CTF estimation (ctffind, ctftilt)

cctfind3 & ctftilt

CTFFIND3 and CTFTILT are two programs for finding CTFs of electron micrographs [1]. The program CTFFIND3 is an updated version of the program CTFFIND2, which was developed in 1998 by Nikolaus Grigorieff at the MRC Laboratory of Molecular Biology in Cambridge, UK with financial support from the MRC. This software is licensed under the terms of the Janelia Research Campus Software Copyright 1.1.

If you use CTFFIND3/CTFTILT to together with the image processing software Spider, you can find information on converting the defocus values here.

New: cctfind3 and ctftilt can now make use of openMP: with 8 CPUs the processing is accelerated about 6 and 4 times, respectively (see README.txt for more info).

Please note: to make the conventions for tilt angle and axis used in CTFTILT compatible with the MRC image processing package (in particular, the 2D crystallography programs), the sign of the tilt angle inverted starting with version 1.7. If you are using CTFTILT, please invert the tilt angle determined by the new CTFTILT version to obtain values that are compatible with previous versions of CTFTILT. Also, the diagram written out by CTFTILT at the end of the run has been flipped to point the Y-axis upwards.

cctfind4

A new version of cctfind is available, which should run significantly faster than cctfind3 and may give slightly improved results when processing data from detectors other than scanned photographic film [2]. More information is available on the cctfind4 page.

Source code is provided, as is a binary compiled for 64-bit linux running on Intel processors. See links below.

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Support

If you encounter any problems using these programs, or have questions, please use the CTFfind & CTFtilt forum.

References
