Analysis of intensive sessions at BKG

24th Meeting of the European VLBI Group for Geodesy and Astrometry (EVGA)

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BKG Analysis Center

- **Data collection and mirroring**
  - Mark - 3 data base
  - Auxiliary data
  - vgosDb *new

- **Data processing**
  - Calc/Solve version 11.01  SOLVE release 2014.02.21
  - nuSolve-0.6.2 (*new in test mode)

- **Products**
  - BKG EOP time series
  - daily SINEX and SINEX for intensives sessions
  - Tropospheric parameters (zenith delays and horizontal gradients) from the standard global solution
  - CRF, TRF (Quarterly solutions)
  - Scheduling SKED
Intensive Sessions: BKG time series
### Intensive Sessions

- **INT1**
  - $Kk(Ts/Is)Wz(Sv), \text{\textquoteleft \textquoteleft XU\textquoteright \textquoteright}$
  - ? New intensives
    - $MkPtWnWz, \text{\textquoteleft \textquoteleft XW\textquoteright \textquoteright}$
- **INT2**
  - $Is(Ts)Wz, \text{\textquoteleft \textquoteleft XK\textquoteright \textquoteright}$
- **INT3**
  - $Is(Ts)Ny(Sh)WnWz, \text{\textquoteleft \textquoteleft XK\textquoteright \textquoteright}$
- Intensives before 2002
  - $KkWz, \text{\textquoteleft \textquoteleft XU\textquoteright \textquoteright}$

<table>
<thead>
<tr>
<th></th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
<th>Experiments at Feb 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT3</td>
<td>7:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>30 vgosDb / 470 mark3db Till Nov-17</td>
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<tr>
<td>INT1</td>
<td>8:30</td>
<td>7:15</td>
<td>INT1, XW'</td>
<td>INT1, XW'</td>
<td></td>
<td></td>
<td></td>
<td>10 vgosDb / 8 mark3db</td>
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<tr>
<td>INT1</td>
<td>XU' 18:30</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT2, XK'</td>
<td>INT2, XK'</td>
<td>3760/1490 mark3db</td>
</tr>
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<td>XU' 18:30</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT2, XK'</td>
<td>INT2, XK'</td>
<td>700 mark3db</td>
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<tr>
<td>INT1</td>
<td>XU' 18:30</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT1, XU'</td>
<td>INT2, XK'</td>
<td>INT2, XK'</td>
<td>700 mark3db</td>
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**Intensives before 2002**
Intensive Sessions: BKG time series

Delays

- INT3: 32%
- INT2: 15%
- INT1: 7%
- Old: 7%

Sources

- INT3: 22%
- INT2: 7%
- INT1: 3%
- Old: 2%

Stations

- INT3: 55%
- INT2: 23%
- INT1: 11%
- Old: 4%
Standard parametrization for Intensive session analysis at BKG

- Clock polynomials (up to 2\textsuperscript{nd} degree)
- Atmospheric parameters (offset)
- dUT1
- VTRF2008a station position and velocities
- ICRF2 source positions
- EOP: usno_finals.erp
- External tropospheric data based on VMF1
- Other reductions w.r.t. IERS Conventions recommendations
Intensive session analysis at BKG
dUT1 time series

Time series of dUT1 estimates

Time series of dUT1 formal errors
Intensive Sessions: BKG time series
Intensive session analysis at BKG
dUT1 estimates: TRF changed
Intensive session analysis at BKG
dUT1 estimates: CRF changed
Outline of intensive session analysis at BKG

- Currently we have a decent set of observations
- However this data set suffers of the lack of data
- TRF update
  - Demand for Tsukuba coordinates
  - ITRF2014 provides no Wz13N coordinates
- CRF update seems to be smooth
Thank you for your attention!

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