

Rising with Miniball Design Status

Monday, 19th January 2004 – Daresbury

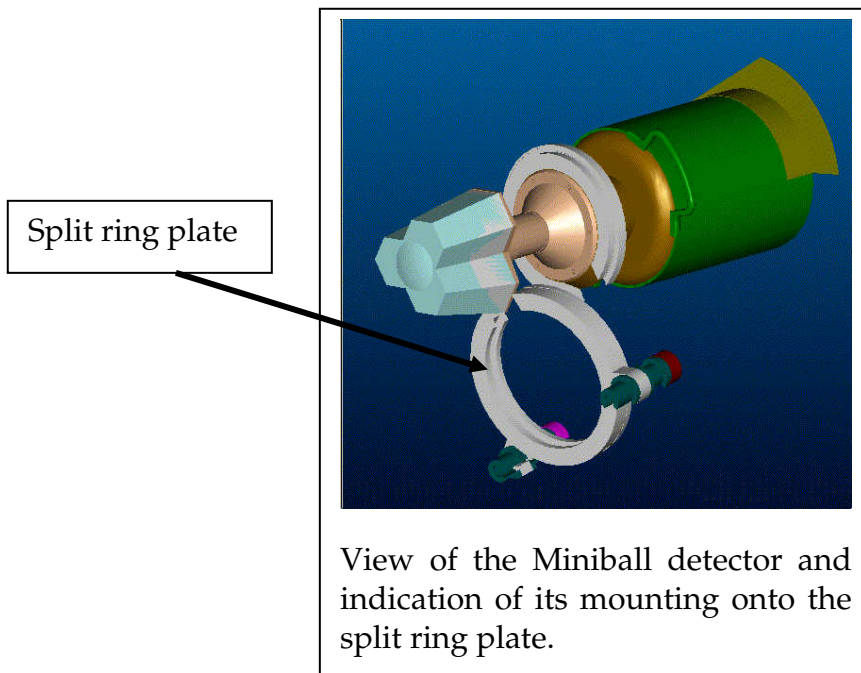
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The two main design problems we had before Christmas were the mounting procedure for the Miniball detectors and the alteration and location of the plate for the signal and high voltage connectors.

We think we now have solutions and understand the operation and construction of the Miniball detectors.

Mounting procedure.

We have investigated the procedure following the email received from Nigel Warr from Cologne. His email explained the mounting procedure used for the Minball spectrometer and we propose to use the same method. Therefore, the proposal is to have the split ring plate mounted and fixed on the mechanical structure. The Miniball detectors are to be inserted by hand into this plate, located in position and fixed by the fixing collar. Please can you (Nigel/Juergen/Dirk) confirm that this is correct and you are all happy with this procedure. We are still checking the access for the 85° but the 51° ring is OK.



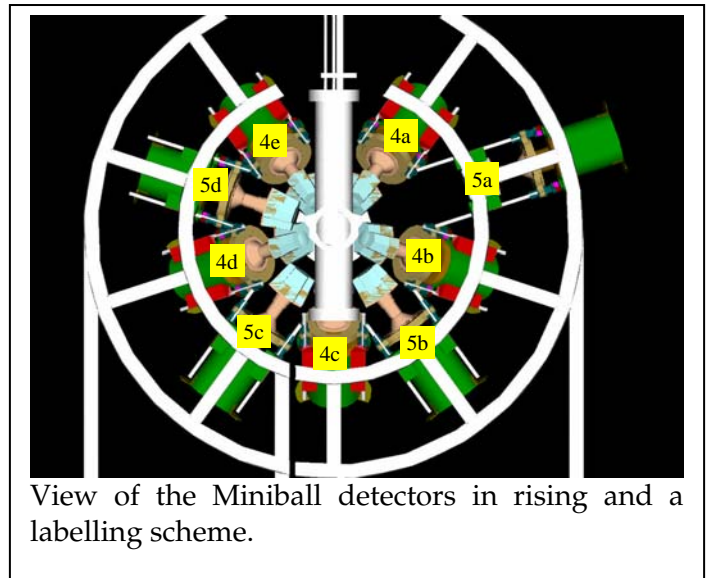
Connector plate.

This will have to be modified for Rising. The email from Juergen Eberth confirmed that this would be OK and that the connector plate can be moved in slightly from the back of the dewar. We will look at this in detail and propose a solution. We do not think that this will be a problem.

Other information.

The location and possible movement of the Miniball detectors in Rising is detailed in the table below. See diagram for orientation. Note the angle to the beam direction is to the centre of the triple cryostat. We will provide detailed angles at a later date. In some position the target chamber limits the movement. Note only nine position are possible. The hector detectors can be located at 90° in positions 108° and 252° .

Ring	Position	Angle		Stroke mm
		θ	φ	
4	a	51.25	36	180-500
	b	51.25	108	180-500
	c	51.25	180	180-500
	d	51.25	252	180-500
	e	51.25	324	180-500
5	a	85	72	180-500
	B	85	144	232-500
	C	85	216	232-500
	d	85	288	180-500



Design status.

Provided that the questions above are OK we plan to finish the conceptual design by the middle of February. Detail design work is then required to provide manufacturing drawings. This will take until end March.

