

# ***Interactive comment on “Global River Radar Altimetry Time Series (GRRATS): New River Elevation Earth Science Data Records for the Hydrologic Community” by Stephen Coss et al.***

**Anonymous Referee #1**

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In this paper the authors describe a fourteen year dataset of global radar altimeter-derived stream elevations. It is a good paper describing a valuable dataset. It is a definitely unique. My comments generally have to do with presentation, but there are two major problems. These comments are meant to improve readability of the paper and make a few specific concepts more clear. I hope my comments are constructive.

Most importantly, when I tried to access the data via the link provided in Section 4, I could not. Please verify the url is correct. I think the ‘ftp’ should be ‘http’. I was able to get to the data viewer site at OSU, but this only provides images, and not the data itself. I was able to perhaps get to the correct data site. However, it seemed the data there

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were metadata and not the time series of river elevations. Since I could not access the data I cannot provide a thorough review of the data usefulness or completeness. I apologize if I am missing something.

Second, the article needs more information, or a description, of the concept of a virtual station. It is never really clearly described what a VS is and thus it may be difficult for someone new to the field and data to understand what is being compared to in situ data.

Some specific comments include: 1) Page 1 Line 20: in “either quantitatively for VS where …” should it not be “VS levels where ….” 2) Page 1 Line 21: As these are multiple VS, should this be VSs? I also wonder about the grammatical use of VS throughout the paper. 3) Page 3 Line 27: This is the first instance of VS in the main text, please spell it out. 4) Page 3 Line 28: Same with GRRATS, and with all the several acronyms throughout the paper 5) Page 4 Line 29: Its unclear where this polygon came from. Would calling it the ‘mask’ be more informative, as it was earlier? How was this polygon defined? This is not described in the text. 6) Page 6 Line 20: Maybe rename this section ‘Data Description’ 7) Page 6 Line 21: is this a typo: ‘50.M’? 8) Page 9 Line 16: The authors note there are two streams illustrated in Figure 4, but there are three. 9) Figure 1: Is the black background really the best choice? 10) Figure 4: A legend would be very helpful. Same in Figure 5.

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