

# Readme/log for feb17 2024

## Matlab files

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# Description of each script that you can run

- “**CMA\_batch\_analysisFeb17.m**” –click on Run button to analyze all abf files in the same directory where this script & its function scripts are stored. Gives results for each file in tables.
- “**feb17\_single.m**” – run analysis on an abf file of interest. Specify its file name after “filename1=”. Then hit Run.

# Change from previous Feb21\_2024 file

Modified the code so that test\_spike in SingletSpikeAnalysis5.m captures ONE singlet each time. AHP half width looked accurate.

# Log – what has been changed from January files

The only major change from January ver. of the code is that the baseline shift has been added.

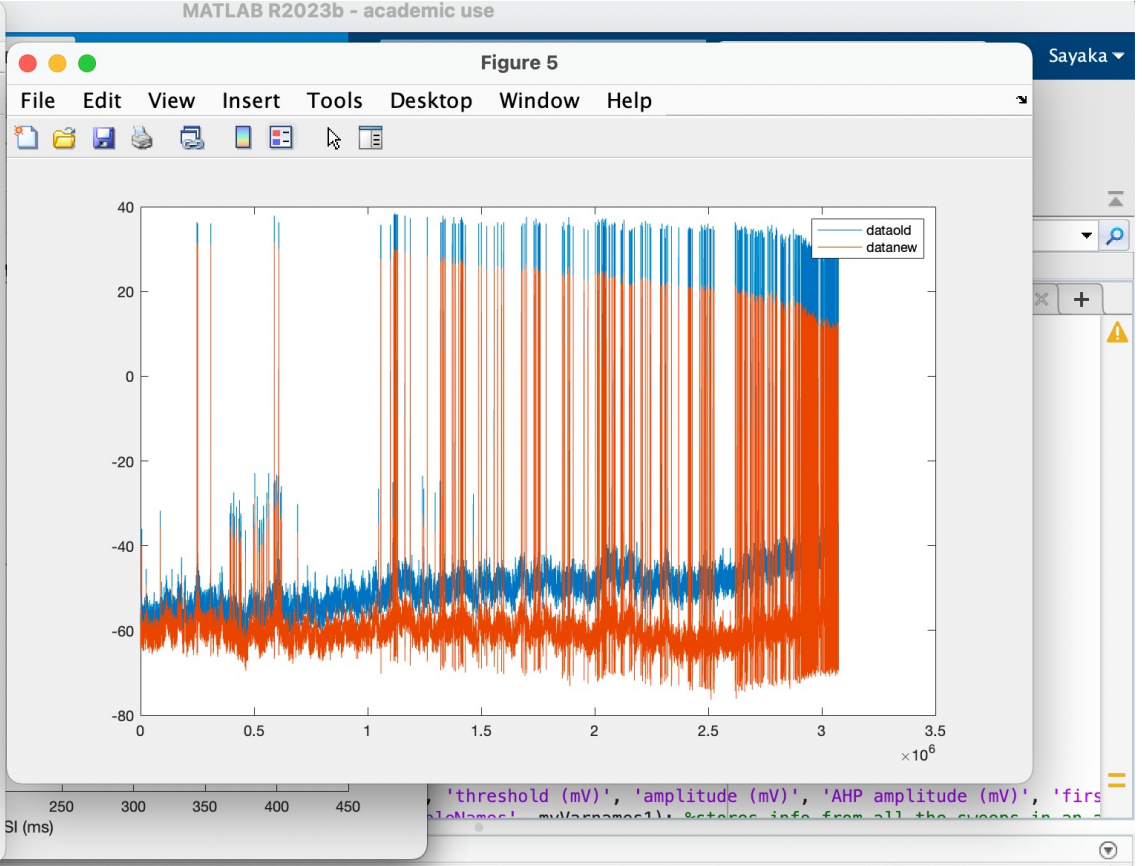
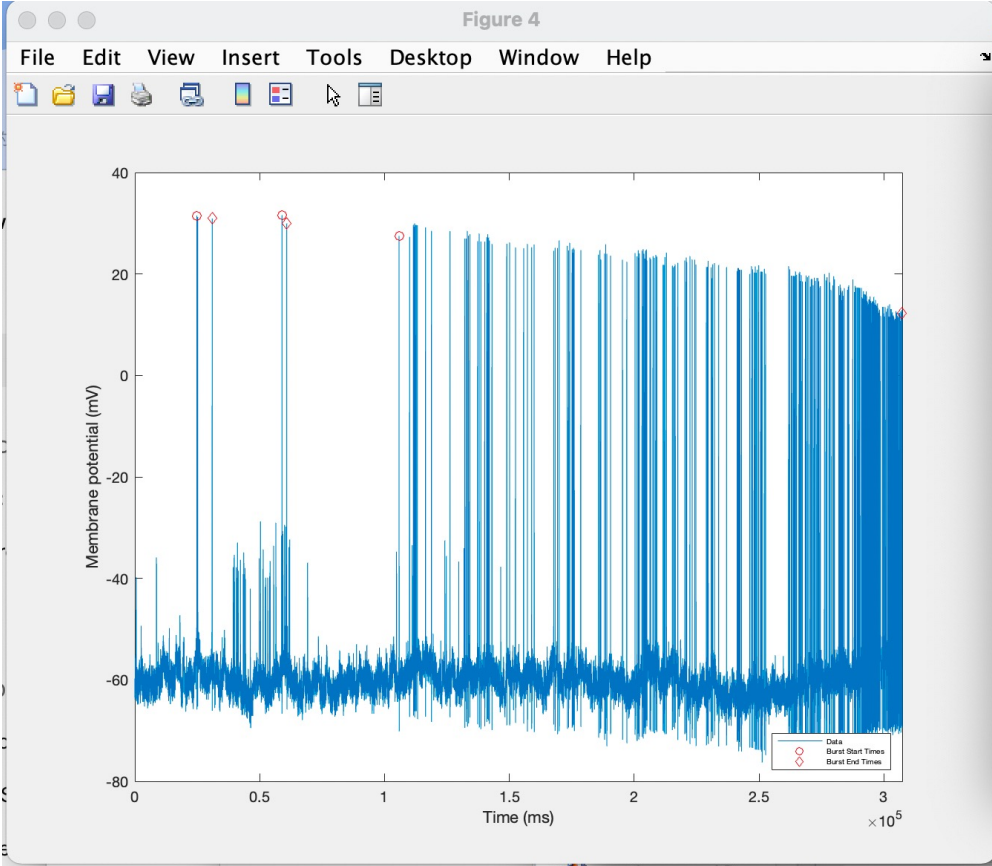
Specifics:

- Added linear baseline readjustment on signal data using `detrend()` to `CMA_burst_analysis_feb17` (the one without baseline shift is `CMA_burst_analysis_Dec20.m`)
- Changed the function name as appropriate in `CMA_batch_analysisFeb17.m` so that the code works with the updated function.
- Plot in figure 5 to show before and after of signal

# Observations before and after baseline adjustment

- By correcting the shifting/drifted baseline using linear detrend() on data, the bunch of APs in the latter half of the plot are all considered as one big burst, while in the unadjusted version they were considered a series of smaller bursts.
- I think this readjusted version portrays the bursts better.

# Sample output – before and after baseline adjustment



continuous\_AP\_a...  
continuous\_anal...  
cmaindividual\_N...  
CMABurstAnalsi...  
cma\_individual\_f...  
CMA\_batch\_anal...

Details

Select a file to view details

threshold(mV)	amplitude(mV)	AHP_amplitude(mV)	trough value (mV)	trough location(ms)	pe
NaN	NaN	NaN	NaN	NaN	

T =

1x9 [table](#)

cell name	threshold(mV)	average_ISI(ms)	AP_frequency(Hz)	total_AP_count_in
"2022_12_02_02_0005.abf"	"-23.124"	"1116.4336"	"0.82647"	"254"

fx >>

Zoom: 90% UTF-8 LF script Ln 7 Col 14