

Interactive comment on “Implementation of a quality control for Radio Occultation observations in the presence of large gradients of atmospheric refractivity” by L. Cucurull

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We are thankful to this reviewer for his comments. Answers are provided below.

- 1) We have rewritten the paragraph in the Introduction Section by listing the different methodologies adapted at the weather centers.
- 2) It is important to notice that these added quality controls only reject a very small percentage of additional observations. Most of the observations affected by super-refraction conditions were already rejected by the standard quality controls, which focused on background departures of bending angles and/or refractivities - and obser-

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ervations affected by super-refraction conditions showed larger background departures. Thus, such maps would be misleading since they would only show a small percentage of the observations being affected by super-refraction conditions. The goal of these updated quality controls is to (1) identify super-refraction conditions in a more objective way and (2) enable the testing of the assimilation of observations affected by super-refraction conditions (ongoing effort at NOAA). Overall, the impact was positive globally for most metrics and vertical levels.

- 3) Figure 10 is commented and referenced in page 8. The figure has been reordered in the revised text (now figure 9). The figure is important because it shows the impact of the updated quality controls for one of the profiles being analyzed.

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