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Subject: new R3B setup components

Posted by [C. A. Douma](#) on Tue, 01 Dec 2015 13:07:49 GMT

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Can anyone tell me which detectors in r3bsim.C belong to the old R3B-LAND setup and which detectors belong to the new R3B setup at FAIR?

Thanks in advance!

Christiaan Douma

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Subject: Re: new R3B setup components

Posted by [Dmytro Kresan](#) on Tue, 01 Dec 2015 14:05:13 GMT

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Hello Christiaan,

There were multiple versions of old LAND set-up. Typical detectors are:

TARGET  
ALADIN  
CRYSTALBALL  
TOF  
DCH  
TRACKER  
LAND

Detectors (and volumes) which definitely belong to new experiments, are:

GLAD  
CALIFA  
DToF  
STaRTrack  
SCINTNEULAND  
MFI  
PSP

We need to ask Michael for possible corrections.

Best regards,

Dima

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Subject: Re: new R3B setup components

Posted by [C. A. Douma](#) on Tue, 01 Dec 2015 14:53:05 GMT

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Thank you! I will await further information from Michael.

Christiaan.

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Subject: Re: new R3B setup components  
Posted by [Michael Heil](#) on Wed, 02 Dec 2015 06:58:01 GMT  
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Hello Christiaan,  
the transition from LAND to R3Broot is floating. Whenever we had a new detector we were using it in the experiment. But I will try to clarify.

TARGET: This is valid for both setups, of course.

ALADIN: Is the old magnet, will be replaced by GLAD.

CRYSTALBALL: is the old gamma calorimeter (and proton detector) will be replaced by CALIFA.

TOF: There are several versions of ToF wall. (TFW, NTF, DTF are old setup. In R3Broot this is called TOF and MTOF.) The new TOF wall is called TOFD and was implemented by Dima as example for the r3broot workshop. It is called DTOF in r3broot.

DCH: This was the first official R3Broot detector. But it arrived at GSI so early that it was used for LAND experiments. In the meanwhile it is already old and will be (probably) not used for FAIR experiment. It will be replaced by straw tubes which are under construction at the moment. Straw tubes are not yet implemented in R3Broot.

TRACKER: This is presumably the proton tracker which surrounds the target. It is not yet finished and will be a FAIR detector.

LAND: Old version of the neutron detector. Will be replaced by NeuLAND. For NeuLAND we were considering two versions, one based on RPC and the other on scintillaotrs and we ran simulations with both. Therefore, you can find several versions. But SCINTNEULAND will be used in future for FAIR.

PSP: Position sensitive pin diodes. Were used in the past for tracking of the incoming beam on target. Will be replaced by strip PSPs in future which are not implemented in R3Broot yet.

GFI: old tracking detectors for fragments. Will be replaced by MFI (thinner fibers).

Best regards,  
Michael