User defined bands

When computing cross spectra, an available option is “user defined bands”. When this is selected, the user must provide a file with the definition of the bands.

A file with user defined bands is a simple text file and can be created in any text editor.

The first line has number of bands, and the following lines have start and end frequencies (Hz), separated by a space. The start and end frequencies are included in the computations: if you define theta as 5 to 7, then the frequencies 5 and 7 are included in the band.

A file for only one band with the theta example (above) would be (exclude the start and end lines with slashes):

```
/////////////////
1
5 7
/////////////////
```

The “classical bands” file that is implicitly used in the LORETA software is (exclude the start and end lines with slashes):

```
/////////////////
8
1.5 6
6.5 8
8.5 10
10.5 12
12.5 18
18.5 21
21.5 30
1.5 30.0
/////////////////
```

which corresponds to δ[1.5…6], θ[6.5…8], α_1[8.5…10], α_2[10.5…12], β_1[12.5…18], β_2[18.5…21], β_3[21.5…30], Ω[1.5…30]. The last band is the “full band”, which is rather redundant.

The user is free to define any number of bands, in any order. Moreover, the bands can overlap. In general, there are no restrictions.

There are no universal guiding principles for defining bands. This is up to the user.