

EMCOR.DOC

(last update May 26 1988)

EMCOR computes the auto-correlation between an IMAGE and itself or the cross-correlation between two IMAGES. These resulting data are stored as IMAGE files.

The auto-correlation function (Patterson function) of an IMAGE is computed using the previously determined Fourier transform of the IMAGE. The size of the auto-correlation IMAGE file is determined by the size of the FFT file. For example, if a 512*512 FFT is computed from an image (which may be smaller than 512*512). The origin peak of the auto-correlation IMAGE appears at the lower left corner when displayed on the TV graphics screen. The auto-correlation pattern is stored by default in a file called ACOR.IMG.

The cross-correlation function between two images is computed from the Fourier transforms of the images which MUST be identical in size (even if the original IMAGE files were quite different in size). For example, if a 45*57 pixel reference IMAGE is cross-correlated with a 450*396 pixel IMAGE, 512*512 Fourier transforms of each IMAGE must be computed before running this program. The cross-correlation pattern is stored by default in a file called CCOR.IMG. This file is used by the program EMCORAVG which computes REAL-SPACE averaging of IMAGES.