Spatiotemporal analyses of annual change seen in daily position data observed at continuos GPS measurements in the Japan Islands

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Continuos GPS observations are performed by GSI all over the Japan Islands and the daily position in three dimensions is determined at each station. There are clear annual components in addition to secular movements in the accumulated data. We made spatiotemporal analyses for this component in relation to secular component that results from plate movements. In these analyses, we found correlation between these components, and further that this seasonal change may cause large earthquakes which occur at subduction zone. We may, therefore, conclude that annual component is produced by plate movement from this viewpoint, though there still remain some rooms for investigation including the problem of driving mechanism.