

Submission and Use of IVS Analysis Reports

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Goals of this workshop topic:

To promote analysis report

- Awareness
- Use
- Submissions
 - Currently only GSFC and USNO submit.
 - We hope other ACs will begin doing so.

What are analysis reports (aka analyst reports, analysis comments)?

Collection of observation counts, session statistics, and analyst comments about version 4 database analysis

e-mailed to ivs-analysis@lists.nasa.gov and sessions-ivsc@nasa.gov

Christopher Dieck

r4804 (\$17AUG10XE) IVS Analysis Report

Gordon, David

crf102 (\$17JUL19XN) NASA Analysis Report

24-hour session report excerpt

Problems: KOKEE could not observe due to storm damage.

NYALES20 experienced heavy snow for the first five hours.

Due to a power outage, WESTFORD's data will be sent and correlated later.

Session Statistics

Observations: 3652 scheduled
 3357 correlated (in database)
 3109 recoverable (usable)
 2989 used
 Session fit: 37.426 ps

Station Performance

	Number of Observations			
	Scheduled	Recoverable	Used	% of scheduled obs used
FORTLEZA	552	456	442	80.1%
.....				
Station Total	3652	3109	2989	81.8%

Source Performance

	Number of Observations			
	Scheduled	Correlated	Used	% of scheduled obs used
0444+634	20	16	12	60.0%
.....				
Source Total	3652	3357	2989	81.8%

Baseline Performance

	Number of Observations			
	Scheduled	Recoverable	Used	% of scheduled obs used
FORTLEZA-HART15M	191	148	147	77.0%
.....				
Baseline Total	3652	3109	2989	81.8%

Intensive report excerpt

Number of observations rejected during correlation: 0

Number of observations not usable by the software: 2

observation 9, KOKEE :WETTZELL, 1636+473, 18:51:40,
 quality code X-band: 9 S-band: 0

observation 13, KOKEE :WETTZELL, 1636+473, 19:07:08,
 quality code X-band: 9 S-band: 0

Number of observations rejected during analysis: 0

Other comments: Does not include SVETLOE (no data yet).

Parameterization:

6 parameters:

UT1 offset

atmosphere offset for:

KOKEE WETTZELL

clock offset, first order term, and second order term for:

WETTZELL

Session Statistics

Observations: 21 scheduled
 21 correlated (included in the database)
 19 recoverable (usable in Solve/nuSolve)
 19 used

Session fit: 38.057 ps

UT1 formal error: 10.25 microsec

Source Performance

Number of Observations

	Scheduled	Correlated	Used
0716+714	1	1	1
0920+390	2	2	0
...			
2229+695	1	1	1
Source Total	21	21	19

Analysis Reports have an official role within IVS:

- Equivalent to correlator reports
- Provide accompanying information about official IVS version 4 databases and vgosDB files

Analysis reports are also useful:

Analysis Reports provide quick feedback about version 4 session analysis to:

- Stations (revealing station problems)
- Correlators (revealing correlation problems)
- Analysis Centers (as a cross check on their own analysis)

Analysis Reports are used by the Network Coordinator's staff for:

- Information about known or on-going problems
- Revelation of new problems
- Use in generating Network Coordination statistics

Analysis Reports are useful for analysts who need historical information for specialized analysis and research.

Where do you find analysis reports?

- e-mailed to ivs-analysis@lists.nasa.gov and sessions-ivsc@nasa.gov
- e-mailed to subscribers who sign up with individual Analysis Centers
- IVS web site (currently being filled), e.g.
<https://ivsc.gsfc.nasa.gov/sessions/2017/r4777/> (click on analyst comments in the analysis section)
- IVS Data Centers (currently being filled), e.g., within `ivsdata/aux/2017/r4777`, file `r4777-IVS-analysis-report.txt` or file `r4777-NASA-analysis-report.txt`.
 - Names such as `R4777-analyst.txt` are obsolete and ambiguous – please ignore them.

Analysis report submission status:

Current status

Generated and submitted by the USNO and GSFC ACs.

Target goal

To have all Analysis Centers submit reports for the sessions they are responsible for submitting to IVS (e.g., BKG T sessions, GSFC R1s, USNO R4s, GSI INT02s)

Reports should be labeled as IVS in file name and title because these accompany official IVS data versions (e.g., r1823-IVS-analysis-report.txt,
IVS Analysis Report for R1823 (\$18JAN02XA)).

Also welcome

Contributed reports from any interested Analysis Center

Reports should be labeled by Analysis Center in file name and title (e.g., r1823-USNO-analysis-report.txt,
USNO Analysis Report for R1823 (\$18JAN02XA)).

Report processing method:

Report generation method

GSFC AC maintains and distributes a set of scripts (anl_comments) to generate and fill in automated report templates based on schedules, observed data, and Solve/nuSolve spoolfiles.

Analysts review and edit the report templates and add comments.

The scripts could be adapted to read output from other software packages by other Analysis Centers or (subject to time constraints) by GSFC AC or with GSFC AC's help.

Report distribution method

The scripts mail the reports to addresses in a local mailing list and to ivs-analysis and sessions-ivsc.

The reports can also be submitted to an IVS Data Center (currently manually, but anl_comments will be upgraded to do this).

Spoolfiles are handled in parallel.

Conclusions

1. IVS and its members benefit from the generation and distribution of analysis reports.
(If you haven't looked at these, please do!)
2. Analysis Centers that generate official IVS session versions should produce these.
3. Other Analysis Centers are also encouraged to do so. (Sometimes two sets of eyes are better than one.)

Discussion?