

Figure S1: The geographic locations of the 50 measurement stations from the NOAA ESRL global air-sampling network (Dlugokencky et al., 2015) used for the model–measurement comparison of surface methane concentrations. On the map, each station is identified by its 3-letter code; the full station names are available in Fig. 3. For clarity, the two stations near 20° N, 155° W are the Hawaiian sites Mauna Loa (MLO) and Cape Kumukahi (KUM); those near 32° N, 65° W are the Bermudian sites Tudor Hill (BMW) and St. Davids Head (BME); and those near 44° N, 77° E are the Kazakhstani sites Sary Taukum (KZD) and Plateau Assy (KZM).

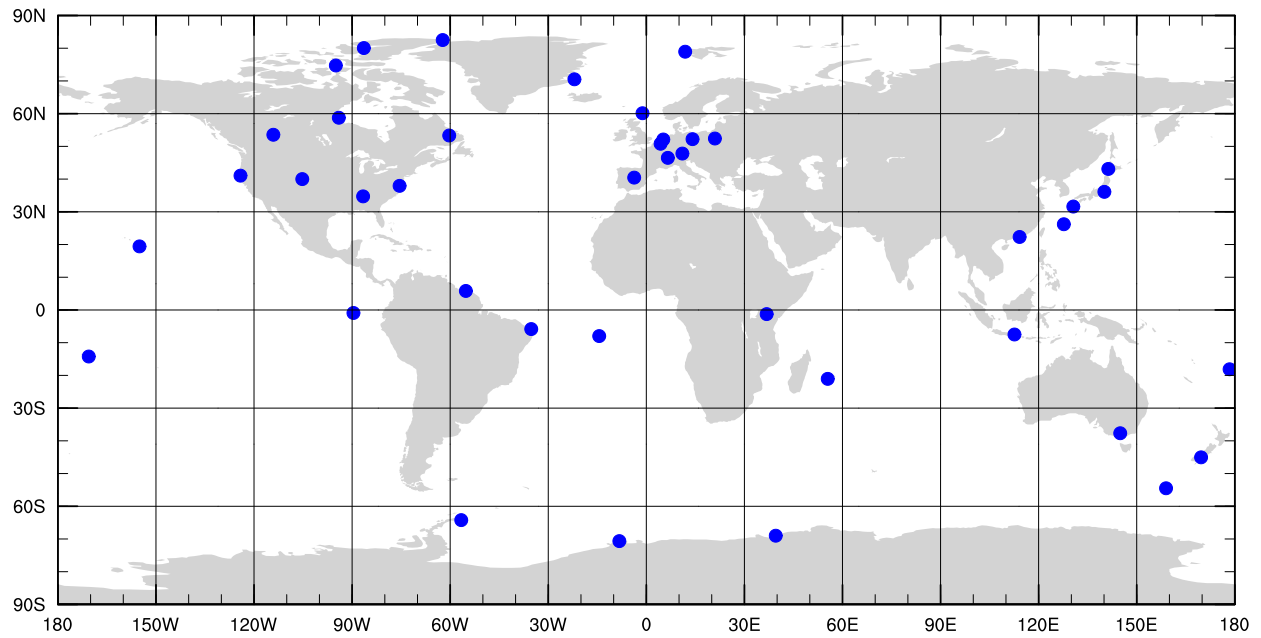


Figure S2: The geographic locations of the 41 measurement stations associated with the ozonesonde climatology (Tilmes et al., 2012) used for the model–measurement comparison of ozone.