**Review Repor 2**

**Thank for the comments concerning our manuscript. Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have made correction which we hope meet with approval. Our research team has long long time conducted field observation tests in the Taklimakan Desert, and all the data obtained are first-hand. Revised portion are marked in red in the paper. We sincerely hope to give the opportunity to publish**

Comments and Suggestions for Authors

**If the authors wish to resubmit, then the following comments should be addressed in the revision.**

**Figure 1 and Figure 2: Please add a scale bar or information on the dimensions of the devices and its different parts. For example, how big is the box enclosing the devices in Fig. 1? 1 mm? 1m? 1 km?**

Reply：Thanks for your suggestion. Have been added a scale bar for Figure 2 and Figure 3.

**Line 178 "the number of sands particles impincing sensor": Do you mean the number of sand particles per unit second? Or per minute? Or per hour?**

Reply：Thanks for your suggestion. the number of sand particles per unit second.

**Equation (3): "Q = 256m, where M is the sand collection". The "m" in eq. (3) should be the same symbol as the "M" at line 188.**

Reply：Thanks for your suggestion. The M have already edited.

**Lines 202-207. This discussion should be removed. This is very difficult to say from the data. Instead, one should say that there occur statistical variations in the value of R^2, which can be caused by changes in meteorology, topography, heat, power and other factors. But you cannot say that you have two fitting functions at the same time or alternating over time, because the data set is limited and the fluctuations in the R^2 very large.**

Reply：Thanks for your suggestion. Lines 202-207 have been deleted.

**Lines 224-226 ("Therefore, two or more functions should be combined"): Same as in the previous comment, see above. You should remove this sentence, because it doesn't have scientific significance.**

Reply：Thanks for your suggestion. Lines 202-207 have been deleted.

**The entire Section 3.2 should be rephrased, no one understands what is written there.**

Reply：Thanks for your suggestion. The section 3.2 have been rephrased. The red part of the text has been marked.

**Figure 3: Doesn't a linear fit of the transition frequency as a function of wind speed work fine? Why a power law with exponent 6.6? Please include the linear fit to compare, and, if you think that the power law must hold, then justify.**

Reply：Thanks for your suggestion. According to “JF Kok, EJR Parteli, TI Michaels, DB Karam, published in Reports on progress in Physics 75 (10), 106901 (2012)”, We have modified this part of the content.

**In Section 3.4 you begin saying that "Fig. 5 shows the relationship between sand transportation rate and wind speed", but this is not shown in Fig. 5. Moreover, it is known that the sand flux increases with the square or the cubic power of wind velocity (depending on soil conditions), do you find this relationship in your measurements? The authors should acknowledge (and study) this review paper that contains the information on the scaling of sand flux with wind speed:**

**The physics of wind-blown sand and dust, by** **JF Kok, EJR Parteli, TI Michaels, DB Karam, published in Reports on progress in Physics 75 (10), 106901 (2012)**

Reply：Thanks for your suggestion. According to “JF Kok, EJR Parteli, TI Michaels, DB Karam, published in Reports on progress in Physics 75 (10), 106901 (2012)”, We have Re-written this section in the discussion section (Section 4 of Disscussion).