Hourly temporal distribution of wind

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The wind process is essential for hydrometeorology and additionally, is one of the basic renewable energy resources. Most stochastic forecast models are limited up to daily scales disregarding the hourly scale which is significant for renewable energy management. Here, we analyze hourly wind timeseries giving emphasis on the temporal distribution of wind within the day. We finally present a periodic model based on statistical as well as hydrometeorological reasoning that shows good agreement with data.