PMIP4 CESM dust data

Data files

- file names = `PMIP4_DUST_Albani_<field>_<expt>.nc`
  - `field` = see Variables section below
  - `expt` = `PI`, `MH` or `LGM`
    - The gaussian weights file does not depend on the experiment: `PMIP4_DUST_Albani_gw.nc`

Dimensions

- nb_time = 12 (12 monthly time steps in each file)
- nb_lat, nb_lon = 192, 288
  - latitude_values = [-90, -89.05759, -88.11518, ... 88.11518, 89.05759, 90]
  - longitude_values = [0, 1.25, 2.5, ... 356.25, 357.5, 358.75]
- size_bin = 4 (dust particle size classes)
  - dust size bin edges = 0.1, 1.0, 2.5, 5.0, 10.0 µm (diameters)
- nb_levels = 26 hybrid sigma-pressure levels
  - check the `PMIP4_DUST_Albani_conc_<expt>.nc` files for details about the hybrid coordinates

References

Please cite **all** following papers

- Albani, S., Mahowald, N. M., Perry, A. T., Scanza, R. A., Zender, C. S., Heavens, N. G., Maggi, V., Kok, J. F., and Otto-Bliesner, B. L.: **Improved dust representation in the Community Atmosphere Model**, J. Adv. Model. Earth Syst., 6, 541–570, doi:10.1002/2013MS000279, 2014.
- Albani, S., Mahowald, N. M., Winckler, G., Anderson, R. F., Bradtmiller, L. I., Delmonte, B., François, R., Goman, M., Heavens, N. G., Hesse, P. P., Hovan, S. A., Kang, S., Kohfeld, K. E., Lu, H., Maggi, V., Mason, J. A., Mayewski, P. A., McGee, D., Miao, X., Otto-Bliesner, B. L., Perry, A. T., Pourmand, A., Roberts, H. M., Rosenbloom, N., Stevens, T., and Sun, J.: **Twelve thousand years of dust: the Holocene global dust cycle constrained by natural archives**, Clim. Past, 11, 869-903, doi:10.5194/cp-11-869-2015, 2015.
- Albani, S., Mahowald, N. M., Murphy, L. N., Raiswell, R., Moore, J. K., Anderson, R. F., McGee, D., Bradtmiller, L., Delmonte, B., Hesse, P. P., and Mayewski, P. A.: **Paleodust variability since the Last Glacial Maximum and implications for iron inputs to the ocean**, Geophys. Res. Lett., 43, doi:10.1002/2016GL067911, 2016.

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