Subject: Re: Geometry of EMC Barrel Crystal
Posted by StefanoSpataro on Fri, 18 Sep 2009 12:58:56 GMT

View Forum Message <> Reply to Message

Christian Hammann wrote on Fri, 18 September 2009 14:13I was looking at crystal 5 in row 1 copy 1 of module 2 which should be a type 1 crystal.
These are the coordinates obtained by doing an inspect node on the root geometry created by the simulation:

Front face:
point #0 : x= -1.64783 y= -1.25634 z= -9.99926
point #1 : x= -1.64783 y=   0.88266 z= -9.99926
point #2 : x=   0.49055 y=   0.88266 z= -9.99926
point #3 : x=   0.49055 y= -1.25634 z= -9.99926

Rear face:
point #4 : x= -0.88418 y= -1.25633 z=   9.99926
point #5 : x= -0.88418 y=   1.63001 z=   9.99926
point #6 : x=   2.04146 y=   1.63001 z=   9.99926
point #7 : x=   2.04146 y= -1.25633 z=   9.99926

This gives a frontface of 21.4 by 21.4 mm which is about 1mm smaller than it is in the TDR. Also it should not be quadratic, (not even rectangular) according to the TDR.

The backface has a size 29.2mm by 28.9mm which more or less agrees with the TDR but it should also not be rectangular.

I have taken a look into the emc tdr, and I have found the numbers for crystal type 1. I compare the values (in mm) to what is present inside the pandaroot geometry definition:

Crystal	TDR	PandaRoot
AF:	21.21	21.38
BF:	21.28	21.39
CF:	21.27	21.38
AR:	29.04	29.26
BR:	28.75	28.86
CR:	29.12	29.26

There are some differencies, but everything is below 200um. Why do yo write "1mm smaller"? I do not think 0.2 mm can change something, maybe it could be good to check also the position. I repeat, the numbers are coming from an old drawing and as far as I know it was not modified. Maybe comments from emc geometry experts are required.