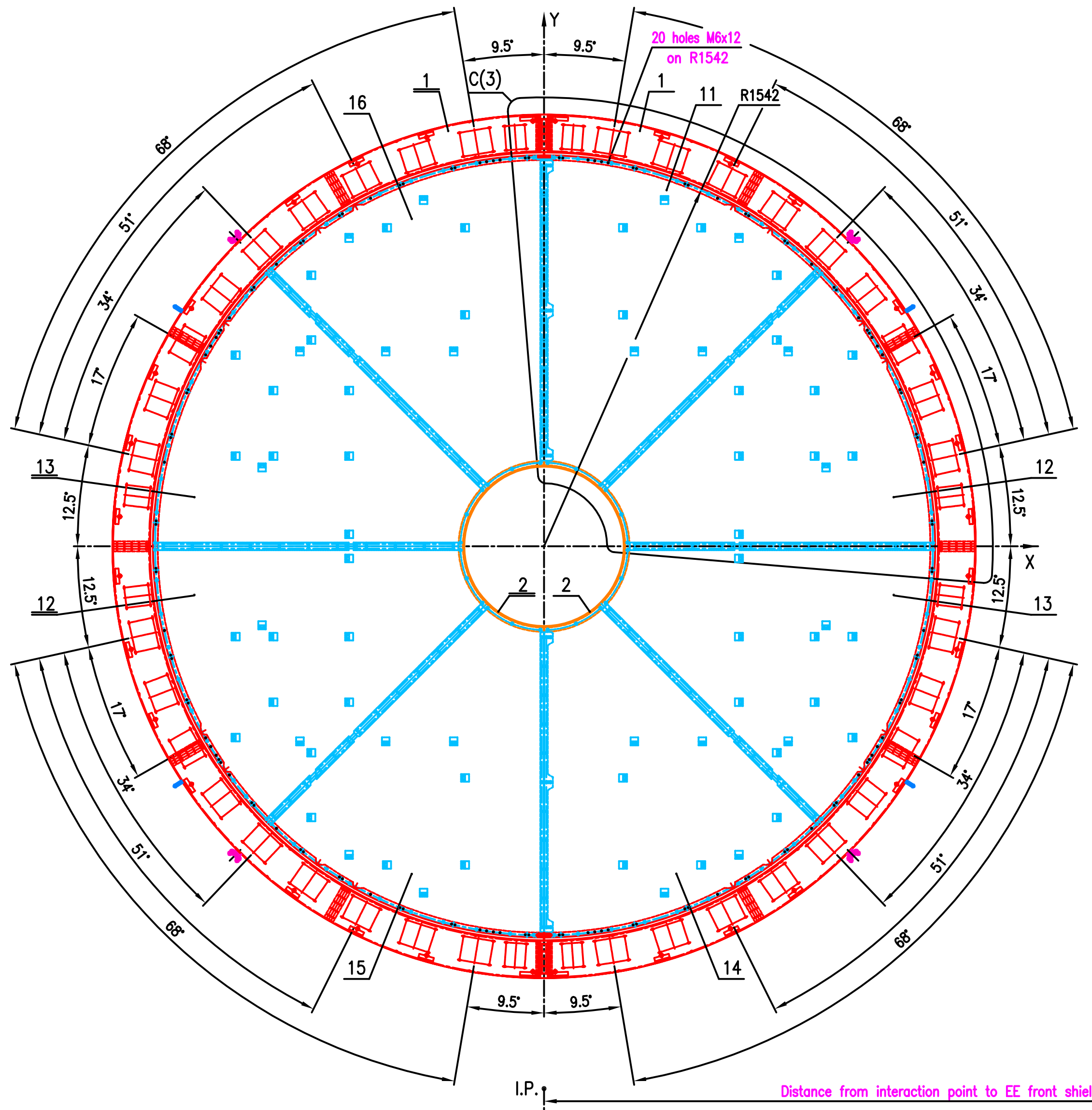
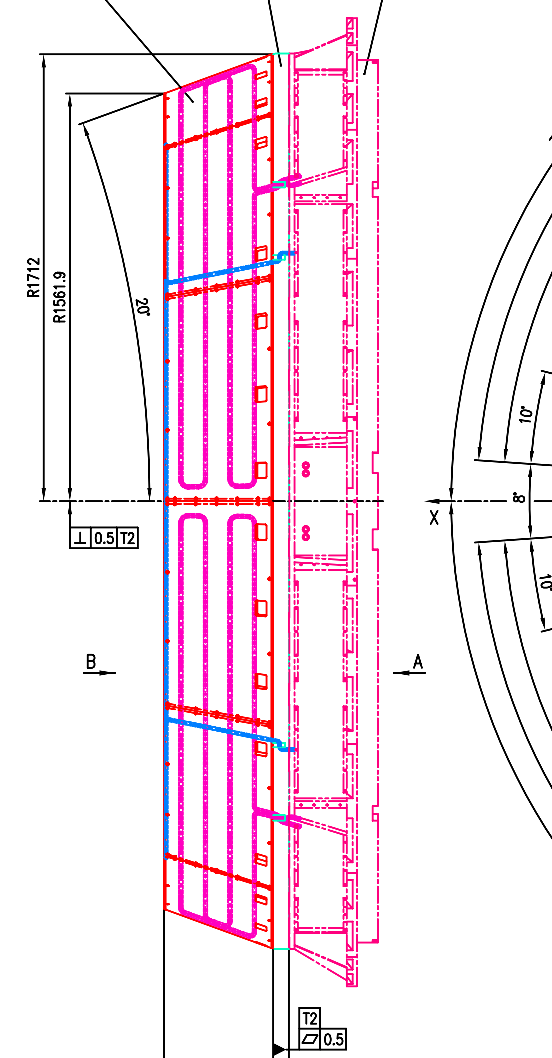
B

Front view with attachment dimensions for detector ES(-1) CMS.





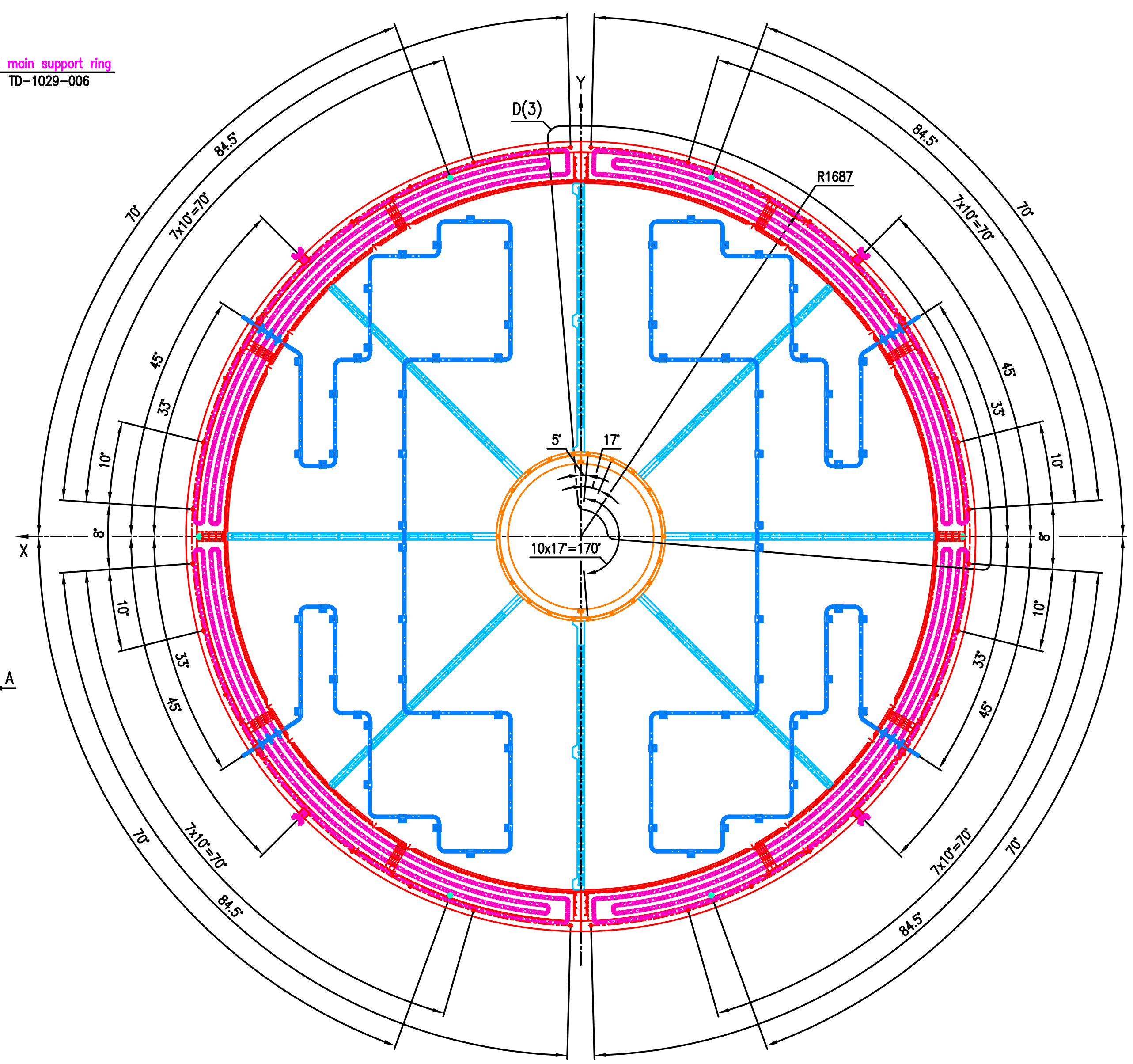
Distance from interaction point to EE front shield z=3172*

Distance to EE back plate z=3590*

Distance to EE support ring z=3650*

A

Back view with attachment dimensions of environmental shield.



Technical requirements.

1. Dimensions for reference.
2. * Z position of EE environmental shield with magnetic field off.
3. Mechanical cover to protect services going above outer environmental shield from detector ES CMS is not shown.
4. Hollow must be filled in with thermal insulation material after the environmental shield will be attached onto EE back plate.
5. Materials for manufacture of all parts and fasteners must be non-magnetic and radiation-resistant. The maximum radiation absorbed dose during the 10 years of operation is 10^6 Gy=1Mrad.
6. All non-metal materials must be tested under radioactive irradiation.
7. Nonspecified radius of cooling pipes bending is 20 mm minimum.
8. Recommended adhesive: EE RTV1075 is made by AMBERSIL.
9. Recommended glue:
10. All gluing surfaces must be cleaned and degreased.
11. Check assembly at a manufacture company is required. It is necessary to measure the outer and attachment dimensions of screen and clearance between two parts of screen.
12. Cooling system must be water tight. Test to 20 bar after screen assembly.
13. Main view, view A and B are corresponding with screen view after detector EE(-1) will be mounted onto CMS (see sheet 1).
14. Additional side screens pos.65 and 66 should be installed onto detector for a time period of Dee test (see sheet 6).
15. Plates pos.73, side plates pos.70 and 71 should be installed onto detector for a time period of Dee storage befor final mounting at the experimental hall (see sheet 5).
16. Plates pos.73, side plates pos.70 and 71 should be dismounted befor detector EE(-1) will be installed onto CMS and hold-down bars pos.31, 32, 33, angle plates pos. 34, 35, 36, connecting bars pos.19 should be fastened.

Approved:

IHEP, Russia, EE CMS Technical Coordinator (Katchanov V.A.)

Rutherford Appleton Laboratory, UK, Engineer of Major Mechanics for the EE CMS (J.A.Hill)

CERN, Switzerland, CMS Integration Center, Principal engineer of Endcap CMS (Surkov A.N.)

N° ORIG.	SIGN AND DATE	CHANGE N°	COPY N°	SIGN AND DATE

NOTE N°	FIRST APPLICATION
	7954-00-00-00

PROJECTION

7954-00-00-00 AD

EE(-1) Environmental shield

Assembly drawing

	NN	SHEET	N° DOCUM.	SIGN	DATE
DRAWN	Levin A.N.				
CHKR	Shorikov E.A.				
M.CONTR.					
S.CONTR.					
APPD	Levin A.N.				

LIT	WEIGHT	SCALE
	106 kg	1:10

SHEET 1 SHEETS 6

INSTITUTE FOR HIGH ENERGY PHYSICS Russia Protvino

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