

Important fields in the 'RegionStats' struct (monocular receptive field mapping data)

Area	area of the ROI
Centroid	centroid of the ROI
PixelList	locations of the pixels from the ROI
DFF	$\Delta F/F$ time series
F	absolute average fluorescence level
Mask	mask of the selected ROI
Tau	time decay constant of GCaMP5G
Frametime	time needed per frame
R	regressor (0, stationary; 1, motion)
recording_ID	recording ID
ROI_ID	ROI ID
boundary_loc	the location of the ROI (2, in the tectum; 3, in the pretectal area; 5, unknown;)
DFF_deconv	deconvolved $\Delta F/F$
MSI	motion sensitivity index
zscore_median	the median of the z-score from the three repetitions
snr_whole_bgf	signal to noise ratio
zscore_corr	linear correlation of the z-score from the three repetitions
zscore_corr_keep	If the ROI is kept for further analysis filtered with linear correlation of the z-score
SNR_keep	If the ROI is kept for further analysis filtered with the signal to noise ratio
MSI_keep	If the ROI is kept for further analysis filtered with the motion sensitivity index
one_2D_gaussfit_keep	1, keeps the one 2D Gaussian RF mapping; 0, discards the cell (the parameter is not used in the final analysis)
two_2D_gaussfit_keep	1, keeps the two 2D Gaussian RF mapping; 0, discards the cell (the parameter is not used in the final analysis)
new_or_old	1, new data, the fish left eye was covered by a black foil during the experiment; 0, old data, reflection to the left eye existed.
Coor_X	x location of the ROI in the fish brain

Coor_Y y location of the ROI in the fish brain

Coor_Z z location of the ROI in the fish brain

In the 'exportmat' cell (monocular receptive field mapping)

Column 2: x location of the ROI in the fish brain

Column 3: y location of the ROI in the fish brain

Column 4: z location of the ROI in the fish brain

Column 6: the location of the ROI (2, in the tectum; 3, in the pretectum; 5, unknown;)

Column 16: recording ID

Column 17: ROI ID

Column 18 the number of the patches the RF covers

Column 19 the location of the RF center in x (azimuth)

Column 20 the location of the RF center in y (elevation)

Column 21: if inhibition exists; 1, yes; 0, no.

Column 23: RF size (1, small-size; 2, medium-size; 3, large-size; 4, bar-shape; 5, double-field RFs)

Important fields in the 'ORM' struct (head-fixed OMR behavior data)

Name	the name of the recording (as an ID of the experiment)
ori_angle	the original tail angle of the fish
locs_peak_array	the locations (frame numbers) of the peak phase of the tail beats
locs_trough_array	the locations (frame numbers) of the trough phase of the tail beats
OMR	1 x n cell; n indicates the bout (session) and within each bout (session), the numbers (0 or 1) indicates OMR tail beats (number 1) or non-OMR tail beats (number 0).
Session	swimming bouts