Supplementary material for An Evaluation of Radiative Transfer Simulations of Cloudy Scenes from a Numerical Weather Prediction Model at Sub-millimetre Frequencies using Airborne Observations

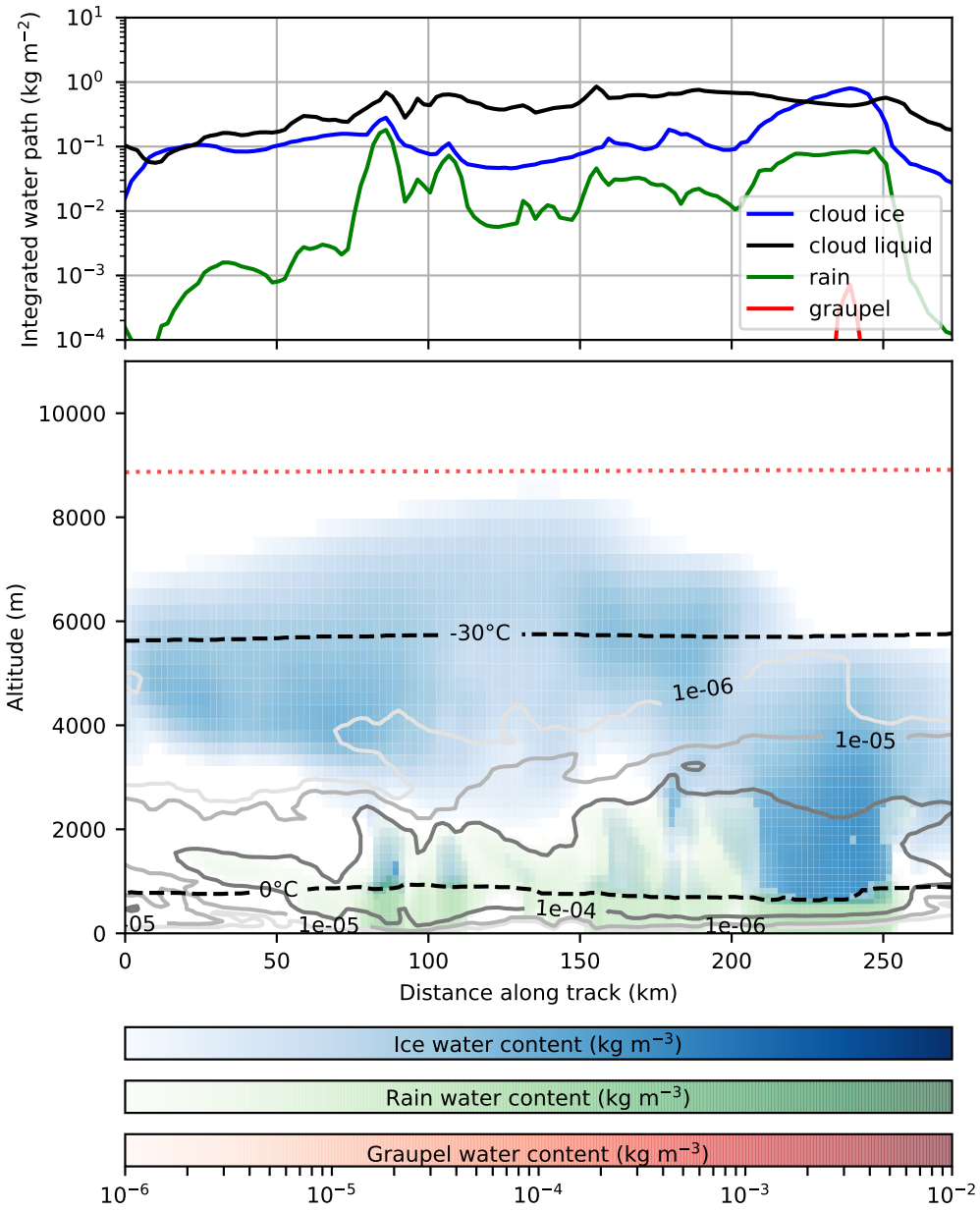

Figure S1: NWP model integrated water path (top) and hydrometeor mass content (bottom) along aircraft track for flight B949. The solid contours in the bottom panel represent the cloud liquid water content, the dashed black lines show the 0 and -30 °C isotherms and the dotted red line indicates the aircraft altitude.

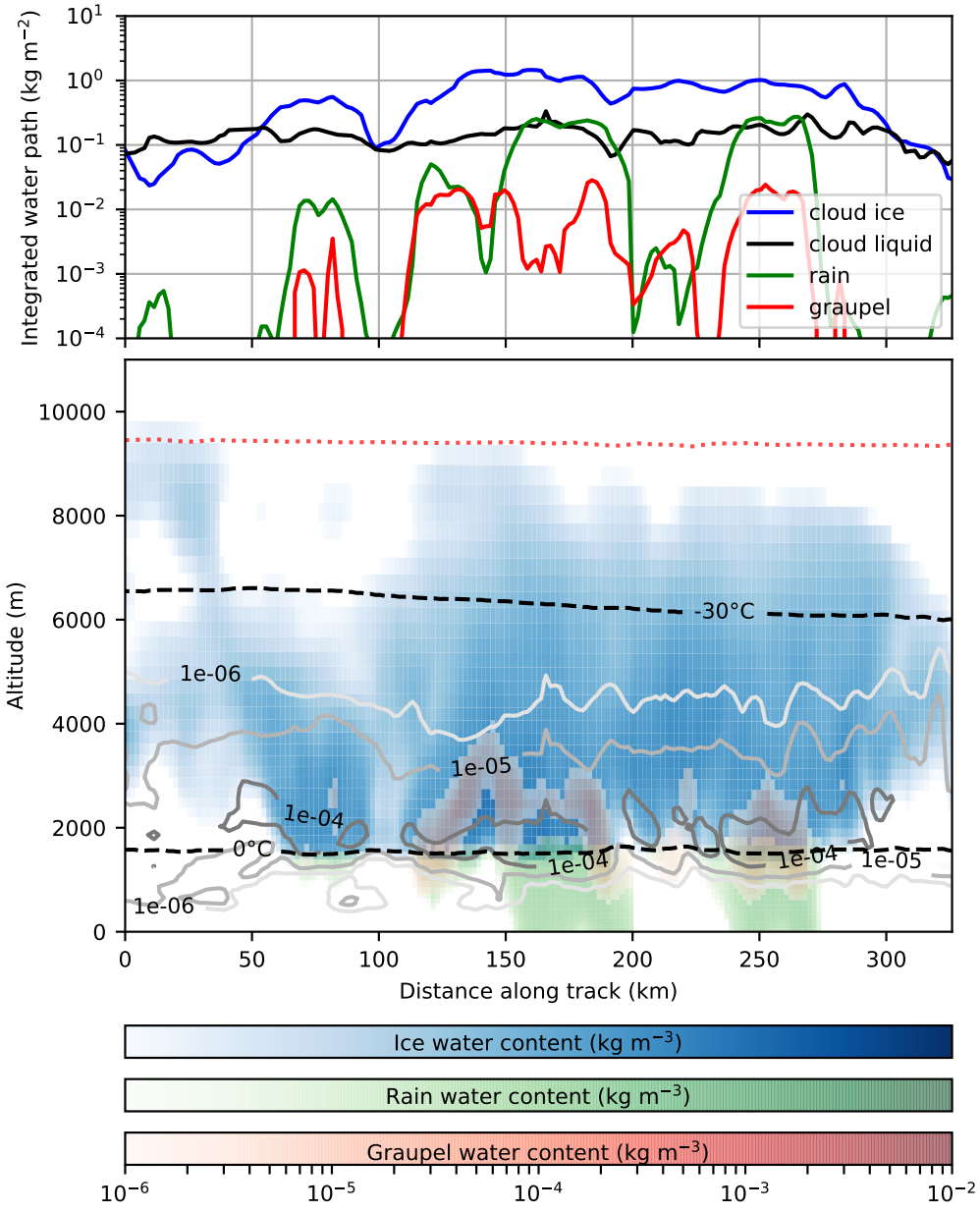

Figure S2: As above but for flight B984.

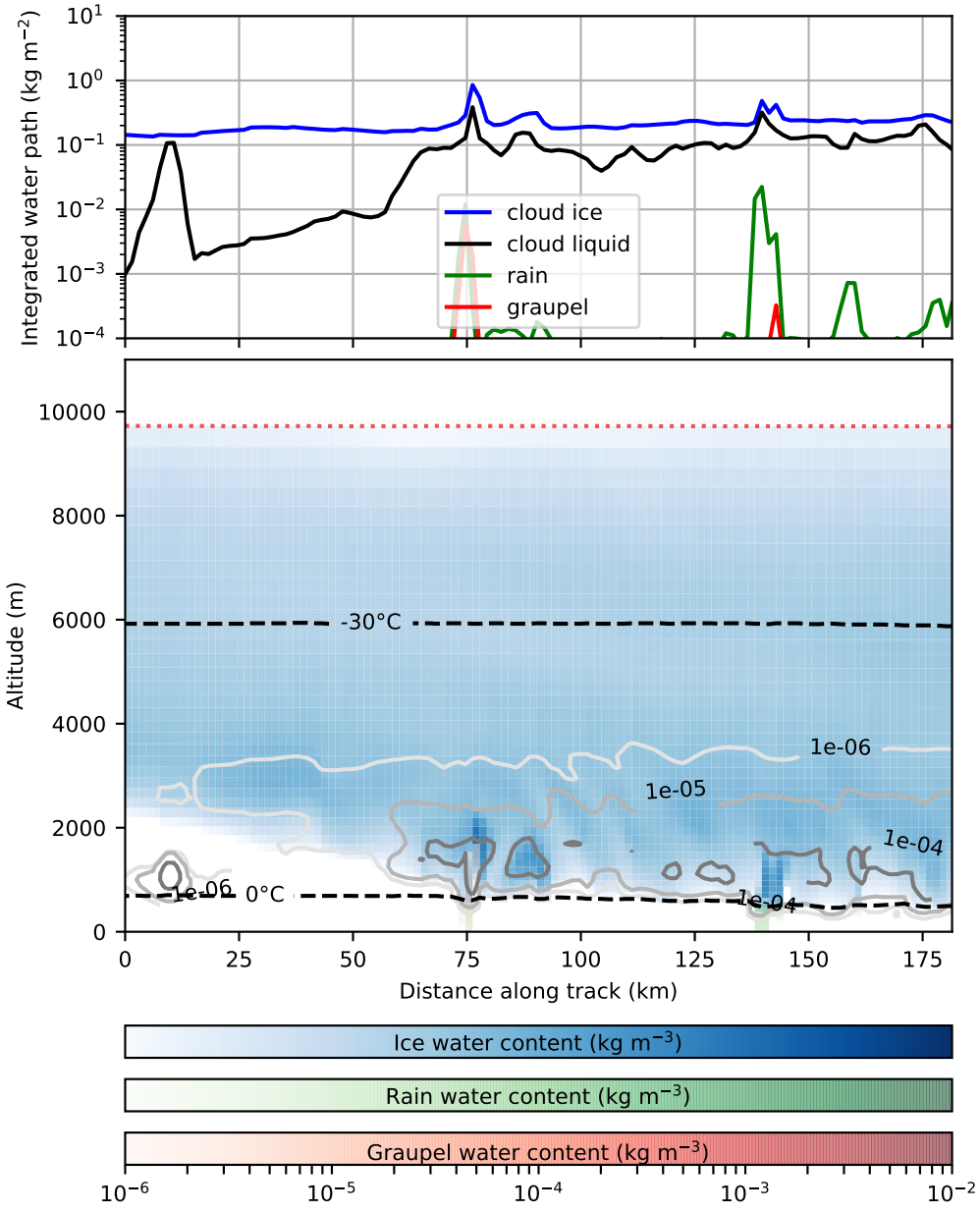

Figure S3: As above but for flight C156.

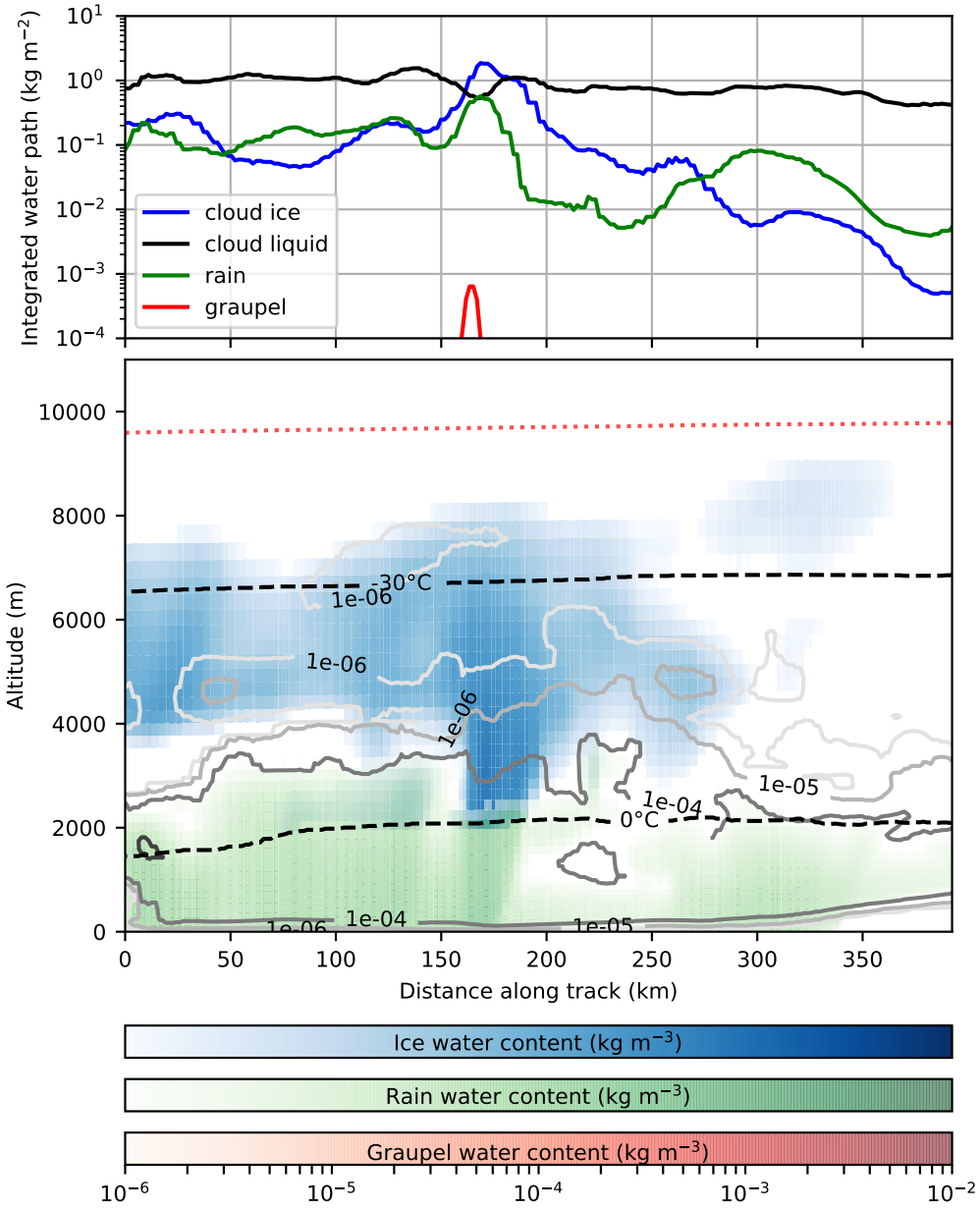

Figure S4: As above but for flight C159.

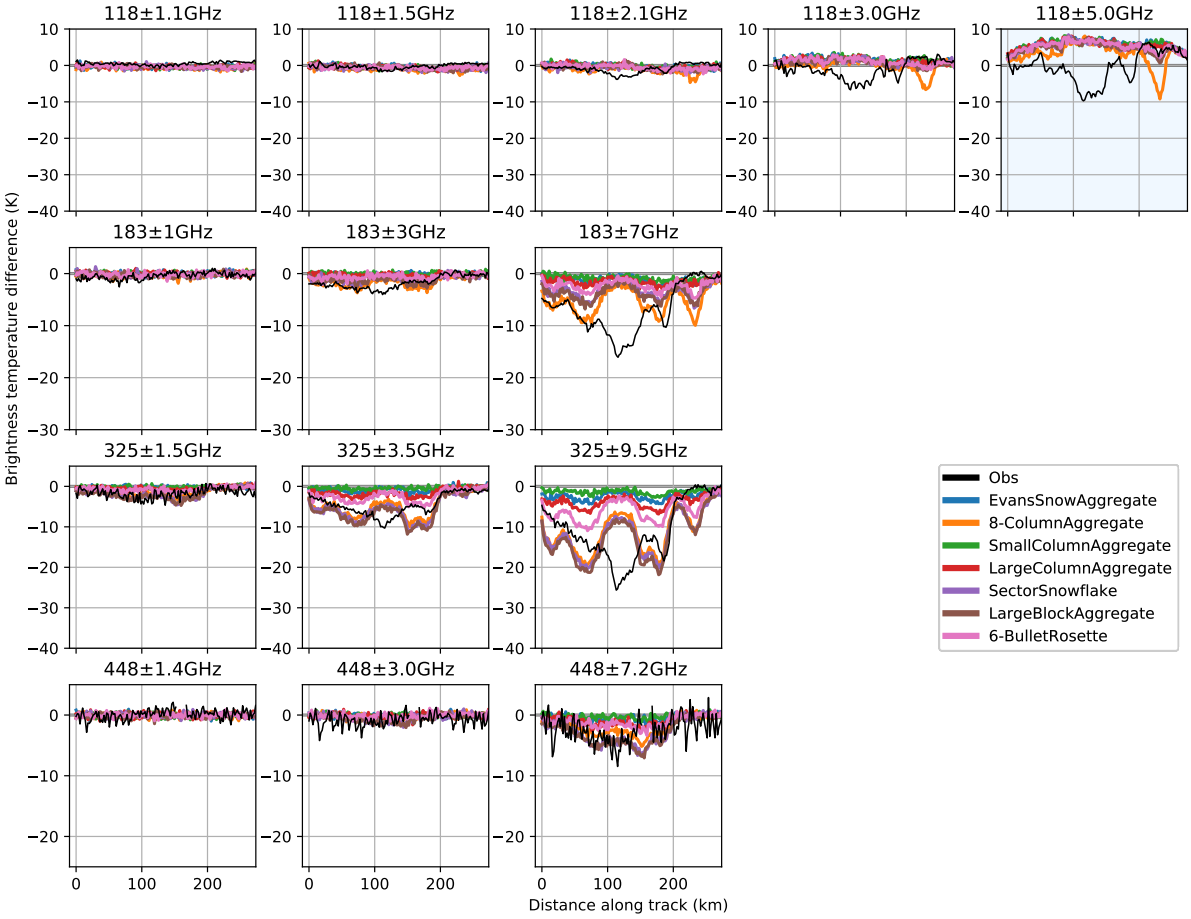

Figure S5: Difference between observed or simulated cloudy brightness temperature and simulated clear-sky brightness temperature for flight B949 for channels not shown in the main text. The shaded background on the 118±5 GHz plot represents the primary surface type (sea=blue, land=beige). Note that different vertical scales are used for each channel.

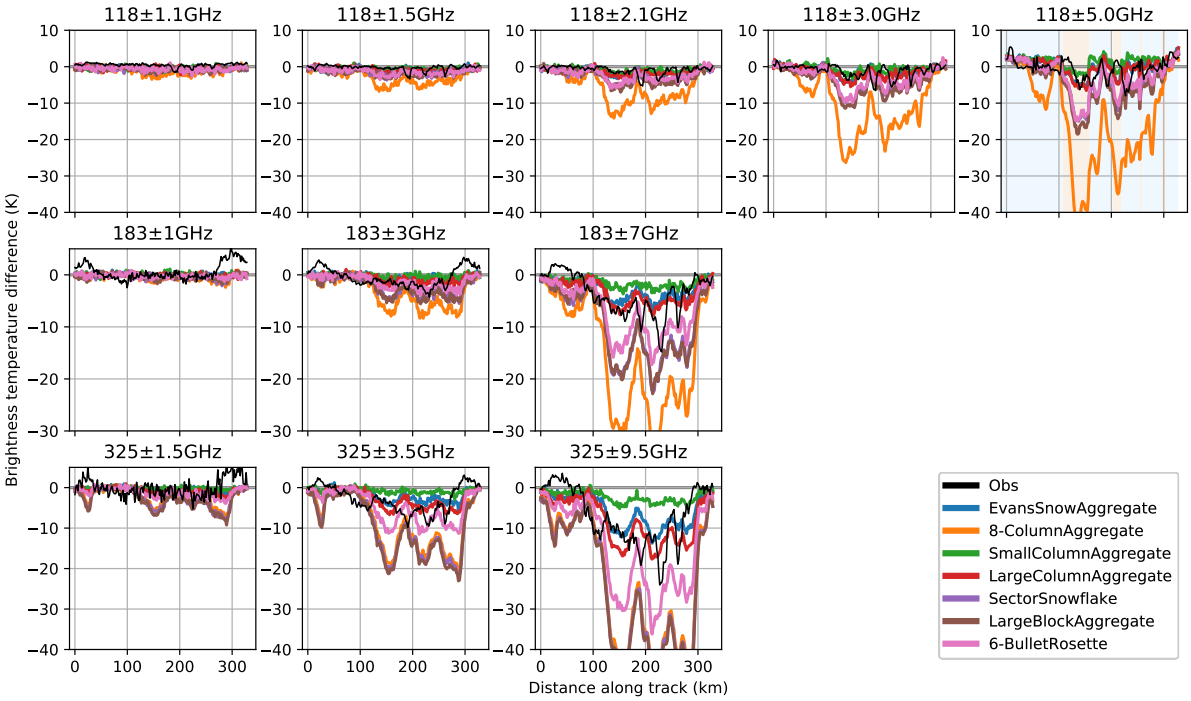

Figure S6: As above but for B984.

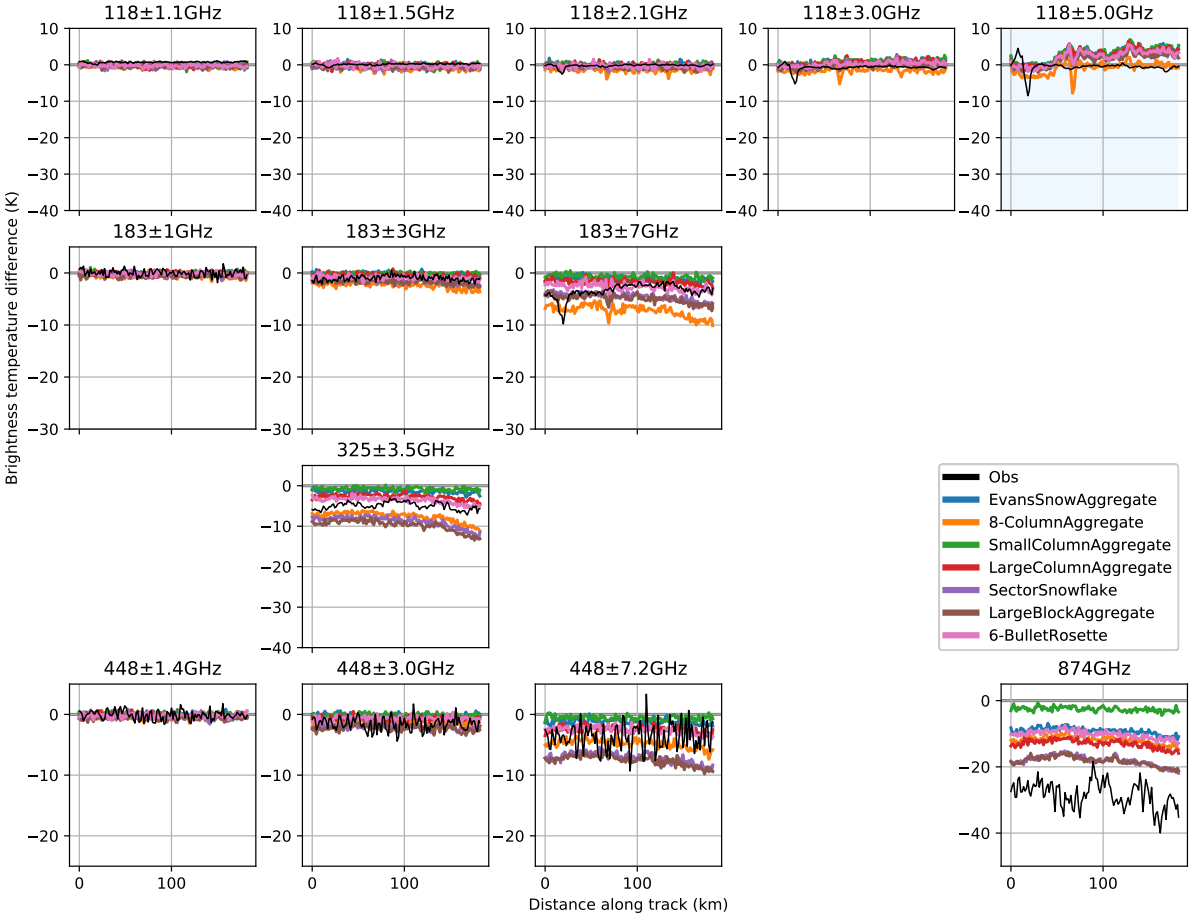

Figure S7: As above but for C156.

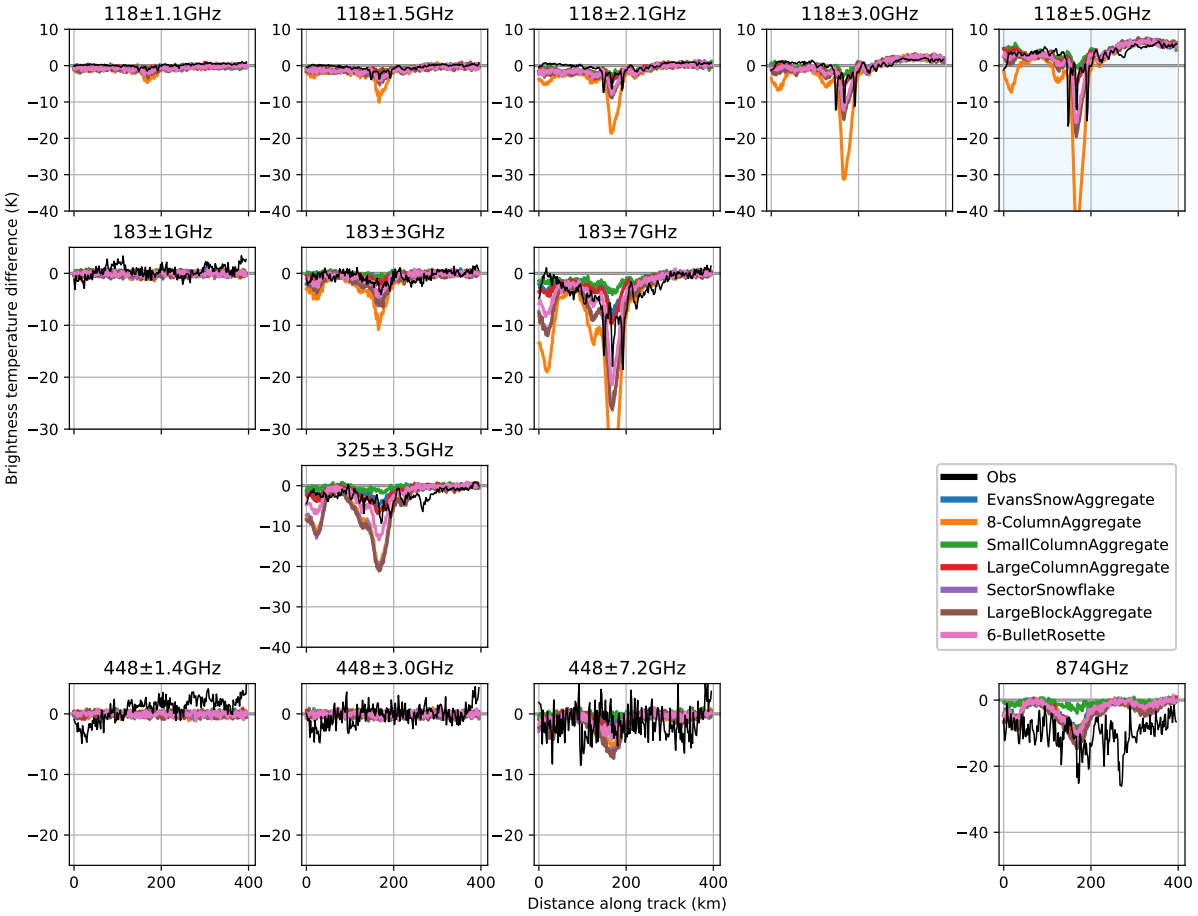

Figure S8: As above but for C159.

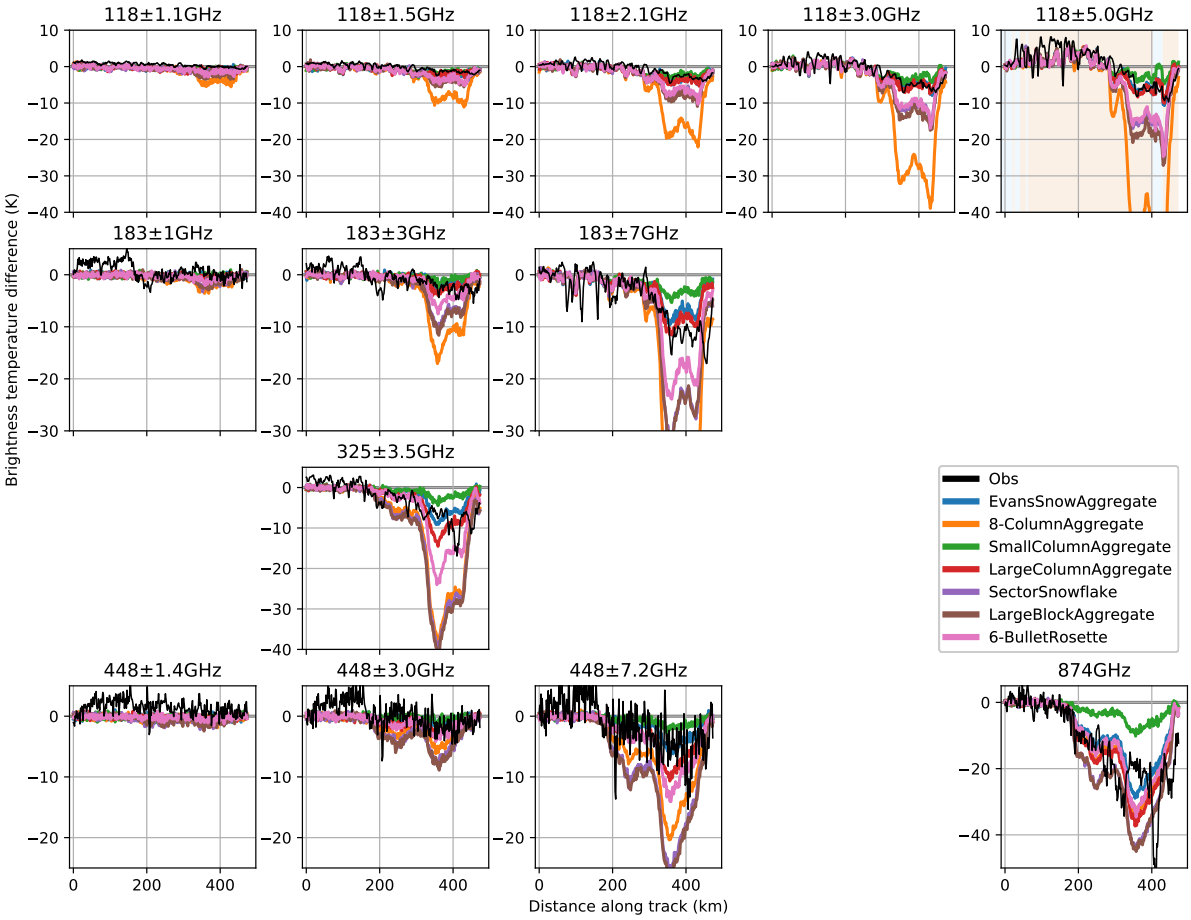

Figure S9: As above but for C161.

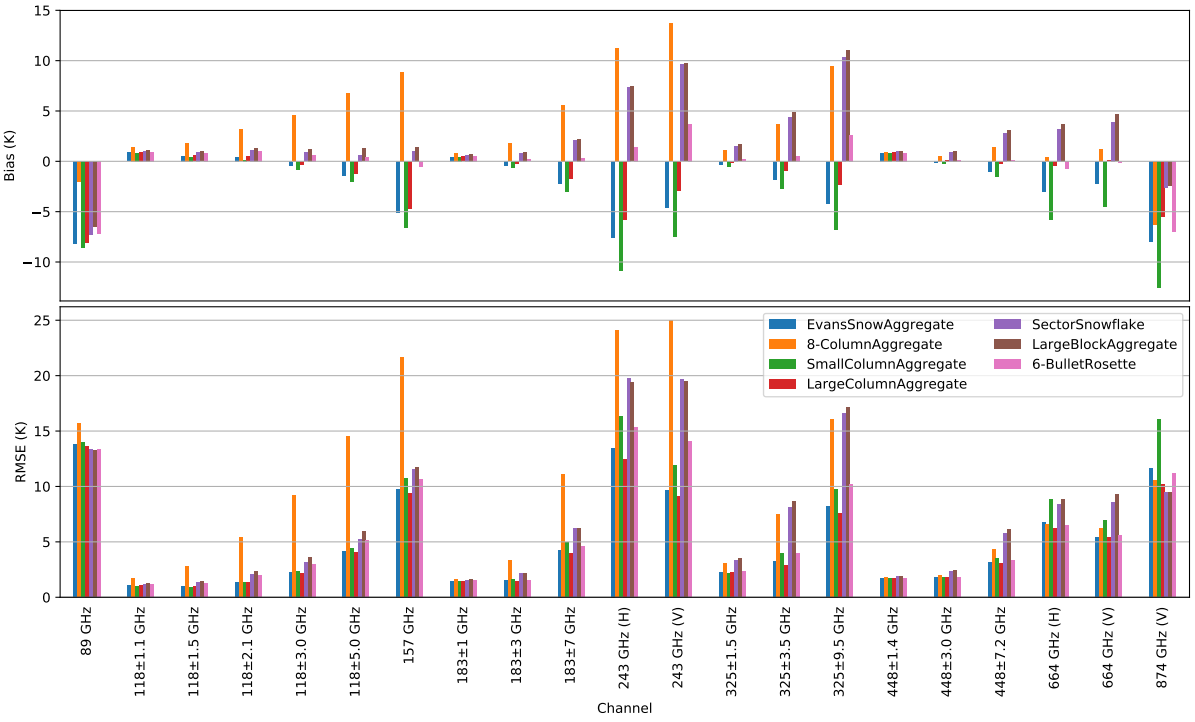

Figure S10: Bias (top) and RMSE (bottom) of first-guess departures (observed-simulated) for simulations using different ice particle habits.

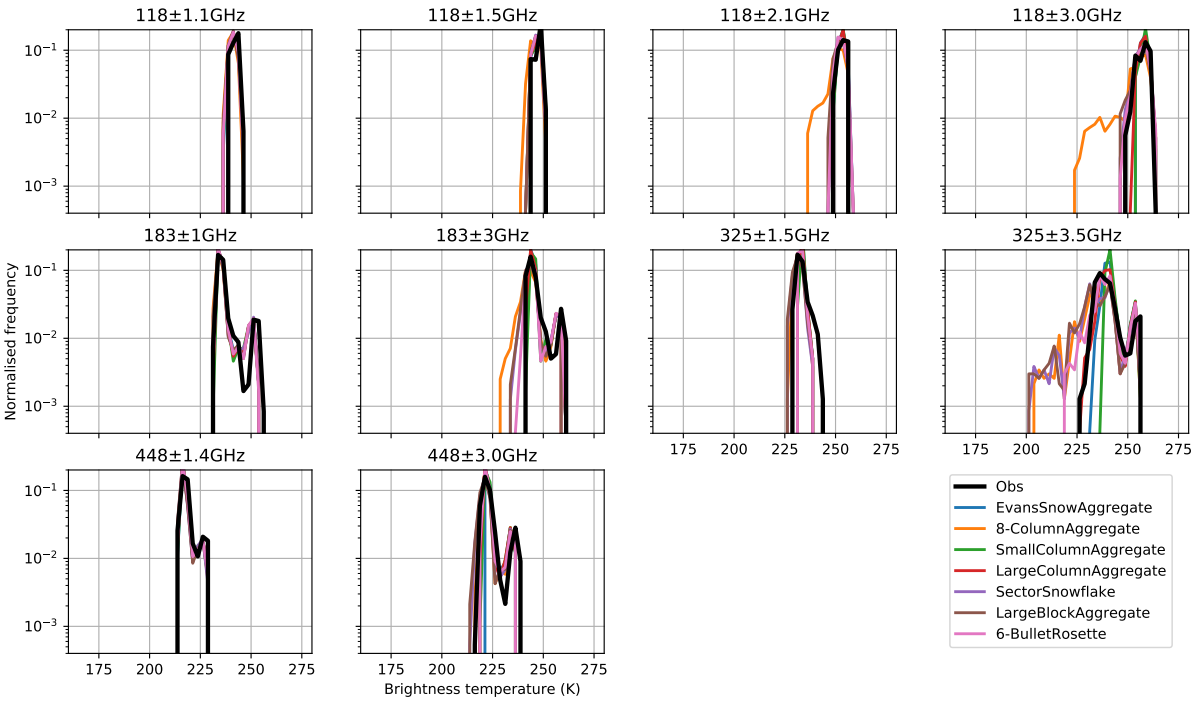

Figure S11: Brightness temperature histograms for observations and simulations using different ice particle habits for channels not shown in the main text.

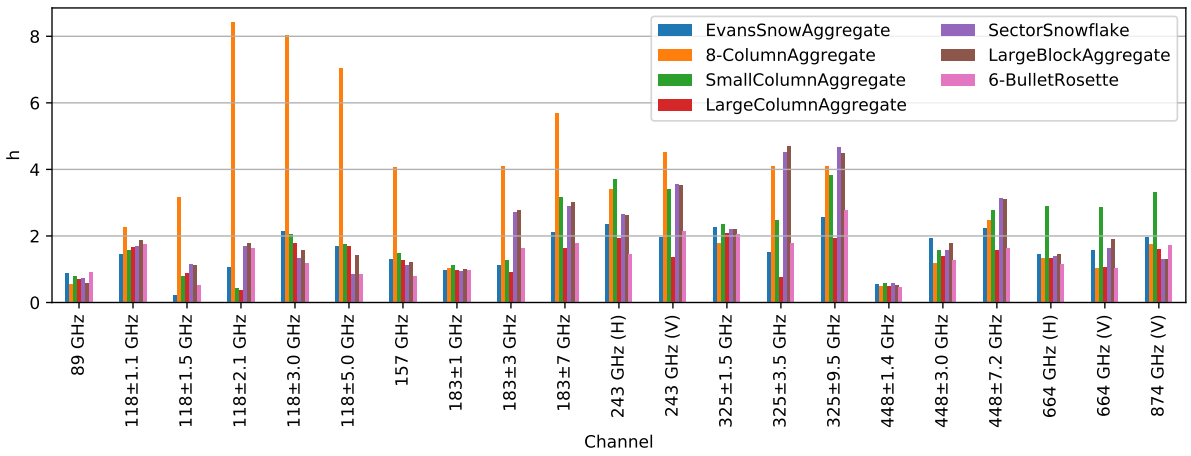

Figure S12: Histogram fit parameter for simulations using different ice particle habits.