

Response to comments by the reviewers and editor

We appreciate the comments from editors, which have allowed us to improve the manuscript. We now give a response to the individual points raised. Changes made to the manuscript are highlighted in yellow color.

(A) Page 2, Abstract, Lines 3-5: Please replace the URL of your catalogue with the DOI <https://doi.org/10.6084/M9.FIGSHARE.21663668.V1>. I further suggest to modify the last sentence and remove the information on the Supplement. The data are properly published via Figshare and don't need to be declared as being a supplement to your article. I suggest to write the following:

“The earthquake focal mechanism catalog described in this article is available at <https://doi.org/10.6084/M9.FIGSHARE.21663668.V1> (Rodríguez-Pérez and Zúñiga, 2022)”

We rewrote this sentence following the suggestion.

(B) Please add the same sentence (above) at the beginning of the “Data Availability Statement”, followed by the description of the original data sources. Some of the sources are assigned with DOI and should be properly cited. Please write the following:

• **“1) Global Centroid Moment Tensor (Global CMT) via <https://www.globalcmt.org> (Dziewonski et al, 1981; Ekström et al., 2012)”**

the references are already included in the “References section”

• **“4) International Seismic Centre (ISC) bulletin (<https://doi.org/10.31905/D808B830>, International Seismological Centre, 2022)”**

with the following additional reference:

International Seismological Centre: On-line Bulletin, <https://doi.org/10.31905/D808B830>, 2022.

• **“7) SCARDEC Source Time Functions Database via <http://scardec.projects.sismo.ipgp.fr> (Valée and Douet, 2016)”**

with the following additional reference:

Vallée, M. and Douet, V.: A new database of source time functions (STFs) extracted from the SCARDEC method, *Physics of the Earth and Planetary Interiors*, 257, 149–157, <https://doi.org/10.1016/j.pepi.2016.05.012>, 2016.

- “8) Southern California Seismic Network (SCSN) earthquake catalogs via http://www.eas.slu.edu/eqc/eqc_mt/MECH.NA (California Institute of Technology and United States Geological Survey Pasadena, 1926).”

with the following additional reference:

California Institute of Technology and United States Geological Survey Pasadena: Southern California Seismic Network, <https://doi.org/10.7914/SN/CI>, 1926.

We modified this section following the suggestions.

(D) Please include the following reference in the “References” Section (you are citing your own data, so the full reference must be included in the “References” Section):

Rodriguez-Perez, Q. and Zúñiga, F. R.: Earthquake focal mechanism catalog for Mexico, <https://doi.org/10.6084/M9.FIGSHARE.21663668.V1>, 2022.

We added this reference to the list.