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GPS可降水量与大雾天气关系的初步分析(PDF)

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Title: Preliminary analysis of relationship between GPS-based precipitable water vapor and weather with dense fog

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关键词: [地基GPS](#); [遥感](#); [可降水量](#); [大雾](#)

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摘要: 利用2007年12月成都地基GPS网络观测数据反演的大气可降水量和地面自动气象站网观测资料,分析了成都市交通和环境造成严重影响的7次大雾天气过程。通过对有雾和无雾时GPS可降水量、地面空气比湿的合成分析,从雾区上空和近地层水汽变化分析了四川盆地辐射雾形成的原因,而GPS降水量的日变化特征可为大雾天气的短时临近预警预报提供有价值的参考信息。

Abstract: In this paper, the precipitable water vapor derived from GPS (GPS PWV) was investigated based on the observation experiment of ground-based GPS network and automatic weather stations in the

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Chengdu area in December 2007. By using the GPS PWV data, seven fog processes causing serious traffic and environmental impact over the Chengdu area were analyzed. The integrated analysis of diurnal cycles of the GPS PWV and specific humidity were carried out according to cases with and without fog. The causes of the radiation fog in Sichuan Basin were explained in the view of the water vapor change over the fog area and in the surface layer. The feature of diurnal variations of the GPS PWV has some valuable reference information on early warning and forecast of dense fog.

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