I thank the referee for taking the time to provide feedback. I respond to each of their comments below, and I have revised the manuscript accordingly, with changes indicated in bold font.

>> 1. Page 2, 3rd line below Eq. (3): strictly speaking, a difference in velocity for the incoming air from one side of the vortex to the other is $ 2*\alpha*\r_inf $. At least, it looks like such, if to understand the author's phrase literally; or, probably, it would be better to improve this phrase, a bit.

The equality is only meant to hold approximately, so I have indicated that I neglect factors of order unity in the text.

>> 2. I would be more cautious when writing on page 3 that "This equation suggests the perhaps counter-intuitive result that $ \R $ decreases with increasing angular momentum, $ \l $." In fact, the right-hand side of (5) contains only the product $ \alpha*\n**2 $ but not the angular momentum $ \l $ that depends also on $ \R**2 $, and there is actually an intricate interplay between $ \R $ and $ \l $ values. For instance, one can also express the centrifugal force at the vortex eyewall as $ \ro*\l**2/\R**3 $ and by equating it to the pressure gradient force one gets that $ \R $ is proportional to $ \l $, for a given $ \Delta_p $.

I have excised this inaccurate discussion from the manuscript.

>> 3. A reference to (Renno et al., 2000) with regard to Eq. (8) should be given.

Reference added

>> 4. Page 3, 1st line below Eq. (10): there is an apparent misprint in the Clapeyron equation; please, improve.

Typo corrected

>> 5. Page 3, the lines between Eqs. (10) and (11): Eq. (5) is essentially used to obtain Eq. (11) and this should be mentioned in the text. Meanwhile, there is a misprint in Eq. (11): it should be $ \n**(-2) $ but not $ \n**(-1) $ on its right-hand side; see Eq. (5).

I have indicated just before Equation 11 that I used Equation 5. I also corrected the exponent on n.

>> 6. Figure 1: please, remind the reader (on page 3 or elsewhere) the numerical value of $ \chi $ for the Martian atmosphere. This would help to get feeling of the $ \eta $-values in Figure 1.

I have included the value for χ (= 0.22) below Equation 6.

>> 7. Page 5, 2nd line above Eq. (12): these are Eqs. (3) and (10) which allow one to estimate the eyewall velocity from a dust devil's height.

I have changed the discussion just above Equation 12 to note that Equations 3 and 10 can be combined to give Equation 12.

>> 8. Page 5. Unfortunately, I found the details of argumentation and of logical connection between statements in the forthcoming piece of text difficult to comprehend: “The momentum and therefore dust mass flux carried by a wind of speed $ \v $ scale as $ \ro*\v**2 $. This dust flux is transported around the circumference of the dust devil in an amount of time $ 2*\pi*\R/\v $. Therefore, at steady-state, the column abundance of dust and optical depth ought to scale as $ \v*\R \propto \h $.” Please, state these more clearly.

I have attempted to clarify this explanation as follows:
The momentum flux carried by a wind of speed υ scales as $\rho \upsilon^2$. Although the details of dust lifting can be complicated (e.g., Greeley & Iversen 1985), once the grains are lifted, momentum conservation requires that their mass flux is proportional to the wind's momentum flux. The dust mass crossing an area oriented perpendicular to the flow in unit time is therefore proportional to υ^2. This dust flux is transported around the circumference of the dust devil in an amount of time $\tau = 2\pi R/\upsilon$. Thus, at steady-state, the total dust mass transported around the eyewall is proportional to $\upsilon^2 \times \tau = \upsilon R \propto h$.