



Using Smartphones for Monitoring Atmospheric Tides

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Smartphones are very popular today, and contain many interesting features such as MEMS pressure sensors. In our research, we focused our attention into the pressure data from various phones - trying to sense different atmospheric phenomena. We placed four phones around Tel Aviv University campus, and after analyzing the data over the course of one year, we were able to see the Semi-Diurnal Atmospheric Tides very clearly. Our next step was to use larger data set from the Weather-Signal app by OpenSignal - which contains tens of thousands of users. And again, with similar data analysis methods, we were able to clearly see the Semi-Diurnal Tides on a global scale. We assess the pressure sensors as being very reliable for further Atmospheric Research, that can lead to the investigation of other atmospheric phenomena, and even data assimilation for weather models.