
Supplementary information

Solar wind contributions to Earth's oceans

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1 **Supplementary Information for:**

2 **Solar wind contributions to Earth's oceans**

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9 **This file includes:**

10 Captions for Data S1 to S11

11 **Other Supplementary Materials for this manuscript include the following:**

12 Data S1 to S11

13

Data S1. (separate file). Atom probe tomography water profiles through Itokawa PSCO

and DSCO data. Cylindrical region of interest z profiles through APT data sets of Itokawa,

PSCO and DSCO datasets used to generate Fig. 2 and Fig S4, 5. ROI Cylinder of Itokawa

2208 of 130 nm diameter, ROI cylinder Itokawa 2210 diameter 62 nm, ROI cylinder Itokawa

02312 diameter 43 nm, ROI cylinder Itokawa 02329 diameter 50 nm, ROI cylinder of D⁺

irradiated 03028 diameter 70 nm, ROI cylinder of D⁺ irradiated 03029 diameter 85 nm, ROI

cylinder of D⁺ irradiated 03030 diameter 71 nm ROI cylinder of SCO 02334 diameter 67 nm.

All have a 2 nm bin width concentration profiles.

Data S2. (Separate File). Grain size dependence on the abundance of solar wind derived

water. Determination of the average total water content of various sized olivine grains with

typical space weathering rim thicknesses used to generate **Fig. 3.**

Data S3. (separate file). D/H bulk isotope ratio calculations for the Earth. Calculations

are for the incorporation of varying amounts of water from, carbonaceous chondrites,

enstatite chondrites, ordinary chondrites and solar wind impinging on silicate surfaces,

accounting for the water variable water abundance in each component used to generate **Fig. 4**

and S7.

Data S4. (separate file). R80_02208.RHIT

Data S5. (separate file). R80_02210.RHIT

Data S6. (separate file). R80_02312.RHIT

Data S7. (separate file). R80_02329.RHIT

Data S8. (separate file). R80_02334.RHIT

Data S9. (separate file). R80_03028.RHIT

Data S10. (separate file). R80_03029.RHIT

Data S11. (separate file). R80_03030.RHIT