Supplementary Information for "Microphysical fingerprints in anvil cloud albedo"

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1   Introduction

This supplementary information includes evaluation of additional dates and longwave/infrared evaluation of cloud morphology between satellite and model, and individual profiles plots for crystal and snow hydrometoer species separately.
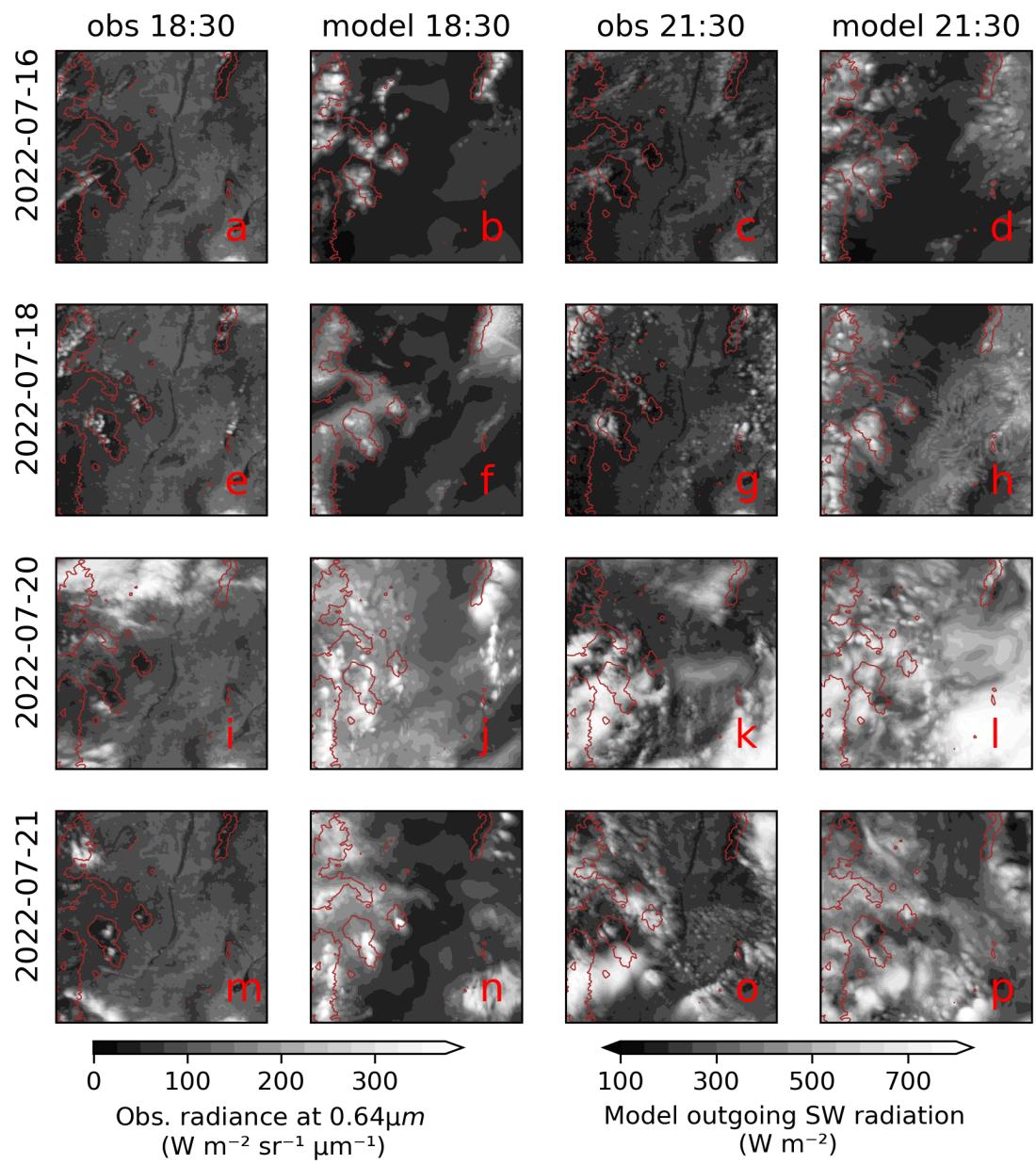
Figure S1. Equivalent plots to Figure 3, for cases: 16/jul/2022, 18/jul/2022, 20/jul/2022, 21/jul/2022.
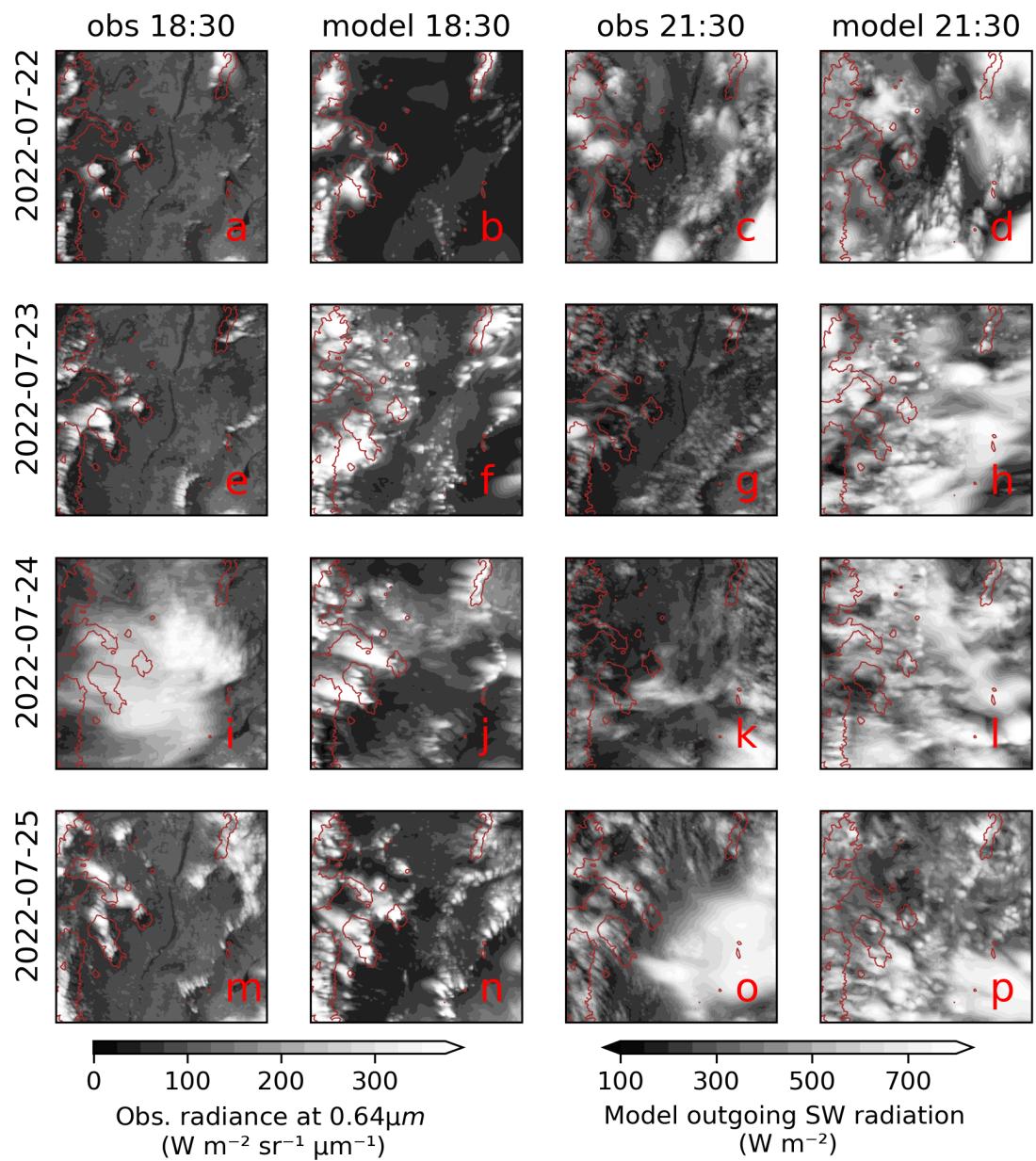
Figure S2. Equivalent plots to Figure 3, for cases: 22/jul/2022 t0 25/jul/2022
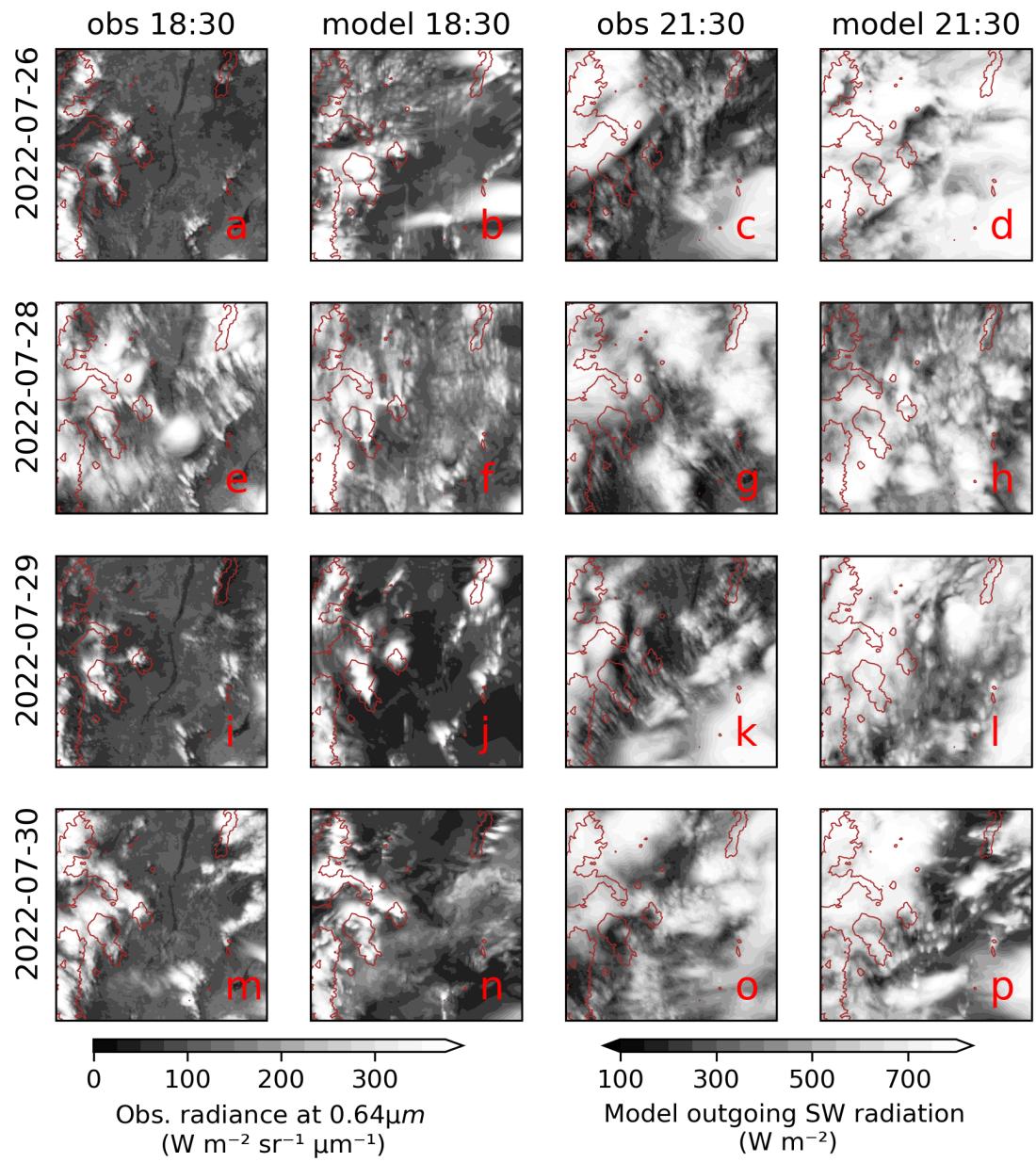
Figure S3. Equivalent plots to Figure 3, for cases: 26/jul/2022, 28/jul/2022, 29/jul/2022, 30/jul/2022.
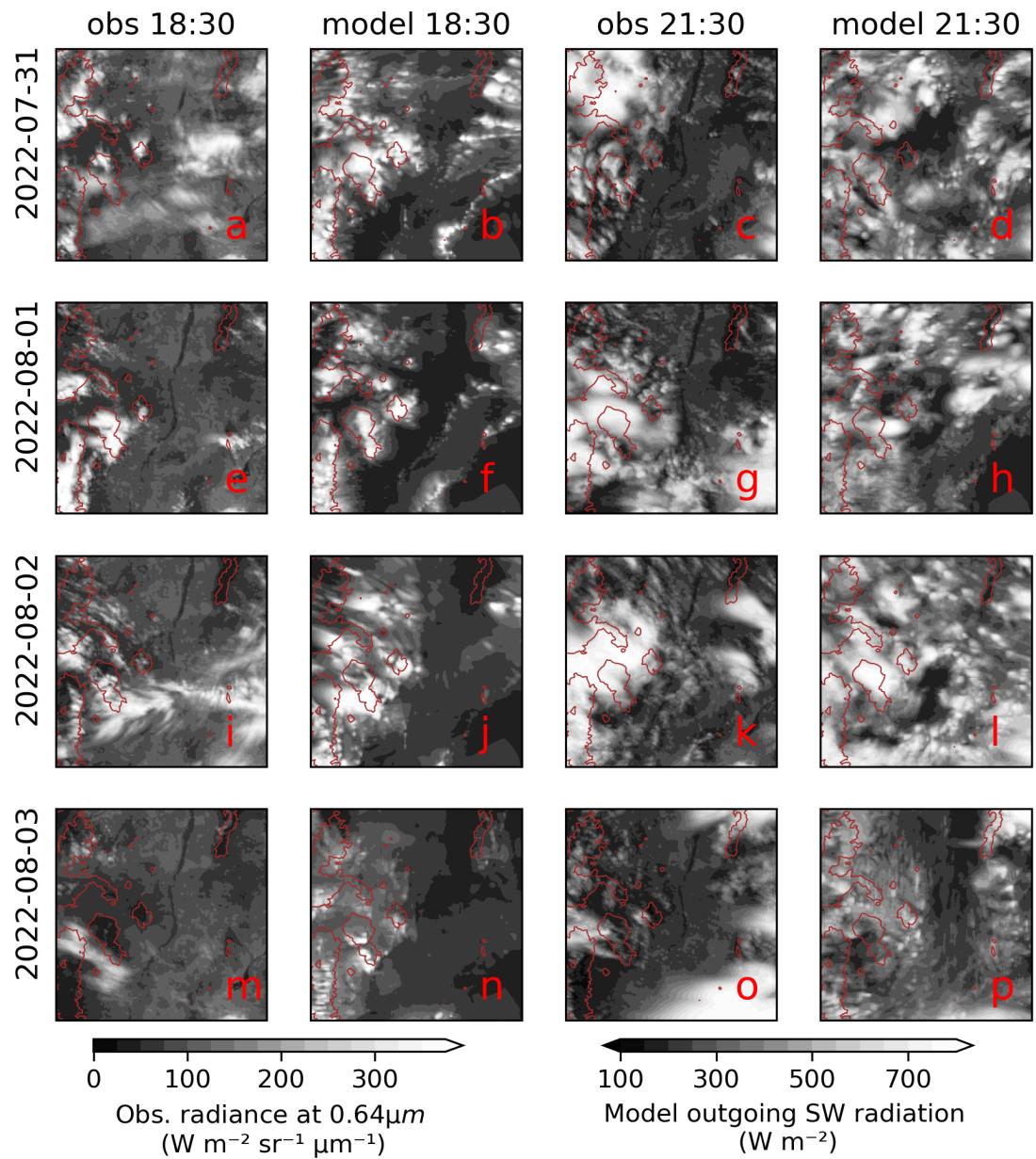
Figure S4. Equivalent plots to Figure 3, for cases: 31/jul/2022 to 3/aug/2022.
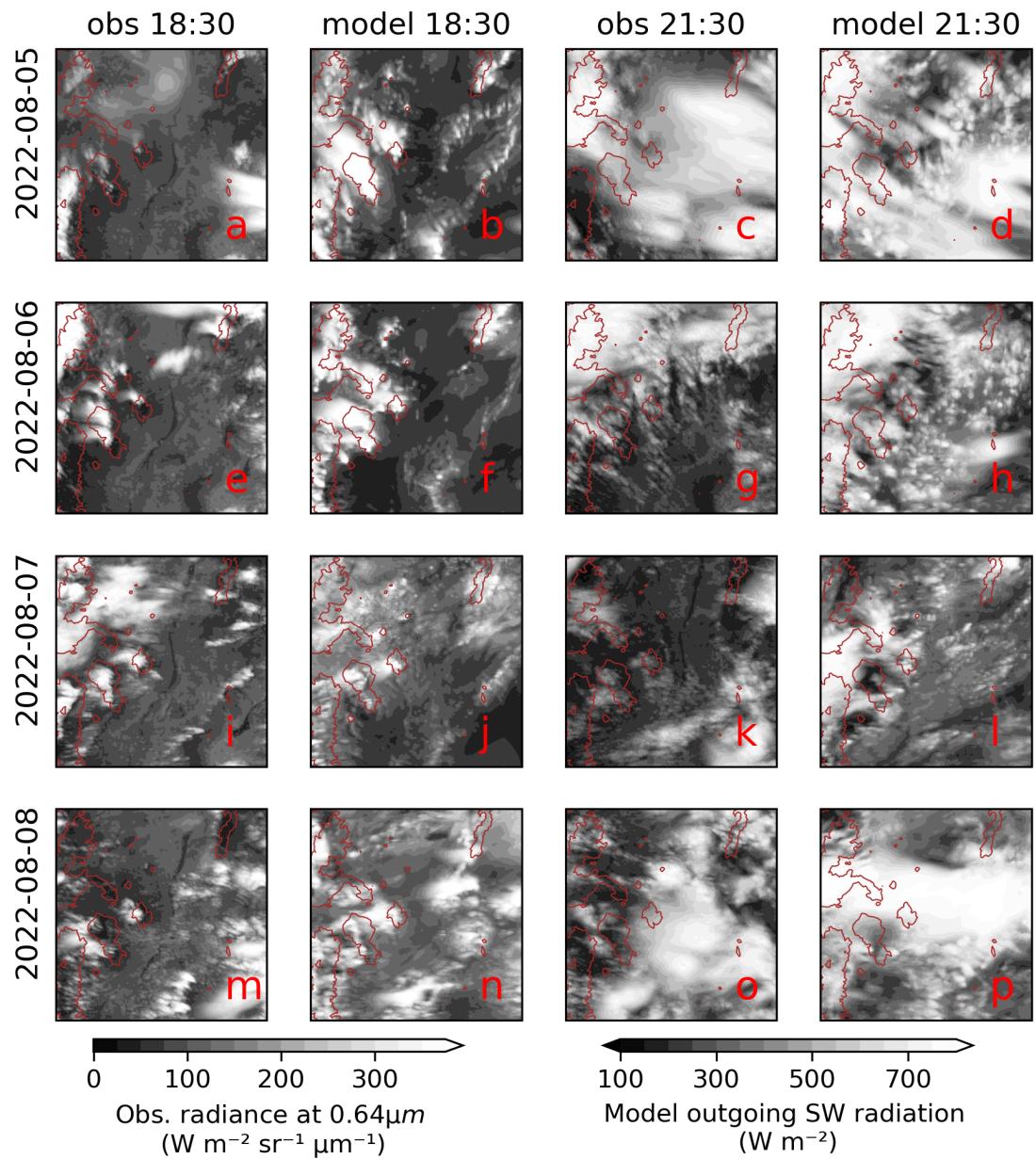
Figure S5. Equivalent plots to Figure 3, for cases: 5/aug/2022 to 8/aug/2022.
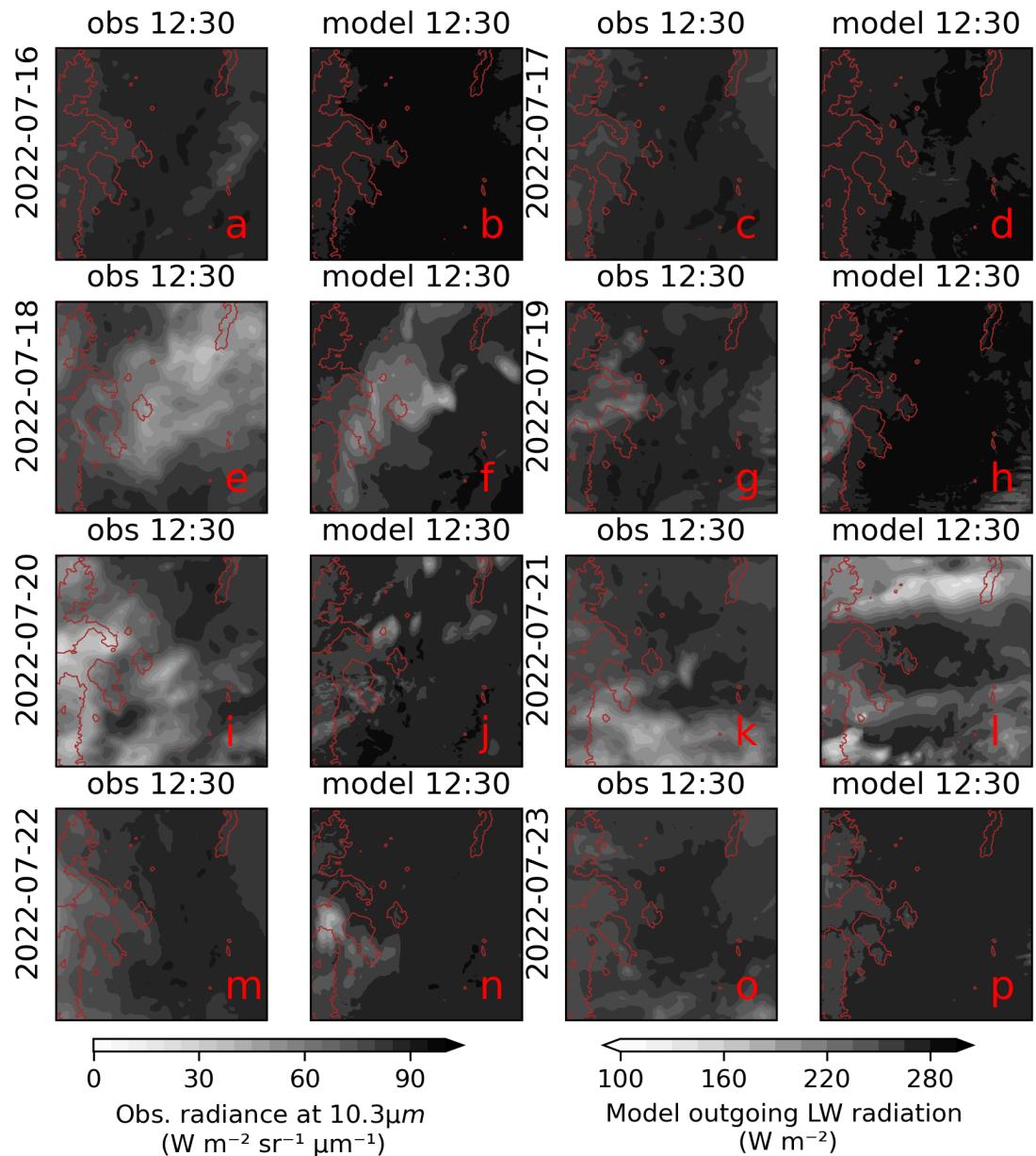
Figure S6. Equivalent plots to Figure 3 but using GOES channel 13 infrared radiance for obs, model outgoing LW radiation, and GOES channel 13 which measures infrared radiance. Only a single time, 12:30 UTC, is shown, allowing for two dates to be shown per row of subplots. This figure includes cases: 16/jul/2022 - 23/jul/2022.
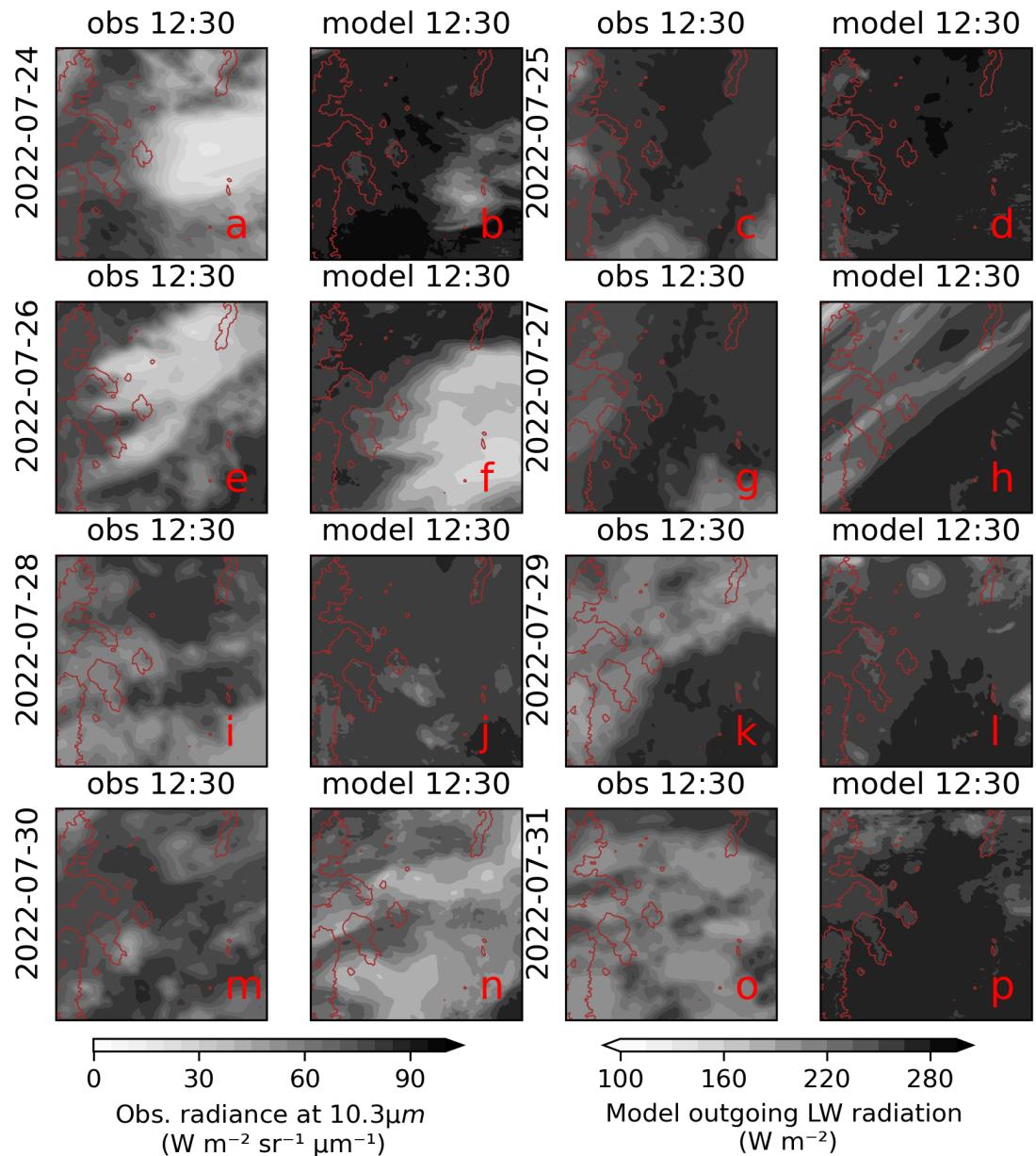
Figure S7. Equivalent plots to Figure 3 but using GOES channel 13 infrared radiance for obs, model outgoing LW radiation, and GOES channel 13 which measures infrared radiance. Only a single time, 12:30 UTC, is shown, allowing for two dates to be shown per row of subplots. This figure includes cases: 24/jul/2022 - 31/jul/2022.
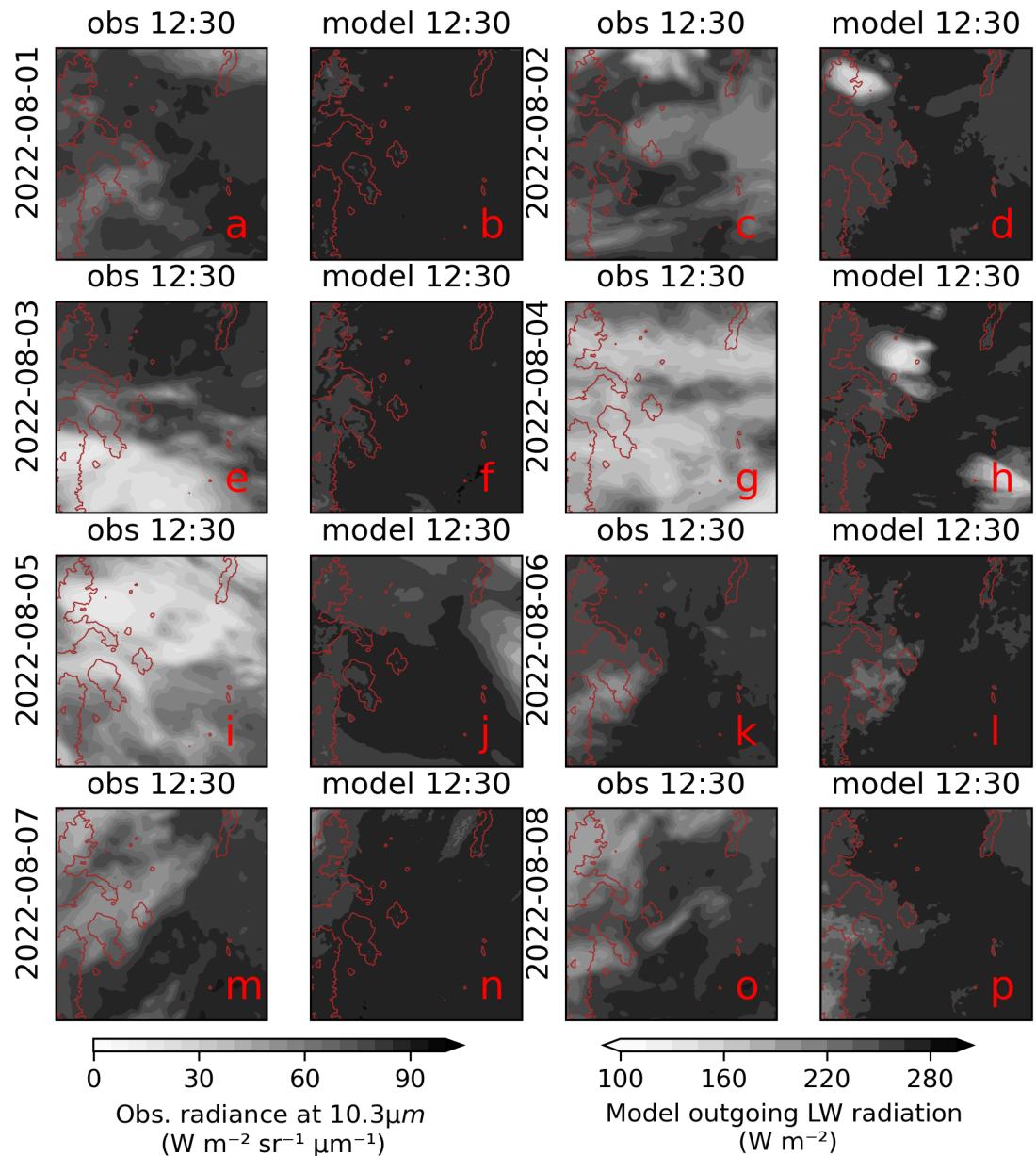
Figure S8. Equivalent plots to Figure 3 but using GOES channel 13 infrared radiance for obs, and model outgoing LW radiation, and GOES channel 13 which measures infrared radiance. Only a single time, 12:30 UTC, is shown, allowing for two dates to be shown per row of subplots. This figure includes cases: 01/aug/2022 - 08/aug/2022.
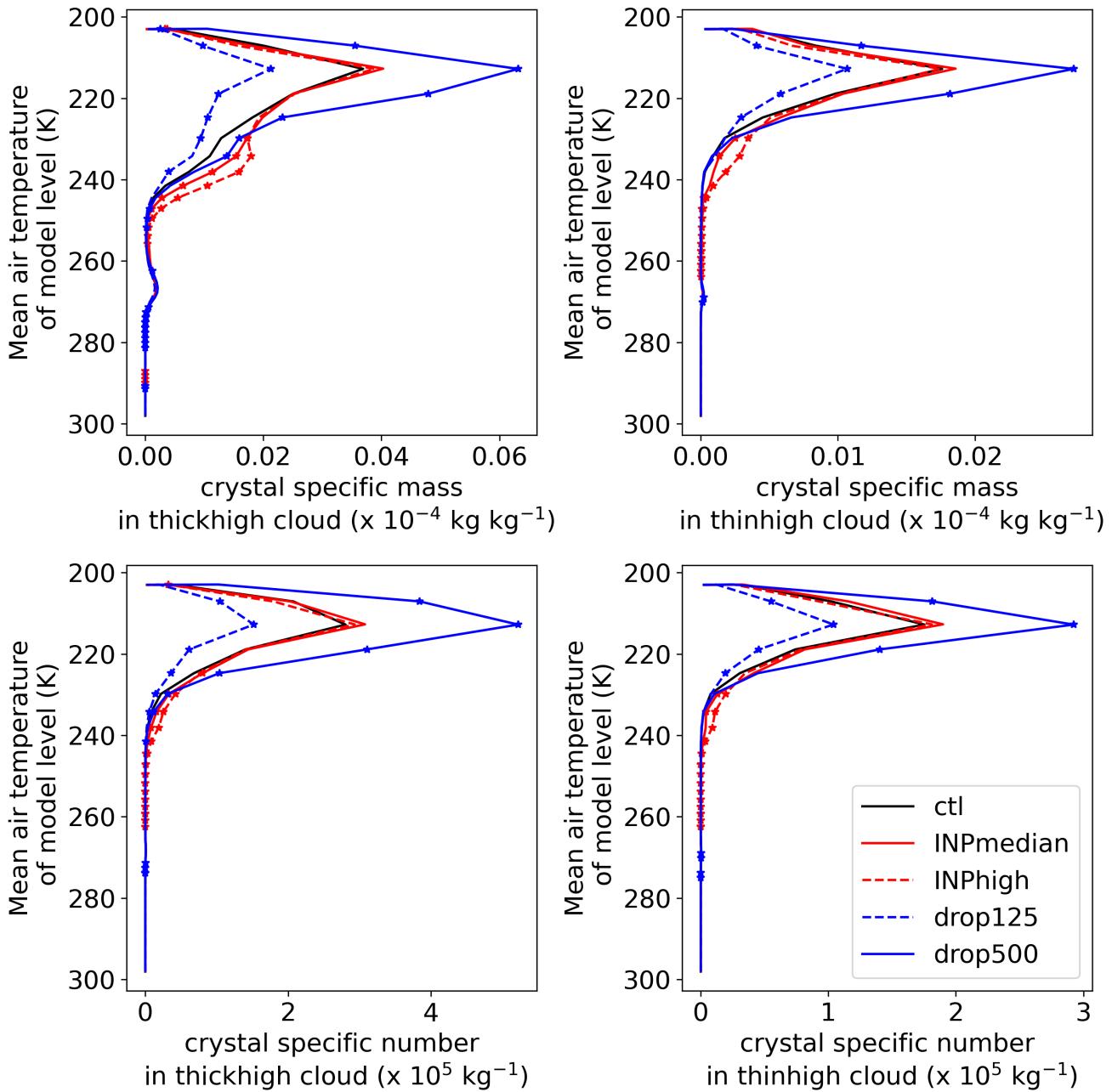
Figure S9. Equivalent plots to Figure 8 but for crystal hydrometeors only.
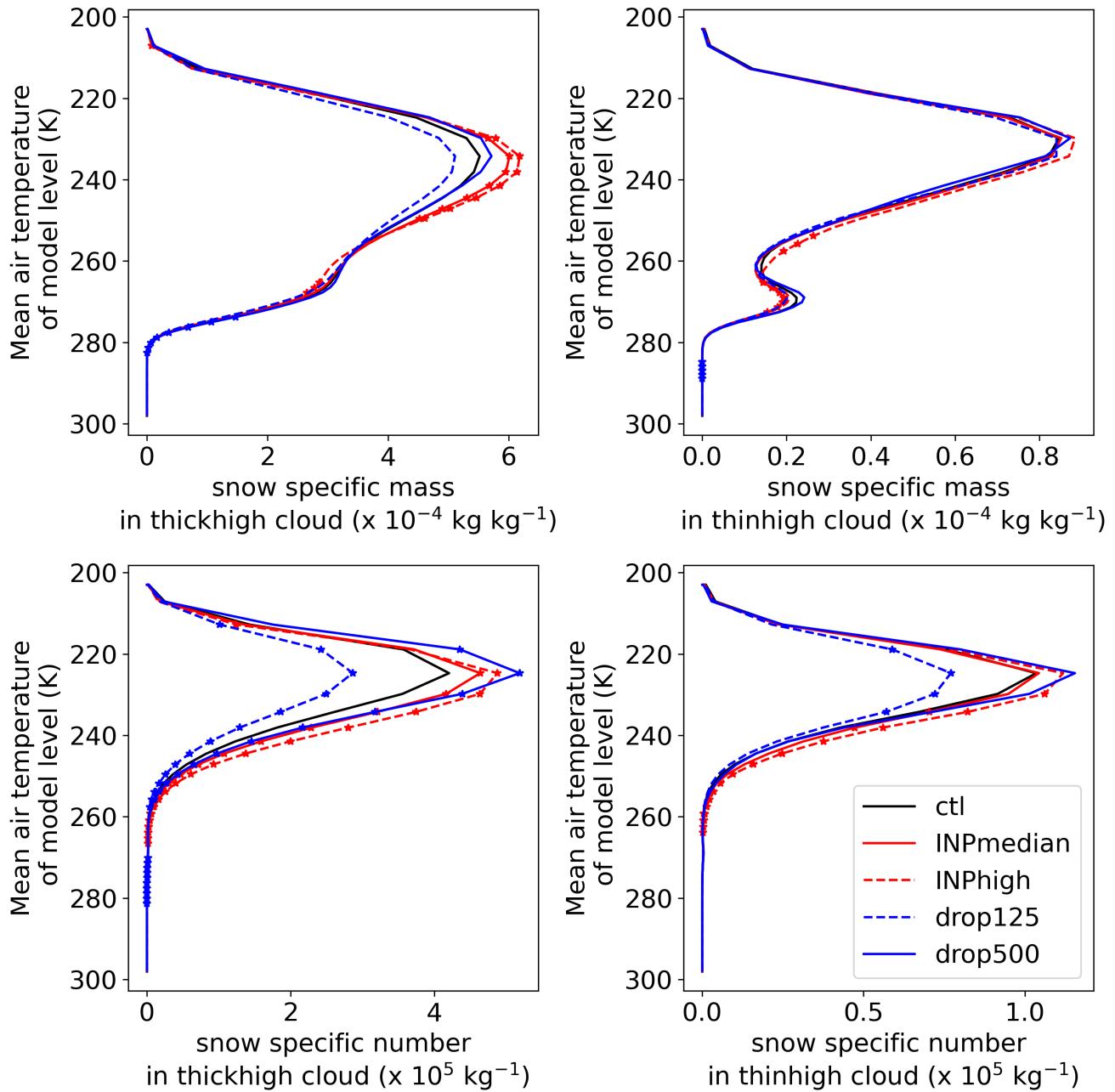
Figure S10. Equivalent plots to Figure 8 but for snow hydrometeors only.