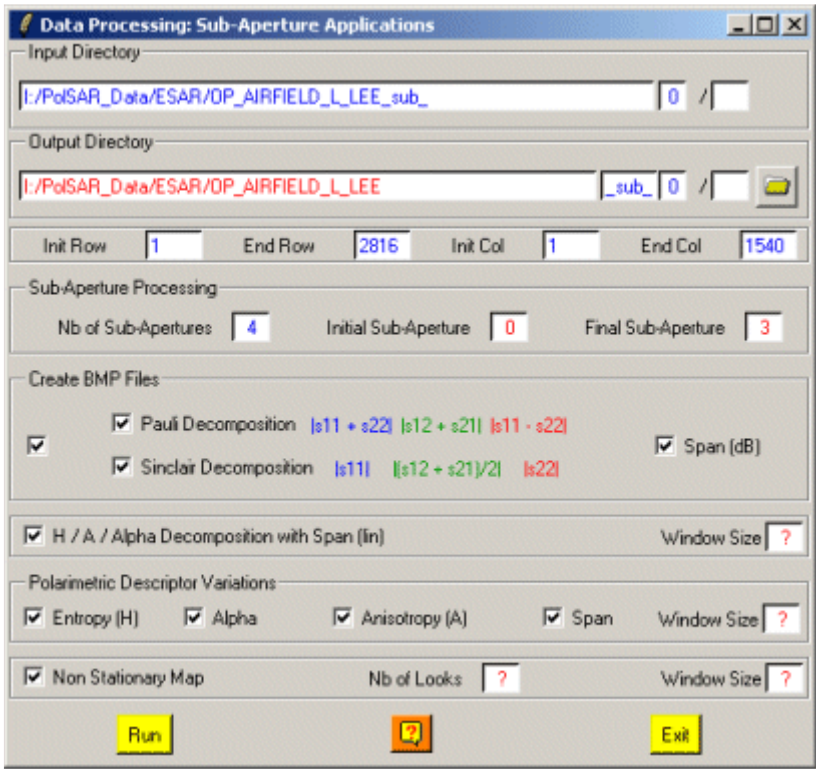
Sub-Aperture Applications



Description:

This function is used to apply sequentially different polarimetric data processes on SAR images after having applied a sub-aperture decomposition. The resulting images can then be analysed to detect and characterize the different anisotropic pixels behavior.

Comments:

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

Input/Output Arguments:

Input Directory	Indicates the location of the considered **Main Directory (MD)** containing the polarimetric data sets of the first sub-aperture SAR image to be processed.
Output Directory	Indicates the location of the data output directory.

Output Image Number of Rows/Columns:

The output image numbers of rows and columns are initialised to the input data set dimensions.

Sub-Aperture Processing:

Nb of Sub-Apertures	Correspond of the Number of Sub-Apertures in which the initial polarimetric data set has been decomposed
Initial Sub-Aperture	Users wishing to process a sub-part of the total number of sub-apertures images created has to modify the Initial value
Final Sub-Aperture	Users wishing to process a sub-part of the total number of sub-apertures images created has to modify the Final value

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Create BMP Files:

If selected, users can **c**reate different sets of color coded BMP images over the different sub-aperture polarimetric data sets, to be integrated in an animation movie (the bmp to movie conversion facility is not be implemented).

H/A/Alpha Decomposition:

If selected, this program creates binary files corresponding to the different polarimetric descriptors obtained from the H/A/Alpha decomposition over the different sub-aperture polarimetric data sets.

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 **?**. Users wishing to avoid additional filtering may set N to **1**.

Polarimetric Descriptors Variations:

If selected, this program creates binary files corresponding to a representation of the polarimetric variations of selected polarimetric descriptors (Entropy, Alpha, Anisotropy, Span) over the different sub-apertures.

Processing Parameters	Data to be analysed 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 **?**. Users wishing to avoid additional filtering may set N to **1**.

Non Stationary Map:

If selected, this program creates binary files corresponding to a map of non-stationary pixels over the different sub-apertures.

Further information about the non stationary map procedure scheme can be found in :

L. Ferro-Famil, A. Reigber, E. Pottier, W.M. Boerner: "Scene Characterization Using Subaperture Polarimetric SAR Data", IEEE Transaction on Geoscience and Remote Sensing, Vol 41, n°10, October 2003.

Processing Parameters	Users have first to set the Input data equivalent number of looks. The default value of N is set to **?**. Data to be analysed may also 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 **?**. Users wishing to avoid additional filtering may set N to **1**.