

## ***Interactive comment on “AIMERG: a new Asian precipitation dataset (0.1°/half-hourly, 2000–2015) by calibrating GPM IMERG at daily scale using APHRODITE” by Ziqiang Ma et al.***

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This manuscript “AIMERG: a new Asian precipitation dataset (0.1° /half-hourly, 2000–2015) by calibrating GPM IMERG at daily scale using APHRODITE”, prepared by Ma et al., (2020), proposed a new daily calibration algorithm on the current stream satellite precipitation product, GPM IMERG, and obtained a new dataset (AIMERG) with better quality compared with the original IMERG over the Asia. Making the AIMERG dataset available is important for the applications in the precipitation-related fields, e.g., hydrology, meteorology, and agriculture. Besides, the calibration algorithm is innovative and meaningful for the next generation of IMERG calibration algorithms. Overall, the

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manuscript is well organized and written, therefore, I recommend it for publication after some minor revisions. Point 1-Line 30: Replace ‘finer’ with ‘fine’. Point 2-Line 32: Replace ‘finer’ with ‘fine’ or ‘high’. Point 3-Line 34: Replace ‘product’ with ‘products’. Point 4-Line 37: Add ‘the’ between ‘in’ and ‘Tropical’. Point 5-Line 49: Replace ‘Results’ with ‘results’ and ‘suggests’ with ‘suggest’. Point 6-Line 73: It’s better to delete ‘near-real-time’ here. Point 7-Line 77: Delete the sentence ‘and other data from potential sensors at 0.1° × 0.1° and half-hourly temporal resolutions’. Point 8-Line 77: Replace ‘Final’ with ‘Final run’. Point 9-Line 79: Replace ‘incorporated’ with ‘incorporating’. Point 10-Line 80: It is better to use ‘contains large uncertainties’ than ‘greatly overestimates the precipitation. . . .’, because the Final-run IMERG product is not always overestimating from regions to regions. Point 11-Line 84: Replace the sentence ‘following the TMPA approach’ with ‘following the gauge correction method of TMPA’ and Change ‘satellite-based only’ by ‘satellite-only’. Point 12-Line 88: I think GPCC is the right one rather than GPCP. Point 13-Line 90: The word ‘finer’ is frequently used, but usually it needs an object to be compared, otherwise the comparative form is not suitable. Point 14-Line 91: Replace ‘product’ with ‘products’. Point 15-Line 96: The grammar of the sentence is incorrect. Point 16-Line 99: Maybe it is ‘GPCC’ rather than ‘GPCP’ here. Point 17-Line 101: ‘over the land’ is repeated. Point 18-Line 116: Replace ‘era’ with ‘eras’. Point 19-Line 124: It is ‘IMERG’ rather than ‘GPM’ here. Point 20-Line 129: The description of the sentence ‘. . . .which the TRMM era IMERG. . . .’ is unclear. Point 21-Line 131: The description here is inconsistent with the introduction part. Point 22-Line 133: The word ‘poster’ is misused here. Point 23-Line 136: Replace ‘the release APHRODITE product’ with ‘the release of the APHRODITE product’. Point 24-Line 138: The literature cited here may not be suitable to support this sentence, but it is not a big problem. Point 25-Line 139: Delete ‘best’ here. Point 26-Line 148: The correct citation here should be ‘Shen et al., 2014’ and the interpolation method is QI instead of IDW. Point 27-Line 158: Replace ‘network’ with ‘networks’. Point 28-Line 181: Delete ‘investigations’ here. Point 29-Line 189: What do ‘those’ mean? Point 30-Line 212: To my understand, the seventh step of the algorithm is not needed, since the fourth step

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already contains that. Point 31: The manuscript has no clear explanation on how to match the  $0.1^\circ$  and  $0.25^\circ$ , which is suggested to be explained. Point 32: Some verbs incorrectly use the plural form in the manuscript. For example, 'are' should be changed by 'is' on line 244 and 'were' should be changed by 'was' on line 292.

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