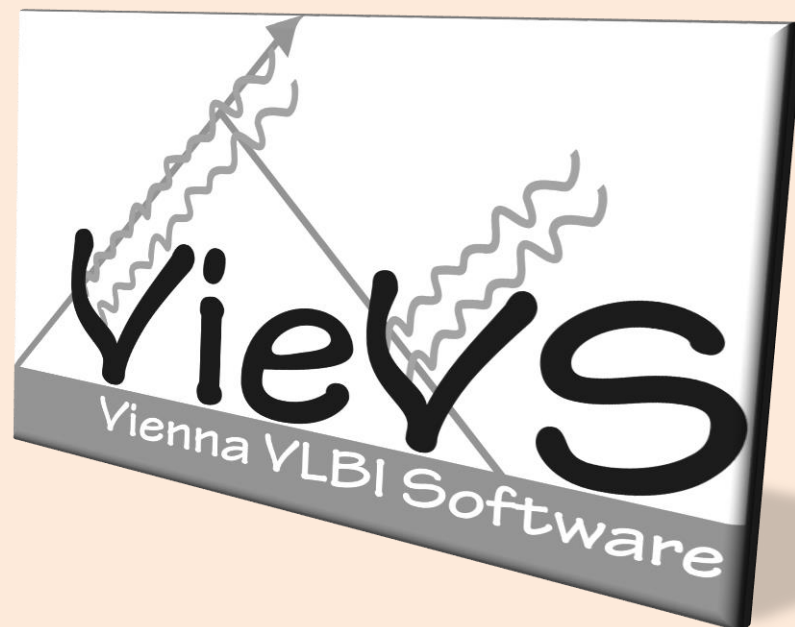


# Special files, OPT-file & Problems

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# Content

- Process list
  - GUI
  - mk\_list
- Parameter files
- OPT files
  - Exercise

# Creating your own process lists

- Sometimes it is good to have predefined lists of sessions which you process often (e.g. all R1/R4, CONT sessions or all intensive sessions)
- Simply choose this list in the GUI
- Predefined process lists should be saved in the **/WORK/PROCESSLIST/**directory (default directory)

# Creating process lists with VIE\_SETUP

- Start VIE\_SETUP with:

>>views

- Select the sessions you want to include in the list
  - *File/set input files* and press *Browse for sessions*
- The process list can be saved with
  - *File/Parameter files/Save parameters as...*
- And loaded by clicking on *Browse for process\_list*
- by default process lists are saved to the directory ***/WORK/PROCESSLIST/***

# Creating process lists with `mk_list`

- With the MATLAB script `mk_list.m` (located in the **/WORK** directory) you can create individual process lists
- Useful for creating lists of e.g. all R1/R4 sessions, or all sessions with a specific station.
- The created lists will include only sessions the NGS-files of which exist in the **/DATA/NGS** directory.

# Syntax of `mk_list`

- `[process_list, sess]=mk_list(s1,s2,...)`  
where `s1`, `s2`, etc. are strings containing the types of sessions you want to include (e.g. 'R1', 'EURO', 'RDV',...). Use 'all' to get all sessions.  
`process_list` is the list of sessions  
`sess` contains the session names
- To make the process list available in the VieVS GUI, save it in the **/WORK/PROCESSLIST** directory:  
`save PROCESSLIST/mylist2.mat process_list`

# Options & examples for mk\_list

- **To only include sessions from specific years:**

```
process_list=mk_list(..., 'YEARS', yrs)
```

where `yrs` is an array with the years you want to include

**e.g. Create a list of all R1/R4 between 2003 and 2007:**

```
process_list=mk_list('R1', 'R4', 'YEARS', 2003:2007)
```

- **To only include sessions with a specific station:**

```
process_list=mk_list(..., 'REQSTAT', sta)
```

where `sta` is the two-letter ns-code of the station

**e.g. All sessions of 2011 which METSAHOV has participated in:**

```
process_list=mk_list('all', 'REQSTAT', 'Mh', 'YEARS', 2011)
```

# Options & examples for mk\_list

- **process\_list=mk\_list(..., 'ALLVERSIONS')**  
includes all versions of the NGS files, not just the latest  
**e.g. All CONT11 sessions, including all versions of the NGS files (in case there are more than one):**  

```
process_list=mk_list('C11', 'ALLVERSIONS')
```
- **To exclude some sessions specified in a list:**  

```
process_list=mk_list(..., 'EXCLUDE', excllist)
```

  
where `excllist` is the file name of the list containing the sessions to be excluded  
**e.g. All R1/R4 in 2009, except those listed in *exclude.txt*:**  

```
process_list=mk_list('R1', 'R4', 'YEARS', 2009, 'EXCLUDE', 'exclude_views.txt')
```



# Format of file (*exclude.txt*) with excluded sessions

- Same format as:  
[http://lupus.gsfc.nasa.gov/files\\_IVS-AC/eop\\_exclusion.txt](http://lupus.gsfc.nasa.gov/files_IVS-AC/eop_exclusion.txt)  
(list of sessions not suitable for EOP determination)
- Test file *exclude\_TEST.txt* (to exclude some stations from CONT11)

```
$11SEP15XA  
$11SEP16XA  
$11SEP21XA  
$11SEP27XA
```

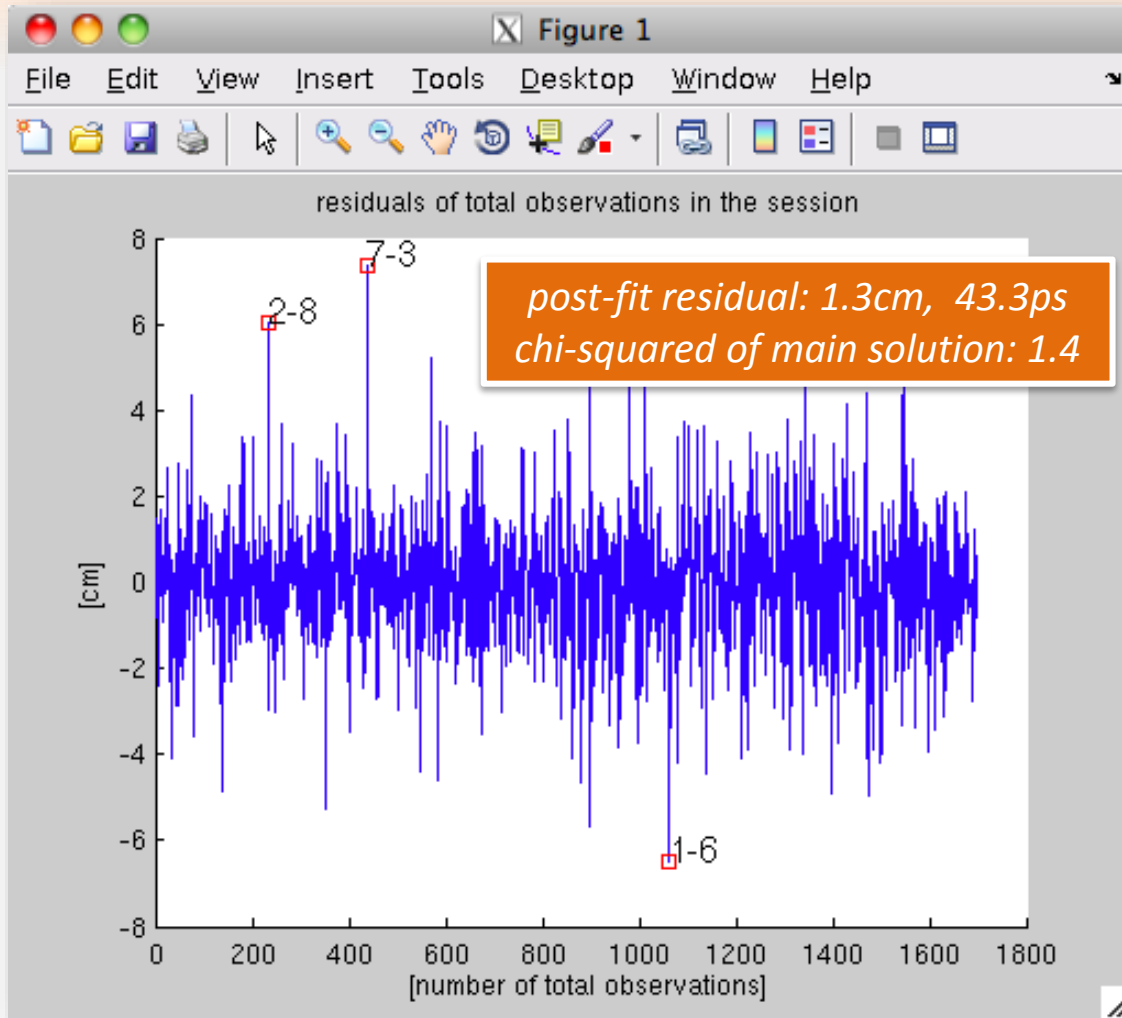
# Creating parameter files

- Run VIE\_SETUP:  
>> *views*
- Select the options you like under *Parameters* and *Estimation*
- Save the parameter file in the ***/PARAMETERS/*** directory by choosing *File/Parameter files/Save parameters as ...*
- You can then load the file by choosing *File/Parameter files/Load parameters...*

# OPT files

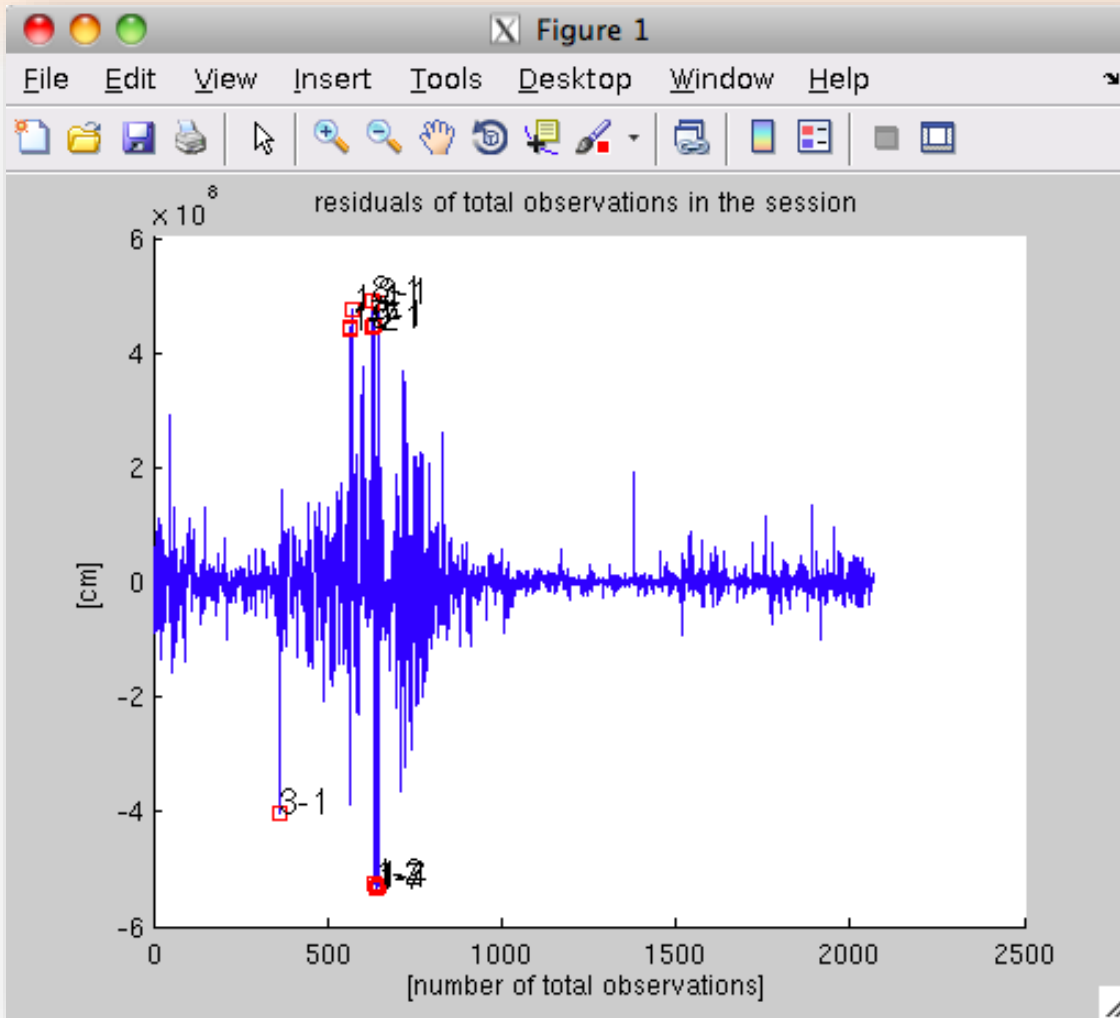
Detecting & Solving Problems

# In most cases, everything works fine



- Residuals of main solution less than a few cm
- Chi-squared of main solution below 3
- Occasional outliers can exist

# In some cases, problems occurs...



- Many large residuals
- Chi-squared of main solution much larger than 3
- This indicates that there is a problem with the session that needs to be fixed

# Problematic VLBI session

- Problems that can occur:
  - Clock breaks
  - Bad stations, sources, baselines,...
  - Few observations for one station
  - ...
- Identifying the problem:
  - Investigation of the data (residual plots etc.)
  - Correlation reports, analysis reports etc.
  - Divine inspiration...

# OPT files

Now let's continue with the exercise.