

Hardware-software system for monitoring of atmospheric water vapor structure in the city of Kazan

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Abstract

© Published under licence by IOP Publishing Ltd. Methodology and software to reconstruct the spatial-temporal structure of water vapor in the troposphere by GNSS signals measured by ground-based receivers is developed. In this paper, measurements of a satellite navigation system receiver network located near the city of Kazan are used. It is shown that using a tomographic approach it is possible to reconstruct the altitude profile of the refractive index in the lower atmosphere and its space-time variations. The tomography method gives less smoothed results than Tikhonov's method.

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