Reviewer 1

1. The expression 'depression of NEE' is mistakable. NEE increases if CO_2 absorption is depressed in rainy season.

   We used the expression, "depression of *NEE*" to indicate a reduction in the magnitude of net carbon uptake, including changes from a net carbon sink (a negative sine) to a net carbon source (a positive sine). Such expression is often used in the literature (e.g., Pereira et al., 2007). To incorporate the reviewer's concern, we have added the definition of "depression of *NEE*" in the revised manuscript (P.3 L.3-5).

   Pereira et al., 2007: Net ecosystem carbon exchange in three contrasting Mediterranean ecosystems – the effect of drought, Biogeosciences, 4, 791–802, 2007. (Here, the sign convention is the same as ours)

2. There is no figure about HFK site in Fig. 5.

   The figure for the HFK site was originally submitted to the publisher and in the process of finalizing the manuscript, the publisher omitted the figure. This figure is back in the revised manuscript.

3. As the authors pointed out, careful assessment on the influence of gap filling is critical in this analysis. I feel that a) the additional figure and analysis on the RE, GPP and their relationship with solar radiation and SWC, and how they interpolated, are needed. Is it really because of the depression of GPP which caused the decrease of CO_2 absorption at rainy season? It might be caused by the increase of RE. b) If actual RE increased with rainfall and the authors used the simple relationship between RE_{max} and temperature for gap filling, then RE might be underestimated and thus GPP might also be underestimated at rainy season.

   a) & b) We have added the analysis of relationships among *GPP*, *RE*, and *NEE*, and environmental conditions (see Section 3.4, P.13 L.20 – P.15 L.15). We also have added further analysis for rainy days during the summer monsoon periods (see Fig. 8 and the discussion from P.17 L.20 to P.18 L.12).

   At the GDK site, *GPP* and *NEE* were controlled mainly by R_g whereas *RE* was controlled mainly by T_a. The influence of SWC on *GPP*, *NEE*, and *RE* was relatively minor compared to that of R_g and T_a. At the HFK site, however, the variations of *GPP*, *RE*, and *NEE* were associated with those of all three variables (i.e., R_g, T_a, and *SWC*).

In short, the main cause of the observed mid-season depression in *NEE* during the summer monsoon was not the increase in *RE* but the reduction in *GPP* with decreasing R_g.

4. Too many figures and Tables on climate conditions. I feel that Table 1 is prolics as we have Fig 5. The information on Fig.1 and Fig.3 can be sort out to one figure or perhaps in Fig. 5. The difference between four sites including Muroran and Takayama can be sort out in one figure.

   We have removed Table 1, as suggested. However, we decided to keep Figs. 1 and 3 because of their different purposes. Fig. 1 used the climate normal to show the substantial decreases in solar radiation during the summer monsoon period whereas Fig. 3 shows the interannual variation of solar radiation during the measurement period.

We very much appreciate the review's critical yet constructive comments, allowing us to reassess and improve our manuscript. Thank you.