NeuroElf (NE) - BrainVoyager (BV)

Cluster threshold

Both in BV and NE: VTC (functional) voxel is used, for example, for monkey data with VTC resampled at 1 mm, 1 "voxel" = 8 * 0.5 (anatomical MRI) voxels.

E.g., 10 voxels: 80 0.5 voxels, thus cluster threshold "10 voxels" means at least 80 0.5 voxels, 10 mm^3.

Important difference: In BrainVoyager, when using "Interpolate" option, the number of voxels is apparently calculated after interpolation, but in NeuroElf, the threshold (k-thresh) is first applied and then the resulting clusters are interpolated. This can result in discrepancy between BV and NE, with less activated clusters in BV as compared to NE.

VOIs

VOIs that were created in NE look like mosaics when displayed in BrainVoyager. The function *ne voi_addvoxels.m* (see Dropbox\DAG\Sources\bv_umg_4NeuroElf) adds the missing voxels. When input shift_vois is set to 'noshift' (default) the resulting VOIs will fully overlap with the VMP voxels they were derived from. When setting shift_vois to 'shift' the resulting VOIs will be shifted by 1 voxel in order to capture the actual VTC voxels they belong to. This may be important because NE can only extract time courses from original VTC voxels.

Background: There is an issue with BrainVoyager VTC voxel time courses and different time course extraction methods in NE (vtc.VOITimeCourse vs. vtc.VOITimeCourseOrig).

Important: If you want to look at the VOIs with a corresponding VMP, you must disable interpolation in the Volume Maps tab in BrainVoyager.