BrainWave-DBS - Excel File usage for event marking:

Event marking technique:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Experiment_nam	Test_num	Corresponding_row_in_json	STN_side	Arm_side	DBS_stim_state	Additionnal_experimen	Condition_file_nam	Event	UTC	DBS_samples	DBS_ms	Event_triggers_ms
2	Experiment_1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DBS_start	11:52:14	0	0	N/A
3	Experiment_1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Experimen	11:52:52	9500	38000	0
4	Experiment_1	1	1	Left	Right	Off	Hot	LEFT_STN_OFF	T1	11:53:05	12750	51000	12600
5	Experiment_1	1	1	Left	Right	Off	Hot	LEFT_STN_OFF	T2	11:53:33	19750	79000	41114
6	Experiment_1	1	1	Left	Right	Off	Hot	LEFT_STN_OFF	T3	11:53:59	26250	105000	66777
7	Experiment_1	1	1	Left	Right	Off	Hot	LEFT_STN_OFF	T4	11:54:29	33750	135000	96883
8	Experiment_1	1	1	Left	Right	Off	Hot	LEFT_STN_OFF	T5	11:55:00	41500	166000	127999
9	Experiment_1	1	1	Left	Right	Off	Hot	LEFT_STN_OFF	T6	11:55:30	49000	196000	157731
10	Experiment_1	1	1	Left	Right	Off	Hot	LEFT_STN_OFF	T7	11:56:01	56750	227000	189060
11	Experiment_1	1	1	Left	Right	Off	Cold	LEFT_STN_OFF	T8	11:56:29	63750	255000	217309
12	Experiment_1	1	1	Left	Right	Off	Cold	LEFT_STN_OFF	T9	11:57:04	72500	290000	251991
13	Experiment_1	1	1	Left	Right	Off	Cold	LEFT_STN_OFF	T10	11:57:40	81500	326000	288450
14	Experiment_1	1	1	Left	Right	Off	Cold	LEFT_STN_OFF	T11	11:58:15	90250	361000	323255
15	Experiment_1	1	1	Left	Right	Off	Cold	LEFT_STN_OFF	T12	11:58:58	101000	404000	365607
16	Experiment_1	1	1	Left	Right	Off	Cold	LEFT_STN_OFF	T13	11:59:35	110250	441000	403134
17	Experiment_1	1	1	Left	Right	Off	Cold	LEFT_STN_OFF	T14	12:00:14	120000	480000	442492

The columns with the first row highlighted in green are what is extracted by the Event marking script. The other columns are additional encoder for tracking purposes, or they are used to calculate the DBS_samples times

- **Corresponding_row_in_json:**

  This indicates the right recording to select in BrainSenseTimeDomain.

  For instance, if Corresponding_row_in_json = 1, the first row in BrainSenseTimeDomain is choosen and the corresponding TimeDomainData is extracted.

data | data.BrainSenseTimeDomain

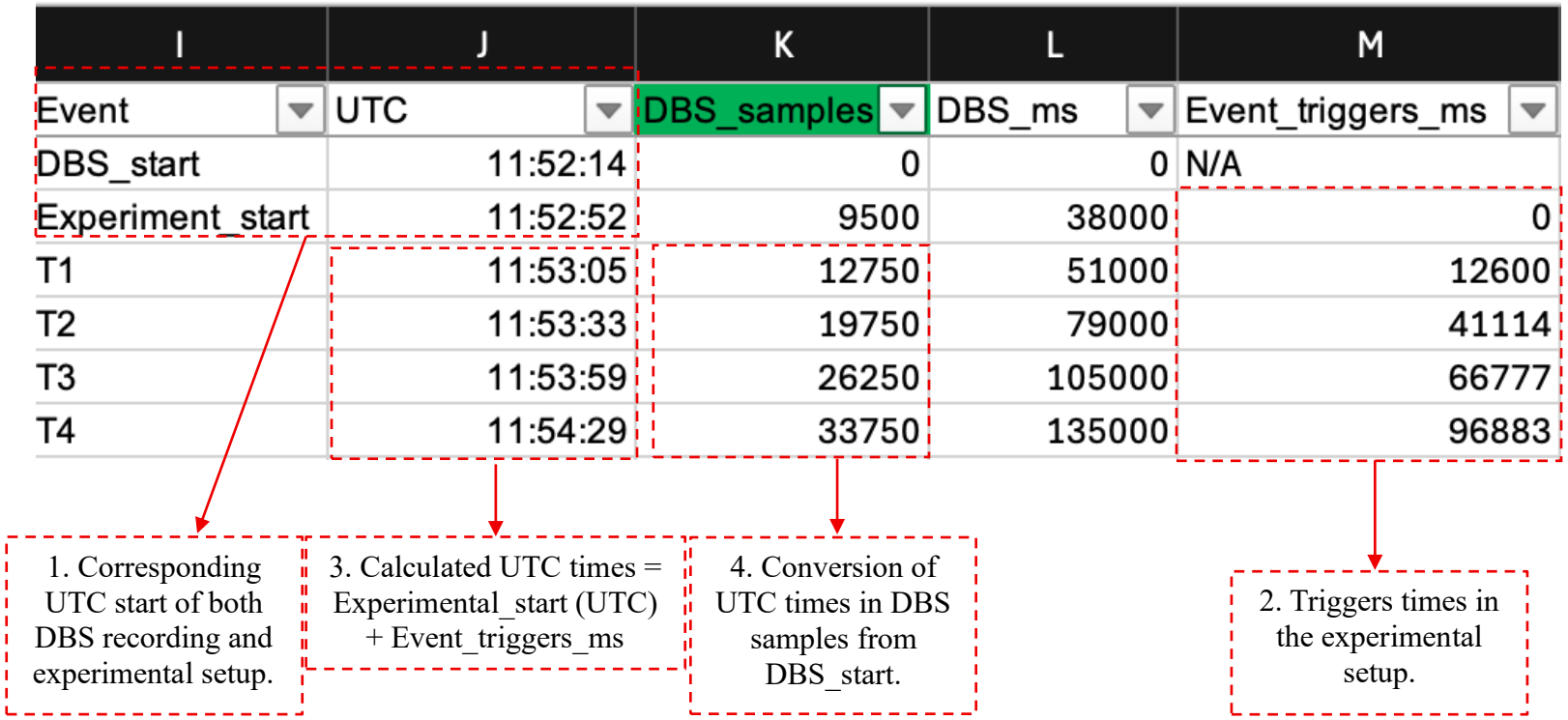
data.BrainSenseTimeDomain

...	Pass	GlobalSequences	GlobalPacketSizes	TicksInMses	Channel	Gain	FirstPacketDateTime	SampleRateInHz	TimeDomainData
1	[]	'0,1,2,3,5,6,7,8,1...	'115,72,63,62,63,62...	'418750,4190...	'ONE_THR...	230	'2024-05-30T15:52:1...	250	*129500x1 double*
2	[]	'0,1,2,3,5,6,7,8,1...	'115,72,63,62,63,62...	'418750,4190...	'ONE_THR...	228	'2024-05-30T15:52:1...	250	*129500x1 double*
3	[]	'0,1,2,3,5,6,7,8,1...	'63,62,63,62,63,62,...	'1041750,104...	'ONE_THR...	230	'2024-05-30T16:02:3...	250	*127063x1 double*
4	[]	'0,1,2,3,5,6,7,8,1...	'63,62,63,62,63,62,...	'1041750,104...	'ONE_THR...	228	'2024-05-30T16:02:3...	250	*127063x1 double*
5	[]	'0,1,2,3,5,6,7,8,1...	'63,62,63,62,63,62,...	'1677750,167...	'ONE_THR...	230	'2024-05-30T16:13:1...	250	*134750x1 double*
6	[]	'0,1,2,3,5,6,7,8,1...	'63,62,63,62,63,62,...	'1677750,167...	'ONE_THR...	228	'2024-05-30T16:13:1...	250	*134750x1 double*
7	[]	'0,1,2,3,5,6,7,8,1...	'62,63,62,63,62,63,...	'2279500,227...	'ONE_THR...	230	'2024-05-30T16:23:1...	250	*122437x1 double*
8	[]	'0,1,2,3,5,6,7,8,1...	'62,63,62,63,62,63,...	'2279500,227...	'ONE_THR...	228	'2024-05-30T16:23:1...	250	*122437x1 double*

- **STN_side:**
  Encodes the hemisphere from which the recording was made (Left or Right).

- **DBS_stim_state:**
  Encodes whether the stimulation was activated or not (Off or On).

- **DBS_samples:**
  This correspond to the LFP samples where triggers are placed.
  For coarse-grained synchronization (UTC based), the DBS samples are calculated like this:



I	J	K	L	M
Event	UTC	DBS_samples	DBS_ms	Event_triggers_ms
DBS_start	11:52:14	0	0	N/A
Experiment_start	11:52:52	9500	38000	0
T1	11:53:05	12750	51000	12600
T2	11:53:33	19750	79000	41114
T3	11:53:59	26250	105000	66777
T4	11:54:29	33750	135000	96883

For fine-grained synchronization (artefact based), the DBS samples are calculated like this:

I	J	K	L	M
Event	UTC	DBS_samples	DBS_ms	Event_triggers_ms
DBS_start	11:52:14	0	0	N/A
Signal_locked_artefact	11:52:52	9500	38000	9350
T1	11:53:05	12750	51000	12600
T2	11:53:33	19750	79000	41114
T3	11:53:59	26250	105000	66777
T4	11:54:29	33750	135000	96883