

**Referee comment on “Direct Inversion of Circulation and Mixing from Tracer Measurements: I. Method” by T. von Clarmann and U. Grabowski**

Although the discussion paper included already an impressive analysis, the revised version has further improved significantly, in particular regarding the presentation style (e.g., the new Fig. 1, illustrating the D-matrix), and I recommend publication in ACP as is. A few typos I detected while reading are listed below (line numbers refer to the version acp-2016-322-manuscript-version3.pdf):

L169: there is a blank before the '!

L171: ...(Eqs. 34-76)...

L894: phi → \phi

L895: ...shown IN Fig. 2b...

L897: ...veloCity...

L897: ...Eq. (91)...

L898: ...(Eq. 28)...

L913: The residual between ... (no OF)

L916: (Fig. 2d) → point missing

Figure 2: units of the color bar of Fig. 2A should be given – at least in the caption.

L977: ...to Eq. (85) ...