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The Vienna VLBI Software VieVS - latest developments

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The Vienna VLBI Software (VieVS) has been developed at the Institute of Geodesy and Geophysics of the Vienna University of Technology since 2008. The software features VLBI data processing following the latest IERS Conventions, easy handling through graphical user interfaces, and optimal prerequisites for extension and adaption to the users' demands. We give an overview on the present state of VieVS, the set-up of the latest release, as well as on its performance by showing selected results. The main emphasis of this poster is placed on the newly developed add-on modules, which include the scheduling tool Vie_sched for optimal assignment of antennas and observing times, the simulation of observation data on the basis of troposphere turbulence models, stochastic clock errors and white noise (Vie_sim), and the implemented global solution (Vie_glob) for reducing and stacking the normal equations and subsequent derivation of a terrestrial and celestial reference frame or of geodynamical parameters. Further innovations currently under development are the usage of ray-traced atmospheric delays, an alternative ionosphere correction on the basis of TEC maps from GNSS, and the evolution of D-VieVS, that is software for processing differential VLBI data intended to navigate various space probes.