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Interactive comment on "The ISC Bulletin as a comprehensive source of earthquake source mechanisms" *by* K. Lentas et al.

Anonymous Referee #2

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The submitted manuscript, in this present form, gives general information about ISC bulletins, focal mechanism compilation. Such information is considered to be useful for users. However, some points which I listed below about the focal mechanisms selection are not clear.

I leave the final decision to the editor, but my decision is a major revision for the manuscript.

Comments:

1 - There are no major differences in the solutions of the focal mechanisms for large earthquakes in ISC bulletins. However, there are serious differences in small (M<5) and sometimes in moderate earthquakes. In this case, how will the user decide which

solution is correct for smaller earthquakes using ISC bulletins? This study has tried to find a solution to this kind of question. But the answer to the question is not given. Only a discussion was made in the sense of depth and rotation angle. But still, the main question is not answered. If ISC calculates focal mechanism using the first motion polarities for small earthquakes (M> 3.5), it will be more reliable as in earthquake locations given by ISC. I think it would be more appropriate to develop the study in this direction.

2 – The study tries to determine which focal mechanism should be used by the user in multiple mechanism solutions. However, the article content does not include such a conclusion.

3 - The figures cannot go beyond giving statistical information and them away from the main purpose of the manuscript.

4 – It is not clear in figure 5 how to choose the proper or target focal mechanism for earthquakes with multiple focal mechanism solutions. This is considered to be a significant shortcoming.

Interactive comment on Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2018-143, 2018.