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Subject: How to start

Posted by [ForamShah](#) on Wed, 26 Mar 2014 11:46:21 GMT

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hi,  
i am trying to do simulation of  $X(3872)$ . for that i create my own decay file & simulation, digitization, rec., ana., pid., for that i take the files given in apr13 tutorial and make necessary changes & try to run it & it's running. My question is that what files i am taking from apr13, is this a correct way? what will be the change if i take this files from pandaroot/macro/run? where to actually take files from & what difference it will make??

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Subject: Re: general

Posted by [Elisabetta Prencipe \(2\)](#) on Wed, 26 Mar 2014 12:08:32 GMT

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Dear Foram,

please provide more detailed information about what you like to do in Pandaroot, otherwise it is difficult to try to help. Here I just take a guess on what are your concerns.

1) As Stefano suggested, it is better to move to the last trunk and proceed as suggested here: [https://panda-wiki.gsi.de/foswiki/pub/Computing/Minutes24March2014/Goetz\\_en\\_FastSim\\_Mar2014.pdf](https://panda-wiki.gsi.de/foswiki/pub/Computing/Minutes24March2014/Goetz_en_FastSim_Mar2014.pdf)

So, please update your release, as here I see that you are using the old apr13.

2) which decay are you simulating? here you say  $X(3872)$ . So,  $p\bar{p} \rightarrow X(3872) \rightarrow (?)$  you should be warned that other people in PANDA already tried the simulation of  $X(3872) \rightarrow J/\psi \pi \pi$ , with nice results [Martin Galuska]. It would be easier/faster for you to take a look on what they already did.

3) you calculate the invariant mass (whatever is your final state. I guess: it is always  $X$  to  $J/\psi \pi \pi$ ) in the analysis macro.

You first simulate you decay (no need to re-invent a file.dec, if it already exists); then you digitize; then you reconstruct your events. Then you use the pid macro. Last step is to run your own analysis macro, depending what you wish to look at (mass, momentum, energy, resolution, ..., whatever selection variable you can build). Macros must be run exactly in this order, as suggested in the tutorial.

4) as Stefano suggested, the updated macros are in /macro/run/

5) make sure not to run too many events in the same file. Suggestion Nevent = 2000/each job.

cheers, Elisabetta

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Subject: Re: general  
Posted by [ForamShah](#) on Wed, 26 Mar 2014 12:17:17 GMT  
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hi,  
i am also having jan14 installed would it be better for me to use that ?  
my decay channel is pbarpsystem---x(3872)--omega j/psi & j/psi--e+ e-  
what is the difference if i take sim,dig,rec,ana,pid files from pandaroot/macro/run or from  
release jan14/apr13

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Subject: Re: general  
Posted by [Elisabetta Prencipe \(2\)](#) on Wed, 26 Mar 2014 12:21:33 GMT  
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Hi Foram,

pandaroot is in development; clearly jan14 is better than apr13: more bugs are fixed  
The suggestion is to use the last update version. Nice to hear that somebody is trying other X  
decays!

Elisabetta

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Subject: Re: general  
Posted by [StefanoSpataro](#) on Wed, 26 Mar 2014 12:21:34 GMT  
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The tutorial to follow is the one in  
<https://panda-wiki.gsi.de/foswiki/bin/view/Computing/PandaRootRhoTutoria> I

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Subject: Re: general  
Posted by [StefanoSpataro](#) on Wed, 26 Mar 2014 12:25:16 GMT  
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In wiki:

<https://panda-wiki.gsi.de/cgi-bin/view/Computing/PandaRoot>

You can see that:

Suggested version of the code

- External packages apr13
- PandaRoot release jan14
- (updated on 02/02/2014)

You could also use the last trunk, if you want to check fast simulation.

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