[data]

file\_format = raw\_binary

stream\_mode = None # None by default. Can be multi-files, or anything depending to the file format

mapping = /media/sshanbhag/Data/exports/1429/spyk/CNT\_E1.prb # Mapping of the electrode (see http://spyking-circus.rtfd.org)

suffix = # Suffix to add to generated files, if needed

overwrite = True # Filter or remove artefacts on site (if write access is possible). Data are duplicated otherwise

parallel\_hdf5 = True # Use the parallel HDF5 feature (if available)

output\_dir = # By default, generated data are in the same folder as the data.

sampling\_rate = 48828.1250

data\_dtype = float32

nb\_channels = 16

data\_offset = 0

dtype\_offset = auto

gain = 1

[detection]

radius = auto # Radius [in um] (if auto, read from the prb file)

N\_t = 3 # Width of the templates [in ms]

spike\_thresh = 5.5 #!! AUTOMATICALLY EDITED: DO NOT MODIFY !!

peaks = negative # Can be negative (default), positive or both

dead\_channels = # If not empty or specified in the probe, a dictionary {channel\_group : [list\_of\_valid\_ids]}

[filtering]

cut\_off = 300, auto # Min and Max (auto=nyquist) cut off frequencies for the band pass butterworth filter [Hz]

filter = True # If True, then a low-pass filtering is performed

remove\_median = False # If True, median over all channels is substracted to each channels (movement artifacts)

common\_ground = # If you want to use a particular channel as a reference ground: should be a channel number

[whitening]

spatial = True # Perform spatial whitening

max\_elts = 1000 # Max number of events per electrode (should be compatible with nb\_elts)

nb\_elts = 0.8 # Fraction of max\_elts that should be obtained per electrode [0-1]

output\_dim = 5 # Can be in percent of variance explain, or num of dimensions for PCA on waveforms

[clustering]

extraction = median-raw # Can be either median-raw (default) or mean-raw

sub\_dim = 10 # Number of dimensions to keep for local PCA per electrode

max\_elts = 10000 # Max number of events per electrode (should be compatible with nb\_elts)

nb\_elts = 0.8 # Fraction of max\_elts that should be obtained per electrode [0-1]

nb\_repeats = 3 # Number of passes used for the clustering

smart\_search = True # Activate the smart search mode

merging\_method = nd-bhatta # Method to perform local merges (distance, dip, folding, nd-folding, bhatta, nd-bhatta)

merging\_param = default # Merging parameter (see docs) (3 if distance, 0.5 if dip, 1e-9 if folding, 2 if bhatta)

sensitivity = 3 # Single parameter for clustering sensitivity. The lower the more sensitive

cc\_merge = 0.95 # If CC between two templates is higher, they are merged

dispersion = (5, 5) # Min and Max dispersion allowed for amplitudes [in MAD]

fine\_amplitude = True # Optimize the amplitudes and compute a purity index for each template

make\_plots = png # Generate sanity plots of the clustering [Nothing or None if no plots]

[fitting]

amp\_limits = (0.3, 5) # Amplitudes for the templates during spike detection [if not auto]

amp\_auto = True # True if amplitudes are adjusted automatically for every templates

collect\_all = True # If True, one garbage template per electrode is created, to store unfitted spikes

ratio\_thresh = 0.9 # Ratio of the spike\_threshold used while fitting [0-1]. The lower the slower

[merging]

erase\_all = True # If False, a prompt will ask you to remerge if merged has already been done

cc\_overlap = 0.75 # Only templates with CC higher than cc\_overlap may be merged

cc\_bin = 2 # Bin size for computing CC [in ms]

default\_lag = 5 # Default length of the period to compute dip in the CC [ms]

auto\_mode = 0.75 # Between 0 (aggressive) and 1 (no merging). If empty, GUI is launched

remove\_noise = True # If True, meta merging will remove obvious noise templates (weak amplitudes)

noise\_limit = 0.75 # Amplitude at which templates are classified as noise

sparsity\_limit = 0 # Sparsity level (in percentage) for selecting templates as putative noise (in [0, 1])

time\_rpv = 5 # Time [in ms] to consider for Refraction Period Violations (RPV) (0 to disable)

rpv\_threshold = 0.02 # Percentage of RPV allowed while merging

merge\_drifts = True # Try to automatically merge drifts, i.e. non overlapping spiking neurons

drift\_limit = 1 # Distance for drifts. The higher, the more non-overlapping the activities should be

[converting]

erase\_all = True # If False, a prompt will ask you to export if export has already been done

export\_pcs = all # Can be prompt [default] or in none, all, some

export\_all = True # If True, unfitted spikes will be exported as the last Ne templates

sparse\_export = True # For recent versions of phy, and large number of templates/channels

prelabelling = False # If True, putative labels (good, noise, best, mua) are pre-assigned to neurons

rpv\_threshold = 0.05 # Percentage of RPV allowed while labelling neurons as good neurons

# [validating]

# nearest\_elec = auto # Validation channel (e.g. electrode closest to the ground truth cell)

# max\_iter = 200 # Maximum number of iterations of the stochastic gradient descent (SGD)

# learning\_rate = 1.0e-3 # Initial learning rate which controls the step-size of the SGD

# roc\_sampling = 10 # Number of points to estimate the ROC curve of the BEER estimate

# test\_size = 0.3 # Portion of the dataset to include in the test split

# radius\_factor = 0.5 # Radius factor to modulate physical radius during validation

# juxta\_dtype = uint16 # Type of the juxtacellular data

# juxta\_thresh = 6 # Threshold for juxtacellular detection

# juxta\_valley = False # True if juxta-cellular spikes are negative peaks

# juxta\_spikes = # If none, spikes are automatically detected based on juxta\_thresh

# filter = True # If the juxta channel need to be filtered or not

# make\_plots = png # Generate sanity plots of the validation [Nothing or None if no plots]

[extracting]

safety\_time = 1 # Temporal zone around which spikes are isolated [in ms]

max\_elts = 1000 # Max number of collected events per templates

output\_dim = 5 # Percentage of variance explained while performing PCA

cc\_merge = 0.975 # If CC between two templates is higher, they are merged

noise\_thr = 0.8 # Minimal amplitudes are such than amp\*min(templates) < noise\_thr\*threshold

[noedits]

filter\_done = True #!! AUTOMATICALLY EDITED: DO NOT MODIFY !!

artefacts\_done = False # Will become True automatically after removing artefacts

median\_done = False # Will become True automatically after removing common median

ground\_done = False # Will become True automatically after removing common ground