Fallback Atmosphere models for Lidar Measurements without corresponding radio-sounding data and Modelling of a Local Atmosphere Model from Historic Radio-Sounding Data. Example of the Sao Paulo Lidar Metropolitan Station.

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Abstract: We compare the performance of some available atmospheric models for the atmosphere of Sao Paulo (Brazil), which are used in case of absence of radio-sounding data for the given day. We developed our own model (SPm) from historic radio-sounding data in order to have a localized model. By performing inversions of lidar signals (distributed over a year), we could benchmark the performance of the models against radio-sounding data. SPm and ISA-15N show the smallest deviation and represent, therefore, the best fallback models.

References

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