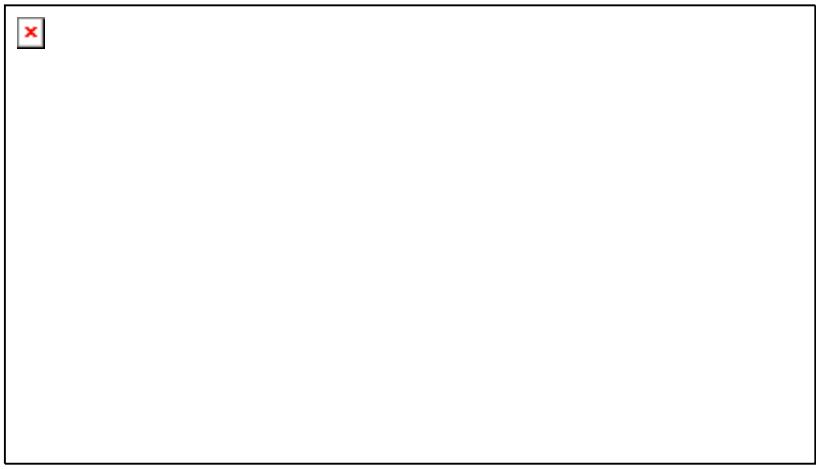
Correlation Coefficients



Description:

Creates complex binary files corresponding to the correlation coefficient of complex Partial Polarimetric raw binary data

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

A Complex Partial Polarimetry **[PPx]** representation (with X equal to 1,2,3) consists of two polarimetric channels acquired in a reduced polarimetry configuration.
PPx binary data files have to be located in a **PPx directory** located at the same level than a **MainDirectory** directory and described by a text configuration file, as follows.

Main Directory (PP1 type)

- MD /.
- MD / config.txt
- MD / s11.bin
- MD / s21.bin

Main Directory (PP2 type)

- MD /.
- MD / config.txt
- MD / s12.bin
- MD / s22.bin

Main Directory (PP3 type)

- MD /.
- MD / config.txt
- MD / s11.bin
- MD / s22.bin

Note: Complex format corresponds to 4 bytes interlaced real and imaginary parts.

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 (MD)** containing the complex Partial Polarimetric raw binary data to be processed.
Output Directory	Indicates the location of the processed data output directory. The default value is set automatically to the **MainDirectory (MD)**.

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:

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: Ro12_mod.bmp
- BMP Phase : Argument of the considered complex correlation element. Ouput file name: Ro12_pha.bmp

The output complex binary data file is : Ro12.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).