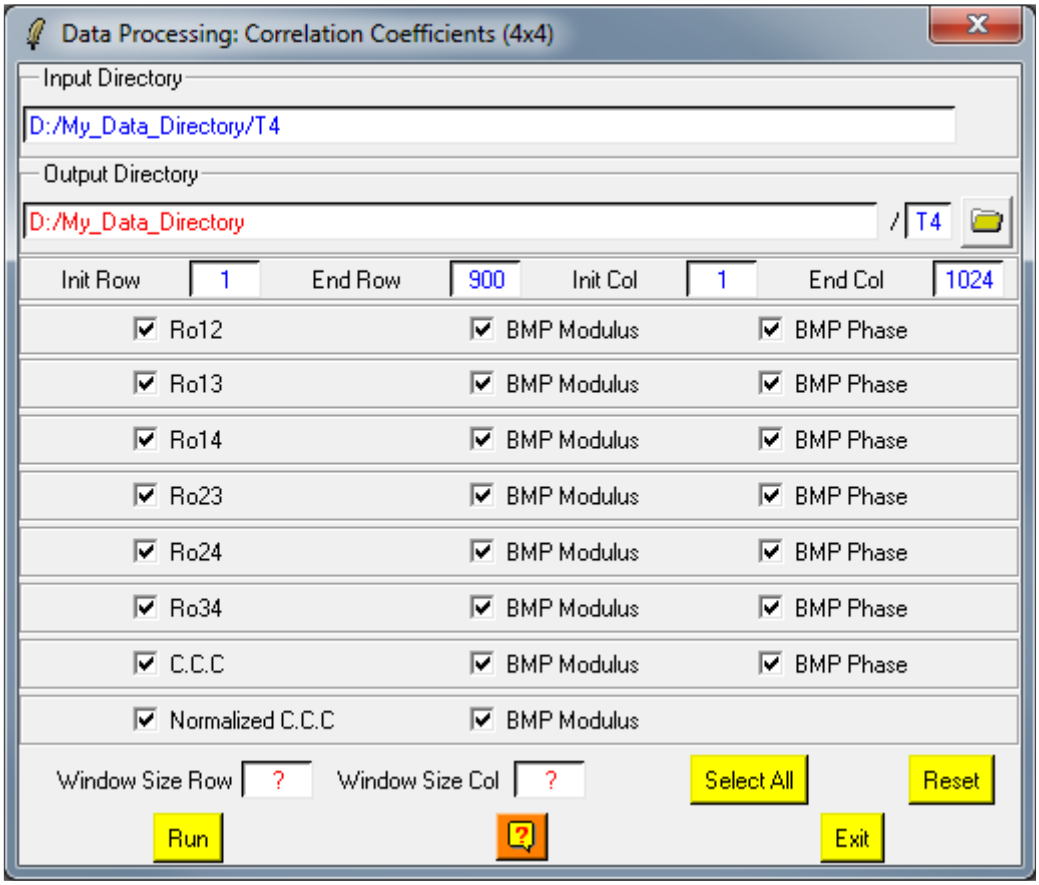
Correlation Coefficients



Description:

Creates complex binary files corresponding to the correlation coefficient constructed from the (4x4) complex Coherency matrix (**[T4]**) raw binary data off-diagonal elements.

Note : **"CCC"** corresponds to the **Circular Correlation Coefficient RR-LL**, and **"Normalized (CCC)"** corresponds to the **Normalized Circular-Pol Correlation Coefficient RR-LL**.

An option may be set to simultaneously create the modulus and argument corresponding bitmap image files.

Comments:

Parameters written in Red can be modified directly by the user from the keyboard.

Input/Output Arguments:

Input Directory	Indicates the complete location of the considered **MainDirectory / T4 (MD / T4)** containing the **[T4]** matrix data to be processed.
Output Directory	Indicates the location of the processed data output directory. The default value is set automatically to : **MainDirectory / T4 (MD / T4)**.

Output Image Number of Rows/Columns:

The output image numbers of rows and columns are initialised to the input data set dimensions.
Users wishing to process a sub-part of the initial image can modify the **Init** and **End** values of the converted images rows and columns.
Note: init and end values have to remain within the range defined by the input image dimensions.

Selection of the Channels to be Processed:

Several channels may be processed at a time. The selection of the BMP options enables the creation of output bmp files. Users may choose between two types of bmp outputs :

- BMP Modulus : Linear representation of the considered complex correlation coefficient element amplitude. Ouput file name: RoXX_mod.bmp or CCC_mod.bmp or CCCnorm_db.bmp
- BMP Phase : Argument of the considered complex correlation element. Ouput file name: RoXX_pha.bmp or CCC_pha.bmp

The output complex binary data file is : RoXX.bin or CCC.bin or CCCnorm.bin.
Note: Complex format corresponds to 4 bytes interlaced real and imaginary parts.

Processing parameters:

Data to be decomposed may be processed through an additional filtering procedure consisting of a boxcar filter. Users have then to set the size of the (N*N) sliding window used to compute the local estimate of the average matrix.
The default value of N is set to **1** (avoiding any additional filtering).