corelation between stack and particle

Mon, 03/12/2018 - 13:21

#1

Jrai

corelation between stack and particle

Dear all,

I have imported stack (.mrcs) and star files from relion. Everything is fine.

I did autorefine. I classified one autorefine model (i.e. parameters) into 3 classes using 3d mask on one region. Lets say I like class 1. I use the particles from class 1 bu creating new stack.

In the other hand, I used same autorefine model (i.e. paratemers) into 3 classes using 3d mask on another region. Lets say I like class 1 also from this classification.

Now the proeblem is how to find the corelation between two classes in relation to parent stack? In other words, Is there any particles that are in both classes from two seperate classification.

How to find out?

Thanking you in advance

Jay

Hi Jay,

I'm sorry, but there is currently no way to do this from within the GUI. However you can work this out yourself if you want. In the refinement package the Ori. Pos. ID should refer to the original position in the imported refinement package.

You first need to know the IDs of the refinement packages you want. If you type the following :-

```
sqlite3 name_of_database.db "select * from
refinement_package_assets;"
```

it will list all refinement packages - you can find the refinement packages you want, and the first column is the id.

To return a list of all the original position asset ids for a given refinement_package_id use :-

```
sqlite3 name_of_database.db "select
original_particle_position_asset_id from
refinement_package_contained_particles_$wanted_id;"
```

e.g. to return all the positions for the refinement package with the id 1 :-

```
sqlite3 name_of_database.db "select
original_particle_position_asset_id from
refinement_package_contained_particles_1;"
```

If you had 2 refinement packages, created from the same initial refinement package and you want to see which particles are in both then the following command would return them :-

```
sqlite3 name_of_database.db "select
refinement_package_contained_particles_$first_id.original_part
from
refinement_package_contained_particles_$first_id,refinement_pa
where
refinement_package_contained_particles_$first_id.original_part
=
refinement_package_contained_particles_$second_id.original_par
```

e.g. To return all particles in both the refinement package with an id of 7, and the refinement package with an id of 9 :-

```
sqlite3 name_of_database.db "select
refinement_package_contained_particles_7.original_particle_pos
from
refinement_package_contained_particles_7,refinement_package_co
where
refinement_package_contained_particles_7.original_particle_pos
```

```
=
refinement_package_contained_particles_9.original_particle_pos
```

Thanks!

Tim

Jrai

Thanks alot.

Thanks alot.

I will let you know how it goes

Jrai

bcc18

How to import a star file and a stack from RELION?

How to import a stack file from RELION that can be used directly in a 2D classification in cisTEM?

The stack file has been created with "relion_stack_create" command from a star file in RELION.

timgrant

Hi,

If you have a stack and a star file, you should be able to import it by going to Assets->Refinement Packages->Import.

Hope that is what you were after.

Thanks,

Tim

bcc18

data from RELION

Hi Tim,

Thank you. I imported the stack and the star files as indicated.
I do not understand why in the Refinement package (Relion import) for
the image ID I have -1 for the entire stack and the X&Y positions are
0.00?

bcc18

data from RELION and 2D classification

Hi,

I have imported some RELION data using Assets->Refinement
Packages->Import. The new Refinement package contains 104021
particles.
I follow this with a "2D classification". However in "Actions/2D Classify"
the fields for the 2D class averages are EMPY.

I wonder what it is wrong? When I look at the newly created "Refinement
package" at the "Image ID" I have -1 for all the 104,021 positions, and
the XPos is 0.00A and YPos is 0.00A for all the 104,021 positions.

Thank you very much.

timgrant

The fact that the Image ID is

The fact that the Image ID is -1 and the positions are 0 is expected. Those fields refer to the original image, and you are importing a stack, so there is no info about the original image.

If you click on display stack in the refinement package assets panel - does the stack look ok?

Are your defocus values as listed in the refinement package assets panel ok? Are they all the same?

Cheers,

Tim

bcc18

Hi Tim,

The defocus values are not the same, they are OK. In the stack the protein in white. Do I have to change the density to negative values?

Thank you.

Tue, 04/17/2018 - 16:42 <u>(Reply to #9)</u>

timgrant

When you import the stack,

When you import the stack, you are given the option of selecting the contrast - did you select the correct one?

Tim

bcc18

Actually for "Protein Density

Actually for "Protein Density in Stack Is"   I had "White (RELION Default)"

I wonder whether I have to switch to " BLACK (Frealign Default)"

Thank you.

Tue, 04/17/2018 - 16:50 <u>(Reply to #11)</u>

timgrant

Let me know if that solves

Let me know if that solves the problem.

Cheers,

Tim

bcc18

Hi Tim,

Switching to "Back (Frealign default)" during the IMPORT process did not solve the problem.

Jrai

Did you try with smaller

Did you try with smaller particle diameter. Looks like you put wrong particle diameter. One thing you should notice that relion use particle diamter while cisTEM used particle radius. And it should work

bcc18

Hi Tim,

Yes; that was the problem. Things work. Thank you.

Jrai

What's work? Did changing the

What's work? Did changing the particle diameter work or changing contrast?

bcc18

Changing the particle

Changing the particle diameter worked.

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