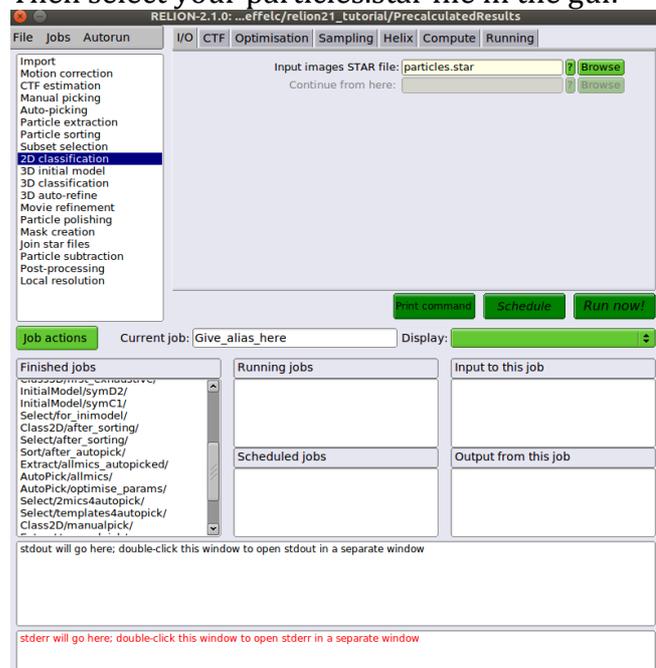


2D Classification in RELION 2.1

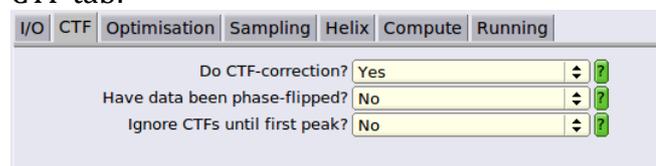
If you do not have extracted particles, copy them from the precalculated results to the working directory:

```
cp -r PrecalculatedResults/Extract/job011 Extract/job011
```

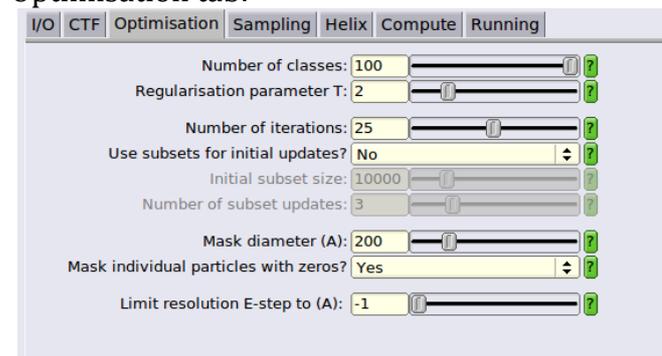
Then select your particles.star file in the gui:



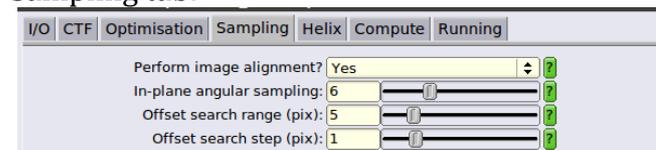
CTF tab:



Optimisation tab:



Sampling tab:



Helix tab:

I/O	CTF	Optimisation	Sampling	Helix	Compute	Running
Classify 2D helical segments?	No					?
Tube diameter (A):	200					?
Do bimodal angular searches?	Yes					?
Angular search range - psi (deg):	6					?

Compute tab:

I/O	CTF	Optimisation	Sampling	Helix	Compute	Running
Use parallel disc I/O?	Yes					?
Number of pooled particles:	3					?
Pre-read all particles into RAM?	Yes					?
Copy particles to scratch directory:						?
Combine iterations through disc?	No					?
Use GPU acceleration?	No					?
Which GPUs to use:	0:1:2:3					?

Running tab:

I/O	CTF	Optimisation	Sampling	Helix	Compute	Running
Number of MPI procs:	1					?
Number of threads:	1					?
Submit to queue?	No					?
Queue name:	openmpi					?
Queue submit command:	qsub					?
Standard submission script:	ON/reliion/bin/reliion_qsub.csh					?
Minimum dedicated cores per node:	24					?
Additional arguments:						?

If your run takes too long you can copy the precalculated run to the running directory and use these results:

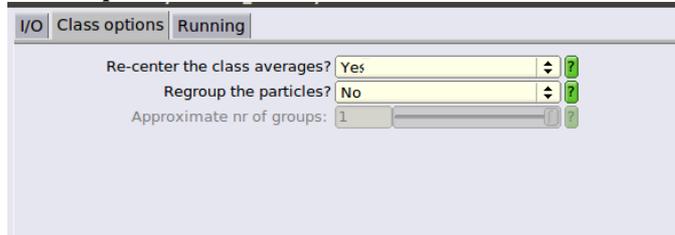
```
cp -r PrecalculatedResults/Class2D/job014 Class2D/job014
```

Selection of the best 2D classes

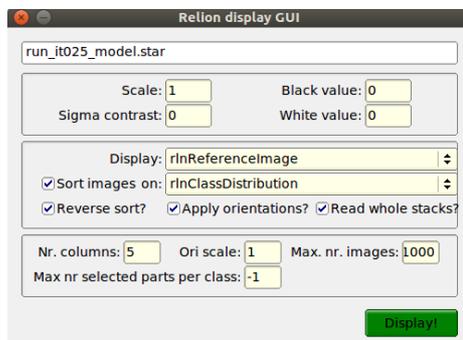
Now you can use the 2D classes to select the best for the initial structure generation:

Therefore choose the **Class2D/job014/run_it025_model.star** file in the **Subset selection** panel:

Class options tab:



press run:



You can select the better classes by clicking on them and save your selection by clicking the right mouse click button and choose save selection:

