Module-C assembly status
Feb.10-22

- Feb. 10-12
  - Tuner and magnetic shield assembly by INFN and FNAL.
  - Many thanks to the INFN and FNAL team.
- Feb. 15 -19
  - Alignment of four cavities.
  - Locking the cavity jackets to Invar rod.
  - Attaching temperature sensors and pin diode.
  - Assembling 5K thermal intercepts on the input couplers for three cavities.
  - Connecting RF cables, and assembling magnetic shields at the string end of FNAL side, and between FNAL and FNAL cavities, and FNAL and DESY cavities.
- Feb. 22-23
  - Assembling magnetic shields between DESY and DESY cavities, and at the string end of DESY side.

Tuner and magnetic shield assembly

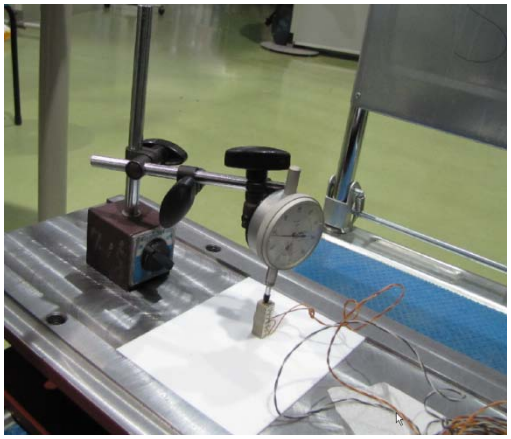
by INFN and FNAL (Feb. 10-12)

INFN : Carlo Pagani, Angelo Bosotti and Rocco Pararella
FNAL : Serena Barbanotti

Blade tuner, magnetic shield and SI on ACC011

Magnetic shields on Z108 and Z109

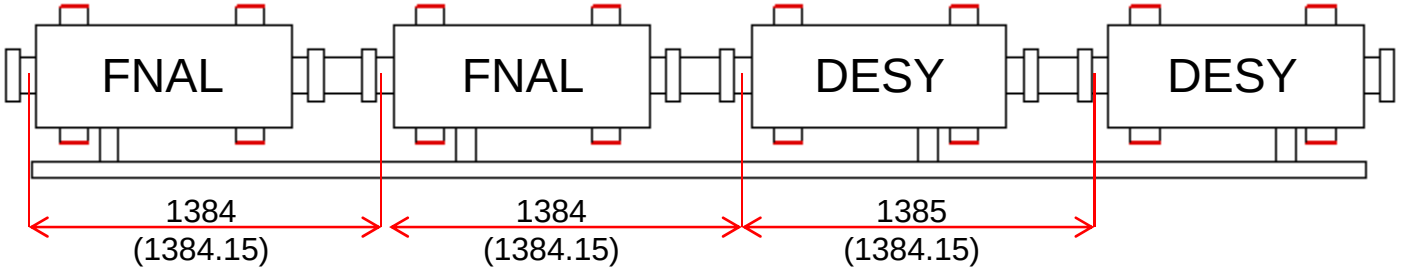
Piezo components of Z109 had a voltage break-down at 90 and 190 voltages.
After cleaning the Piezo components, they were able to work up to 200 voltages.



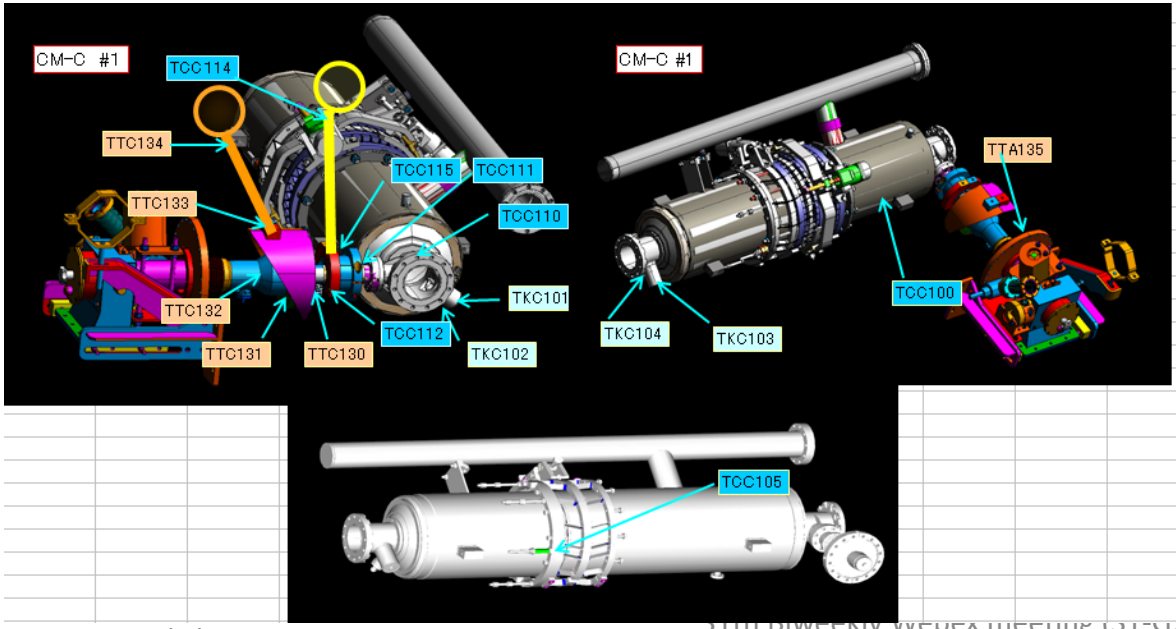
Test of Piezo after cleaning

Module-C assembly work: Feb. 15 -19

Module-C alignment

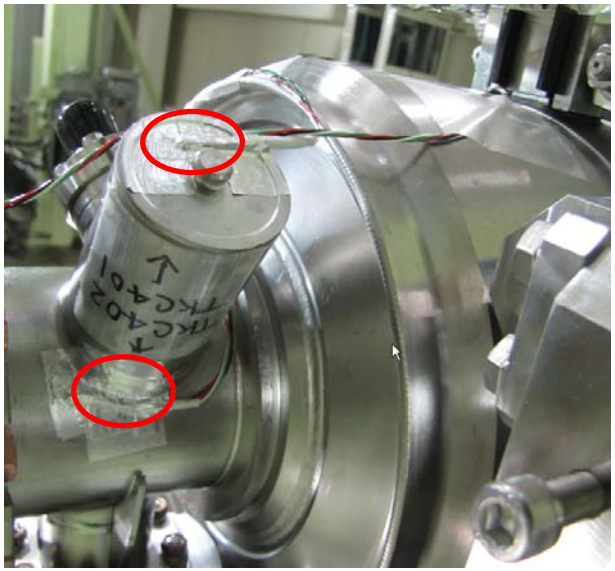


Temperature sensors and pin diodes

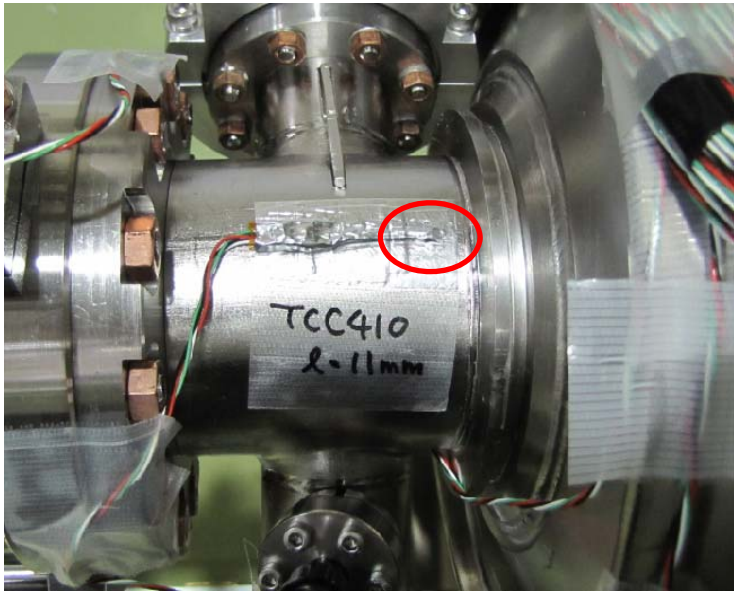


Tag No.	Position of measurement
TCC100	Helium Vessel
TKC101	HOM coupler in the input coupler side-top
TKC102	HOM coupler in the input coupler side-bottom
TKC103	HOM coupler in the non-input coupler side-top
TKC104	HOM coupler in the non-input coupler side-bottom
TCC105	Piezo
TCC110	Connection area of input coupler with beam pipe
TCC111	5K thermal intercept of input coupler (beam pipe side)
TCC112	5K thermal intercept of input coupler (body)
TCC114	5K thermal intercept of input coupler (cooling pipe side)
TCC115	5K thermal intercept of input coupler (intercept side)
TTC130	80K thermal intercept of input coupler (beam pipe side)
TTC131	80K thermal intercept of input coupler (body)
TTC132	80K thermal intercept of input coupler (vacuum vessel side)
TTC133	80K thermal intercept brade of input coupler (coupler side)
TTC134	80K thermal intercept brade of input coupler (cooling pipe side)
TTC135	Input coupler (room temperature and in the vacuum vessel)

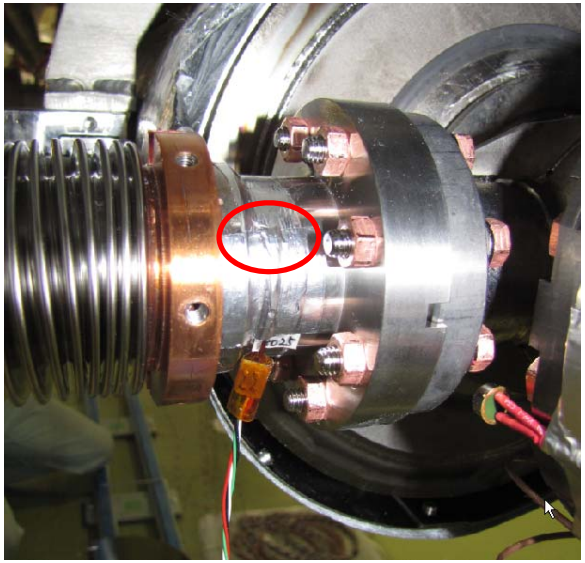
Cavity jacket: Cernox



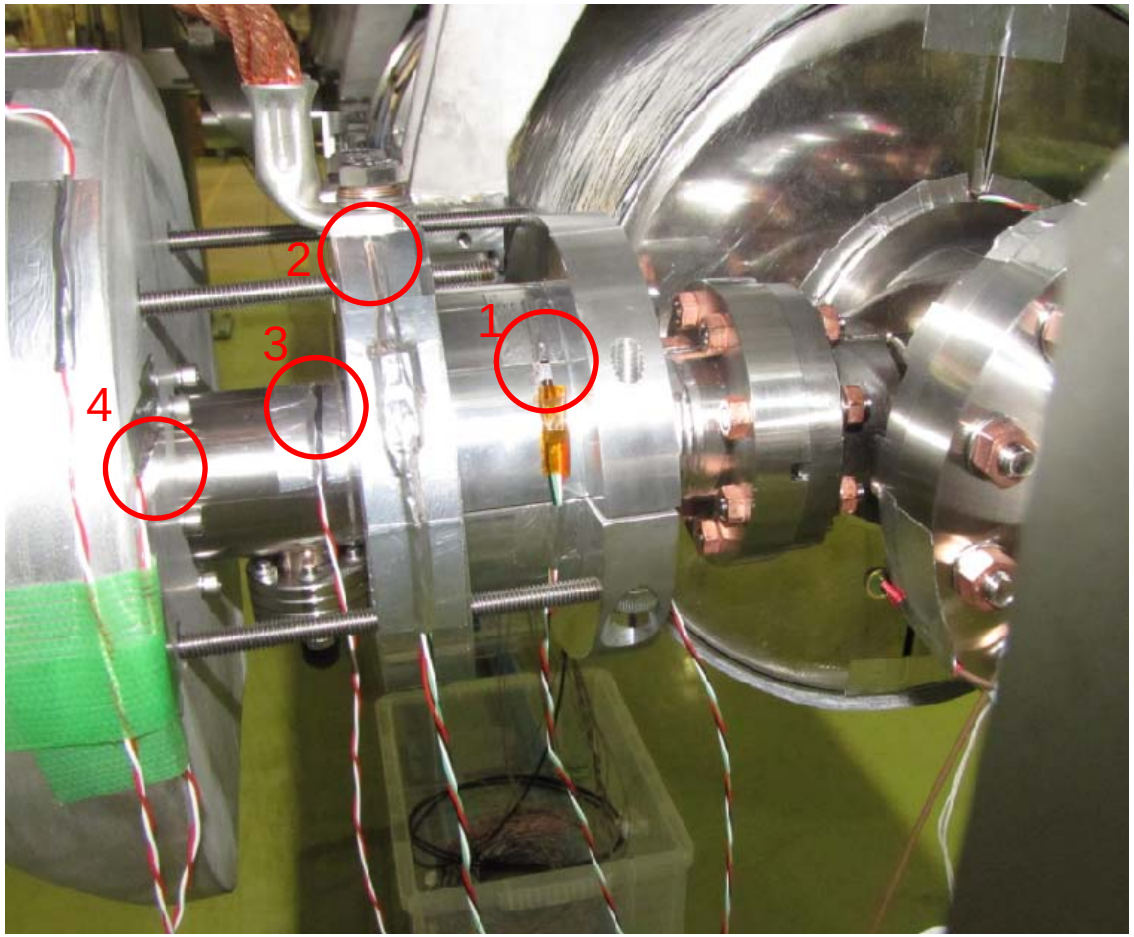
HOM coupler: Carbon resistors



Beam pipe: Cernox



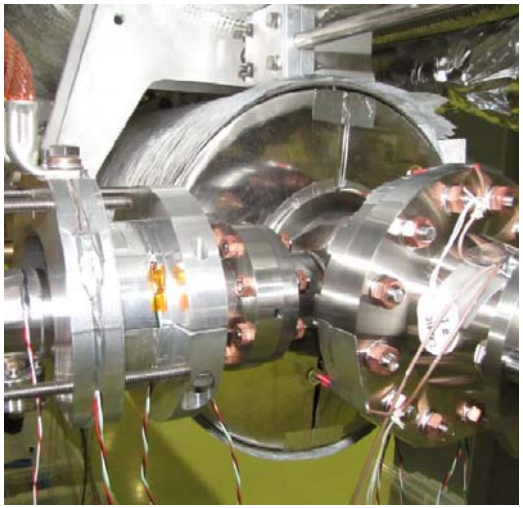
Input coupler at 5K anchor (beam pipe side): Cernox



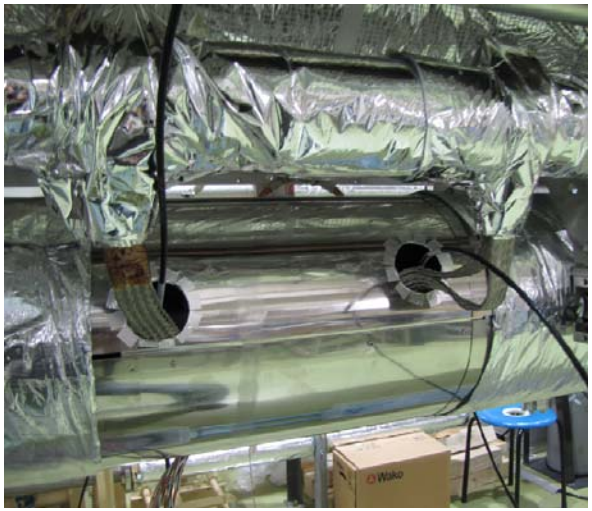
1. 5K thermal intercept of input coupler (body): Cernox
2. 5K thermal intercept of input coupler (intercept side): Cernox
3. 80K thermal intercept of input coupler (beam pipe side): CC
4. 80K thermal intercept of input coupler (body): CC

Assemblies of 5K thermal intercepts for 2 FNAL cavities and 1 DESY cavity have been completed.

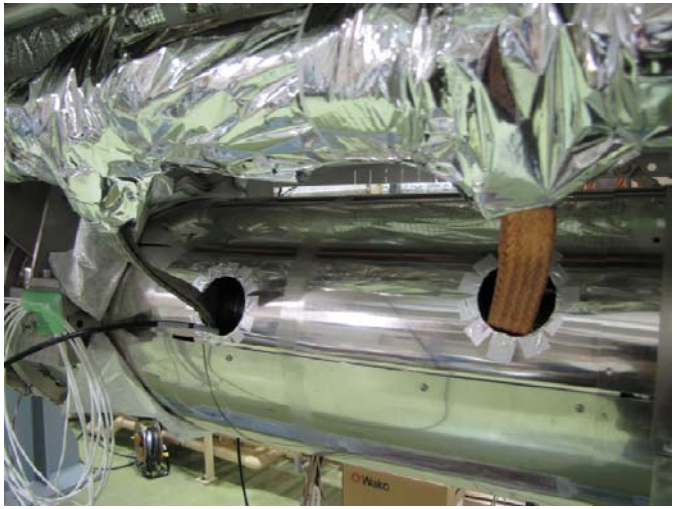
Assembly of magnetic shields between cavities



Magnetic shield for the end of the FNAL cavity, AES004



Magnetic shield between the AES004 and ACC011



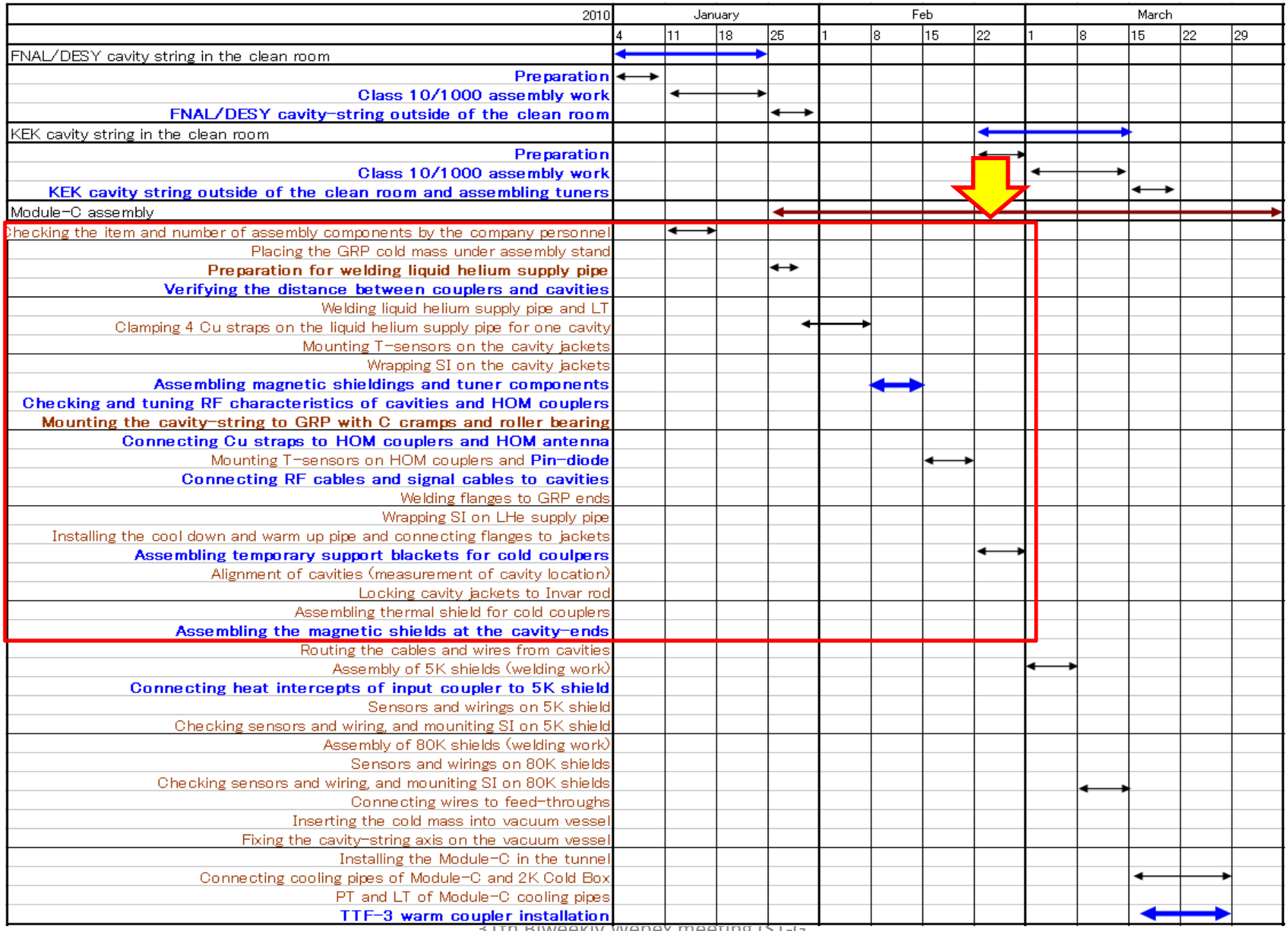
Magnetic shield between the ACC011 and Z108

Module-C assembly work: Feb. 23

Assembling magnetic shields at the end of DESY cavity and between DESY cavities.

Work schedule this week

- Feb. 24: Completing the magnetic shields, and connecting RF cables. Assembling cool-down/warm-up line.
- Feb. 25: Assembling one set of 5K thermal intercept for Z109. Welding bellows to cool-down/warm-up line.
- Feb. 26: Helium leak test of the cool-down/warm-up line.
- March. 1~: Assembling and welding of 5K shield.


2010
January
Feb
March
4
11
18
25
1
8
15
22
1
8
15
22
29
FNAL/DESY cavity string in the clean room
Preparation
Class 10/1000 assembly work
FNAL/DESY cavity-string outside of the clean room
KEK cavity string in the clean room
Preparation
Class 10/1000 assembly work
KEK cavity string outside of the clean room and assembling tuners
Module-C assembly
Checking the item and number of assembly components by the company personnel
Placing the GRP cold mass under assembly stand
Preparation for welding liquid helium supply pipe
Verifying the distance between couplers and cavities
Welding liquid helium supply pipe and LT
Clamping 4 Cu straps on the liquid helium supply pipe for one cavity
Mounting T-sensors on the cavity jackets
Wrapping SI on the cavity jackets
Assembling magnetic shieldings and tuner components
Checking and tuning RF characteristics of cavities and HOM couplers
Mounting the cavity-string to GRP with C cramps and roller bearing
Connecting Cu straps to HOM couplers and HOM antenna
Mounting T-sensors on HOM couplers and Pin-diode
Connecting RF cables and signal cables to cavities
Welding flanges to GRP ends
Wrapping SI on LHe supply pipe
Installing the cool down and warm up pipe and connecting flanges to jackets
Assembling temporary support blackets for cold coulpers
Alignment of cavities (measurement of cavity location)
Locking cavity jackets to Invar rod
Assembling thermal shield for cold couplers
Assembling the magnetic shields at the cavity-ends
Routing the cables and wires from cavities
Assembly of 5K shields (welding work)
Connecting heat intercepts of input coupler to 5K shield
Sensors and wirings on 5K shield
Checking sensors and wiring, and mouniting SI on 5K shield
Assembly of 80K shields (welding work)
Sensors and wirings on 80K shields
Checking sensors and wiring, and mouniting SI on 80K shields
Connecting wires to feed-throughs
Inserting the cold mass into vacuum vessel
Fixing the cavity-string axis on the vacuum vessel
Installing the Module-C in the tunnel
Connecting cooling pipes of Module-C and 2K Cold Box
PT and LT of Module-C cooling pipes
TTF-3 warm coupler installation