Spectro-Temporal Unfolding of Temporal Orienting of Attention
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Background
Temporal preparation integrates different types of temporal information, such as that provided either by symbolic cues ("temporal orienting of attention") or by regular presentation of the stimuli ("rhythms”), to prepare an optimal response to forthcoming events in our environment. Previous studies reported EEG correlates of temporal preparation driven by rhythms and documented a desynchronization in low frequency power (≤ 30 Hz) which followed the time course of predictable time intervals.

Goal
In this study we investigate the spectro-temporal aspects of the temporal orienting effects of attention in a temporal orienting task.
If temporal orienting driven by symbolic cues involves different processing than those underlying temporal preparation driven by rhythms, we expect the time-frequency analysis to reveal different modulation of the electroencephalograph recordings.

Method & Procedure
EEG recording (128 channels) (n=16)

Behavioral results
- Valid Cue
- Invalid Cue

Recorded ERPs
- Short interval
- Cue: Early vs. Late

Preliminary results in Short interval (n=16)
- PO3
- PO4

Preliminary Conclusions
- When an early cue predicts a short interval there is higher power in lower frequencies at the short interval as compared to the power when a late cue predicts a short interval. This pattern of data is different to that observed when temporal preparation is guided by the presentation of a regular rhythm.
- Time frequency analysis must be performed in the total of the participants.


Funding: Short Term Scientific Mission, COST Action on Time In MeNTal activity – theoretical, behavioral, bioimaging & clinical perspectives (TIMELY)