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#1

Jae

Unable to determine CTF

Dear All,

I am using cisTEM to process some negative-stain images. FindCTF had a hard time to determine the CTF for all the images. Based on each run's results, I tried different parameters, with a focus on MinRes and Search Defocus Step. However, several images show some confusing CTF corrections.

1) In Image_1, the CTF is not able to be identified. Compared to Image_2, they have a similar 1D CTF FIT result. But the CTF is able to be determined in Image_2.


2) In Image_3, I am not sure why the FindCTF failed. Is it because of the astigmatism (The angle is -51.61)?


I also did the CTF determination for cryo-images. The results are pretty good with a default setting. Is the CTFFIND4 algorithm more suitable for cryo samples?

Many thanks!

File:

 [Image_1.png](#)

 [Image_2.png](#)

 [Image_3.png](#)

alexis

Hi Jae,

Hi Jae,

Thanks for reporting this.

For all three images, the "quality of fit" (blue) curve is clearly wrong, especially in the lowest frequencies.

However, the defocus values it found are probably in the correct ballpark, at least for images 1 and 2. So I would feel OK processing those images with those defocus values, though of course I would not necessarily expect to achieve very high resolution from this kind of neg stain data

For image 1, there is additionally a problem with the normalization of the image for display purposes.

Finally in the case of image 3, I am not sure the fit is very good - it looks OK in the 2D plot but terrible in 1D.

I will email you now to see if you could share the actual images with me to see if I can debug the issues listed above.

Thanks again,
Alexis

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