Data from the paper (paper ID 2018JD029817) titled as “Lightning initiation processes imaged with very high frequency broadband interferometry” authored by Fanchao Lyu, Steven A. Cummer, Zilong Qin and Mingli Chen

Description: The archived data contains the data in the figures. A total of 6 subfolders contains the data used in the six figures.

1. Data in folder “Figure_1”
One mat file, which contains the time, elevation and azimuth of the located sources, a total of 57090 sources were mapped.
2. Data in folder “Figure_2”
One mat file, which contains the LF magnetic field signal, VHF emission and elevation of the located source during the plotted time window. “LF_time_plot” and “LF_Bphi_plot” are the time and magnetic field data from LF magnetic field sensor. “VHF_time_plot” and “VHF_data_plot” are the time and VHF emission recorded during the plotted window. “VHF_interf_time”, “VHF_interf_elevation” and “VHF_interf_amplitude” are the time, elevation and amplitude of the mapped VHF sources.
3. Data in folder “Figure_3”
Three mat files, which contains the LF magnetic field signal, VHF emission and elevation of the located source during the plotted time window of three events, respectively. In each of the three mat file (named as “Figure_3_Event_1.mat”, “Figure_3_Event_2.mat” and “Figure_3_Event_3.mat”). Seven parameters can be found, and these seven parameters have the same meaning with those in the mat file for Figure_2.
4. Data in folder “Figure_4”
Two mat files, which contains the LF magnetic field signal, VHF emission and elevation of the located source during the plotted time window of two events, respectively. In each of the two mat file (named as “Figure_4_Event_4.mat” and “Figure_4_Event_5.mat”). Seven parameters can be found, and these seven parameters have the same meaning with those in the mat file for Figure_2.
5. Data in folder “Figure_5”
One text file named as “Figure_5_Amplitude_Duration_Range.txt” contains the event date, time, range to the interferometer in km, event duration in nanoseconds and normalized amplitude of the initiation event from all the 31 flashes in this study. Please refer to the first comment line in the text file for more information.
6. Data in folder “Figure_6”
Two mat files, which contains the electric field waveform, LF magnetic field signal, VHF emission and elevation of the located source during the plotted time window for two events. There are “E_field_time_plot”, “E_field_data_plot” and seven other parameters can be found in each of these two mat files. “E_field_time_plot”, “E_field_data_plot” are the time and electric field change waveforms, while the other seven parameters have the same meaning with those in the mat file for Figure_2.

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