VLBI Intensives

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VieVS

Intensives

Why Intensives?
- dUT1 values
- as soon as possible
- needed for GNSS

How can this be achieved?
- dUT1 $\rightarrow$ east-west baseline
- speed $\rightarrow$ only two stations and short timespan (1h) $\rightarrow$ less data
- speed $\rightarrow$ small datarate (128 Mbps) $\rightarrow$ less data

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Intensives Analysis

24h sessions:

- station coordinates
- source coordinates
- EOP (xp, yp, dUT1, X, Y)
  - xp, yp
  - dUT1
  - X, Y
- troposphere
  - ZWD
  - gradients
- clock
  - offset + rate
  - polynom order 2
  - PLO
- ...

1h Intensive

- dUT1
- ZWD
- clock

$\rightarrow$ far less parameters
(typically 8)

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Intensives Networks

- WETTZELL, KOKEE (IVS: TUE, WED, THU, FRI)
- WETTZELL, ISHIOKA (IVS: SAT, SON)
- WETTZELL, ISHIOKA, NYALESON (IVS: MON)

- MK-VLBA, PIETOWN, LA-VLBA (USA)
- BADARY, SVETLOE, ZELENCHK (Russia)

- **WETTZ13N, RAEGSMAR (Europe) ???**

European Intensives   Scheduling

	PIET	LA_V	MK_V	BADA	ZELE	SVET	WN	SA
Diameter [m]	25	25	25	32	32	32	13.2	13.2
Slew r. az. [°/min]	90	90	90	60	60	60	**720**	**720**
Slew r. el. [°/min]	30	30	30	30	30	30	**360**	**360**
SEFD X [Jy]	500	500	500	400	400	400	1400	1600
SEFD S [Jy]	400	400	400	600	600	600	1050	1700

European Intensives:

- less sensitive $\rightarrow$ 1Gbps
- less sensitive $\rightarrow$ strong sources
- short baseline $\rightarrow$ faster stations $\rightarrow$ more scans
  - more scans $\rightarrow$ estimate more parameters
  - short baseline $\rightarrow$ good sky coverage
- according to simulations results should be "good"

Lecture VLBI Intensives

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