

Supplementary Materials: Spatio-temporal Analysis of Valley Wind Systems in a Complex Mountain Topography of the Rolwaling Himal, Nepal

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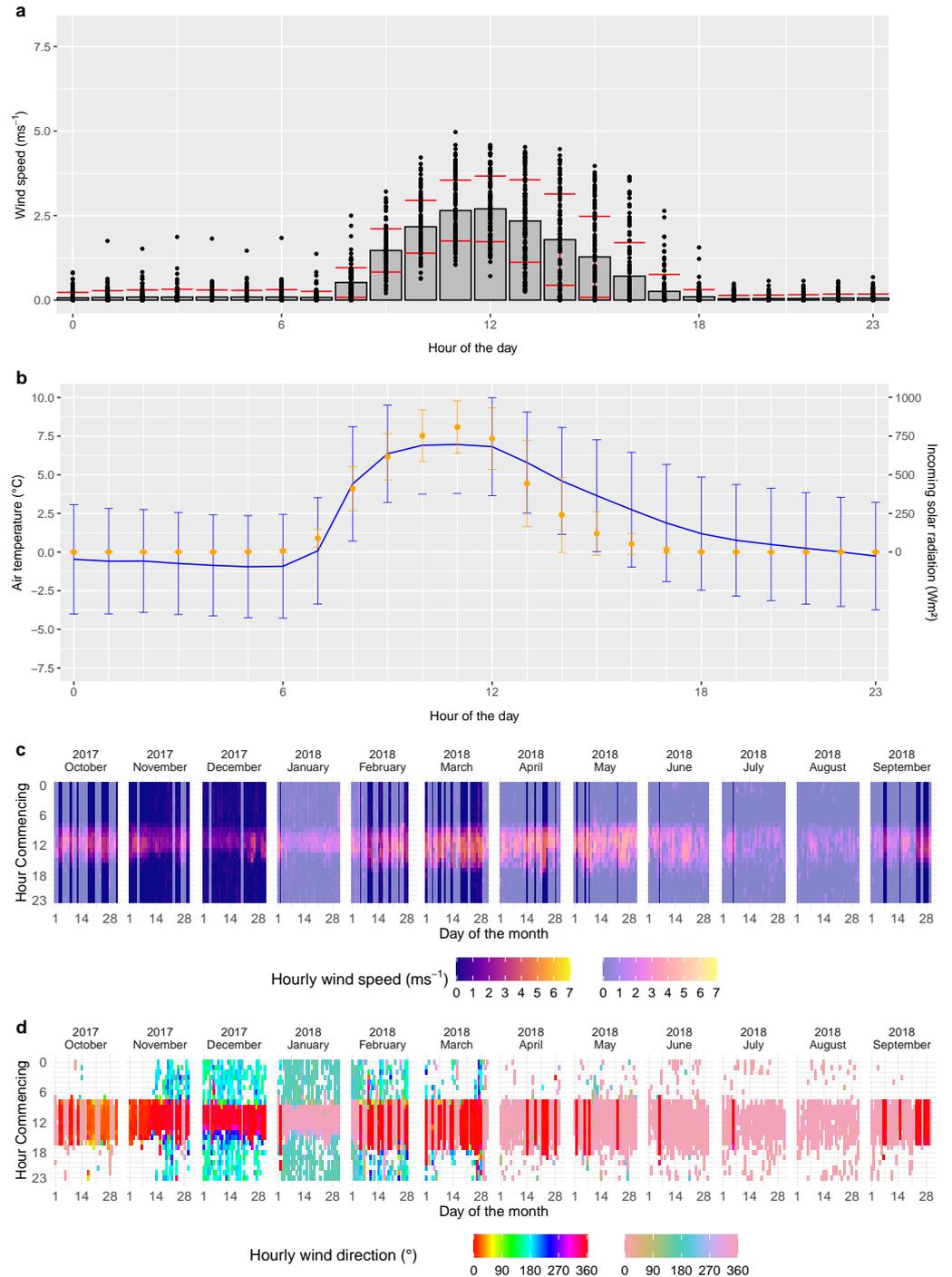


Figure S1. Wind speeds and direction during valley wind days at NW bottom station. Topmost position (a) shows the hourly mean value of wind speed on VWD as bar height with red SD whiskers. Hourly data is provided as black dots. Plot (b) consists of the hourly means of temperature (blue) and mean incoming solar radiation sums (yellow) on VWD. Whiskers of one SD are added to the parameters in the respective colors. Mean hourly wind speeds for every hour in the observational period are shown in (c). The bottom plot (d) shows hourly wind directions in same period. Calm hours are shown as transparent boxes in plot (d). Both (c) and (d) show the VWD data with higher lumination.

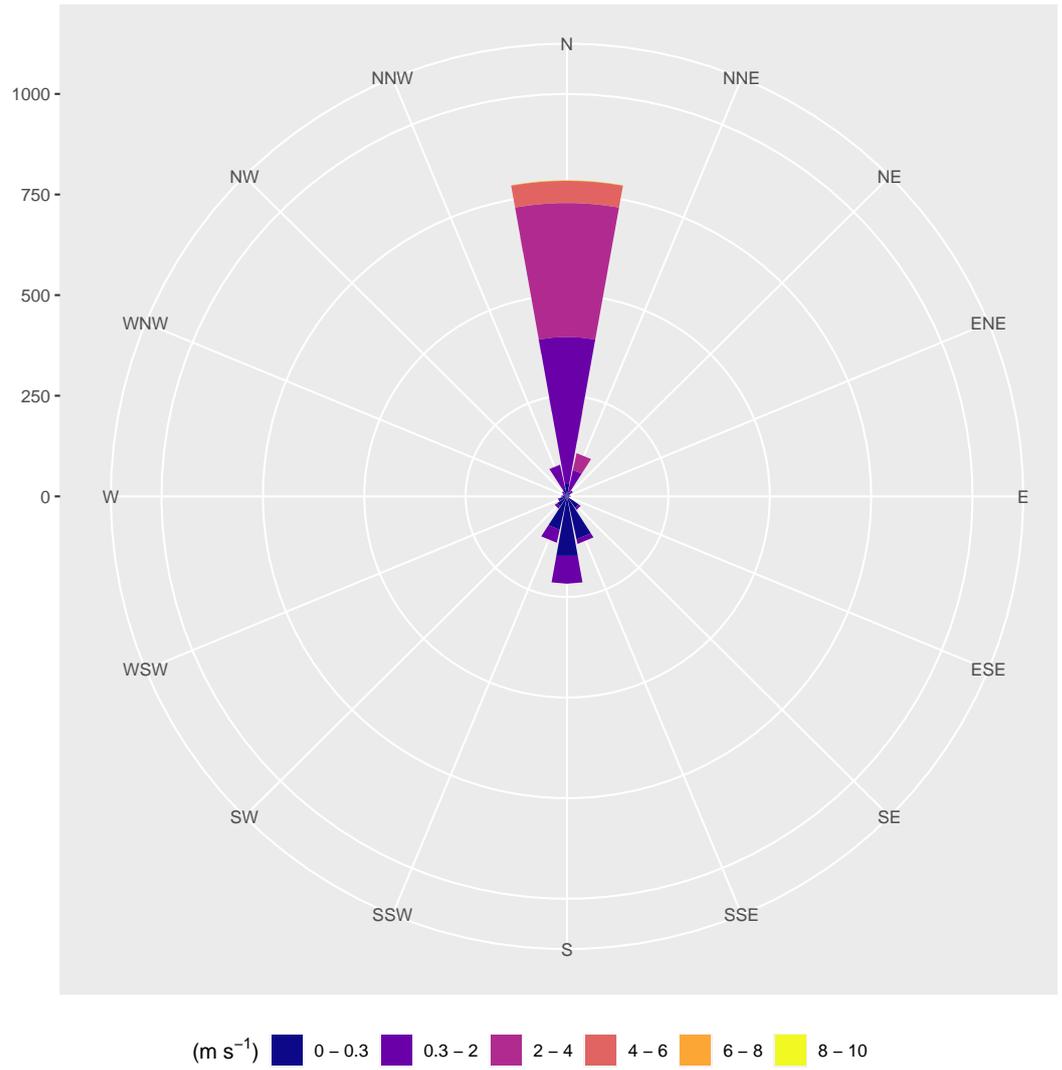


Figure S2. Windrose of hourly wind speeds during the VWD at the NW bottom station.

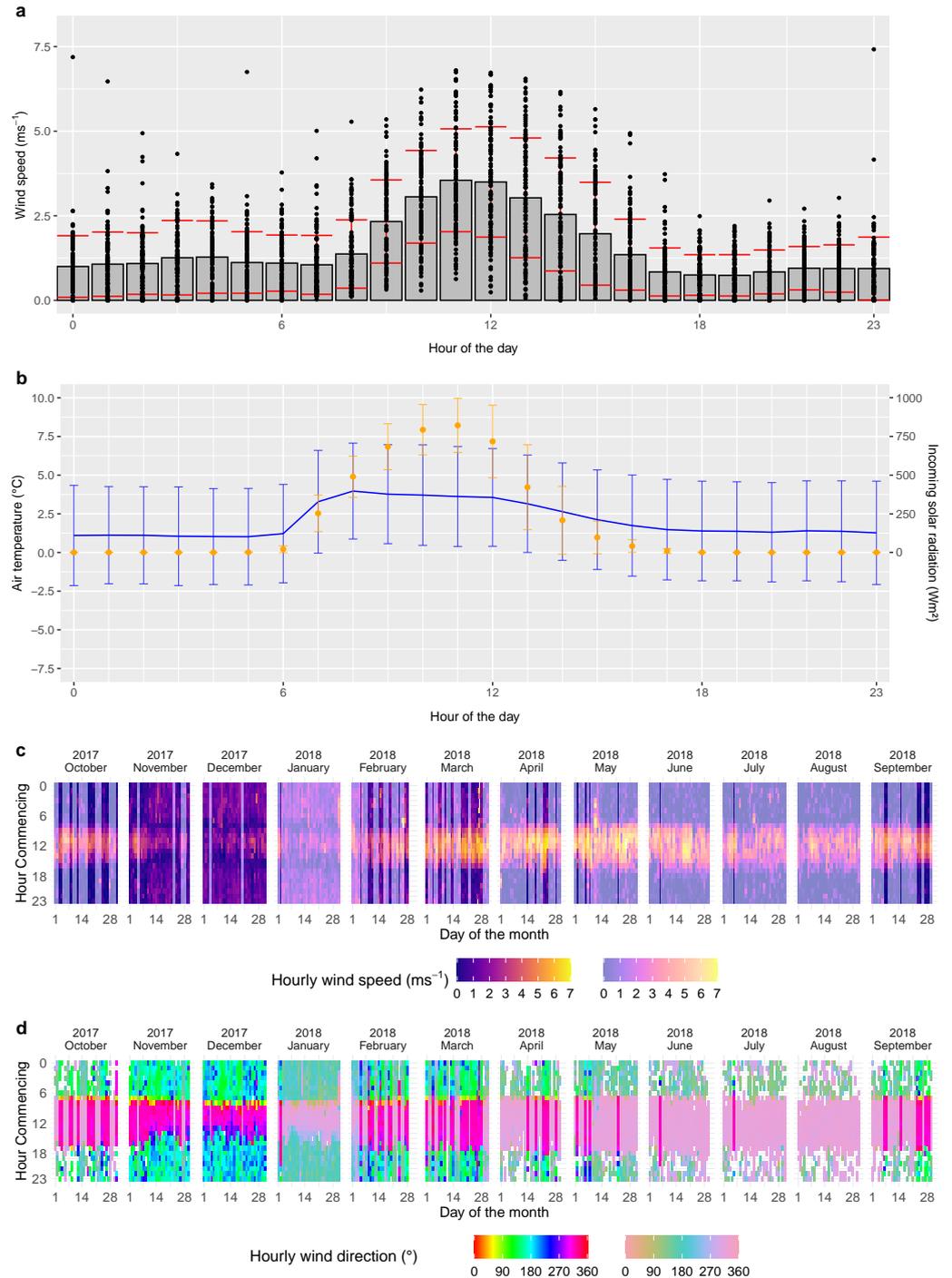


Figure S3. Wind speeds and direction during valley wind days at NW top station. Topmost position (a) shows the hourly mean value of wind speed on VWD as bar height with red SD whiskers. Hourly data is provided as black dots. Plot (b) consists of the hourly means of temperature (blue) and mean incoming solar radiation sums (yellow) on VWD. Whiskers of one SD are added to the parameters in the respective colors. Mean hourly wind speeds for every hour in the observational period are shown in plot (c). The bottom plot (d) shows hourly wind directions in same period. Calm hours are shown as transparent boxes in plot (d). Both (c) and (d) show the VWD data with higher luminance.

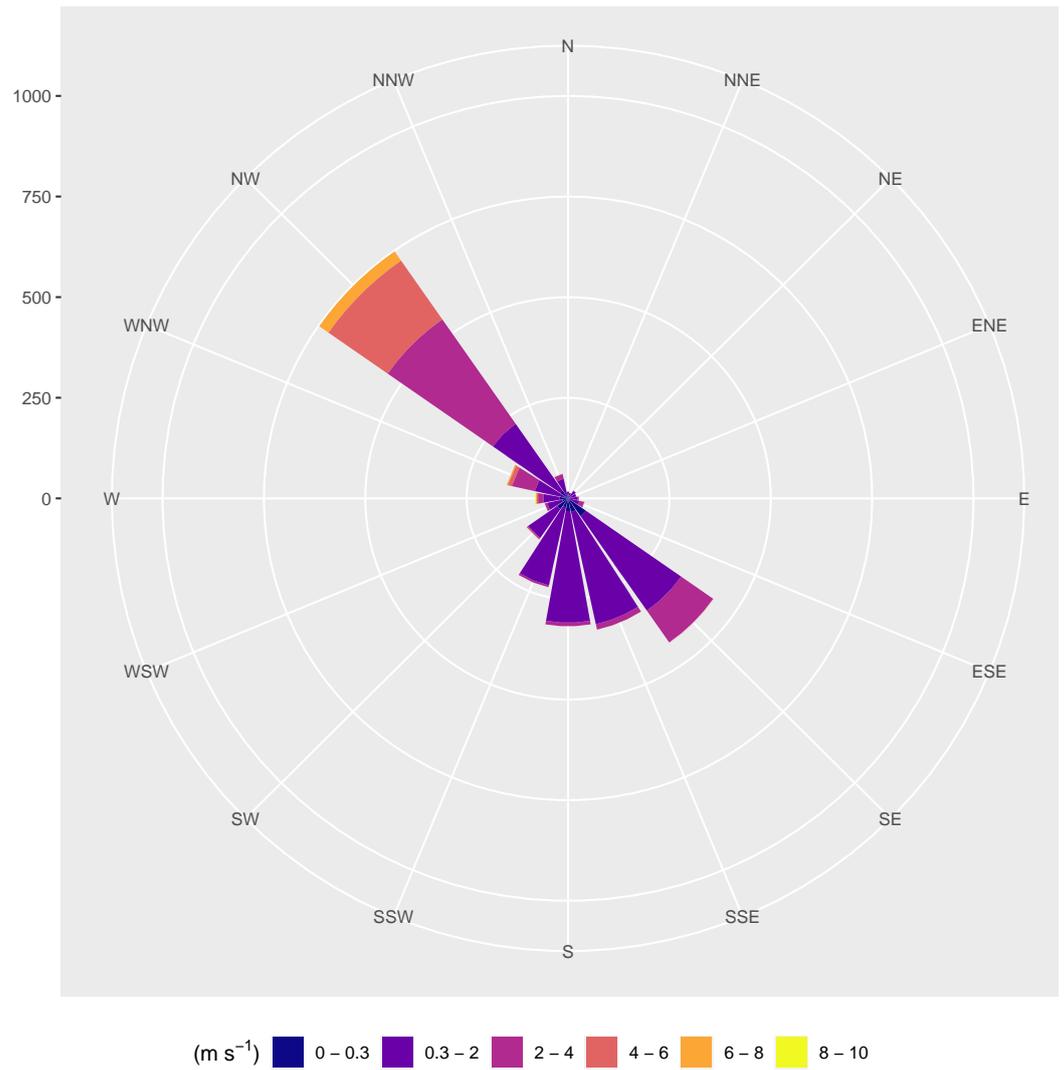


Figure S4. Windrose of hourly wind speeds during the VWD at the NW top station.

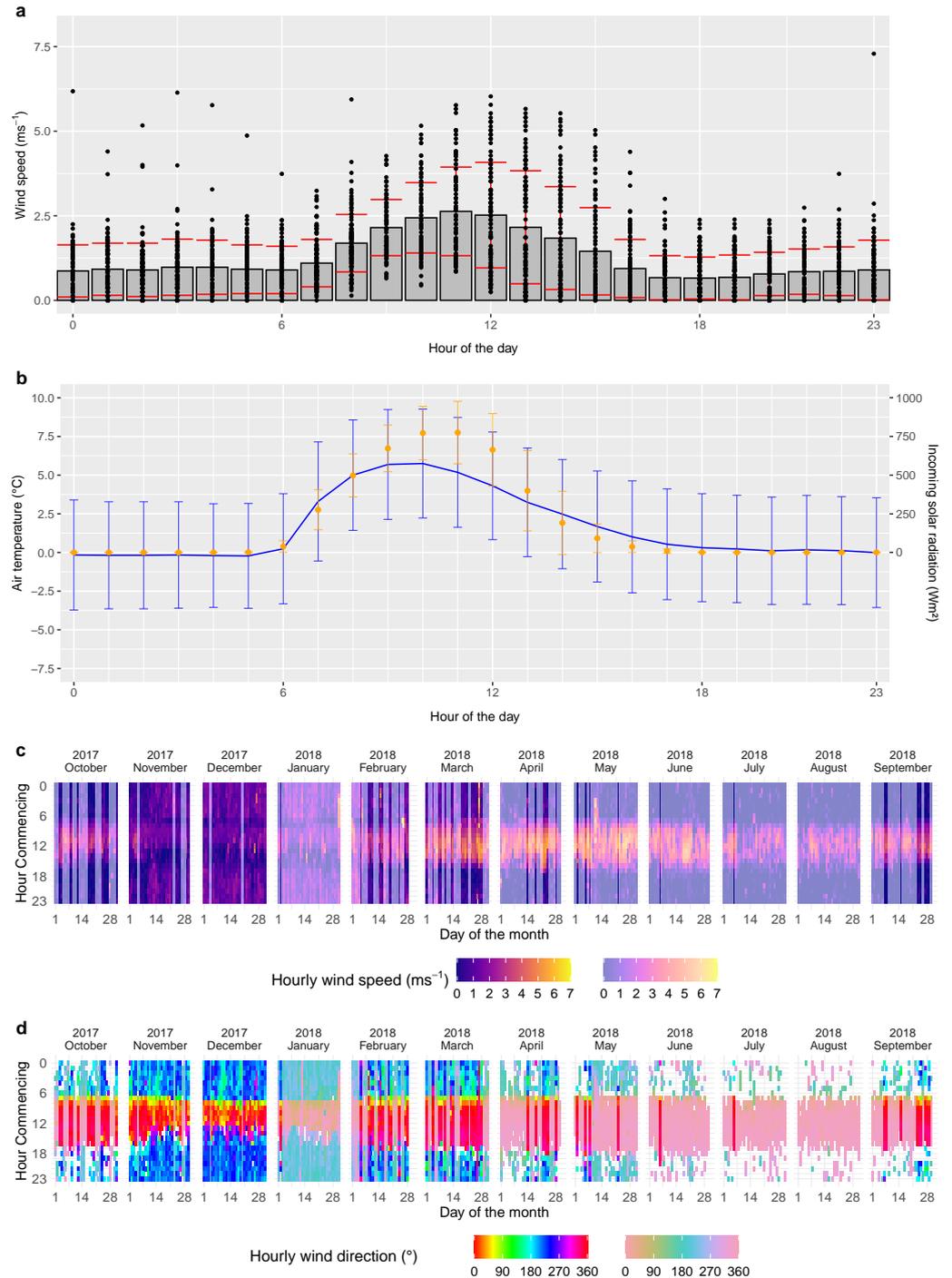


Figure S5. Wind speeds and direction during valley wind days at NE top station. Topmost position (a) shows the hourly mean value of wind speed on VWD as bar height with red SD whiskers. Hourly data is provided as black dots. Plot (b) consists of the hourly means of temperature (blue) and mean incoming solar radiation sums (yellow) on VWD. Whiskers of one SD are added to the parameters in the respective colors. Mean hourly wind speeds for every hour in the observational period are shown in plot (c). The bottom plot (d) shows hourly wind directions in same period. Calm hours are shown as transparent boxes in plot (d). Both (c) and (d) show the VWD data with higher lumination.

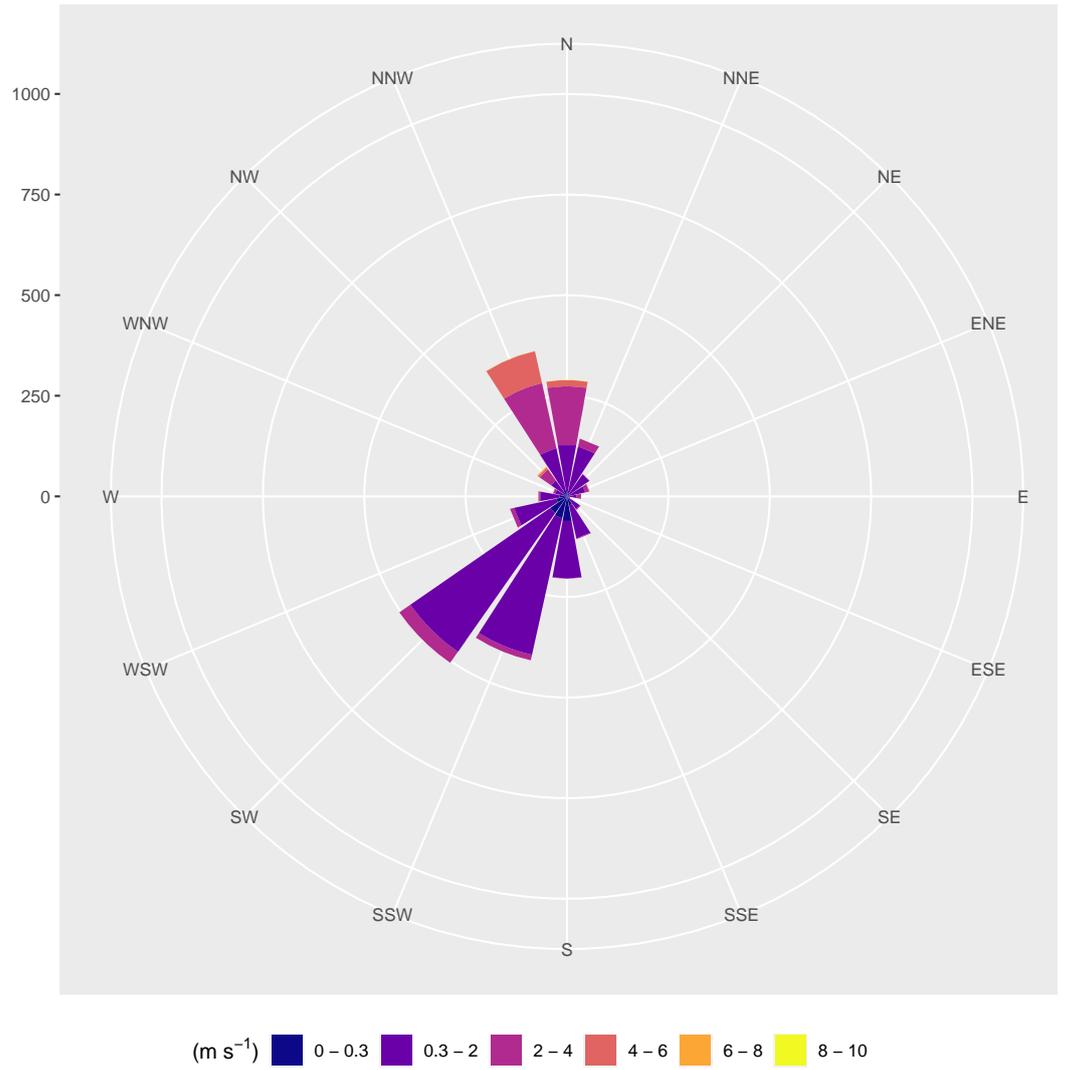


Figure S6. Windrose of hourly wind speeds during the VWD at the NE top station.

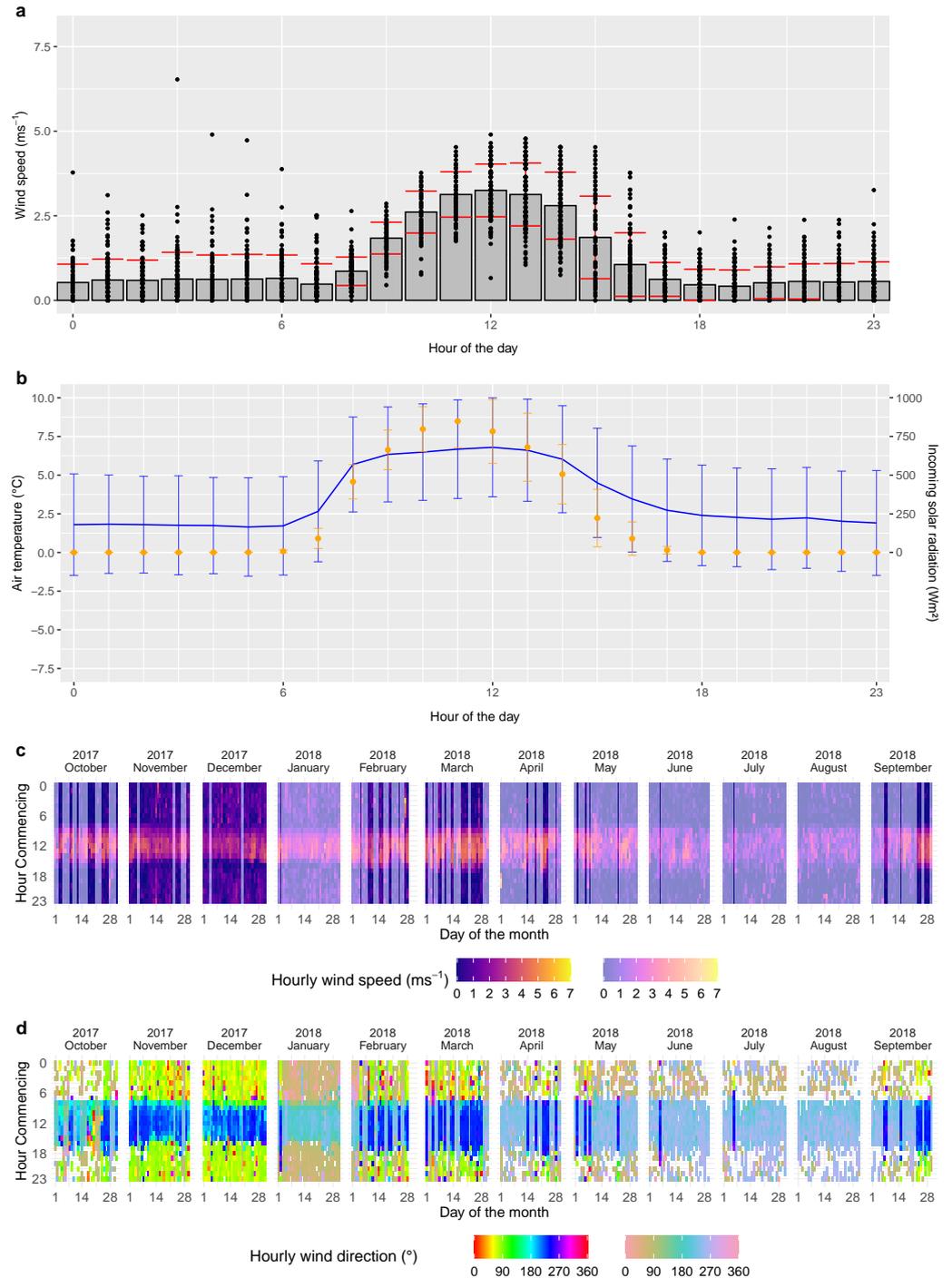


Figure S7. Wind speeds and direction during valley wind days at Gompa station. Topmost position (a) shows the hourly mean value of wind speed on VWD as bar height with red SD whiskers. Hourly data is provided as black dots. Plot (b) consists of the hourly means of temperature (blue) and mean incoming solar radiation sums (yellow) on VWD. Whiskers of one SD are added to the parameters in the respective colors. Mean hourly wind speeds for every hour in the observational period are shown in plot (c). The bottom plot (d) shows hourly wind directions in same period. Calm hours are shown as transparent boxes in plot (d). Both (c) and (d) show the VWD data with higher luminance.

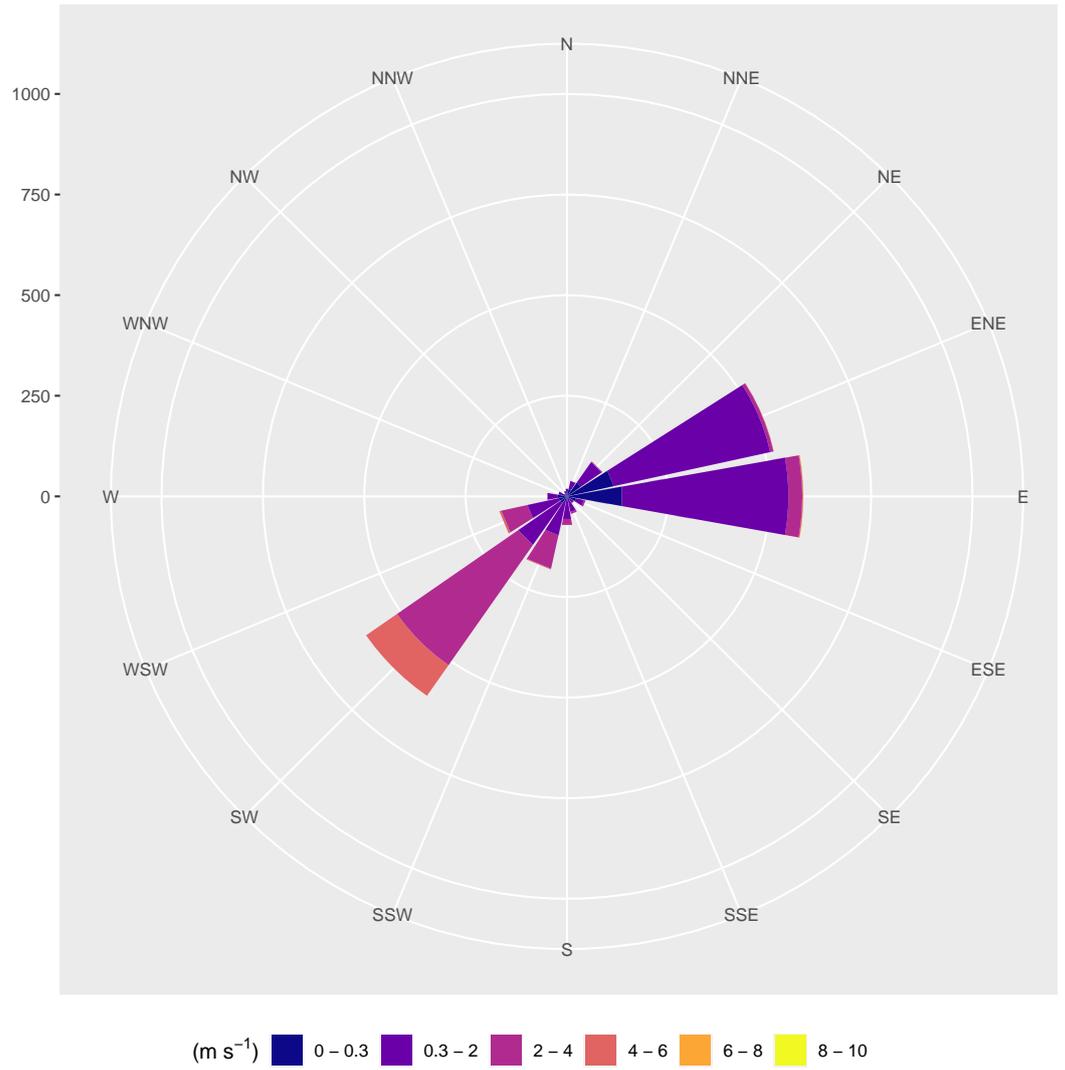


Figure S8. Windrose of hourly wind speeds during the VWD at the Gompa station.

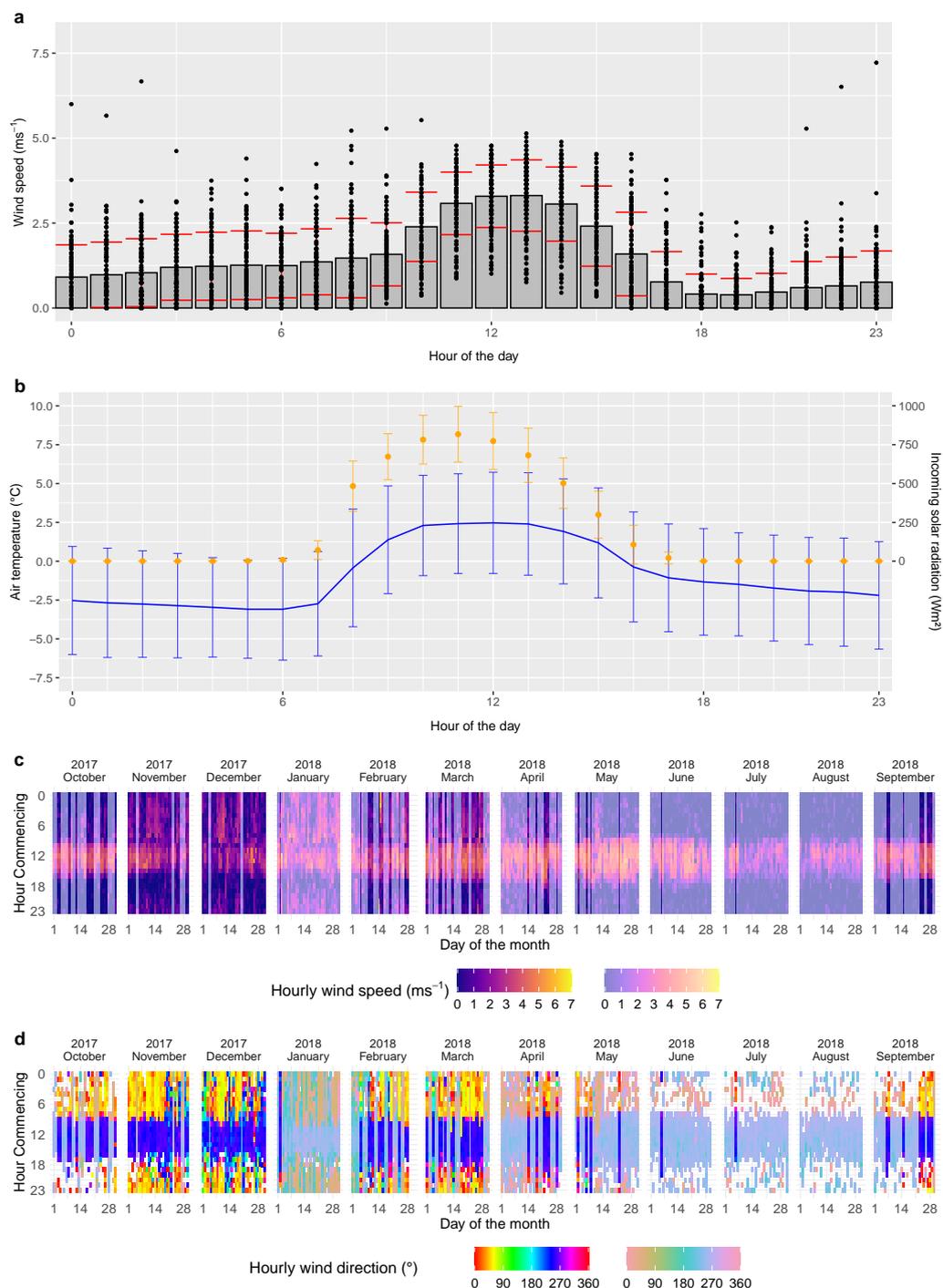


Figure S9. Wind speeds and direction during valley wind days at Dudgunda station. Topmost position (a) shows the hourly mean value of wind speed on VWD as bar height with red SD whiskers. Hourly data is provided as black dots. Plot (b) consists of the hourly means of temperature (blue) and mean incoming solar radiation sums (yellow) on VWD. Whiskers of one SD are added to the parameters in the respective colors. Mean hourly wind speeds for every hour in the observational period are shown in (c). The bottom plot (d) shows hourly wind directions in same period. Calm hours are shown as transparent boxes in plot (d). Both (c) and (d) show the VWD data with higher lumination.

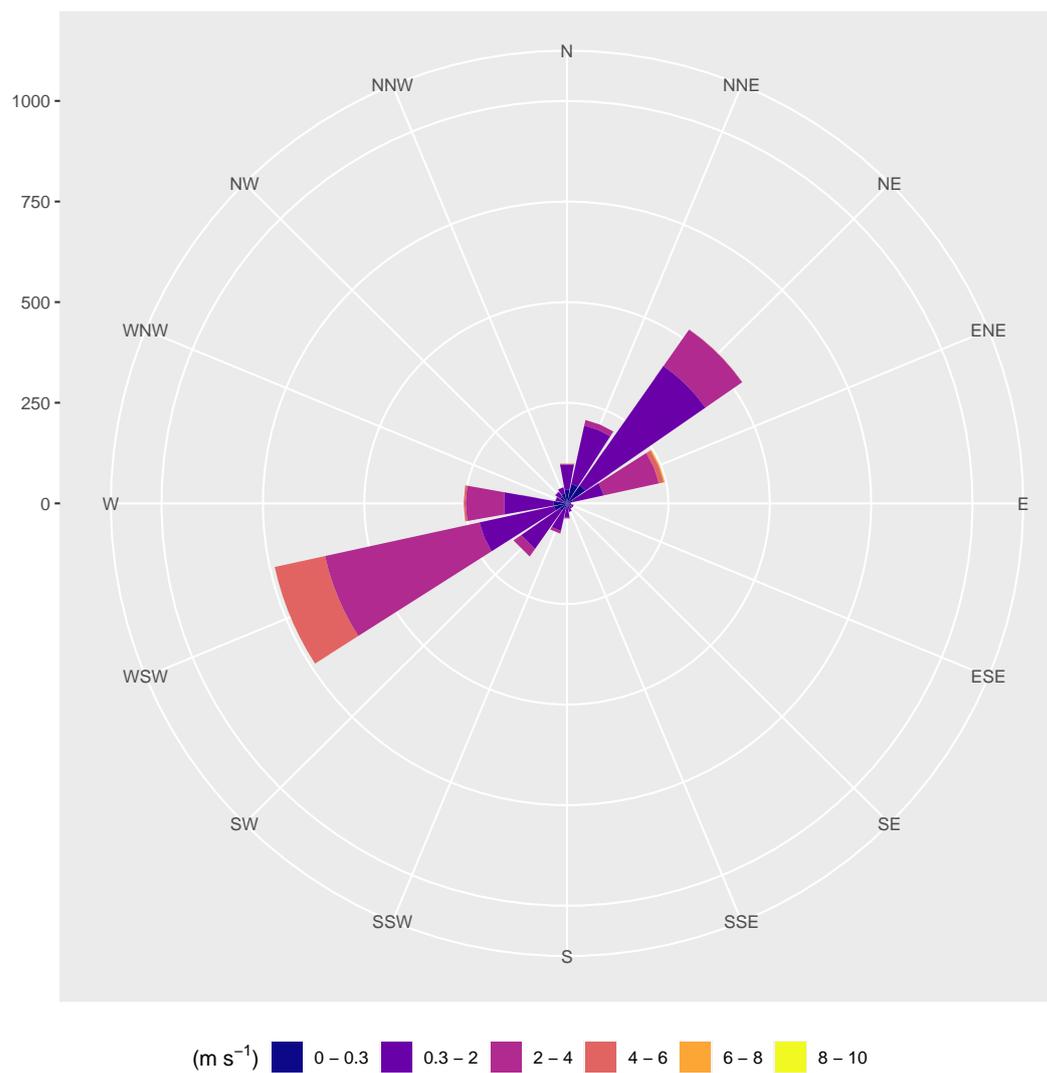


Figure S10. Windrose of hourly wind speeds during the VWD at the Dudgunda station.