Results - Subjects batch 1

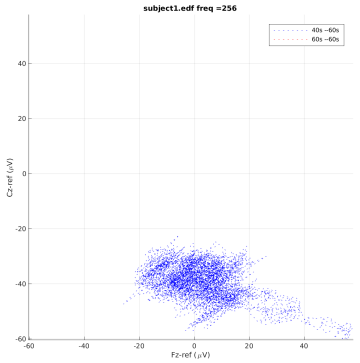
For this first report, I'll only consider LE montages with generalised seizures and only look at Fz, Pz, and Cz electrodes

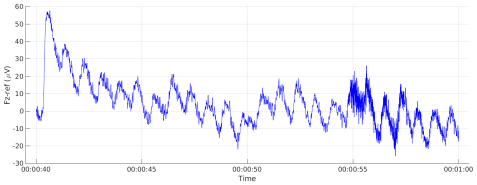
Plots below are snippets of regions of interest in the TUH dataset.

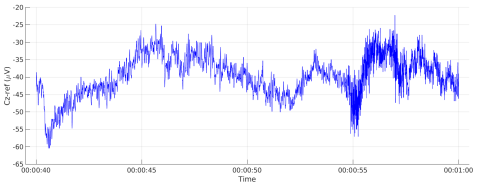
- Blue: "non-seizure" activity
- Red: "seizure" activity

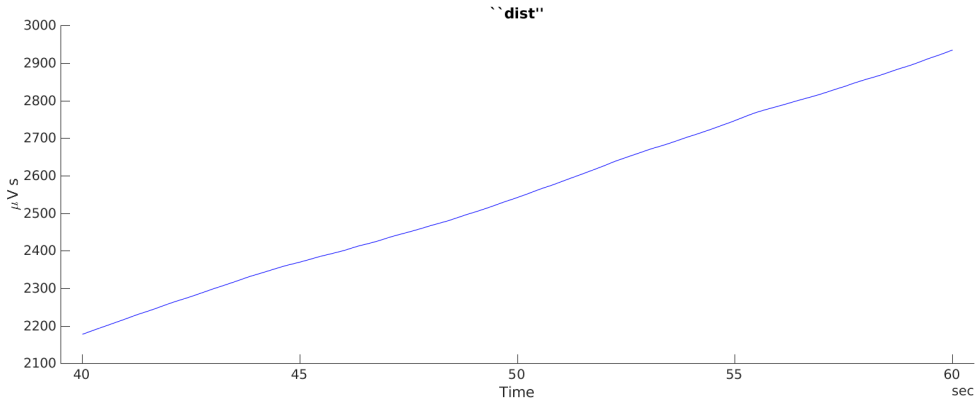
Determining this transition is a highly subjective process of inspection by a mathematics PhD student with limited knowledge on EEG analysis, guided by the annotations accompanying the data.

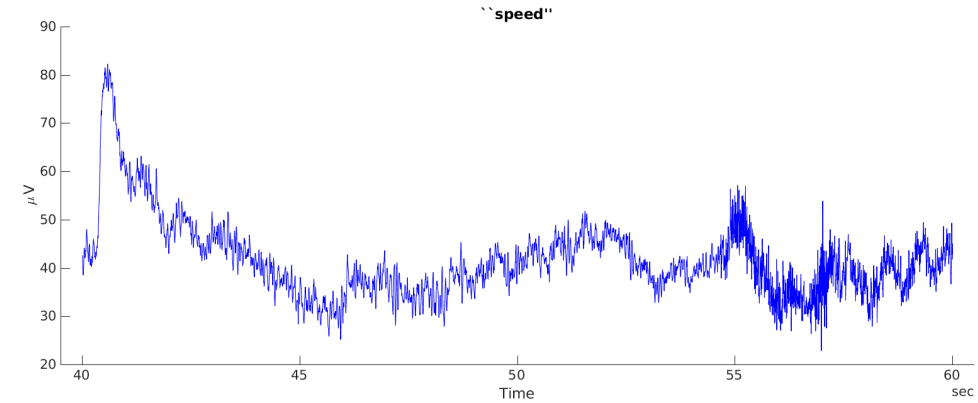
[FIG01] : subject1 (FROM SEPERATE DATASET) : non-epilepsy example

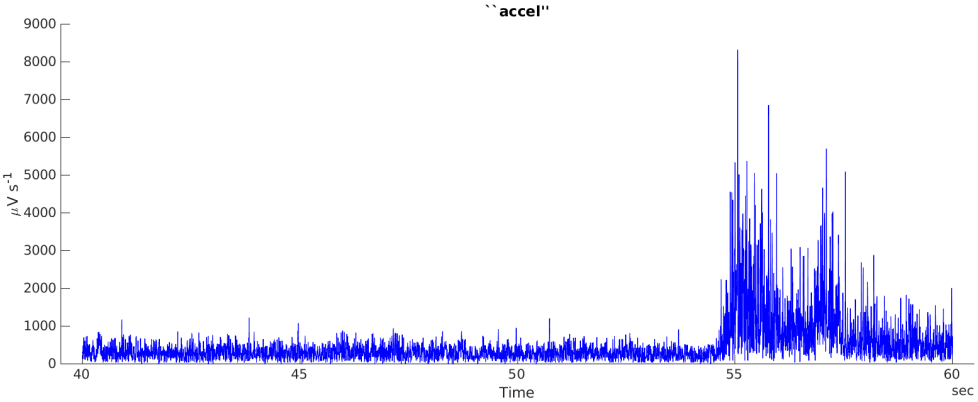

subject1.edf freq =256
40s –60s
60s –60s
Cz-ref (μV)
Fz-ref (μV)


Fz-ref (μV)
Time

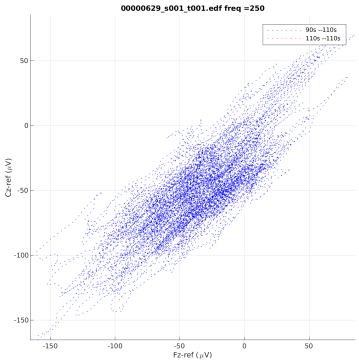

Cz-ref (μV)
Time

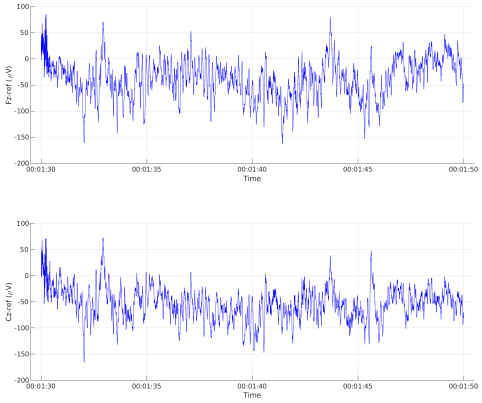

``dist''
μV s
Time
sec

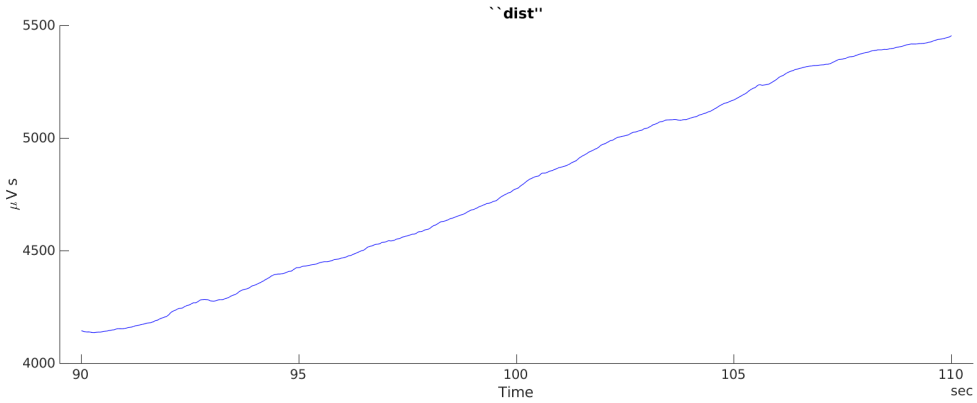

``speed''
μV
Time
sec

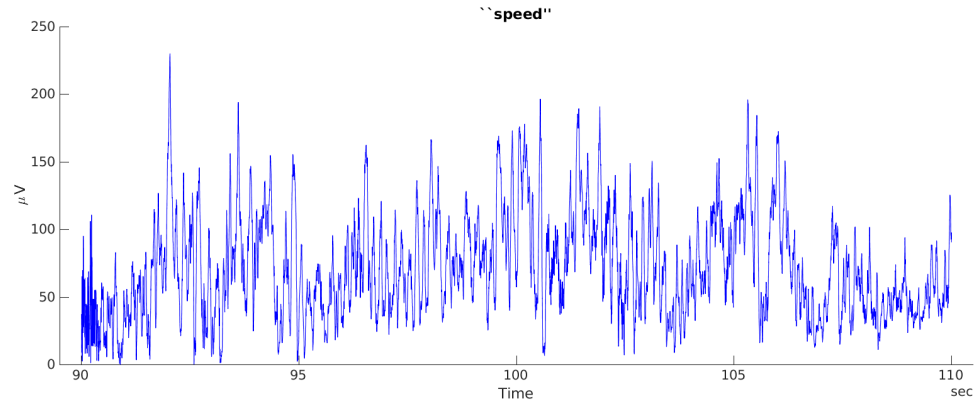

``accel''
μV s-1
Time
sec

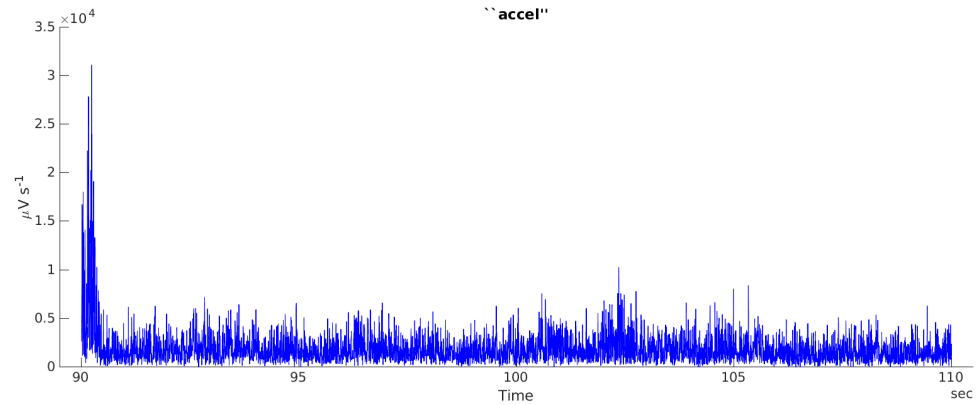
[FIG02] : 00000629_s001_t000 : background slowing


00000629_s001_t001.edf freq =250
90s –110s
110s –110s
Cz-ref (μV)
Fz-ref (μV)

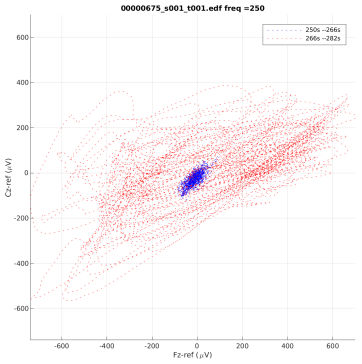

Fz-ref (μV)
Cz-ref (μV)
Time


``dist''
μV s
Time
sec

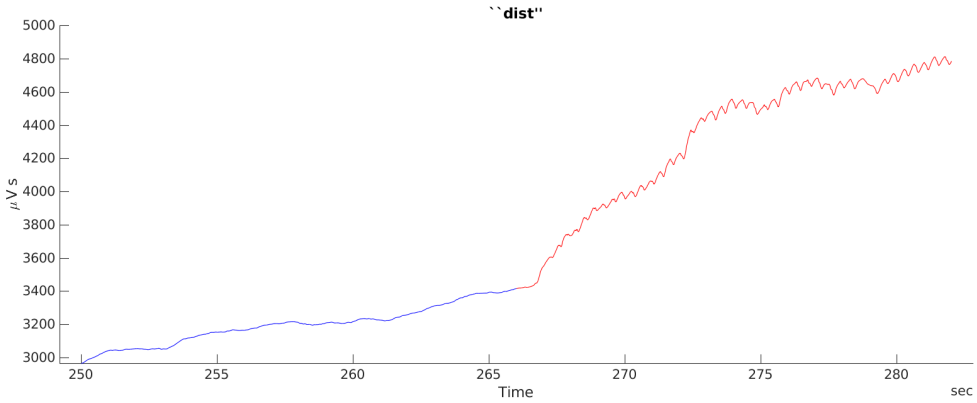

``speed''
μV
Time
sec

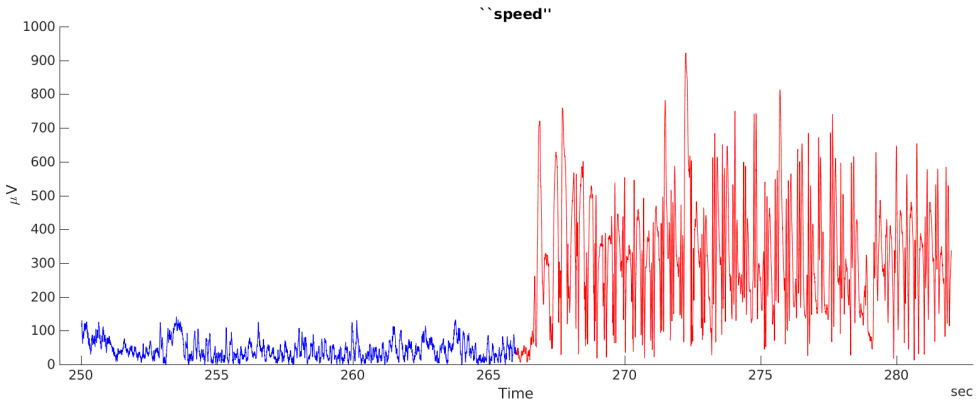

``accel''
×10^4
μV s^-1
Time
sec

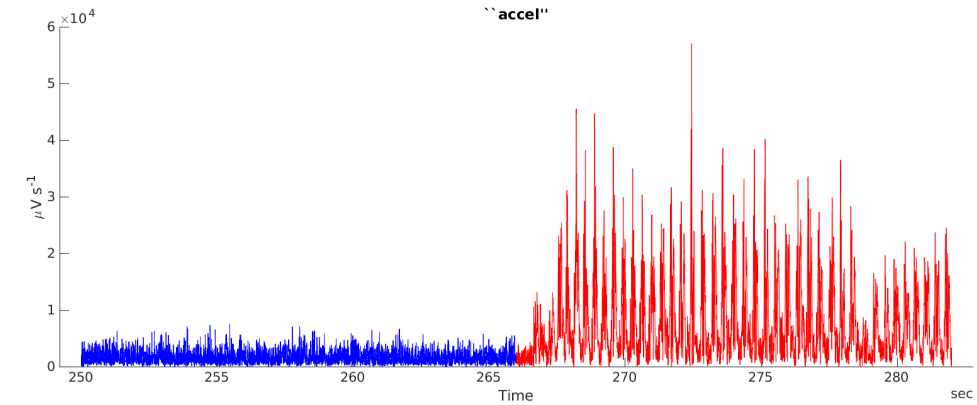
[FIG03] : 00000675_s001_t001 : Absence seizures


00000675_s001_t001.edf freq =250
250s -266s
266s -282s
Cz-ref (μV)
Fz-ref (μV)

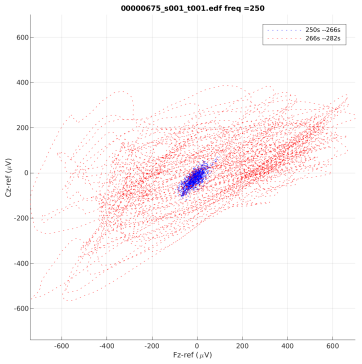

Fz-ref (μV)
Cz-ref (μV)
Time


``dist''
μV s
Time
sec

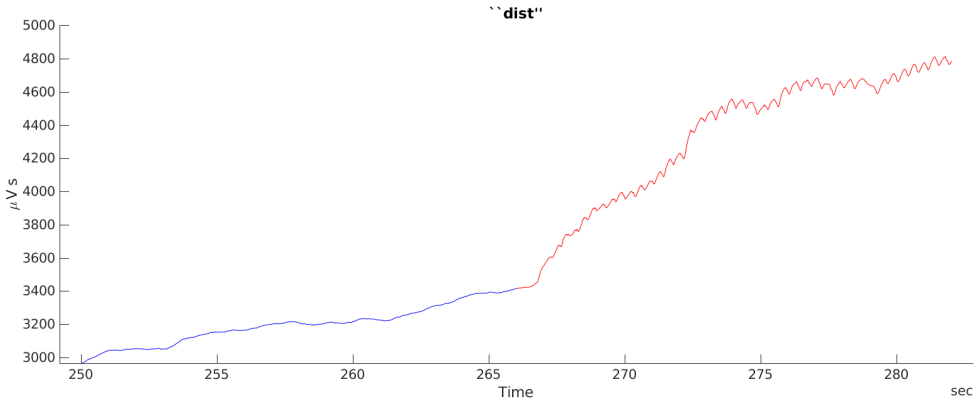

``speed''
μV
Time
sec

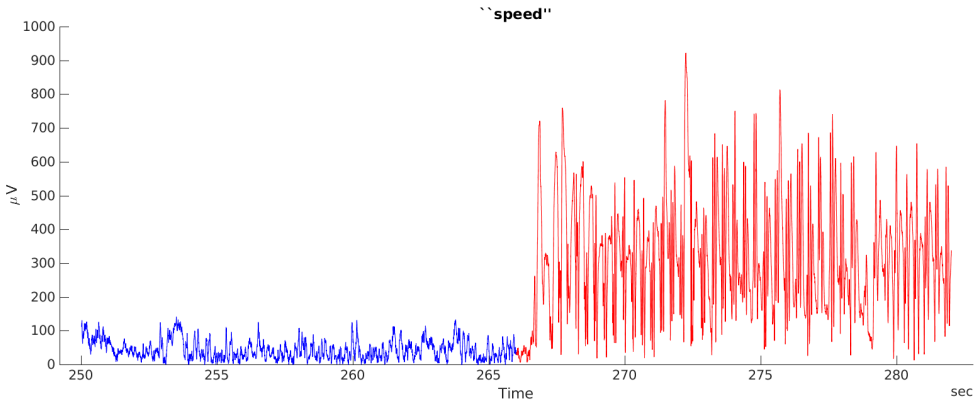

``accel''
×10^4
μV s^-1
Time
sec

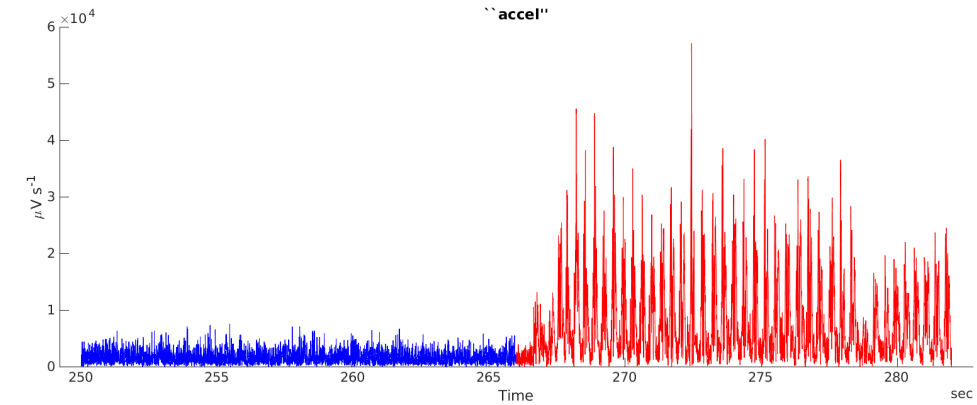
[FIG04] : 00000675_s002_t001 : Absence seizures


00000675_s001_t001.edf freq =250
250s -266s
266s -282s
Cz-ref (μV)
Fz-ref (μV)


Fz-ref (μV)
Cz-ref (μV)
Time

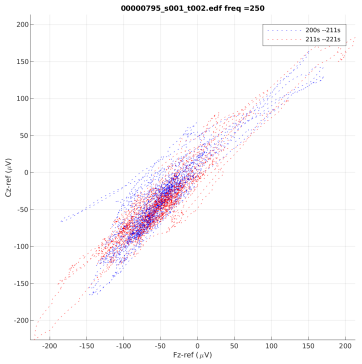

``dist''
μV s
Time
sec

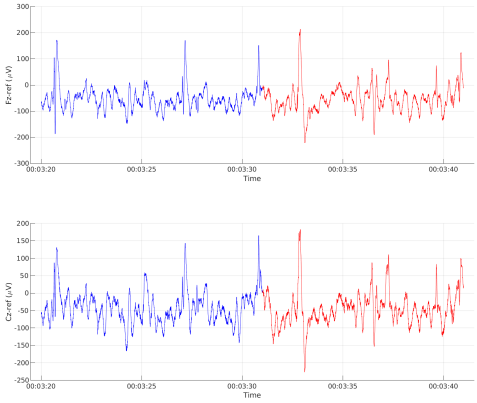

``speed''
μV
Time
sec

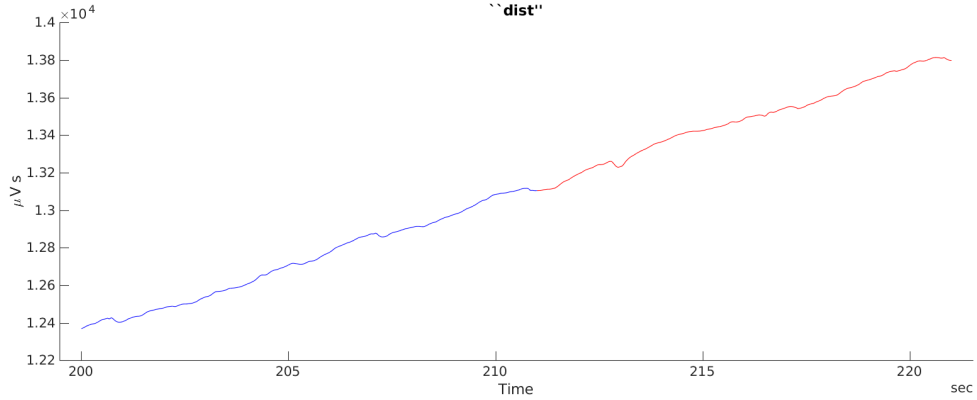

``accel''
×10^4
μV s^-1
Time
sec

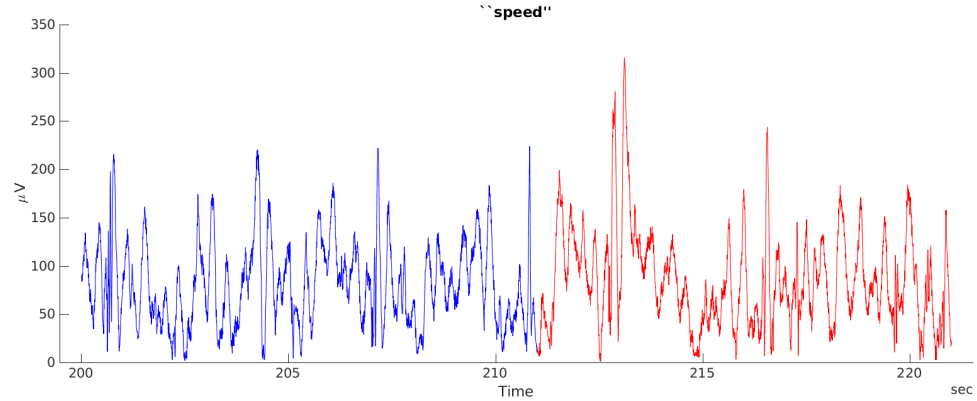
[FIG05] : 00000795_s001_t002 : background (spike and waves)

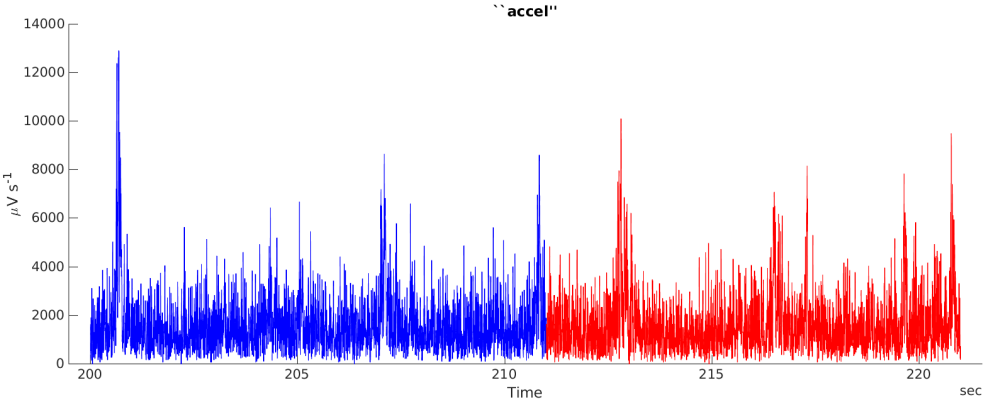
- Spikes in red, but difficult to tell apart from preceding activity, same "magnitude" of migration


00000795_s001_t002.edf freq =250
200s -211s
211s -221s
Cz-ref (μV)
Fz-ref (μV)


Fz-ref (μV)
Cz-ref (μV)
Time

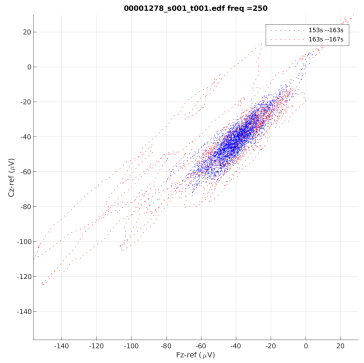

``dist''
×10^4
μV s
Time
sec

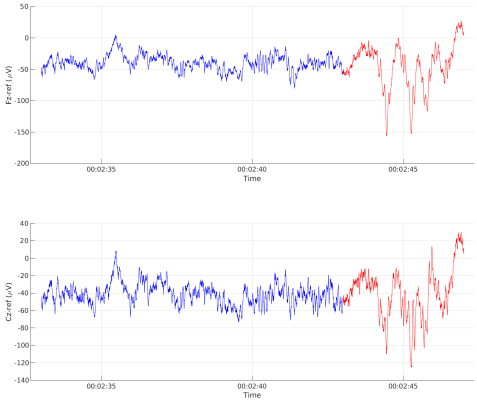

``speed''
μV
Time
sec

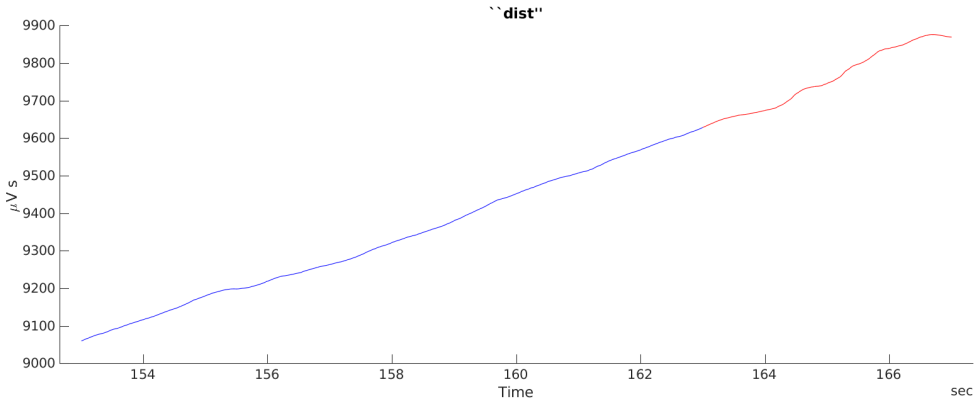

``accel''
μV s^-1
Time
sec

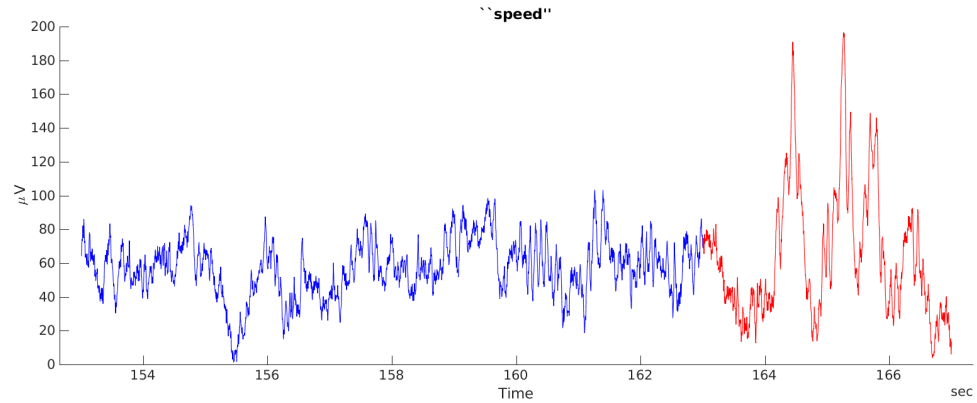
[FIG06] : 00001278_s001_t001 : generalised slowing

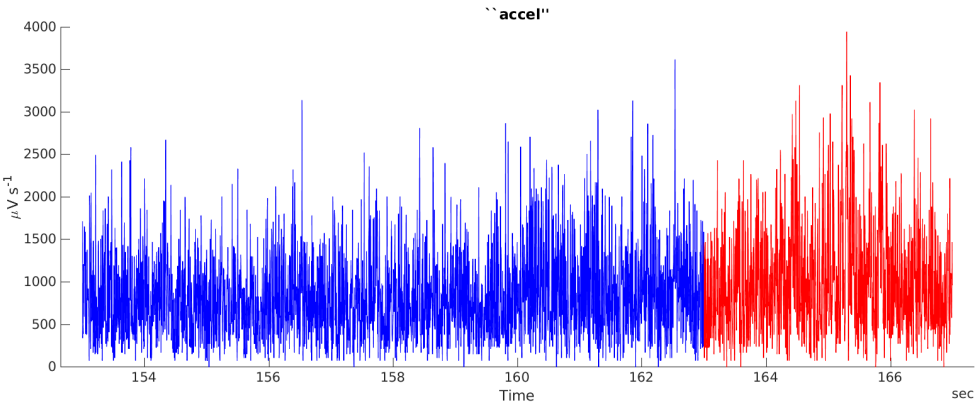
- Spikes and waves in red


00001278_s001_t001.edf freq =250
153s –163s
163s –167s
Cz-ref (μV)
Fz-ref (μV)


Fz-ref (μV)
Cz-ref (μV)
Time


``dist''
μV s
Time
sec

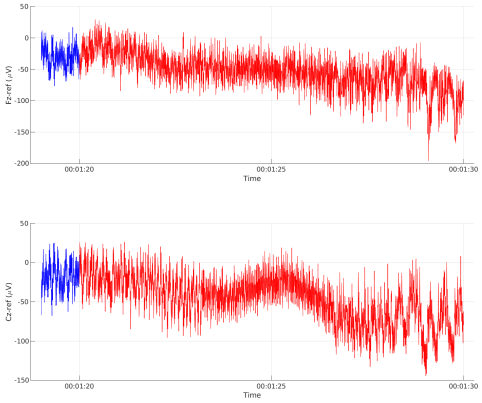

``speed''
μV
Time
sec


``accel''
μV s-1
Time
sec

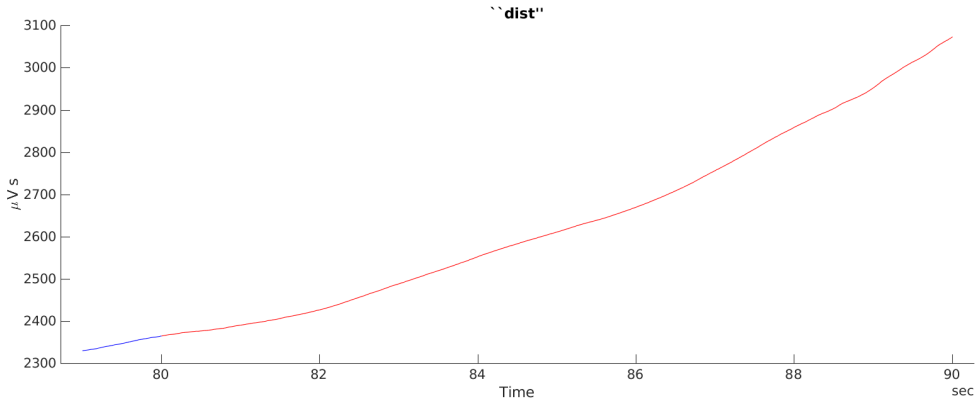
[FIG07] : 00001770_s003_t000 : Tonic clonic seizure

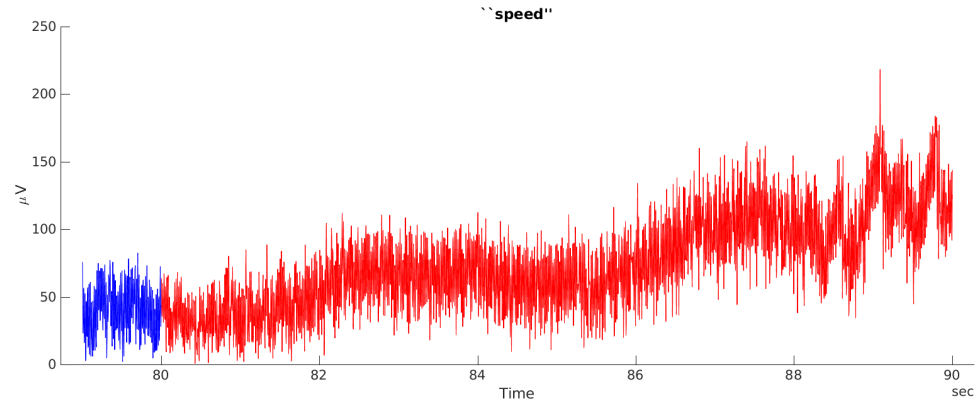
- Most of this record is seizure, but doesn't show up much on EEG

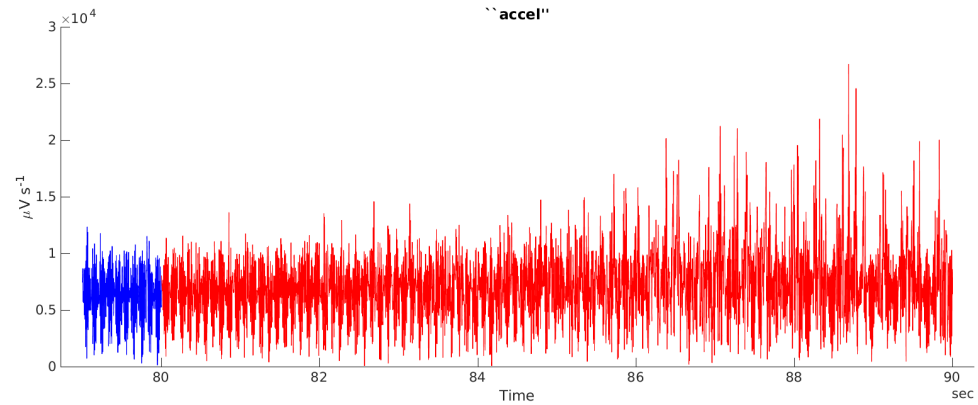

00001770_s003_t000.edf freq =250
79s –80s
80s –90s
Cz-ref (μV)
Fz-ref (μV)


Fz-ref (μV)
Time
00:01:20
00:01:25
00:01:30

Cz-ref (μV)
Time
00:01:20
00:01:25
00:01:30


``dist''
μV s
Time
sec


``speed''
μV
Time
sec


``accel''
×10^4
μV s^-1
Time
sec

[FIG08] : 00001981_s004_t000 : background

- (spike-wave in red)

[FIG09] : 00001984_s001_t001 : absence seizures

(Left off at `./edf/dev/02_tcp_le/022`, this should be a good initial sample)