

expmt struct fields

Raw Data		
Field	Description	Subfields
Centroid	struct containing raw centroid data memory map (<i>numROIs</i> \times 2 \times <i>numFrames</i>) as well as raw centroid data file path, data precision, file ID, and dimensions for each frame	map, path, precision, fID, dim
Time	struct containing raw time data memory map formatted as interframe intervals (rather than timestamps) as well as raw time data file path, data precision, file ID, and dimensions for each frame	map, path, precision, fID, dim
<raw_output_field>	structs containing raw data memory map for any other specified raw data fields in the above format	map, path, precision, fID, dim
fields	cell array of strings listing raw output field names (eg. ['Centroid'; 'Time'; 'Area'])	none

Meta Data		
Field	Description	Subfields
parameters	struct containing autotracker parameter values	duration, ref_depth, ref_freq, ROI_thresh, track_thresh, speed_thresh, distance_thresh, vignette_sigma, vignette_weight, area_min, area_max, target_rate, mm_per_pix, units, ROI_mode, sort_mode, ROI_tol, edit_rois, dilate_sz
ROI	struct containing information about ROI number, position, orientation, size, shape, imaging mask, ROI definition mode,	n, centers, corners, orientation, im, mask, pixIdx, mode, (optional: shape, vec, row, col, grid, tform, cam_dist)
nTracks	number of objects tracked (ie. number of ROIs)	none
nFrames	length of the tracking in frames	none
Name	name of the experiment tracking protocol (eg. Basic Tracking, Y-maze, Circadian)	none
source	image data source (ie. camera/video)	none
ref	struct containing background reference image, image stack, number, timer, inter-reference distance threshold, tracked object positions for each image in the reference stack, and reference update trigger	im, stack, ct, t, thresh, cen, update
noise	struct containing noise sample meta data including raw distribution, mean, standard deviation of number of above threshold pixels during sampling period as well as distributions, means, and standard deviations of above threshold pixels for each ROI	dist, mean, std, roi_dist, roi_mean, roi_std
vignette	struct containing vignette correction image and mode	im, mode
labels	cell array containing the values from label UI table	none
labels_table	ROI-wise formatted labels containing label info for each individual ROI	Strain, Sex, Treatment, ID, Day, Tray, Box, Comments
drop_ct	raw number or fraction of total frame number excluded from tracking due to excess noise	none

File Pathing Info		
Field	Description	Subfields
fdir	directory of the <i>expmt</i> struct .mat file	none
rawdir	directory of the the associated raw data files	none
fLabel	auto-generated label string for creating unique and identifiable directories and file names (eg. 'date_trackingname_strain_ID#')	none
fpath	original user-selected save directory	none
figdir	directory for auto-generated figures	none

Hardware Info		
Field	Description	Subfields
camInfo	struct containing camera video object as well as adaptor and device info	vid, Device Info, DeviceIDs, activeID, AdaptorName
video	struct containing video file object, directory, file names, file number, duration, and frame number	vid, fdir, fnames, nVids, total_duration, nFrames
light	struct containing illumination panel PWM values	white, infrared
COM	illumination panel controller COM object	port, name, status, byteorder
AUX_COM	cell containing list of available auxillary COM ports	none
projector	struct containing scattered interpolants used to convert camera pixel coordinates to projector pixel coordinates	Fx, Fy
scrProp	struct containing screen properties for displaying Psychtoolbox stimuli	window, screenNumber, windowRect, xCenter, yCenter, vbl, waitframes