

MSSA Analysis Of Seasonal Loading-Induced Deformation From GNSS Time Series

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1. Introduction and study objectives

- can be monitored by space geodesy (e.g. GNSS and GRACE)
- snow and soil-moisture
- models
- not yet explained by the loading models
- in the world mainly due to the river level variations



- account for rivers (better correlation MERRA: 72 % -> 79 %; GLDAS: 76% -> 85 %; lesser RMS differences MERRA: 3.8 mm -> 1.6 mm; GLDAS: 3.5 mm -> 1.8 mm)



GNSS sites (Figure 8) at different periods (few hours to seasonal) in order to confirm the results and to infer geophysical interpretations.

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4. Analysis using Taylor Diagram





ATMMO +MERRA ■ ATMMO +GLDAS ■ GRACE Figure 8: Overview on all GNSS station



ATMMO +MERRA +river ATMMO +GLDAS +river ATMMO +MERRA ATMMO +GLDAS GRAD