

```
% run experimental loop until duration is exceeded or last frame
% of the last video file is reached
while ~trackDat.lastFrame

    % update time stamps and frame rate
    [trackDat] = autoTime(trackDat, expmt, gui_handles);

    % query next frame and optionally correct lens distortion
    [trackDat,expmt] = autoFrame(trackDat,expmt,gui_handles);

    % track, sort to ROIs, evaluate noise level, output optional fields
    trackDat = autoTrack(trackDat,expmt,gui_handles);

    % ----- %
    % insert custom routines %
    % ----- %
    trackDat = customStimulusSubRoutine(trackDat,expmt);

    % output data tracked fields to binary files
    [trackDat,expmt] = autoWriteData(trackDat, expmt, gui_handles);

    % update reference or reset if noise thresh is exceeded
    [trackDat, expmt] = autoReference(trackDat, expmt, gui_handles);

    % update the display data
    trackDat = autoDisplay(trackDat, expmt, imh, gui_handles);

end
```