Status and Plans for the Vienna VLBI and Satellite Software (VieVS 3.0)

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The Vienna VLBI and Satellite Software (VieVS) is state-of-the-art Very Long Baseline Interferometry (VLBI) analysis software for geodesy and astrometry. VieVS has been developed at Technische Universität Wien (TU Wien) since 2008 where it is used for research purposes and for teaching space geodetic techniques. In the past decade, it has been successfully applied on Very Long Baseline Interferometry (VLBI) observations for the determination of celestial and terrestrial reference frames as well as for the estimation of celestial pole offsets, Universal Time (UT1‒UTC), and polar motion based on least-squares adjustment. Furthermore, VieVS is equipped with tools for scheduling and simulating VLBI observations to extragalactic radio sources as well as to satellites and spacecrafts ‒ features which proved to be very useful for a variety of applications. Furthermore we are planning to extend VieVS to other space geodetic techniques as well. We will integrate a new module to carry out Precise Point Positioning (PPP) of GNSS data and we will enable the processing of Satellite Laser Ranging (SLR) data. A ray-tracing program written in Fortran is also added to the VieVS software package. VieVS is now available as version 3.0 and we do provide the software to all interested persons and institutions.