Introduction

The Vienna VLBI Software (VieVS) is state-of-the-art VLBI analysis software, developed and maintained by the VLBI group at Technische Universität Wien since 2008, with important contributions of other groups worldwide. VieVS is designed for the analysis of geodetic VLBI observation data, as well as for scheduling and simulation of different VLBI sessions. The software incorporates the latest IERS Conventions and uses the concept of continuous piecewise linear offsets at integer hours for the parameter setup, consistent with the terms of reference of the GGOS. VieVS comes with a graphical user interface and is written in MATLAB for convenient handling and coding. This also facilitates entry into VLBI analysis for students.

Chapter 1: VieVS structure

VieVS is available free of charge for registered users. Registration: If you want to have access to VieVS, take a look at the VieVS-Wiki webpage (http://vievs.geo.tuwien.ac.at/) under the heading “Get VieVS”.

Current VieVS Reference:

Chapter 2: VieVS features

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VieVS-Wiki webpage (http://vievs.geo.tuwien.ac.at/), provides an open platform for VieVS related topics.

A full documentation can be accessed.

How can I become a user?

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System requirements

- MATLAB 7.6 (R2008a) or later.
- Tested on Linux and Windows.

Future plans

Source structure
- Refining simulations
- Correct observations for source structure effects

Ray-traced delays
- Improved tropospheric delay modeling based on ray tracing
- Direct application for all VLBI observations

Schedule satellite observations
- Generation of fully realistic schedules for simulations and actual satellite observations
- Combination of observations to quasars and satellites in one session

Twin and sibling telescopes
- Improved scheduling capabilities with dedicated optimization approaches

Implementation of up-to-date file formats
- VEX 2.0 for schedule files
- VGOS database files (NetCDF)

GNSS-VLBI Hybrid System
- Combination of GNSS and VLBI data at the observation level
- Introduction of local tie vectors on site common parameters

6th VieVS Workshop

- Introduction to VieVS and practical exercises to learn how to work with the software
- September 23-24 2015, at Technische Universität Wien, Vienna, Austria

We highly appreciate the contributions of all former members of the VieVS developer team!