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Thermodynamic and kinematic drivers of atmospheric boundary layer stability in the central Arctic during the Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC)

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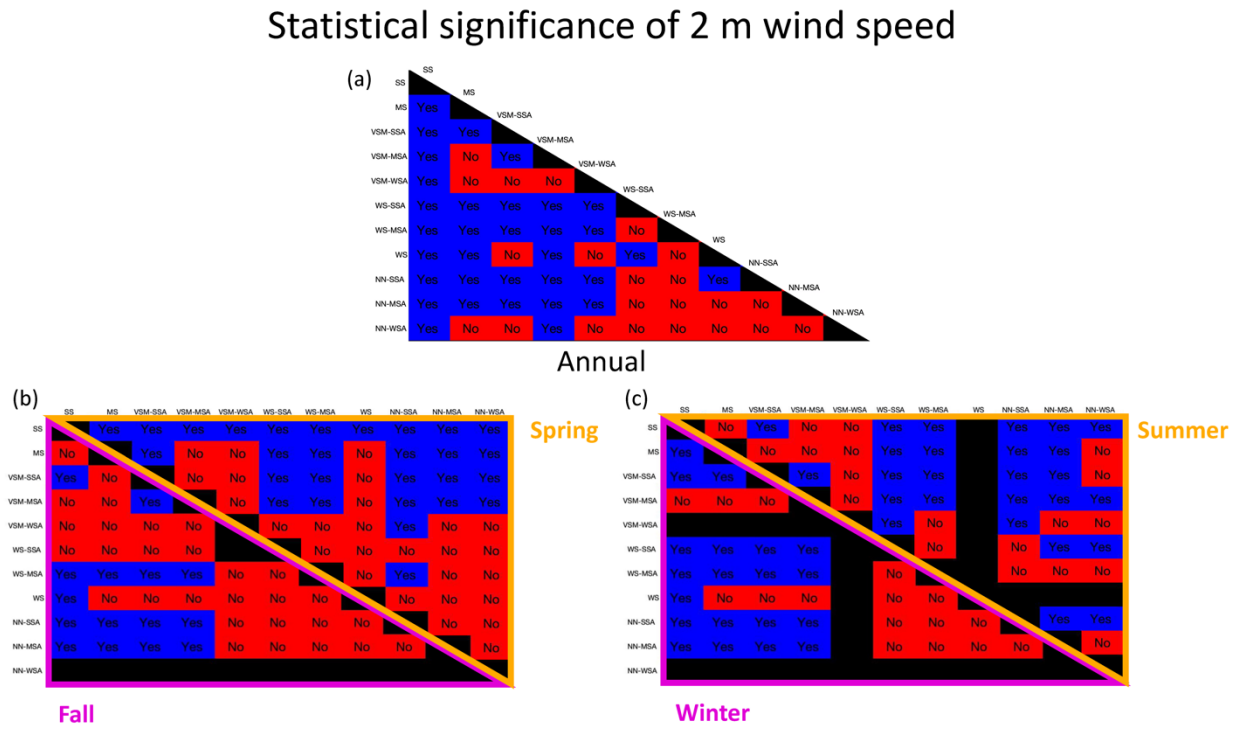

Fig. S1: Grid plots indicating whether the means of 2 m wind speed are statistically significantly different between stability regimes, where blue shading and the word "yes" indicate that the means are significantly different and red shading and the word "no" indicate that the means are not significantly different. (a) shows annual significance (b) shows significance for the fall (pink outline) and spring (yellow outline), and (c) shows significance for the winter (pink outline) and summer (yellow outline).

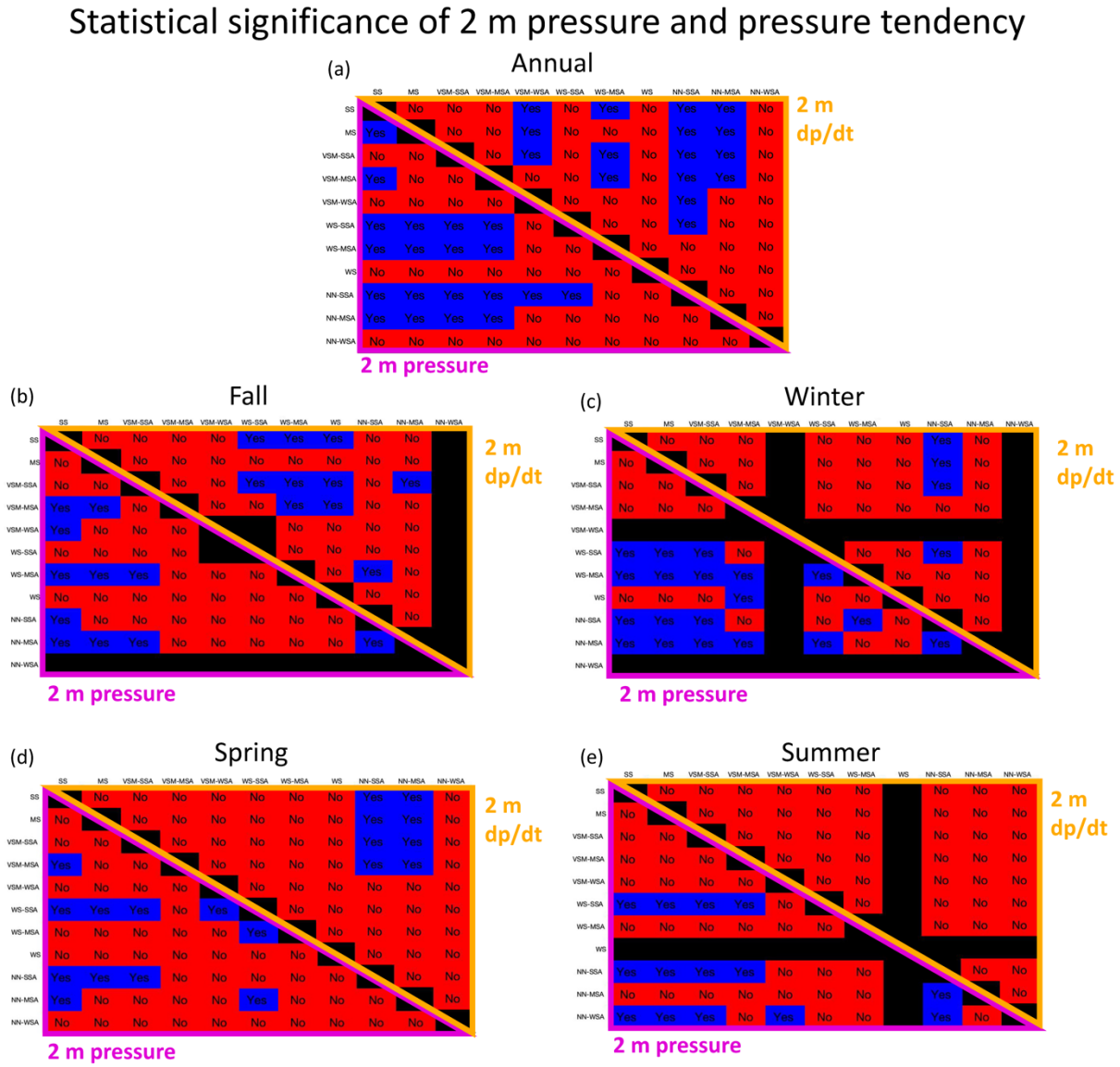

Fig. S2: Grid plots indicating whether the means of 2 m pressure and pressure tendency (dp/dt) are statistically significantly different between stability regimes, where blue shading and the word "yes" indicate that the means are significantly different and red shading and the word "no" indicate that the means are not significantly different. (a) shows annual significance, (b) shows significance in fall (c) shows significance in winter, (d) shows significance in spring, and (e) shows significance in summer. Grid cells outlined in yellow show significance for 2 m pressure tendency and grid cells outlined in magenta show significance for 2 m pressure.

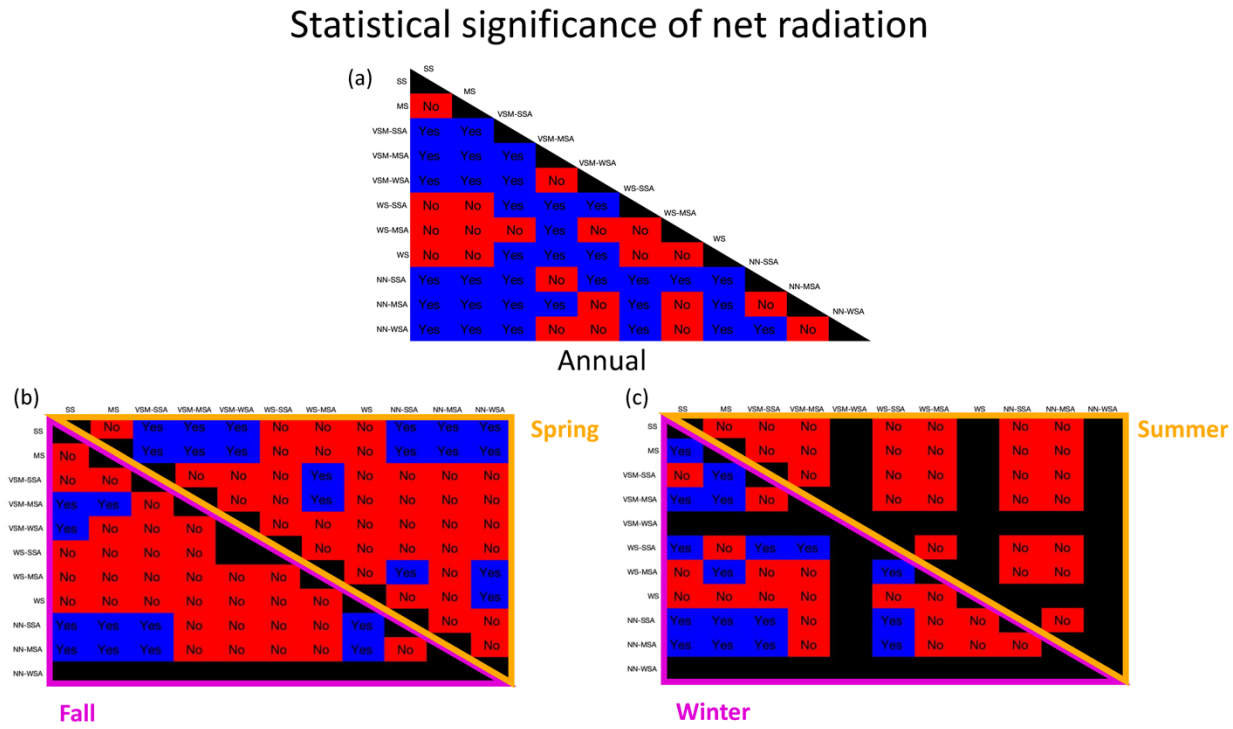

Fig. S3: Grid plots indicating whether the means of net radiation are statistically significantly different between stability regimes, where blue shading and the word "yes" indicate that the means are significantly different and red shading and the word "no" indicate that the means are not significantly different. (a) shows annual significance (b) shows significance for the fall (pink outline) and spring (yellow outline), and (c) shows significance for the winter (pink outline) and summer (yellow outline).

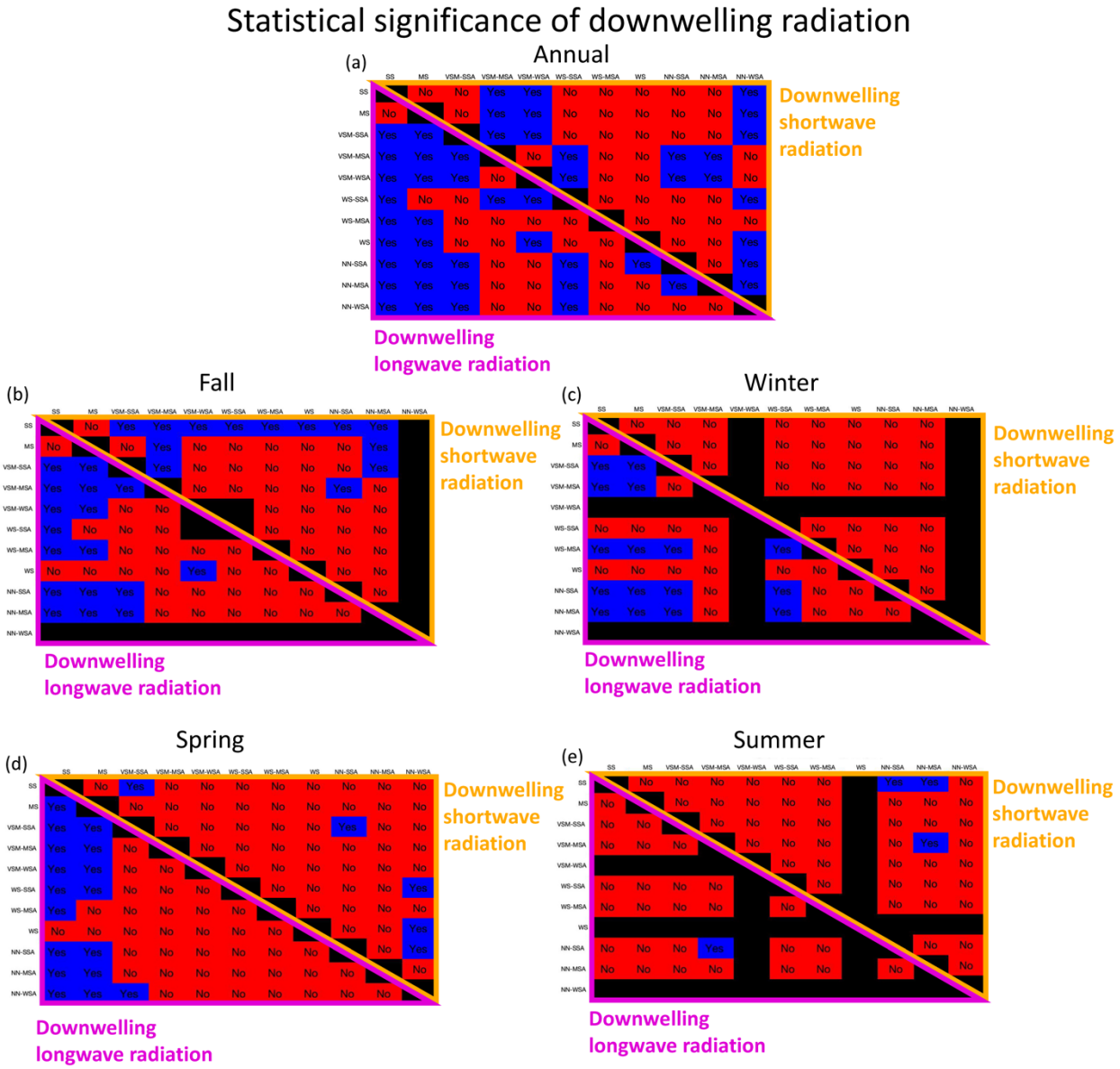

Fig. S4: Grid plots indicating whether the means of downwelling radiation are statistically significantly different between stability regimes, where blue shading and the word "yes" indicate that the means are significantly different and red shading and the word "no" indicate that the means are not significantly different. (a) shows annual significance, (b) shows significance in fall (c) shows significance in winter, (d) shows significance in spring, and (e) shows significance in summer. Grid cells outlined in yellow show significance for downwelling shortwave radiation and grid cells outlined in magenta show significance for downwelling longwave radiation.

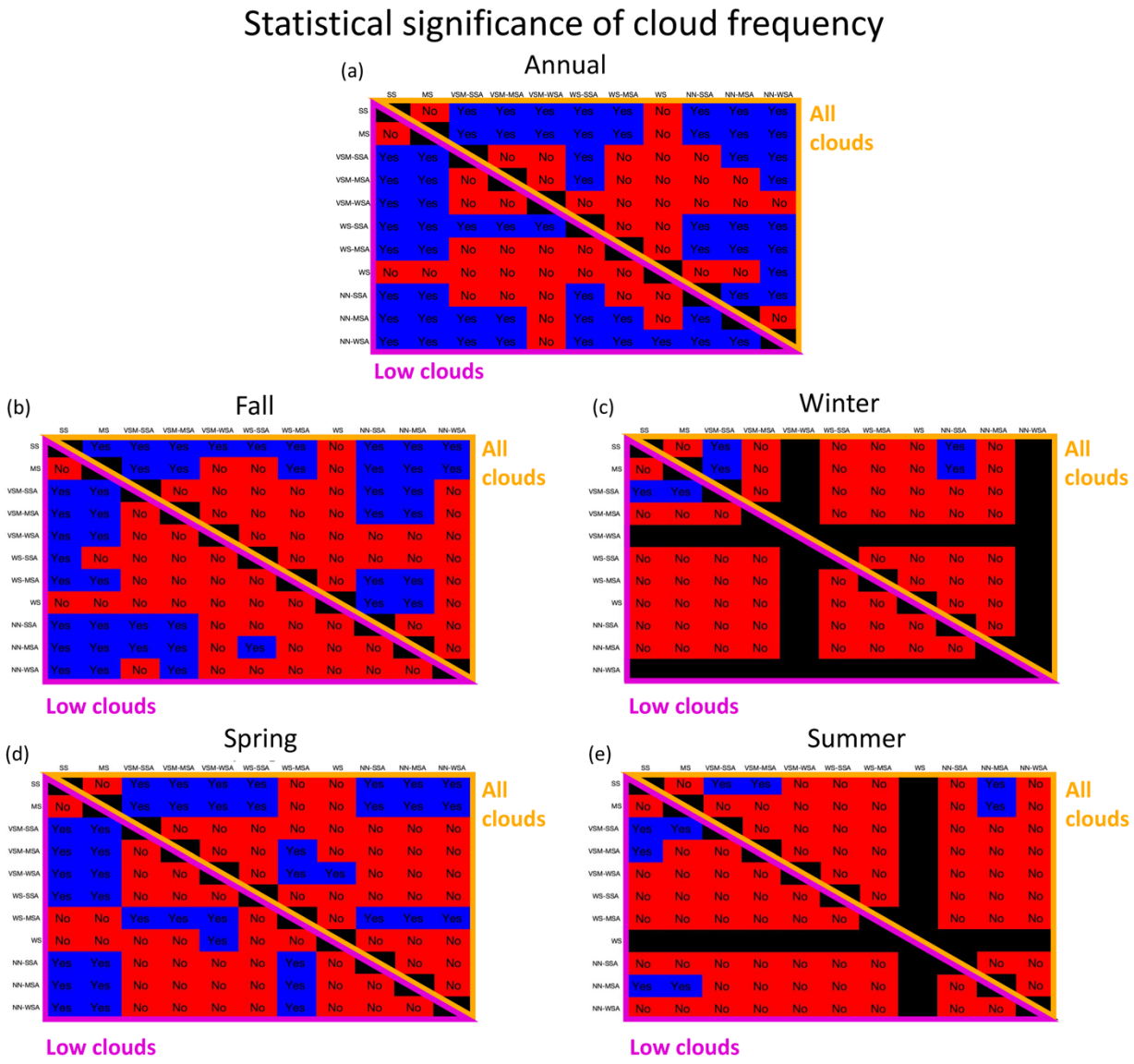

Fig. S5: Grid plots indicating whether the means of frequency of cloud cover in the 30 minutes leading up to radiosonde launch are statistically significantly different between stability regimes, where blue shading and the word "yes" indicate that the means are significantly different and red shading and the word "no" indicate that the means are not significantly different. (a) shows annual significance, (b) shows significance in fall (c) shows significance in winter, (d) shows significance in spring, and (e) shows significance in summer. Grid cells outlined in yellow show significance for all clouds and grid cells outlined in magenta show significance for low clouds.

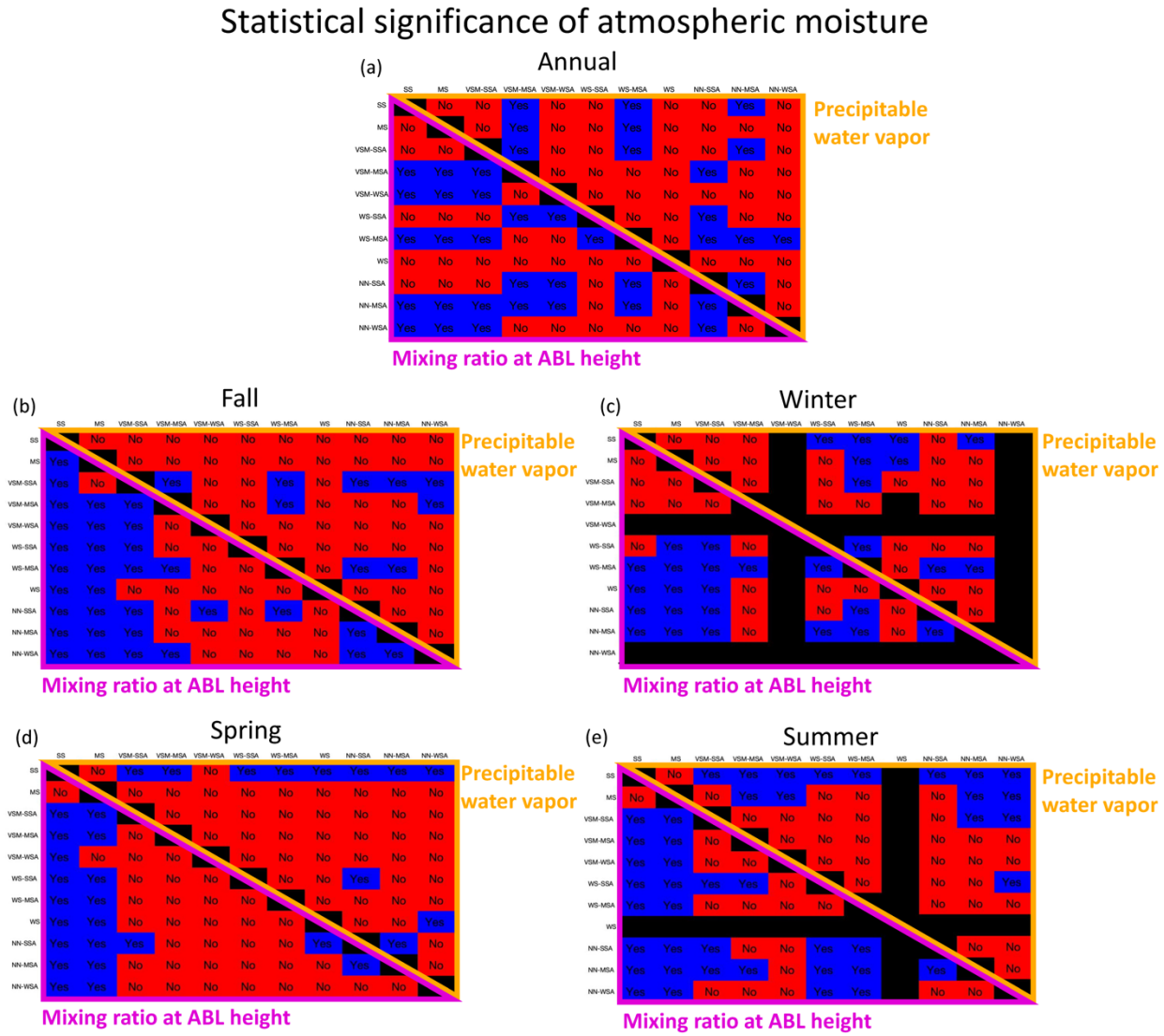

Fig. S6: Grid plots indicating whether the means of moisture variables are statistically significantly different between stability regimes, where blue shading and the word "yes" indicate that the means are significantly different and red shading and the word "no" indicate that the means are not significantly different. (a) shows annual significance, (b) shows significance in fall (c) shows significance in winter, (d) shows significance in spring, and (e) shows significance in summer. Grid cells outlined in yellow show significance for precipitable water vapor and grid cells outlined in magenta show significance for mixing ratio at ABL height.