Author’s response for the minor revisions of the manuscript “Dye tracer aided investigation of xylem water transport velocity distributions”

Generally, we would like to refer to the point by point replies to the reviewer comments postet in the open review process as AC2 and AC3. Within this document we will not repeat every point that was made within AC2 and AC3. We will rather focus on documenting bigger changes that were made to the manuscript during the revision process.

In section 1.1, we moved the paragraph describing dye tracer approches to investigate plant water transport from the end to the start.

Since Reviewer #1 noted a very abrupt transition from section 1.1 to section 1.2, we added an introductory paragraph to section 1.2 and hope that this improves the reading experience.

We changed Fig. 2 to include a scale and legends.

In the Results chapter, we added some information on the NDBI threshold and the spatial resolution achieved within our analyses.

For our description of the results, we changed the naming order of the xylem depth classes (now depth class number 1 refers to the outer xylem and depth class number 6 to the inner xylem, which is hopefully more intuitive than the previously used naming scheme).

We changed Fig. 4 to depict bigger classified images of the stained surfaces (in Fig.4a) and included a hopefully more intuitive legend for the xylem depth classes.

We added a similar depth class legend to Fig. 5 and made some minor adjustments, most importantly labeling the axes with full words instead of cryptic things like “u/q [-]”.

We also adapted Fig.6 to include visual representations of the sampled parts of the xylem cross section. This also should make it more easy to relate the colored lines in Fig.6 to the respective depth classes.

In the discussion of Sec. 4.2 we included a paragraph that highlights the difference between radial velocity distributions inferred by sap-flux sensors and by dye tracers.

We added section 4.3 to discuss the sectoral distribution of tracer transport velocities and to justify, why we did not assess them in detail.

We also invested quite some effort to compile a hopefully comprehensible collection of scripts and data that should enable others to reproduce the results presented in this study.