We thank Anonymous Referee #2 (AR2) for his/her positive and constructive comments, these are all very much appreciated and contribute to the improvement of this paper.

In *italics*, comments by AR2,
In **bold** proposed additions/changes to text by authors.
In "normal" text with grey background original text from manuscript.
In "normal" text response to the comments of AR2.

Specific Comments

1. It is inappropriate to refer to the TRMM 3B42RT product as "TRMM", as this is the name of the satellite and the entire mission, whereas 3B42RT (or equivalently, TMPART) is the name of just one of many TRMM products. The most glaring example is at the top of p. 5976. Furthermore, this assignment of the term "TRMM" is not formally made until Section 2.2, whereas phrases such as "TRMM data" are already used in reference to 3B42RT in the abstract and Sections 1 and 2.1.

The second paragraph on p. 5971 states "One of these satellites is TRMM", then contrasts this with "Other satellite products are CMORPH and PERSIANN". The sentence about TRMM is accurate, but it needs an introduction of the 3B42RT product before drawing a contrast with the others.

>> We agree with AR2 that the use of TRMM and TRMM 3B42RT has not been used consistent and correctly throughout the paper. We will change all references to TRMM data and propose to add the following sentence on page 5971 after "... backscatter from clouds (Huffman et al., 2007).":

"**One of the rainfall estimate products derived from the TRMM satellite is the real-time TRMM 3B42RT product (Huffman et al., 2007).**"

In addition we propose to add a reference to Section 2.2 on page 5971 and change

"... and how the data are processed."

Into

"**... and how the data are processed (see also Section 2.2).**"

Table 4 should say "TRMM 3B42RT precipitation" rather than just "TRMM precipitation" in the title. Figs. 6, 7, and 9 should use "3B42RT" in the labeling, both for accuracy and for consistency with Figs. 4, 5, and 10.

>> We agree with AR2 and will change accordingly, not only in labelling but also in the captions of the respective Figures. In addition we will also change the inconsistency in the caption of Table 5 and Figure 1.

2. p. 5971, line 25 - Your contention may be true within the hydrological community, but in the meteorological community as a whole, there have been plenty of studies that have made these comparisons simply to evaluate the algorithms themselves

and/or to intercompare competing algorithms (Ebert et al., 2007, Bull. Amer. Meteor. Soc., 88, 47-64, just to cite one of many examples). Therefore, I suggest modifying the sentence to state "but within the hydrological community, these have mostly focused on…". I do agree that the emphasis has been on high amounts.

>> We thank AR2 for this suggestion which we will adopt.

3. p. 5972 - The statement about quality controlling the record by excluding longer periods that deviated from other stations and from the station record is rather vague. It would be helpful if this could be quantified somewhat, without going into great detail.

>> We agree with AR2 that the sentence on quality controlling of the ground station data is vague. A similar remark has been made by Anonymous Reviewer #1 (AR1) as well. We propose to change the sentence on page 5972:

"Subsequently, all periods of 2 months or longer in which rainfall clearly deviated from all neighbouring stations, and from the pattern of the remainder of the station record, were excluded from further analysis as having a high likelihood of being incorrect."

as follows:

"**Subsequently, the data were checked for consistency, deleting unreasonable values such as 0 entries in the wet season.**"

4. p. 5974 - The description of 3B42RT should mention that it also includes contributions from AMSU-B, MHS, and IR data to fill in gaps in spatial coverage from the microwave scanners (i.e., TMI, SSMI, and AMSR-E).

>> We thank AR2 for this useful addition which we will gladly include. We propose to add the following sentence on page 5974 after "... for the Earth Orbiting System (AMSR-E).":

"**The 3B42RT product includes contributions from AMSU-B, MHS and IR data to fill in gaps in spatial coverage from the microwave scanners (i.e. TMI, SSMI, and AMSR-E).**"

5. It is worth mentioning in the paper that a newer "Version 6" of 3B42RT was issued in 2009, with the record beginning in late 2008. The new version also includes an "uncalibrated" field that provides continuity with the previous version.

>> We thank AR2 for this useful addition which we propose to add after the following sentence on page 5974 "... using the TMI sensor (Huffman et al., 2007).":

"**The algorithm of the TRMM 3B42RT product used in this study is Version 5. A newer "Version 6" of 3B42RT was issued in 2009, with the record beginning in late 2008. The new version also includes an "uncalibrated" field that provides continuity with the previous version.**"

6. I was initially confused on p. 5976 that June-October was defined as the dry season because the six areas had monthly rates < 100 mm/hr, whereas Table 3 appeared to indicate otherwise, until I realized that the values in Table 3 are five-month totals. Even so, I note that Bogor had 715 mm, which is > 100 mm/month.

>> AR2 is of course correct and we apologize for this mistake. We will change the sentence "... the period over which the six validation areas..." into "**... the period over which five of the six validation areas...**".

7. Table 4/p. 5978 - It should be noted that for 4 of the 6 regions, the average difference in annual precipitation actually got worse after bias correction! For the dry season (Table 5), the difference got better for 5 of the 6 regions. Perhaps the bias correction technique is better suited for the dry season than for year-round use?

>> We thank AR2 for this comment and based on similar remarks from AR1 (Major issue No. 2) we like to include these observations and propose to change the following sentences:

Abstract, page 5970:

"… both for dry periods (R^2 0.65-0.92) and annually (R^2 0.84-0.96), applying a…"

into:

"**… both for dry periods (R^2 0.65-0.92) and to a lesser extent also annually (R^2 0.84-0.96), applying a…**"

Section 2.4, page 5976:

"The bias corrected TRMM data have a better fit with ground station data, with R2 varying from 0.84 for both the Jakarta and Bogor area to 0.96 for East Java on an annual basis and improved RMSE in all cases, by 6% for Banjar Baru to 24 % for Lampung (Table 4)."

into:

"**Although relative bias only improved for 2 of the 6 validation areas on an annual basis, RMSE improved in all cases, by 6% for Banjar Baru to 24 % for Lampung (Table 4).**" (See also Technical Comment No. 11 below)

and

Section 2.4, page 5976-5977:

"For the dry season RMSE improved for 4 of the 6 validation areas, by 12 to 26 % with R2 ranging from 0.65 for Jakarta to 0.92 for East Java (Table 5)."

into:

"**For the dry season, relative bias improved for 5 of the 6 validation areas, and RMSE improved for 4 of the 6 areas, by 12 to 26 % with R2 ranging from 0.65 for Jakarta to 0.92 for East Java (Table 5).**"

Section 3.2, page 5978:

"The bias correction has reduced …"

into

"**Averaged over all areas, the bias correction has reduced…**"

Technical Comments

We very much appreciate these editorial comments and like to thank AR2 for his/her efforts!

1. p. 5970 - Change "where most parts of it" to "most parts of which ".
>> This will be corrected
2. p. 5971 - 2nd line, change "does at present not" to "does not at present".
>> This will be corrected
3. p. 5971 - Put commas on both sides of "and has full coverage of the entire country".
>> Commas will be added
4. p. 5972 - Switch the order of "Lampung and Banjar Baru" to be consistent with the order presented in the tables.
>> This will be corrected
5. p. 5973 - A quarter-degree distance at the equator is indeed approximately 28 km, but the area is more accurately 27.78 x 27.78 = 772 km^2, rather than 28 x 28 = 784 km^2.
>> This will be corrected
6. p. 5973- The phrase "as they occur in Indonesia" is unnecessary, as tropical rainstorms tend to be localized in general.
>> This will be corrected
7. p. 5973 - A new paragraph should begin at "Average monthly ground station..."
>> This will be corrected
8. p. 5973 - Insert a comma as follows: "is largely the same, with June-October".
>> A Comma will be added
9. p. 5974 - Insert a comma as follows: "considerable bias, although this bias".
>> A comma will be added
10. p. 5974 - Change "of" to "or": "either somewhat positive OR somewhat..."
>> This will be corrected
11. p. 5976 - R squared does not show very much improvement, so it may not be worth mentioning in the text. If it is retained, insert a comma as follows: "annual basis, and improved RMSE".
>> Also based on specific comment No. 7 above we propose to delete the R squared and change the sentence on page 5976:

"The bias corrected TRMM data have a better fit with ground station data, with R2 varying from 0.84 for both the Jakarta and Bogor area to 0.96 for East Java on an

annual basis and improved RMSE in all cases, by 6% for Banjar Baru to 24 % for Lampung (Table 4)."

into:

"**Although relative bias only improved for 2 of the 6 validation areas on an annual basis, RMSE improved in all cases, by 6% for Banjar Baru to 24 % for Lampung (Table 4).**"

12. p. 5977 - Insert a comma as follows: "further explored, as this was".
>> Commas will be added
13. p. 5977 - Add the word "slightly": "improved RMSE and slightly higher correlation coefficients", because the improvement is generally small.
>> The word "slightly" will be added
14. p. 5978 - change "4 mm/month" to "3.6 mm/month".
>> This will be corrected
15. p. 5978 - Insert a comma as follows: "applications, especially".
>> A comma will be added
16. p. 5978 - Change "but" to "and": "(and in other data sparse...)".
>> This will be corrected
17. p. 5979 - A new paragraph should begin at "Clearly such..."
>> This will be corrected
18. p. 5979 - Insert a comma as follows: "additional errors, using for instance".
>> A comma will be added
19. p. 5980 - Replace "can not" with "cannot".
>> This will be corrected
20. p. 5981 - References: For Huffman 2007, replace "TCMA" with "TMPA".
>> This will be corrected
21. References - there is some inconsistency in capitalization; e.g., Oldeman 1979 and Wyrtki 1956, compared to the other entries.
>> This will be corrected and in addition a typing error at the Wyrtki 1956 reference, "Indonesians" will be corrected into "**Indonesian**"