Doric Lenses' Data Analysis Software:
danse™

Data **A**nalysis for **N**euro**s**cience **E**xperiments

INDEX

Introduction

Experimental Pipeline

Compatible Data

Photometry

From *DNS:*
- .doric files
- v5 .doric files
- v5 CSV files

CSV/Excel

Compatible with:
- TDT
- Neurophotometrics

Microscopy

From *DNS:*
- .doric files
- v5 .doric files
- .avi

.tif/.tiff format

Compatible with:
- Inscopix
- UCLA Miniscope

Behavior

.doric files:
- DIO (TTL signals)
- AIN (Analog signals)
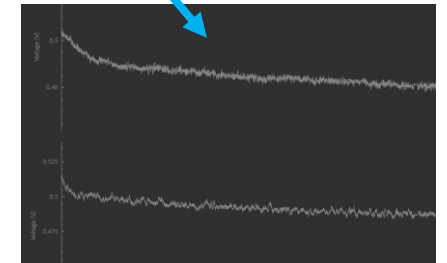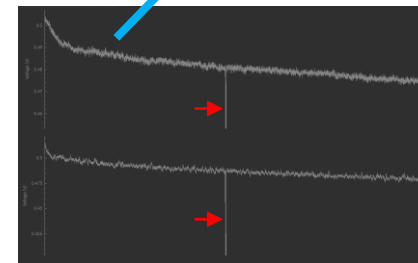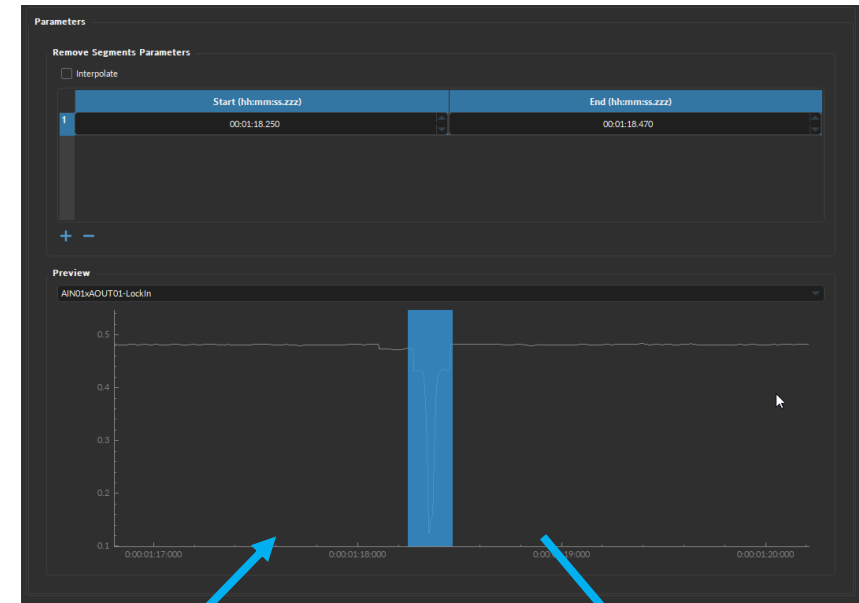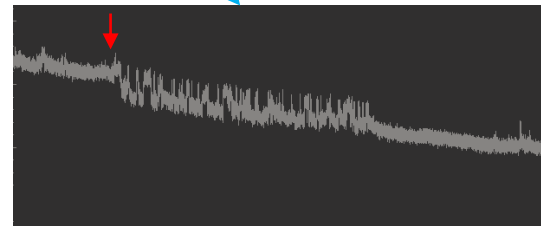- Video (Beh Camera)
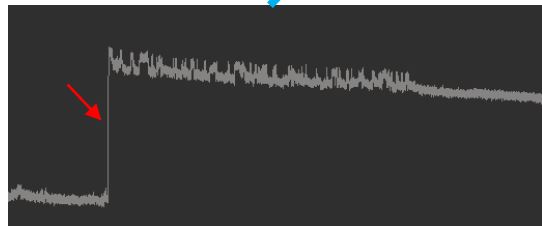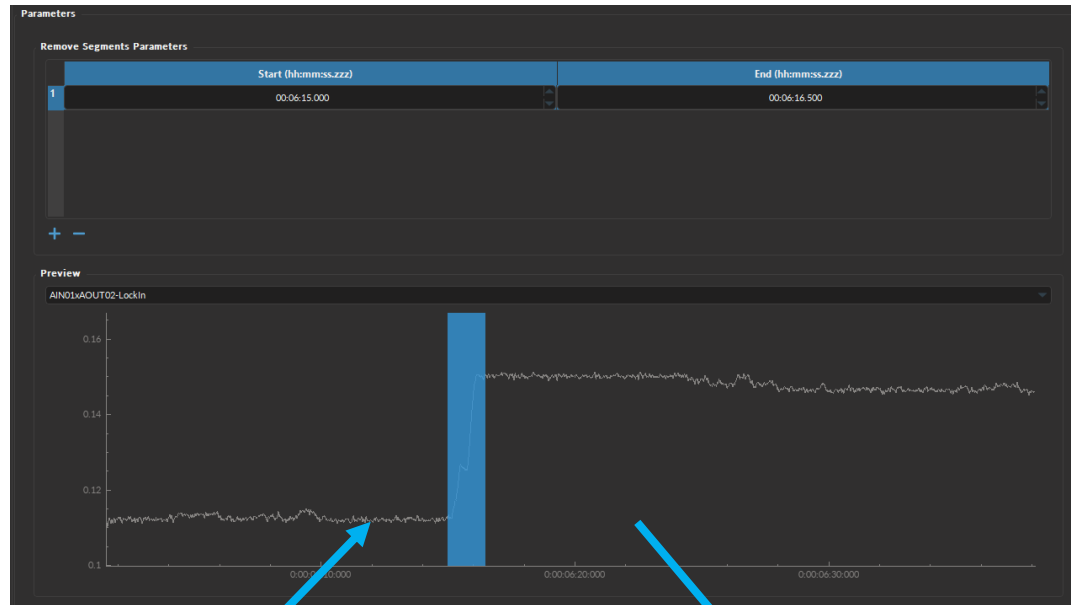- Keypress Events

Video (.mp4)
CSV/Excel

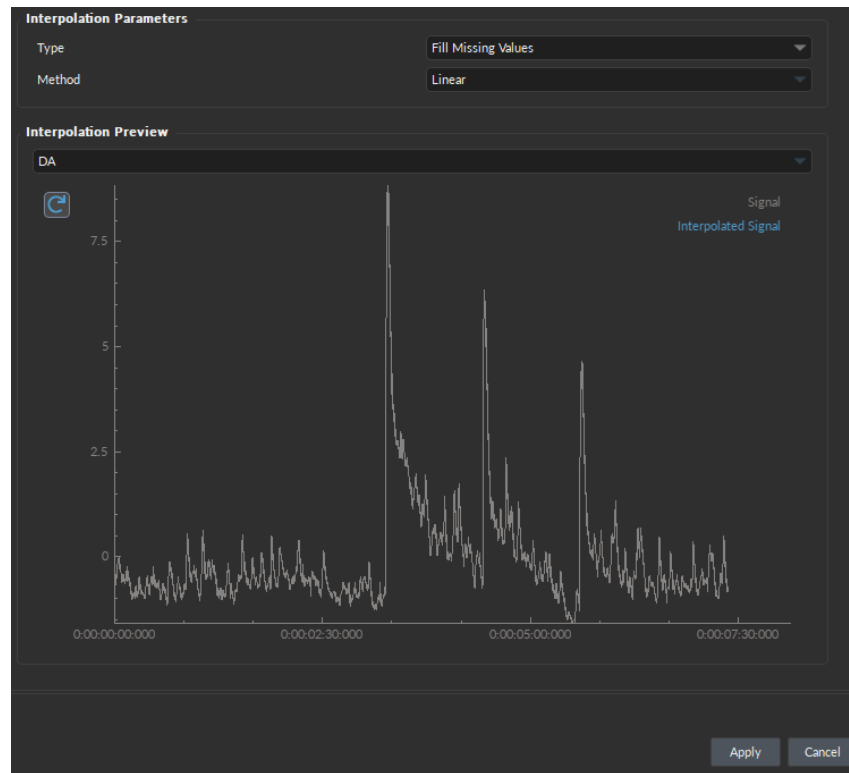**Compatible with:**
- Ethovision
- Anymaze
- DeepLabCut
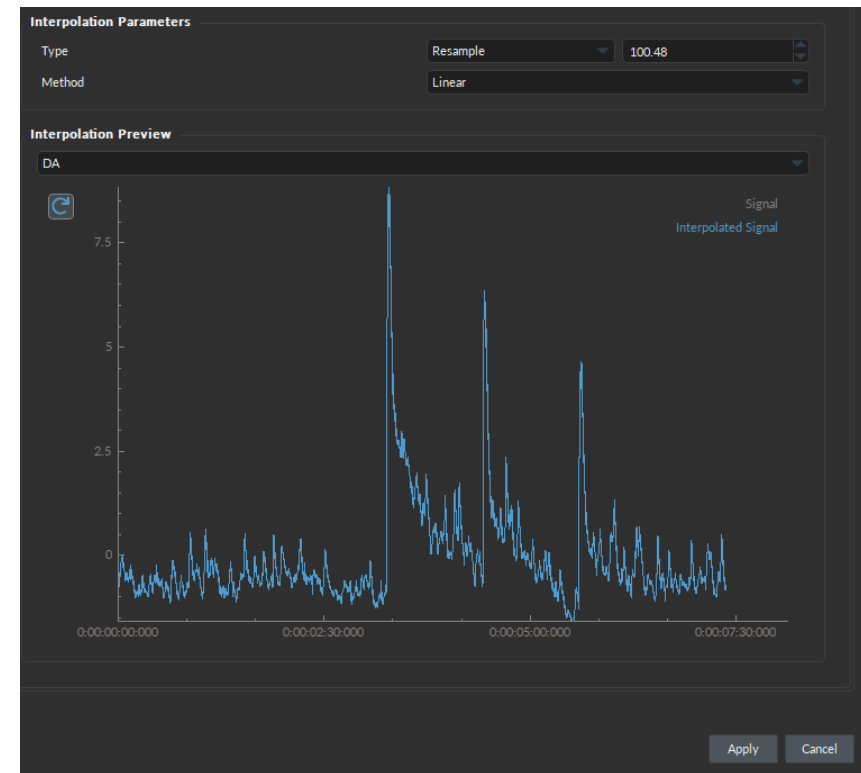
General Signal Processing

Remove Artefact operations

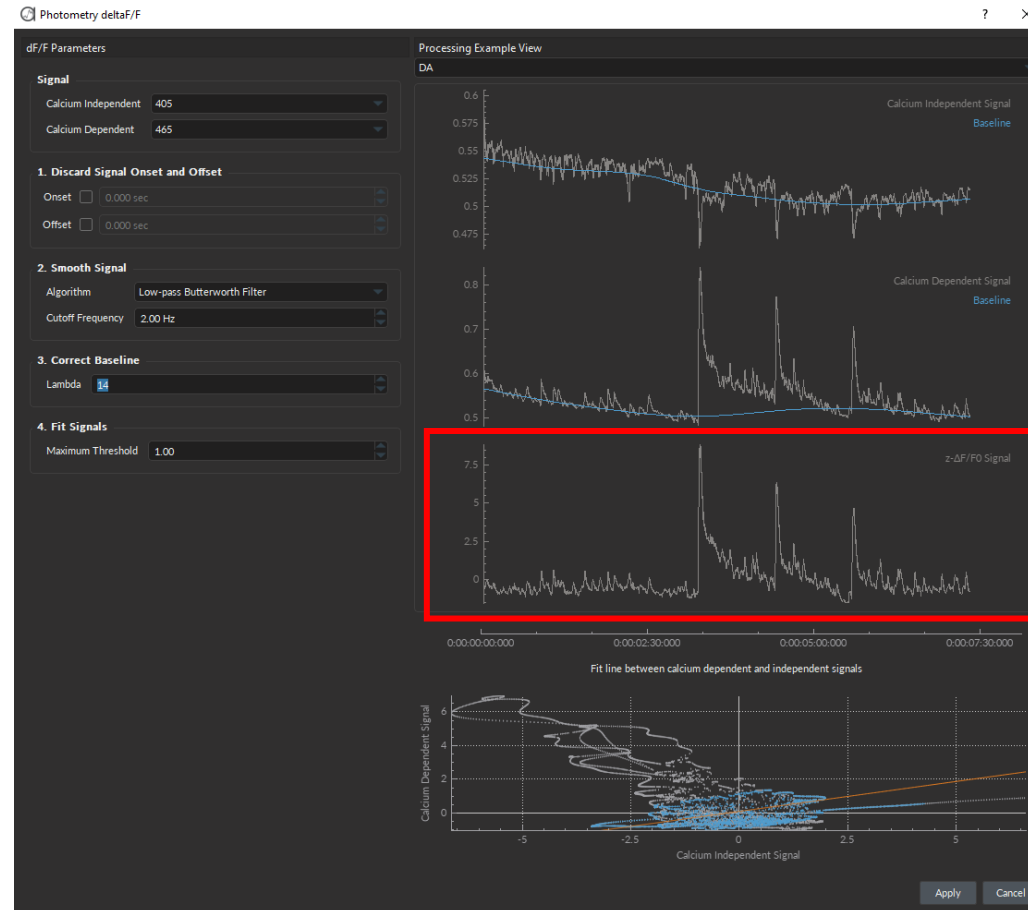# Interpolation operation

Fill in missing values:

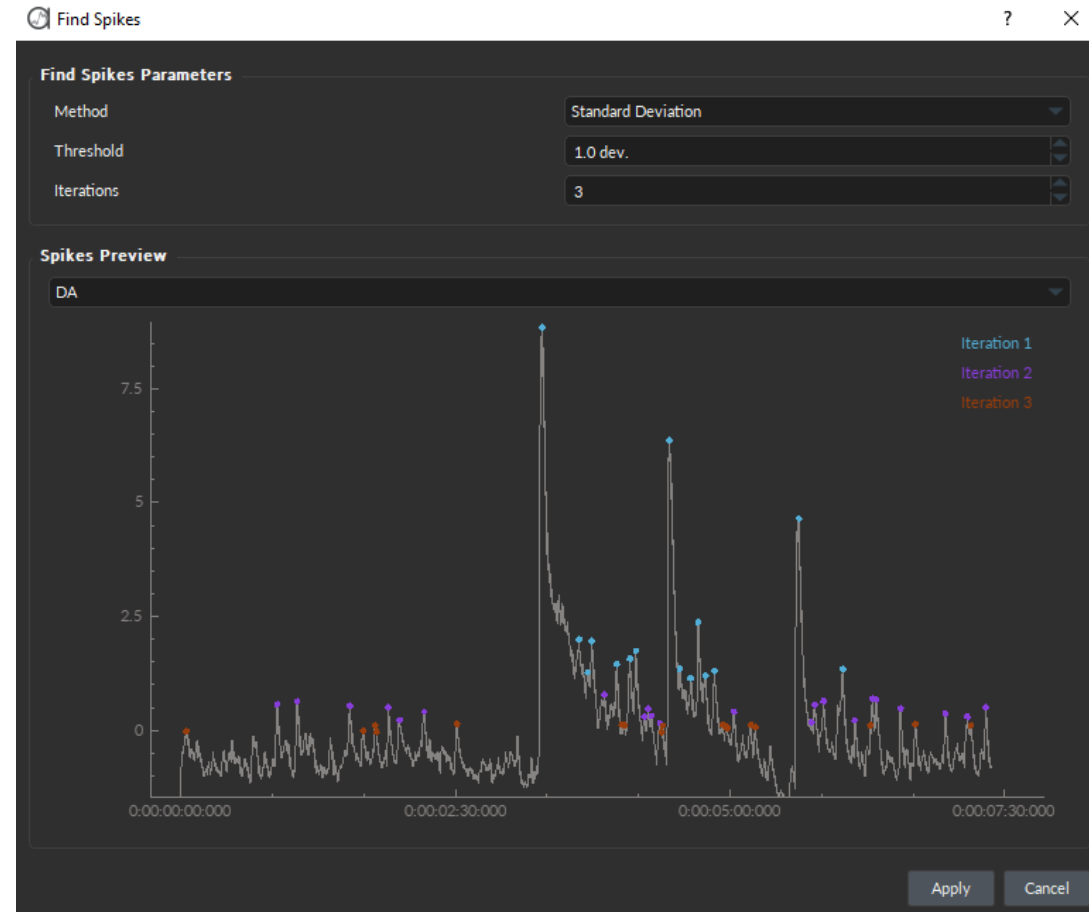Resample:

Fiber Photometry

Calculate z-DF/F0

Tutorial Video

Z-score DF/F0

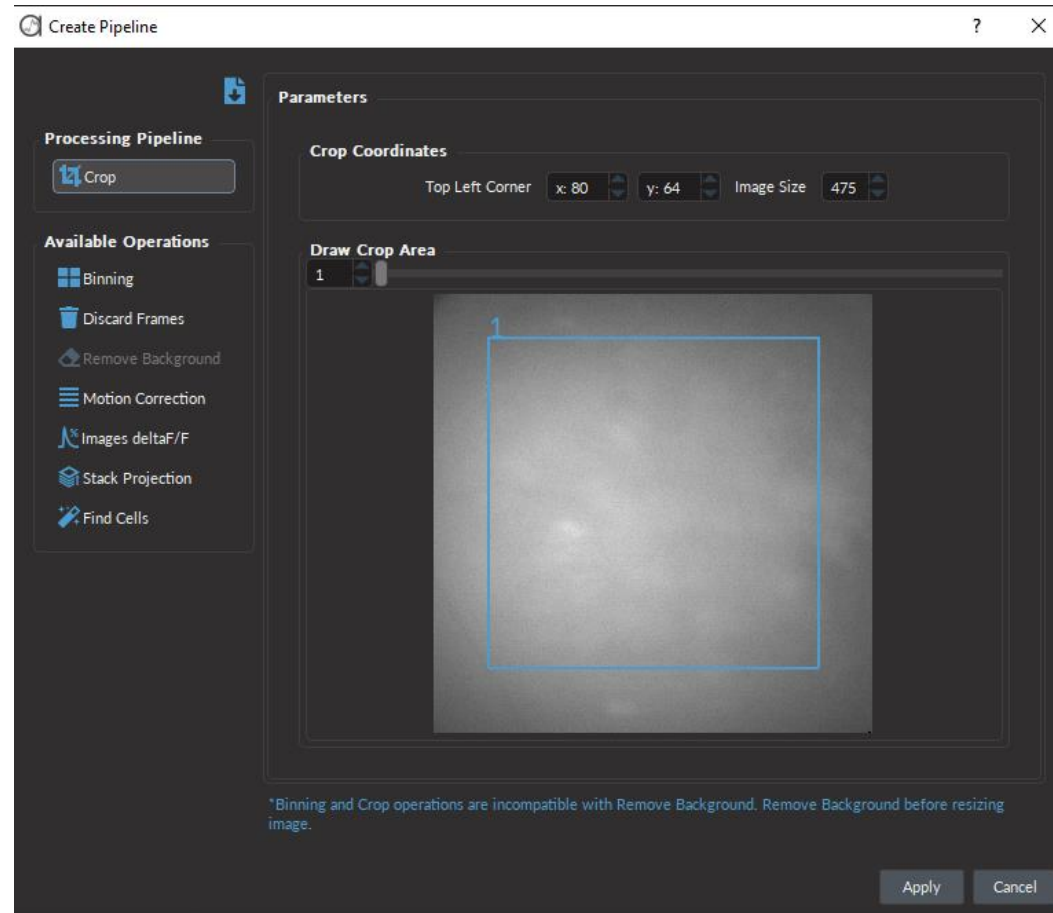# Find Spikes

Microscopy

Image Processing Operations

- Crop
- Binning
- Discard Frame
- Motion Correction
- Stack Projection

Find Cells Algorithms

CalmAn CNMF-E:

MiniAn CNMF:
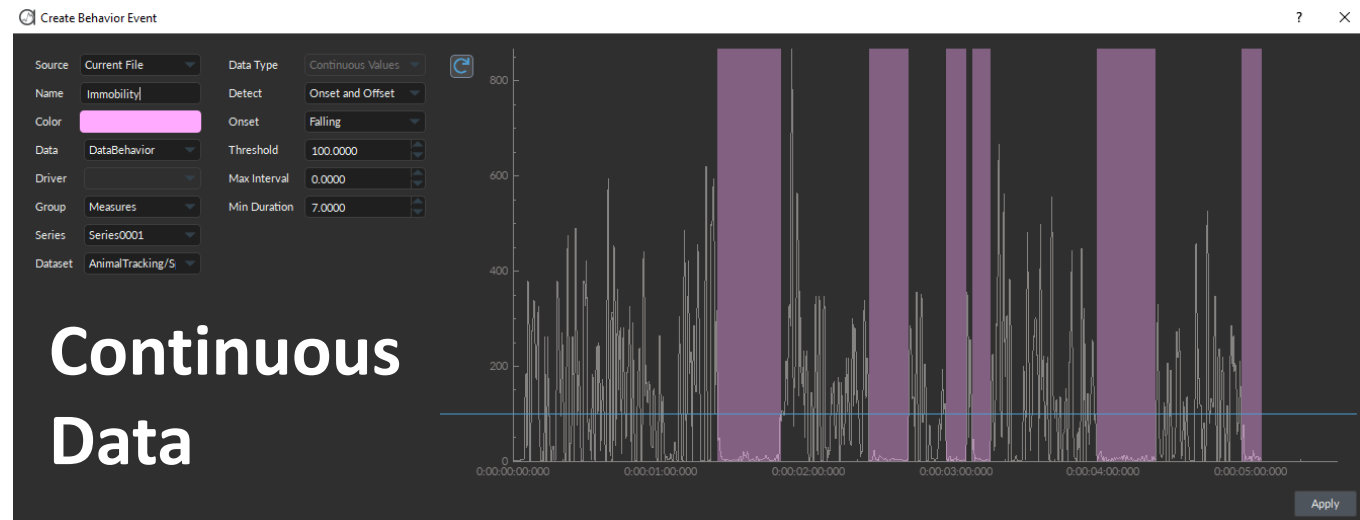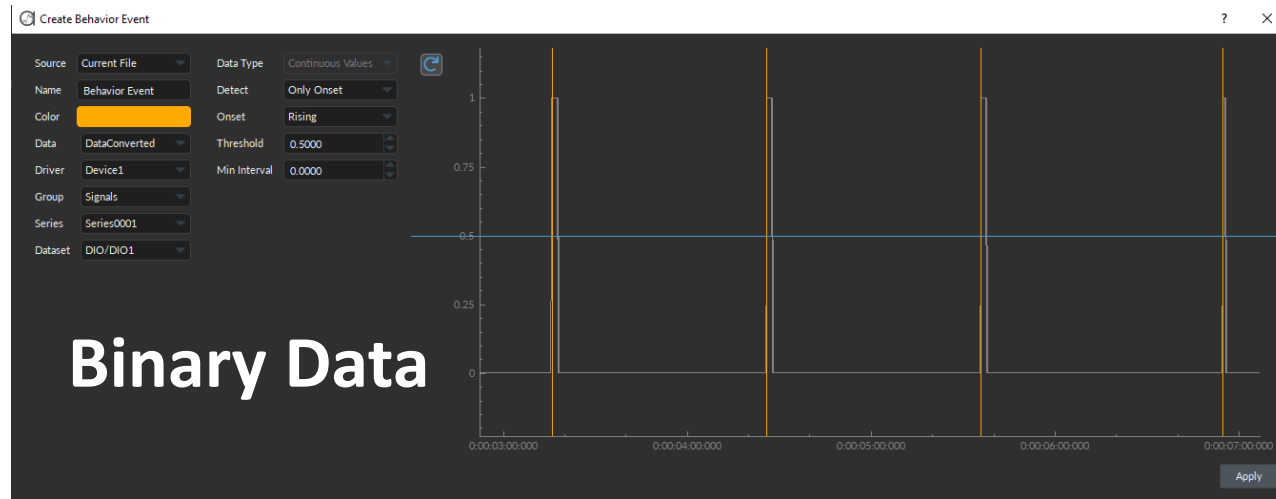
Behavior

Extract **Behavior Events** from measures

Binary Data

Continuous Data

Link Behavior Video
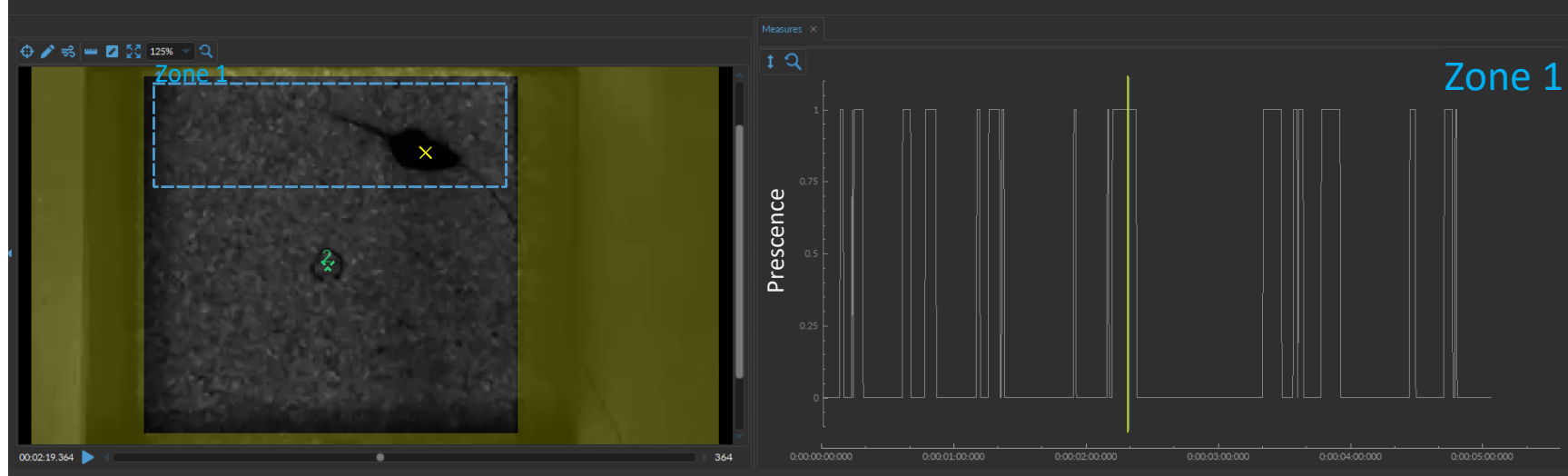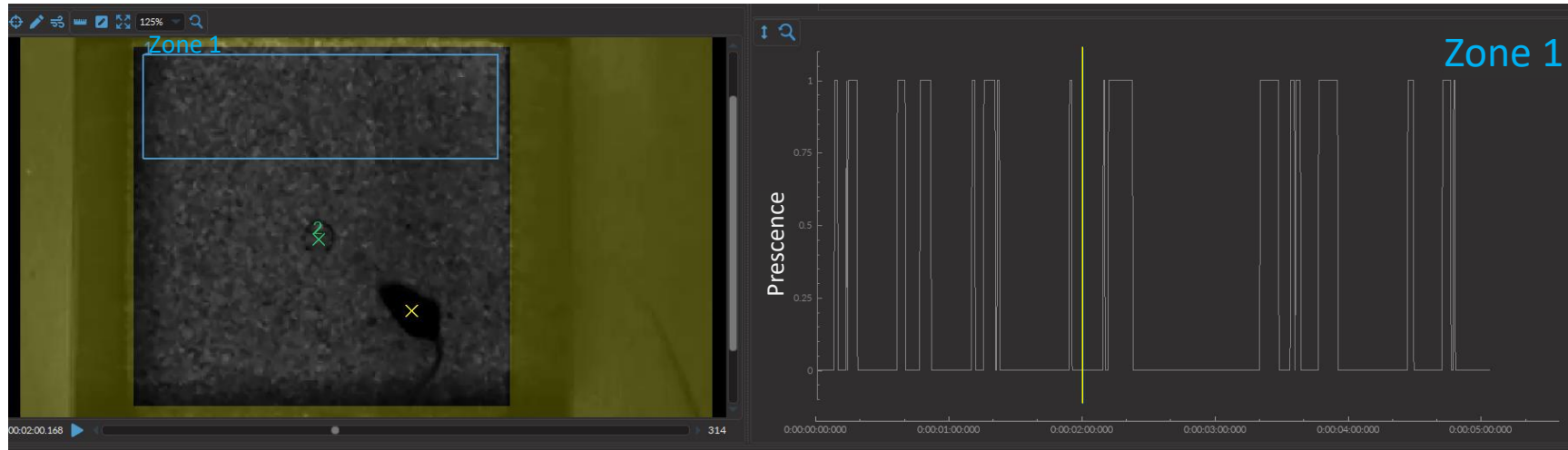
Import behavior data

Animal Tracking

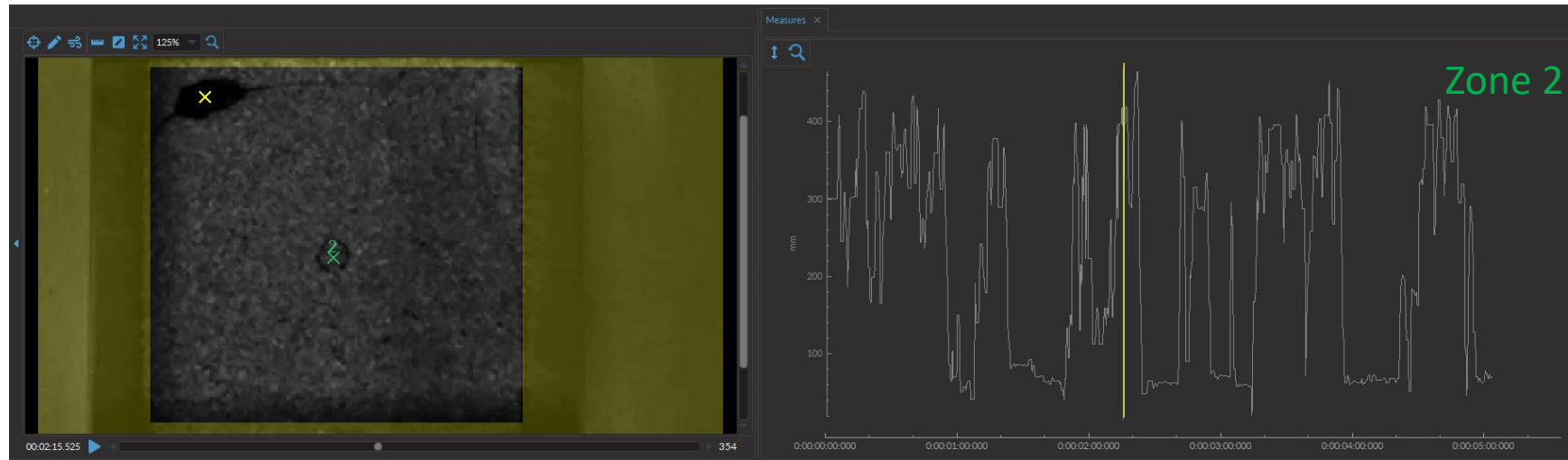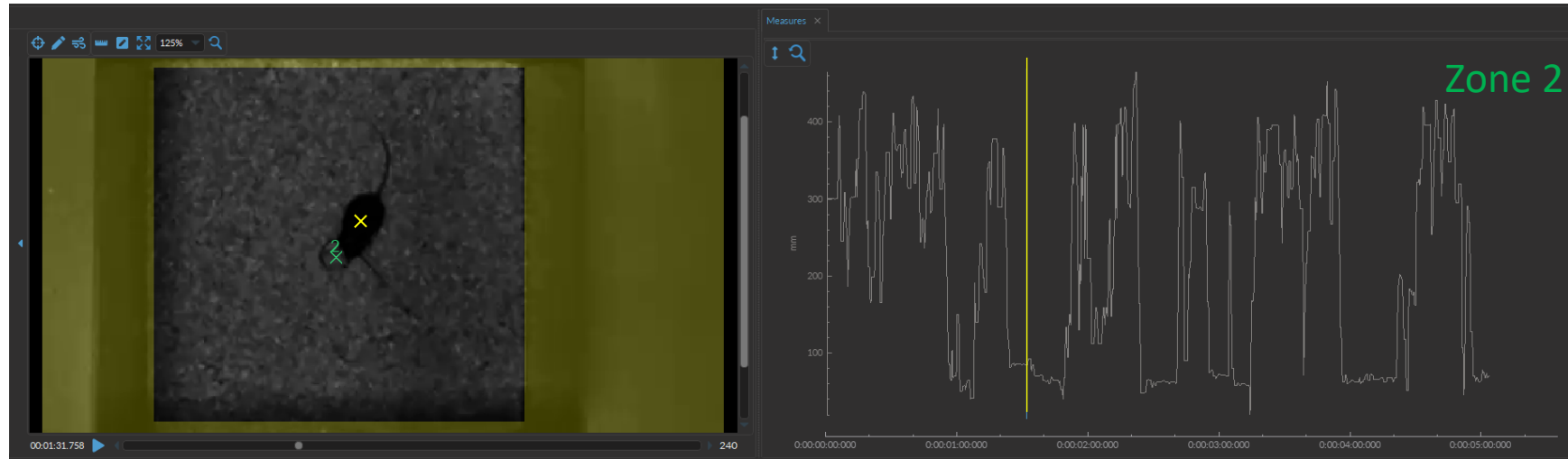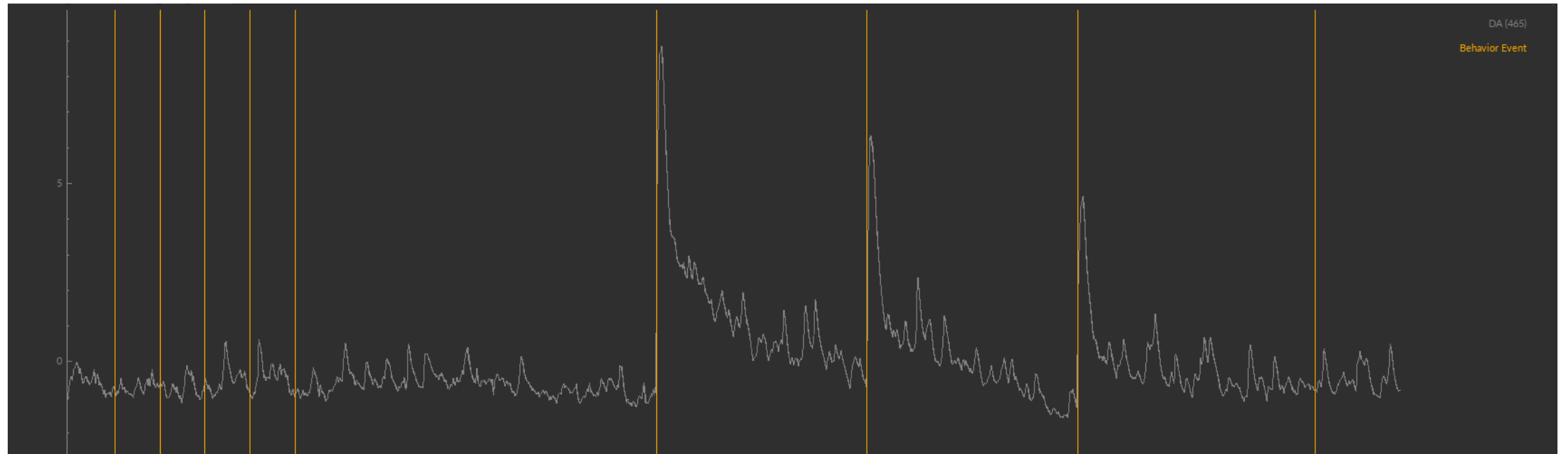# Animal Speed
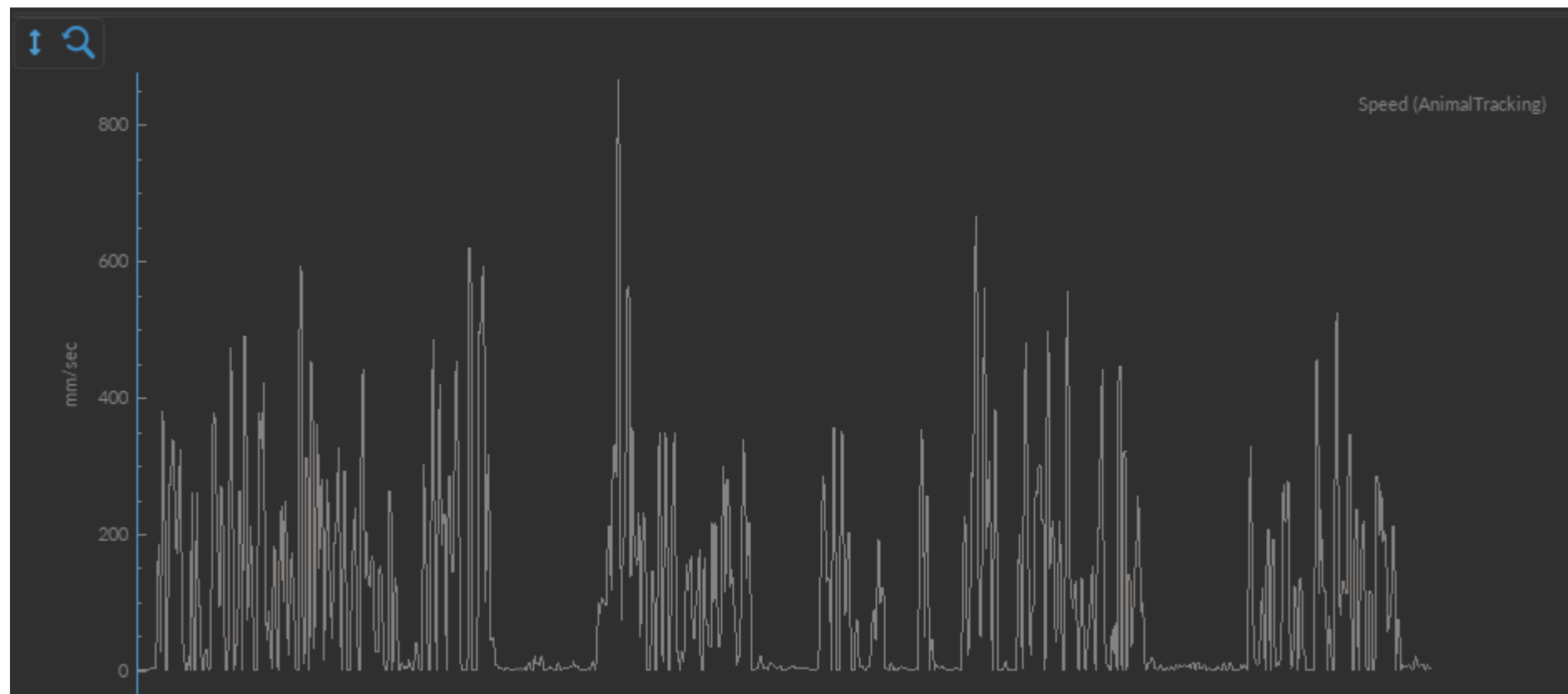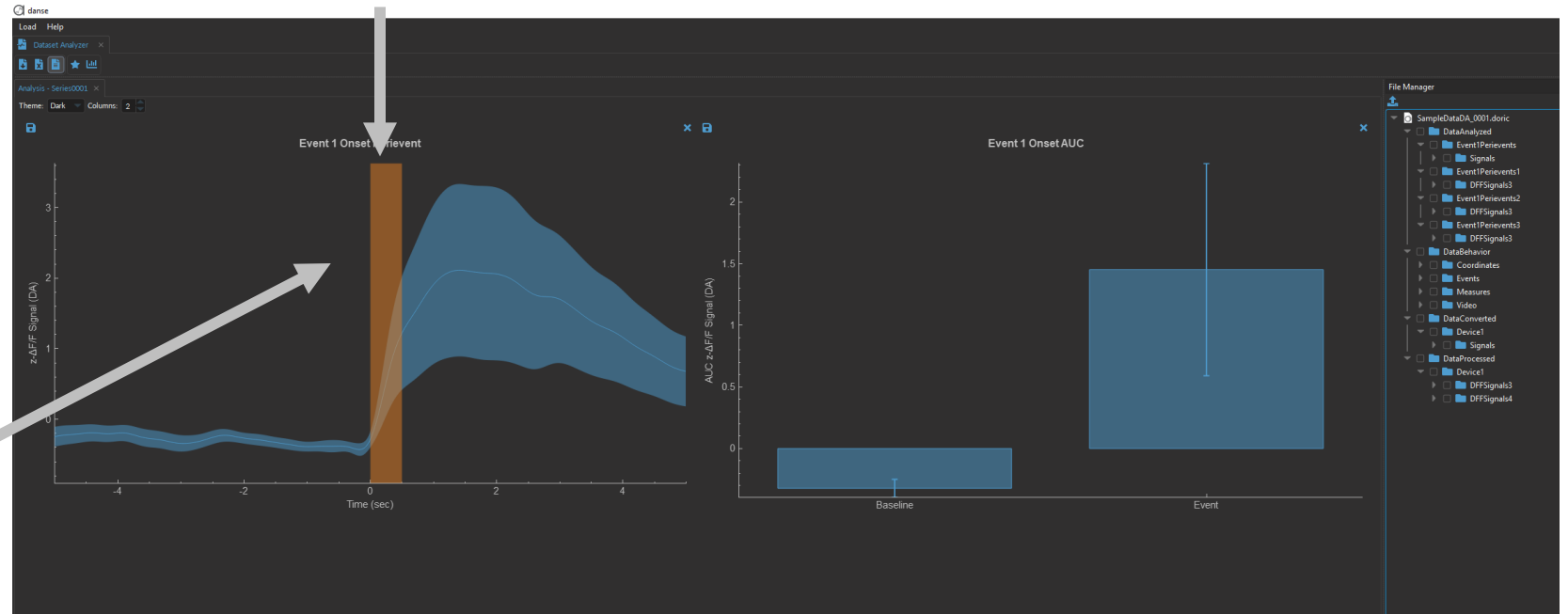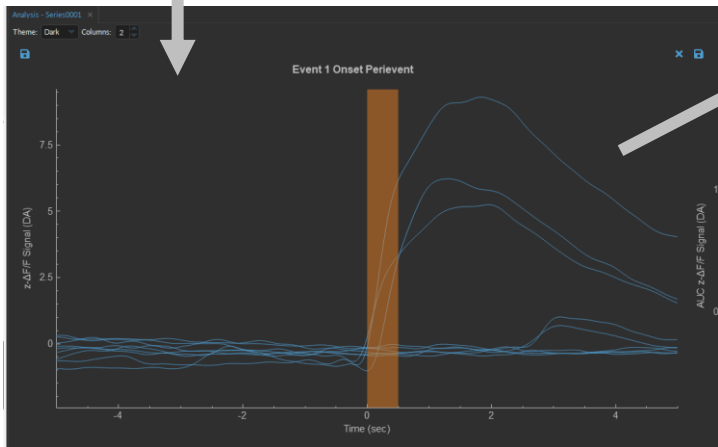
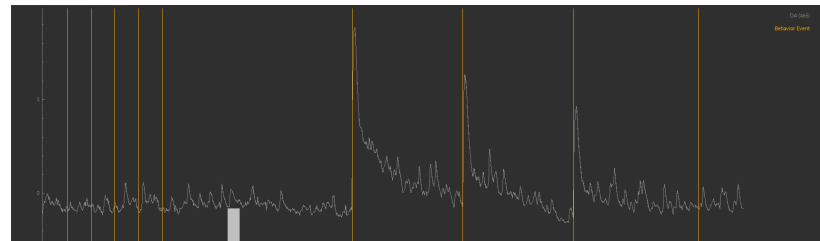# Animal Presence in Zone

Animal Distance from Point

Combining neural and behavior data

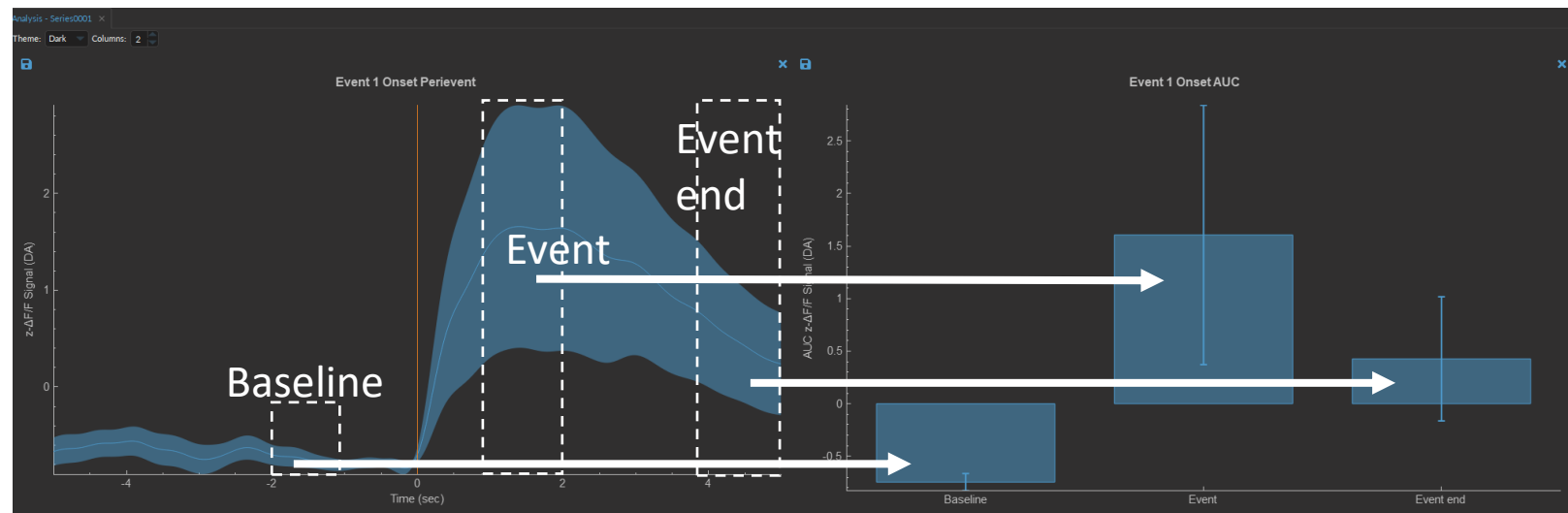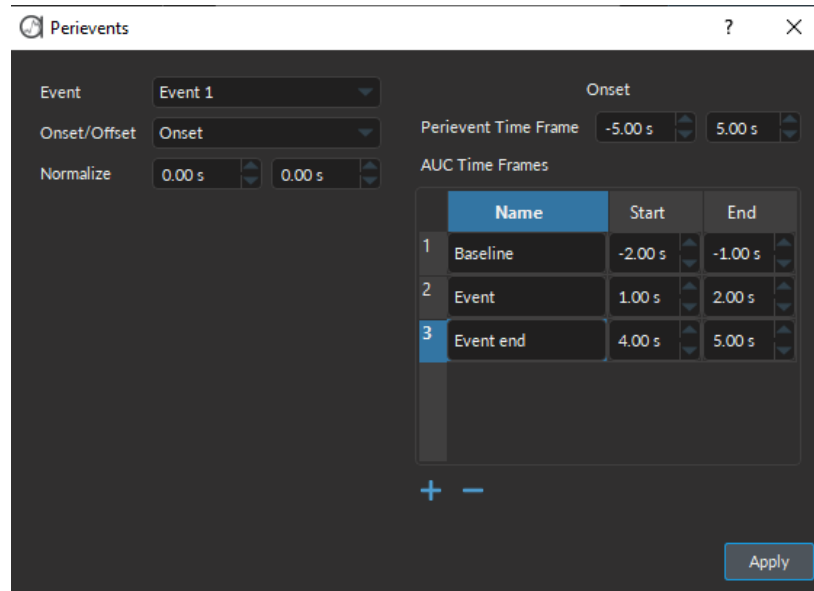# Load Behavior Event over Neural Data

Calculate Peri-Event Histograms
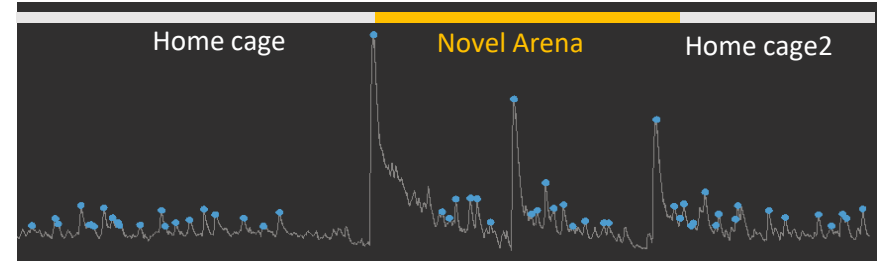
Align multiple Events together

Same data, but seeing each independent neural response to the same type of event
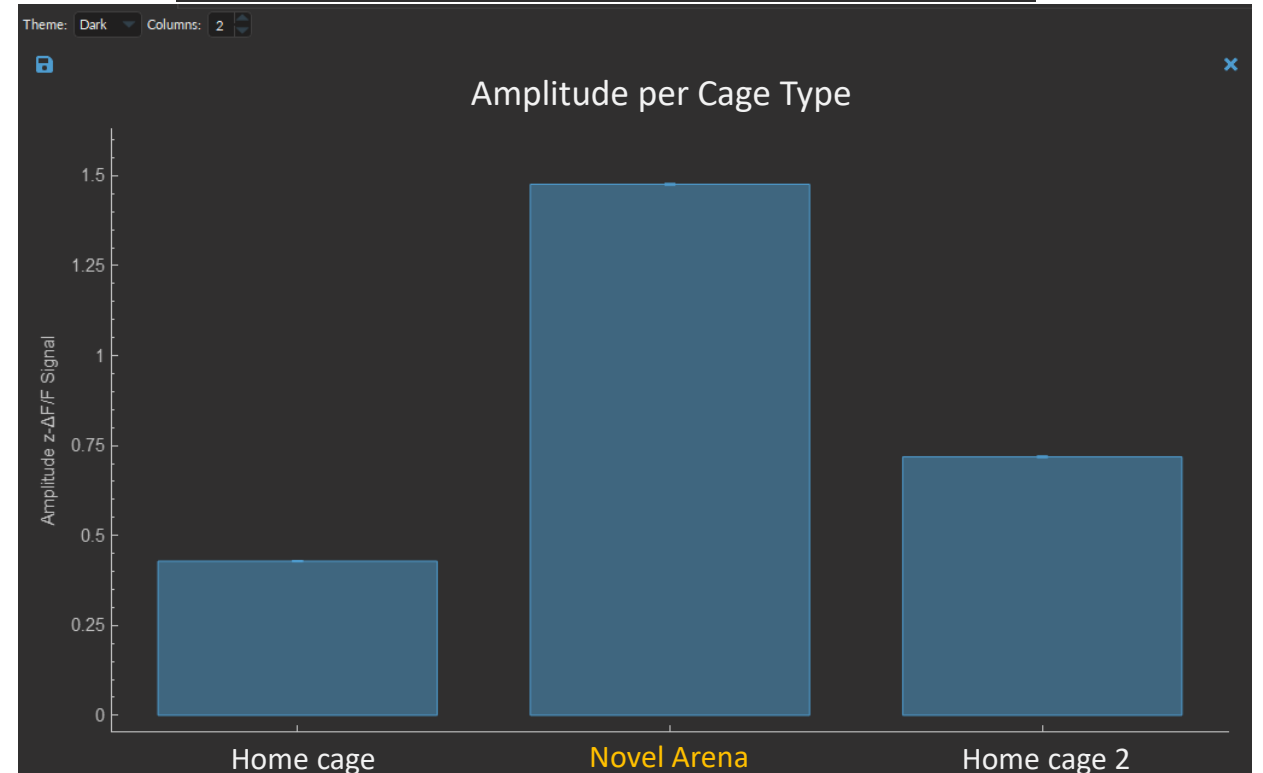
Calculate Area Under the Curve

Spike Statistics: Amplitude, Frequency & Count

Experiment Analysis

Organise entire Experiments

Automatically generate Experimental designed

Individual recording Data files

Input animal/categories/groups/trials etc. assigned to each recording

Batch Processing entire Experiments

Individual Data files

Set and test parameters On <u>each</u> animal recording

Pick several processing/analysis operation to apply to all data files

Analyze Data over different Groups

Merge groups together

Pick animals to include in analysis

Pick analysis operation (like Perievent)

Check which parameters were applied in past processed signal

Option to pool signals even if processed with different parameters

Analyze Data over different Groups

Export Figures
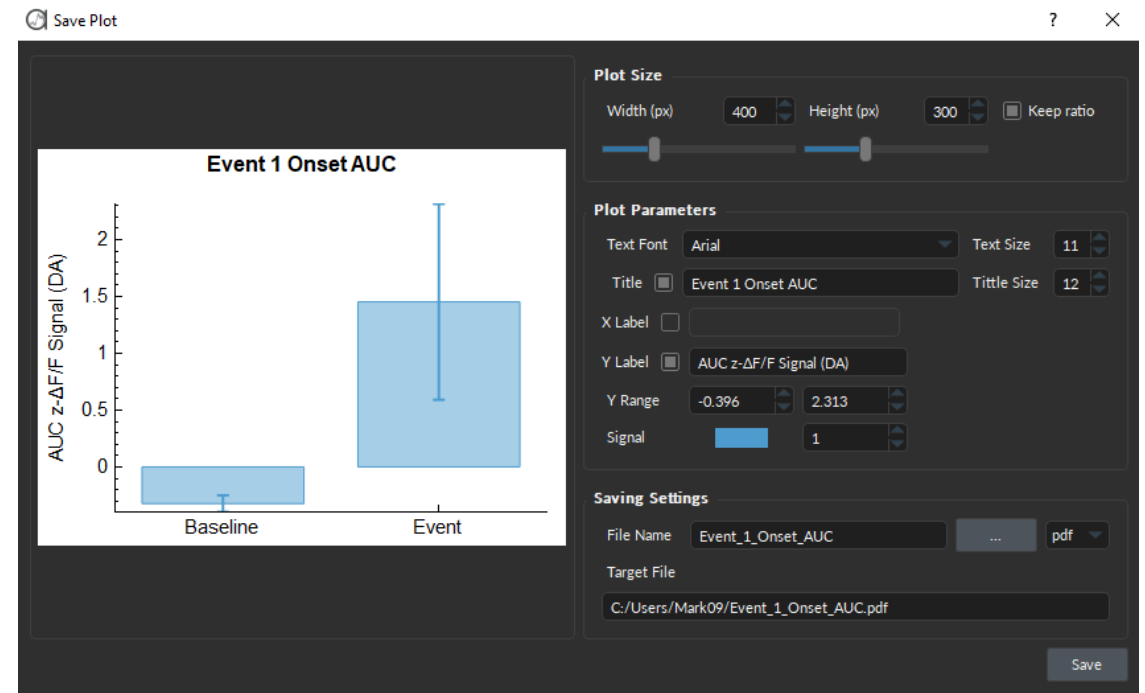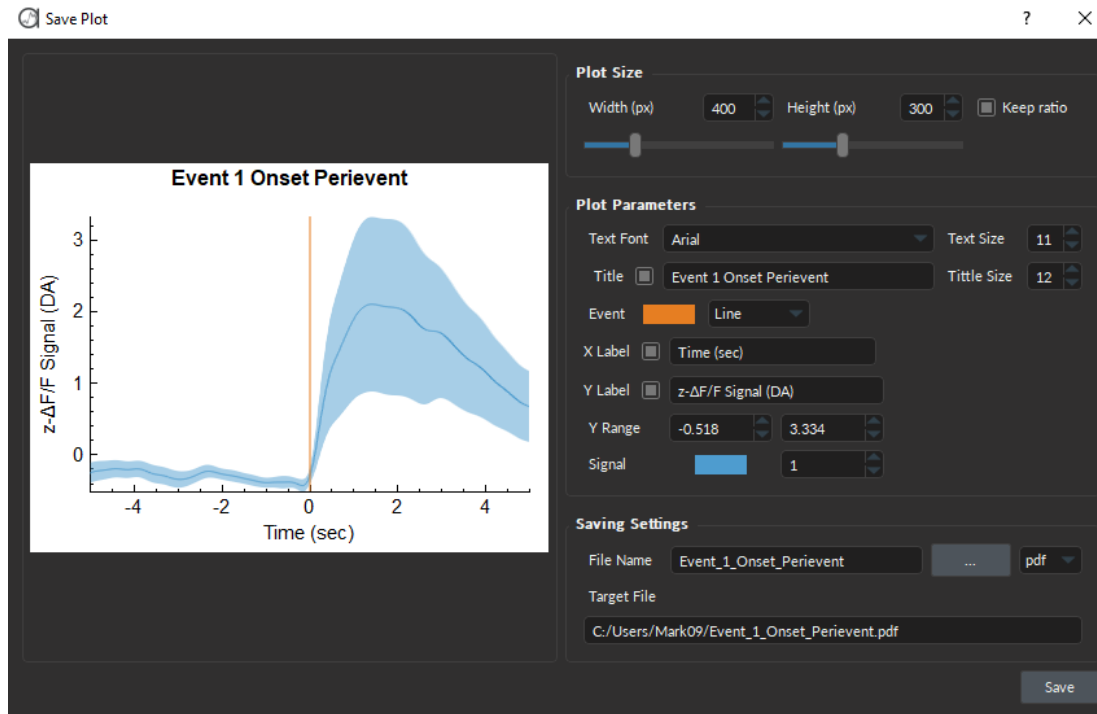
Export data in .csv files

OR

Copy data directly from File Editor

Resources

Tutorial Videos

neuro.doriclenses.com/pages/video

How-to:
Link Behavior Video in danse™

How-to:
Load and visualize data in danse™

How-to:
Use photometry ΔF/F in danse™

How-to:
Use the Create Pipeline Tool in danse™

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