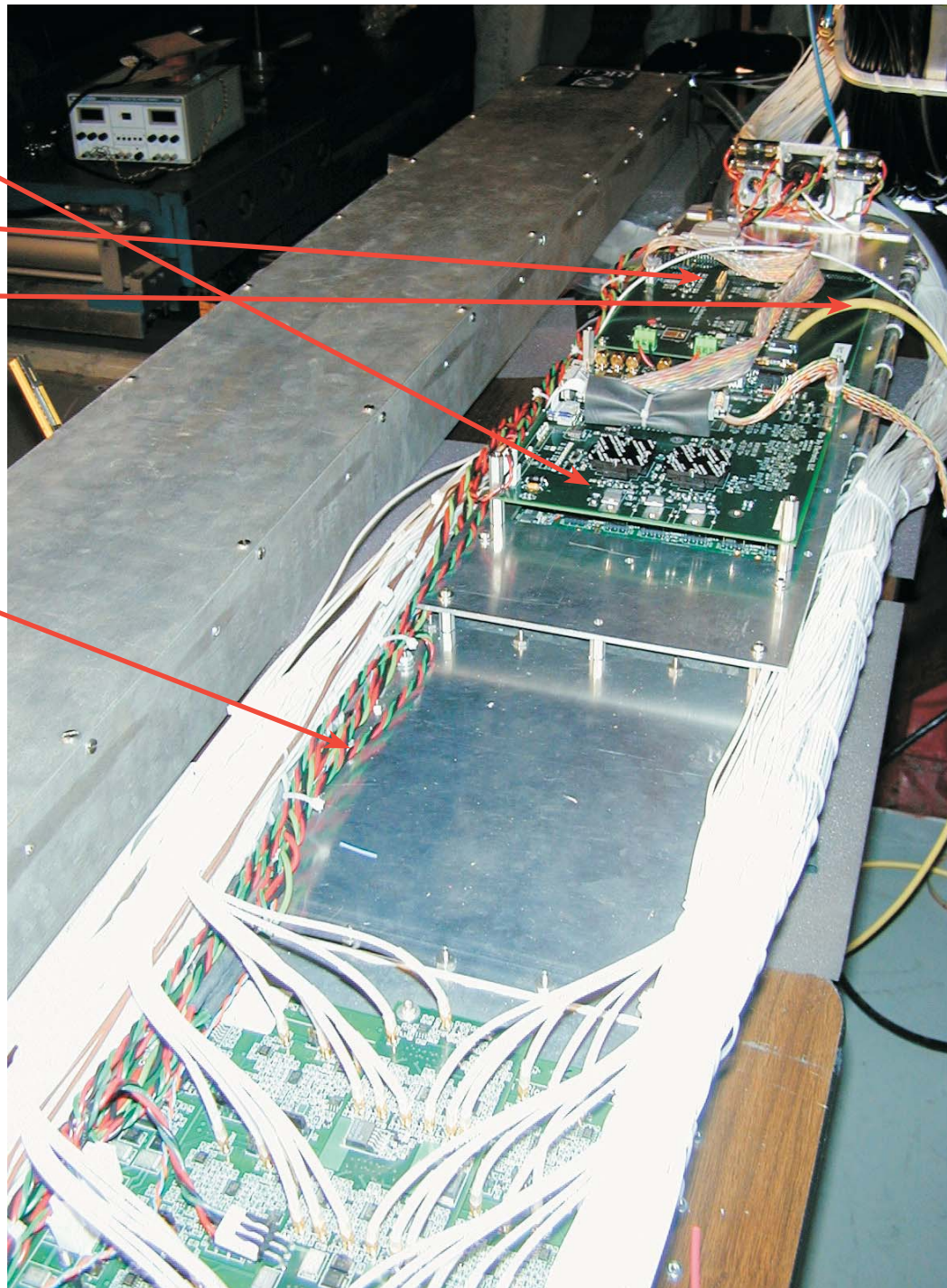
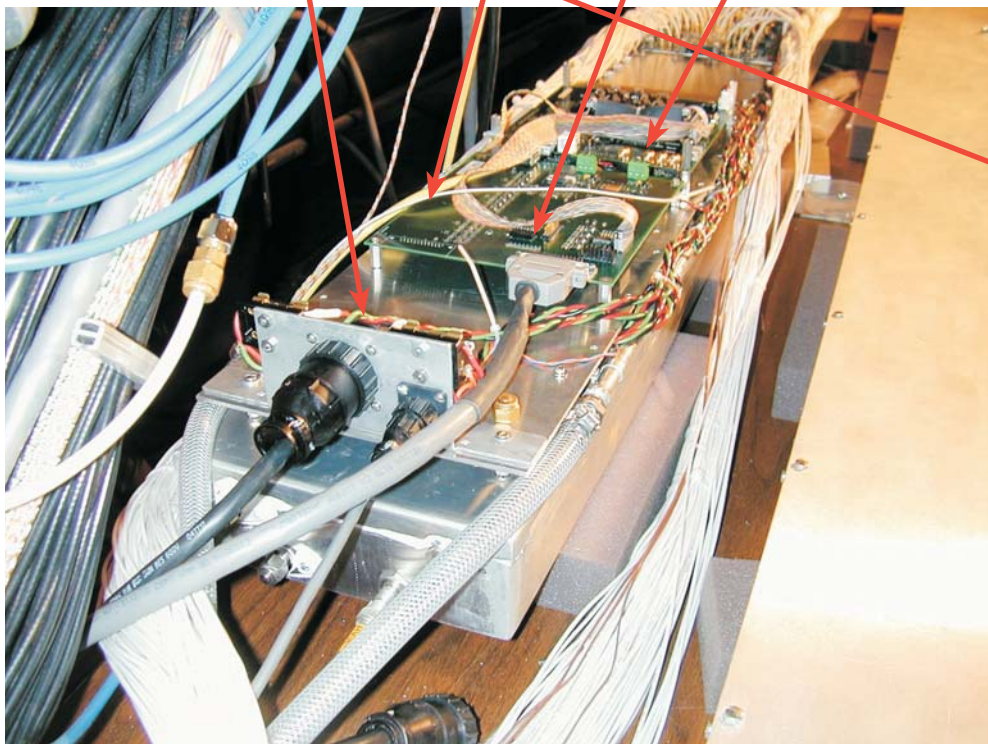


Jalepeno

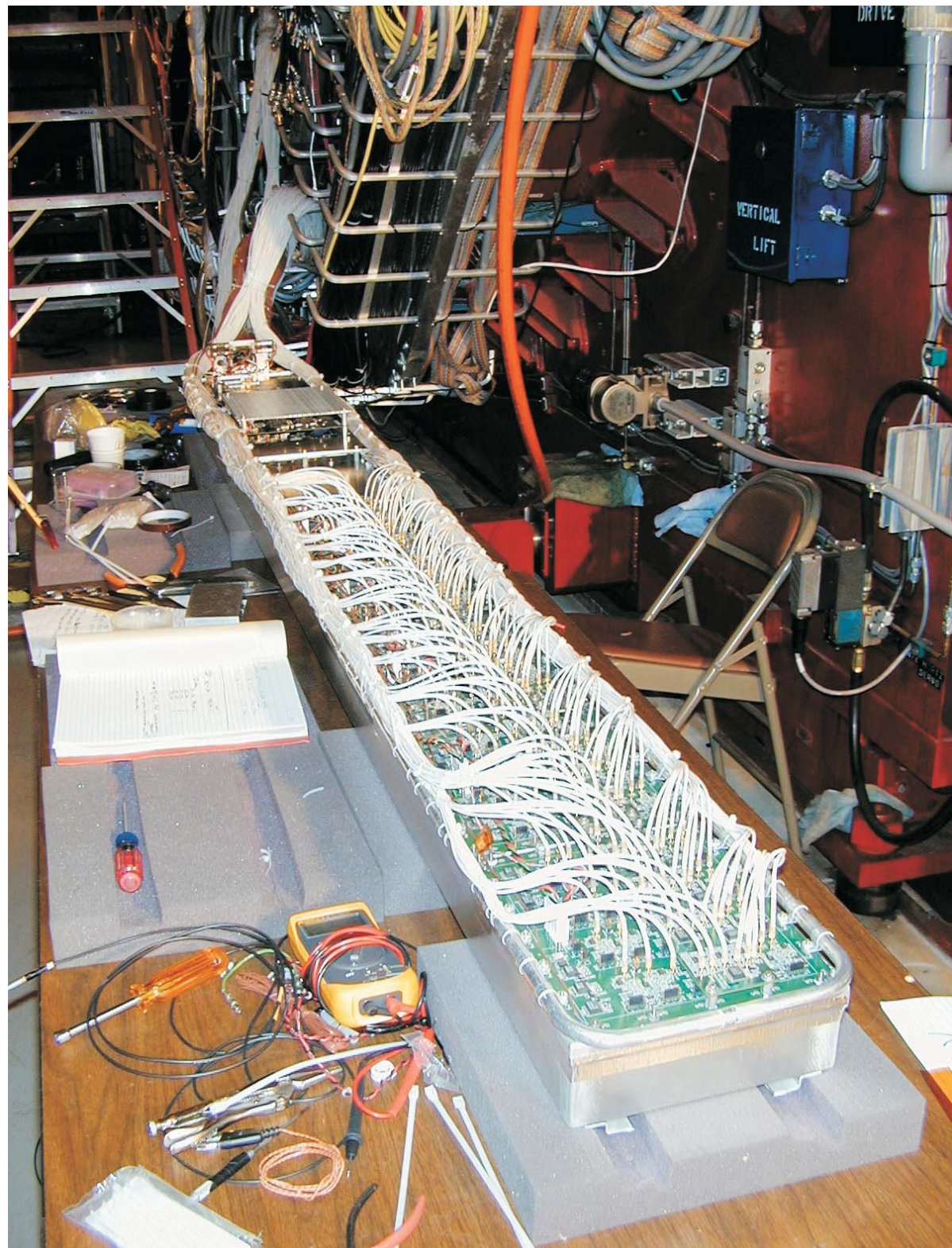
TCD interface board

CANBUS (data out)

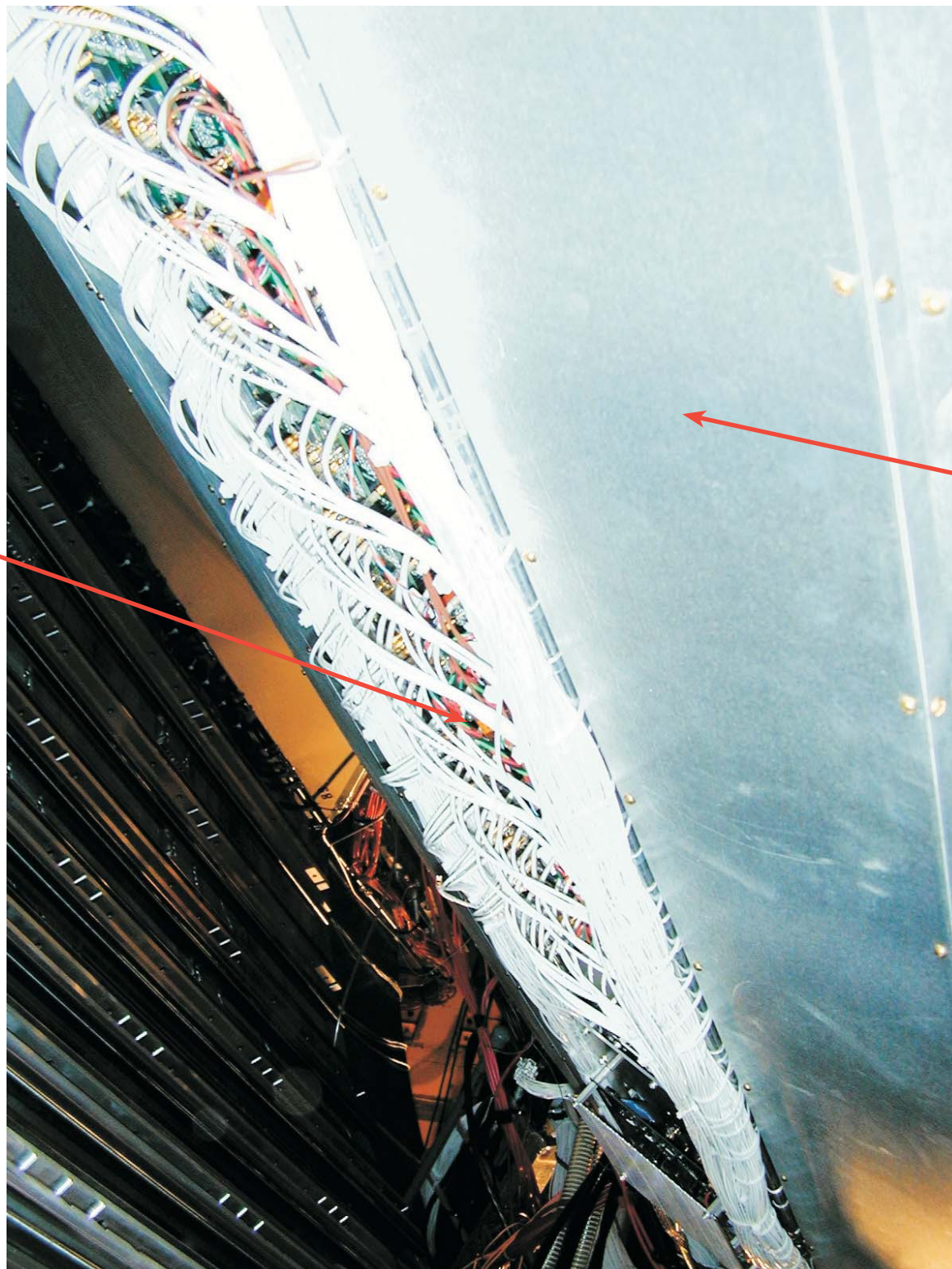
new LV bus



Ready for installation....

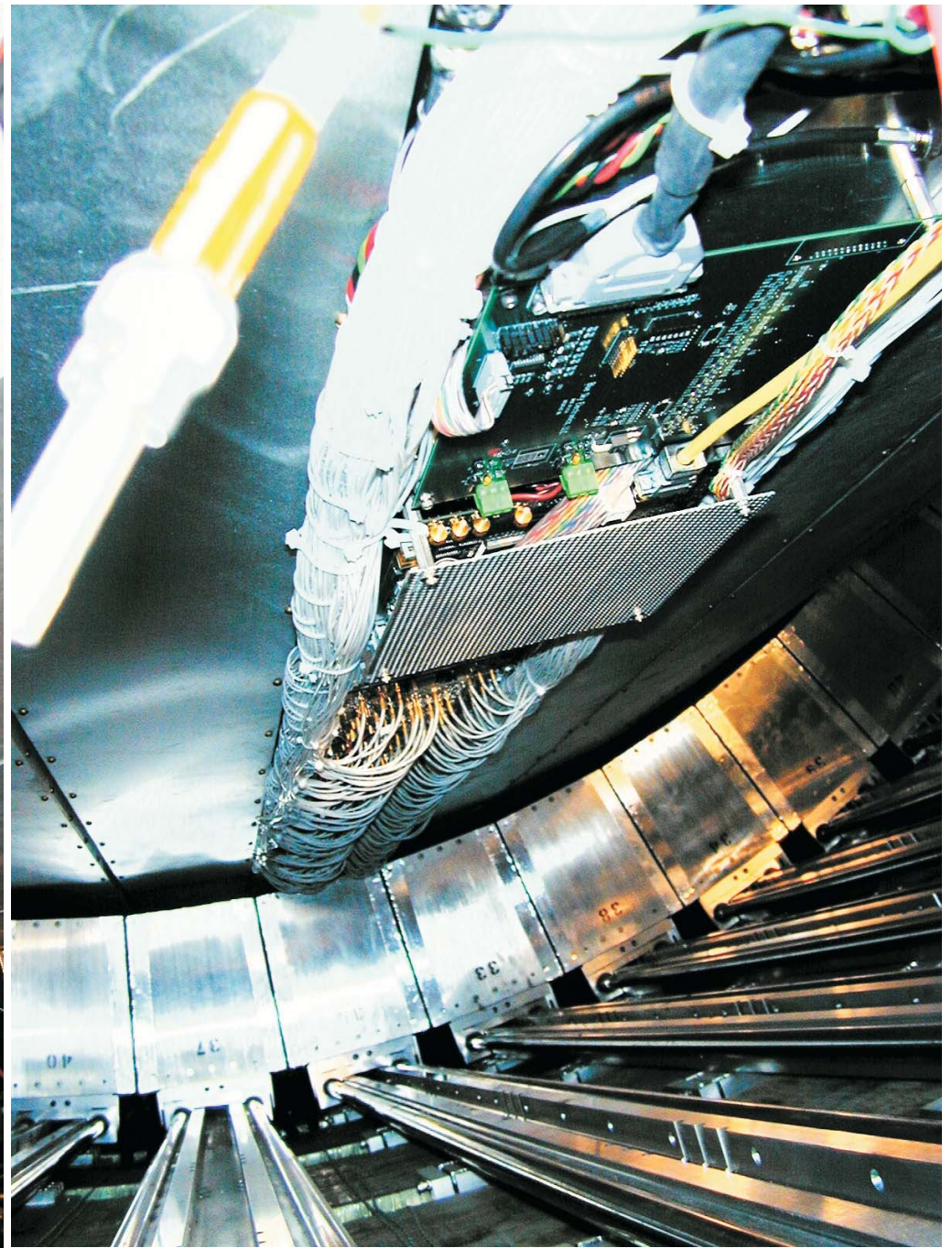
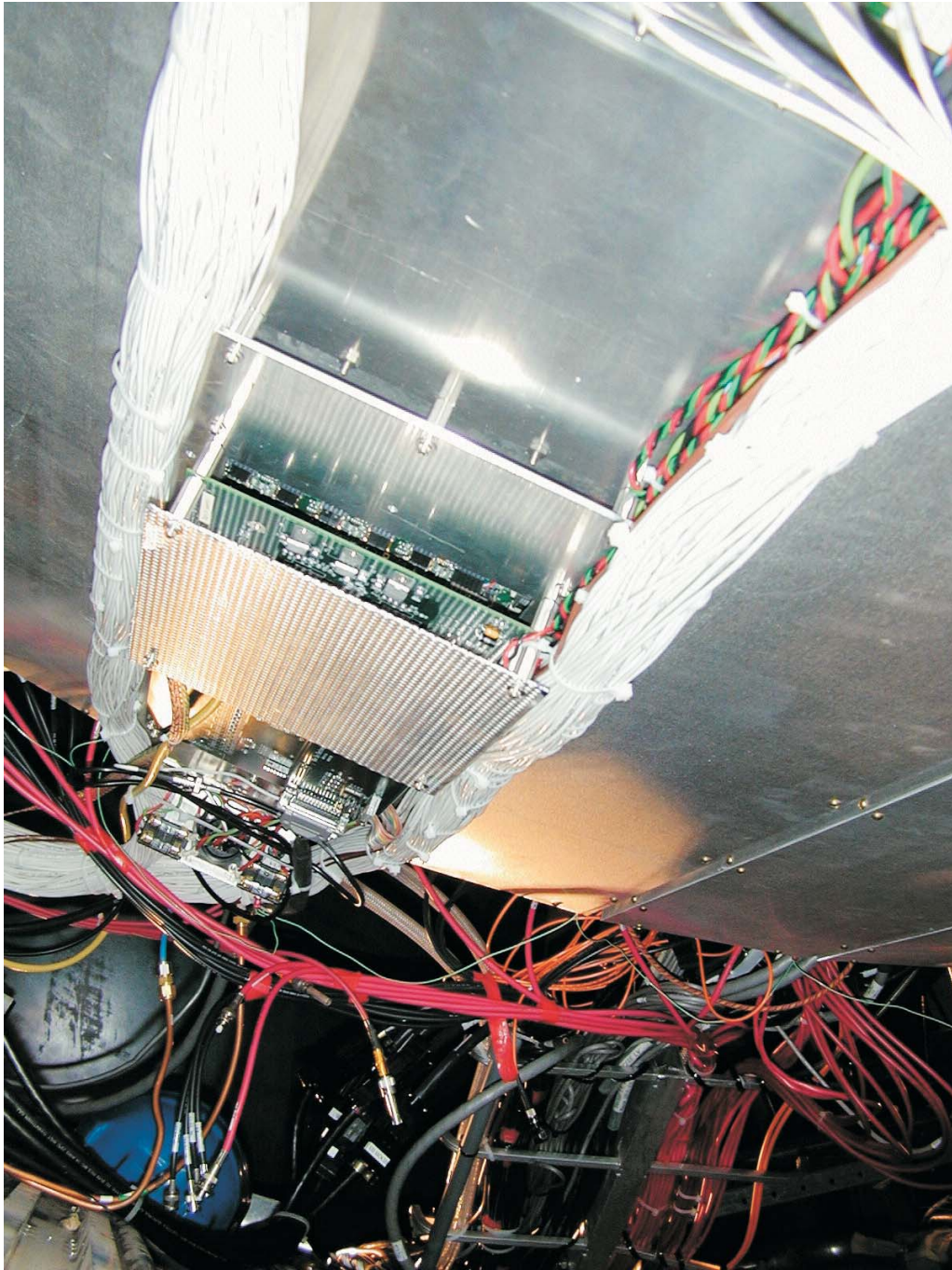


Installed...



TOFrp

CTB



HV + and -

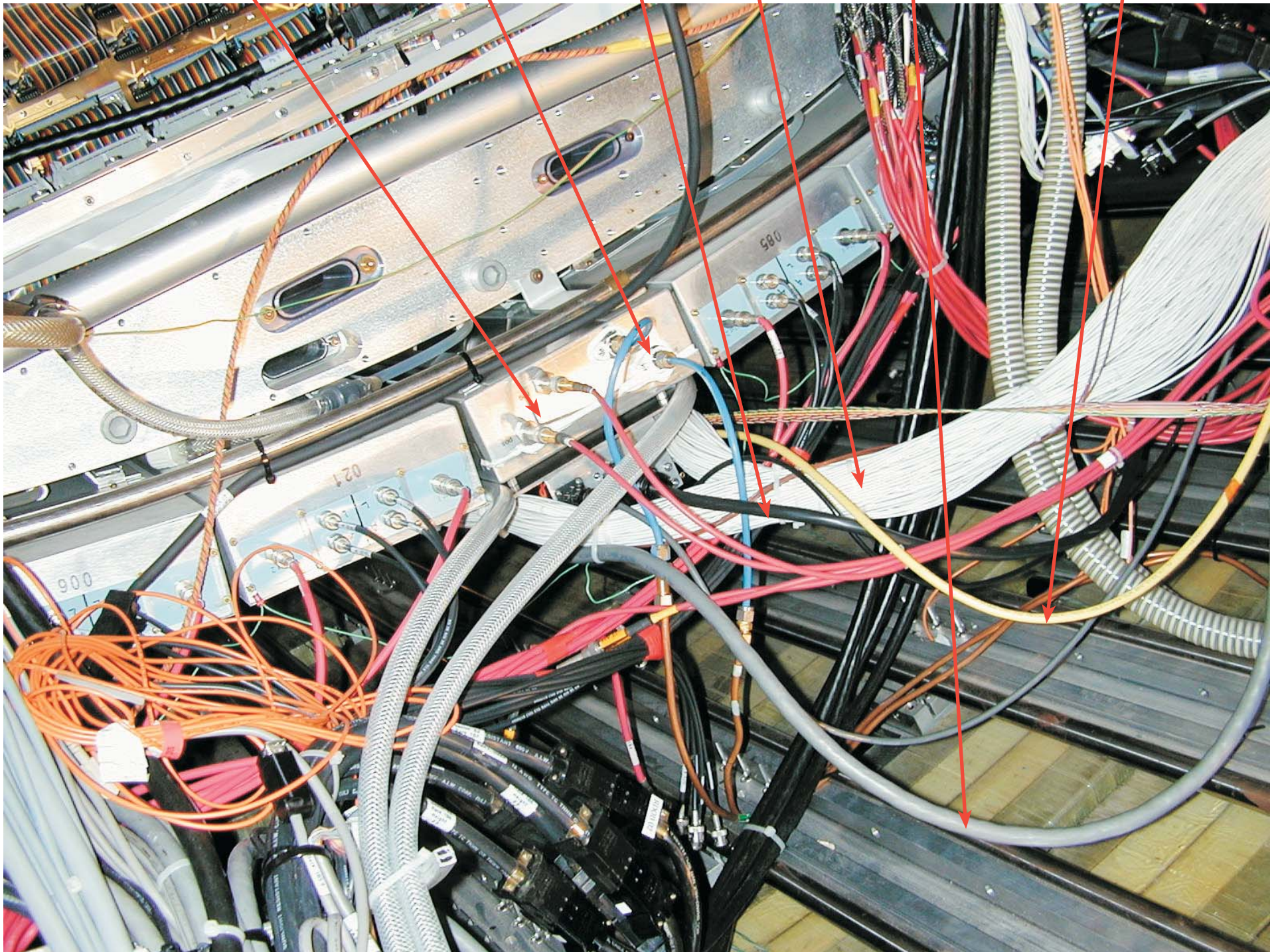
Gas In and Out

LV

pigtails

from TCD

to tofjdaq.starp





pVPD PMTs

pVPD structure

pVPD cabling

TOFrp

TOFp Racks (1B1 & 2)

TOFp Thermocouples

TOFp HVSystem

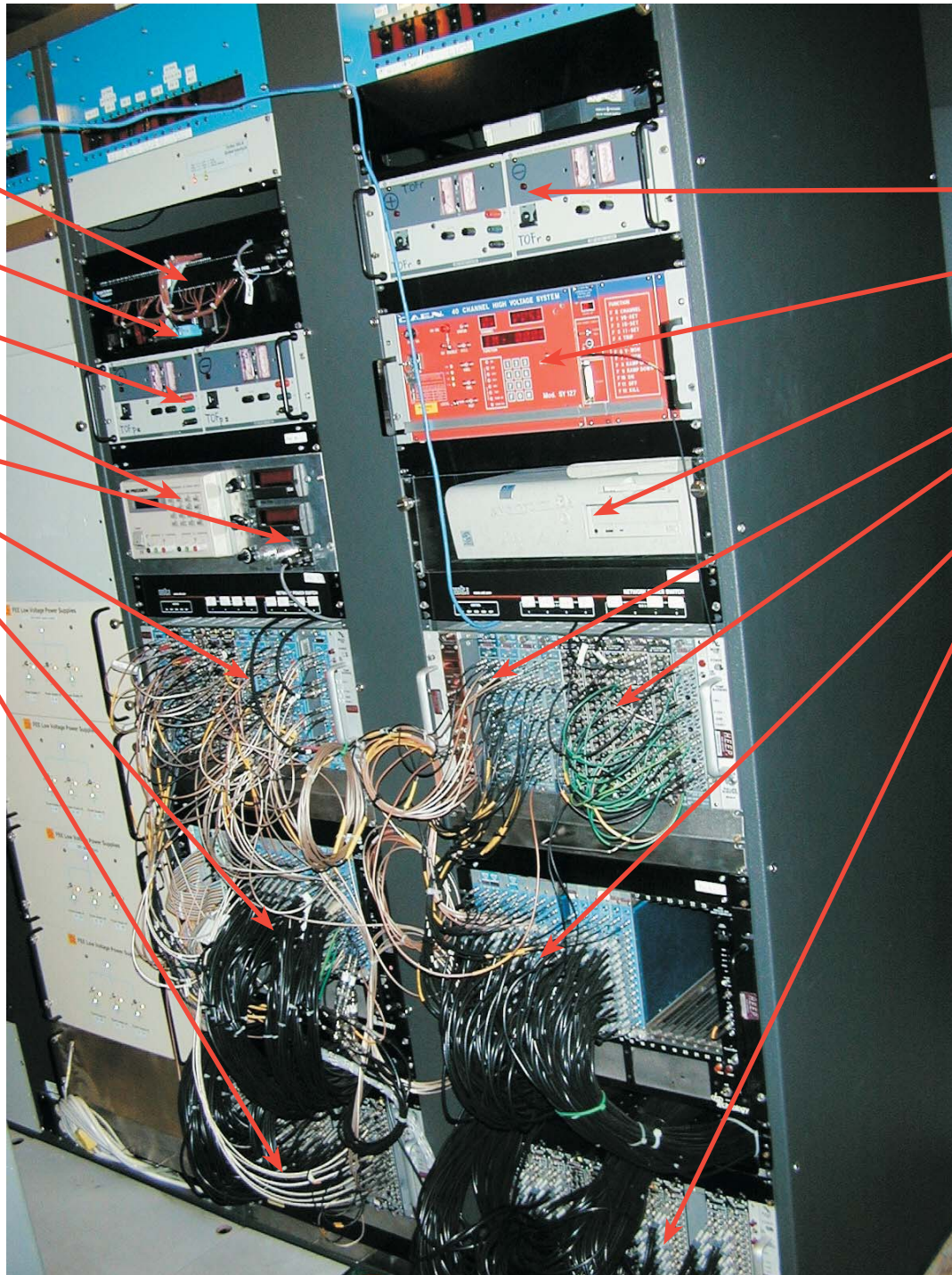
TOFp LV

pVPD LV
Threshold System

TOFp Local Trigger

TOFp/pVPD digitization

TOFp/pVPD discriminators



TOFrp LV

TOFrp HV

tofpdaq.starp

TOFrp starts/gates/clears

TOFrp trigger logic

TOFrp digitization

TOFrp discriminators