

## Coherency [T4] matrix Elements Processing



**Data Processing: Coherency Elements T4**

Input Directory:

Output Directory:  /

	Init Row	End Row	Init Col	End Col	
T11	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)			<input checked="" type="checkbox"/> BMP
T12	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)	<input type="radio"/> Phase		<input checked="" type="checkbox"/> BMP
T13	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)	<input type="radio"/> Phase		<input checked="" type="checkbox"/> BMP
T14	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)	<input type="radio"/> Phase		<input checked="" type="checkbox"/> BMP
T22	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)			<input checked="" type="checkbox"/> BMP
T23	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)	<input type="radio"/> Phase		<input checked="" type="checkbox"/> BMP
T24	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)	<input type="radio"/> Phase		<input checked="" type="checkbox"/> BMP
T33	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)			<input checked="" type="checkbox"/> BMP
T34	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)	<input type="radio"/> Phase		<input checked="" type="checkbox"/> BMP
T44	<input type="radio"/> Modulus	<input checked="" type="radio"/> 10log(Modulus)			<input checked="" type="checkbox"/> BMP
Span	<input type="radio"/> Linear	<input checked="" type="radio"/> DeciBel = 10log(Span)			<input checked="" type="checkbox"/> BMP

Buttons: Run, Select All, Reset, Exit

### Description:

Creates binary files corresponding to the modulus and argument of the (4x4) complex Coherency matrix ([T4]) raw binary data.  
An option may be set to simultaneously create the 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 three types of output binary data :

- **Modulus** : Linear representation of the considered [**T4**] element amplitude.  
Output file name : Tij\_mod.bin (.bmp)
  - **Modulus** : Element amplitude in dB= $10\log_{10}(\text{Modulus})$ . Output file name : Tij\_dB.bin (.bmp)
  - **Phase** : Argument of the considered complex [**T4**] element (Only available for off-diagonal elements). Output file name : Tij pha.bin (.bmp)
  
  - **Span** : Correspond to the sum of the diagonal elements of [**T4**], may also be processed (linear and dB) using this program.
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