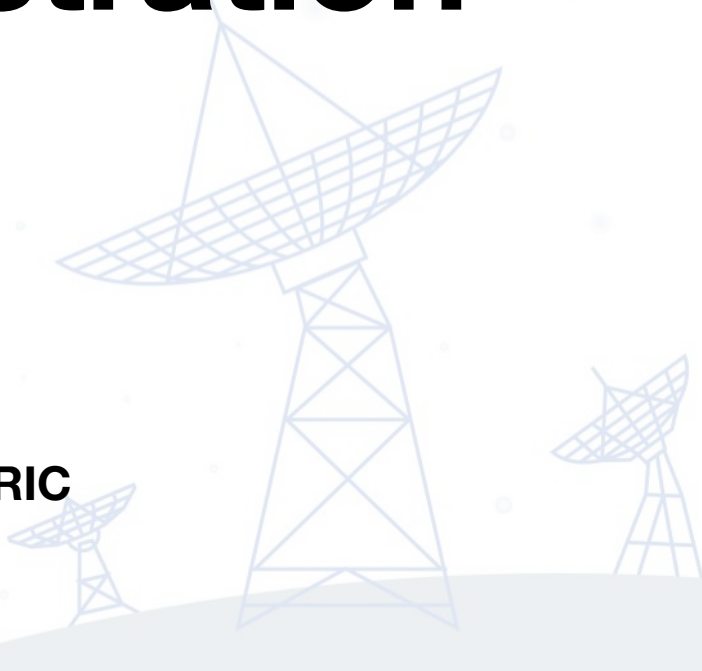


e-EVN demonstration RSM07

Junghwan Oh

Joint Institute for VLBI ERIC

JVS 2025



Yesterday's observation - RSM07

RSM07 18cm L+R 1024 Jb2 Wb1 Ef Mc On85 T6 Tr -- Hh Ir MER 259 1300(16/09)-1600(16/09)

```
source='3C345' gap=0:00 dur=5:00 comment='RSM07' / ! fringe-finder
```

```
source='J1848+3219' gap=3:00 dur=2:00 / ! phase-cal
```

```
group 4 rep 15
```

```
source='3C395' gap=0:00 dur=3:00 / ! target
```

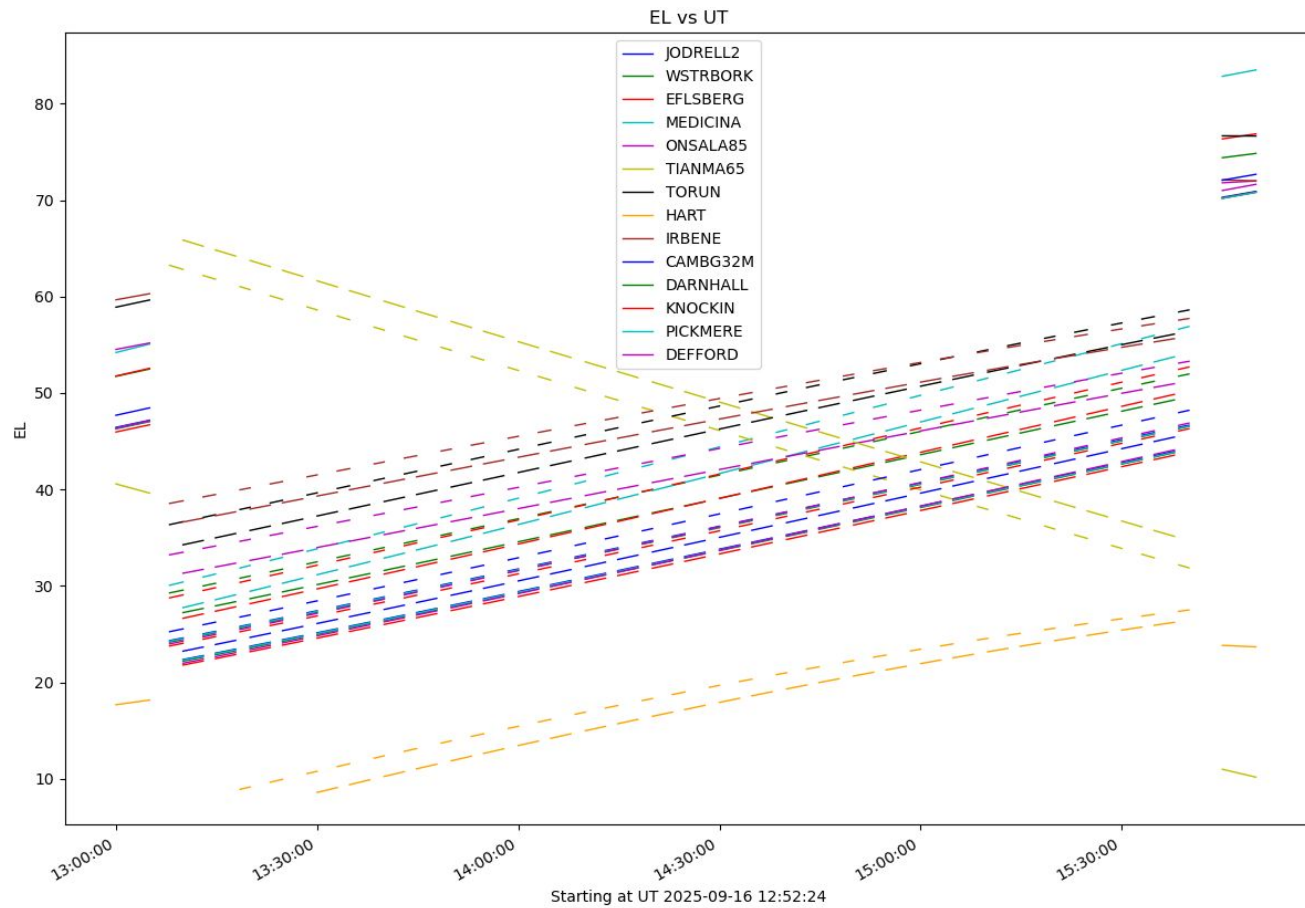
```
source='J1848+3219' gap=0:00 dur=1:50 / ! phase-cal
```

```
source='3C395' gap=0:00 dur=3:00 / ! target
```

```
source='J1848+3219' gap=0:40 dur=1:30 / ! phase-cal
```

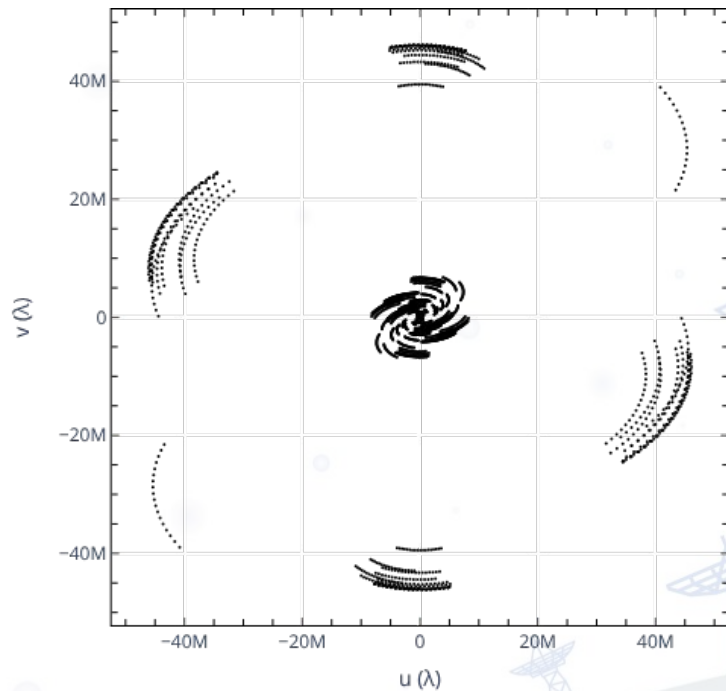
```
source='3C345' gap=5:00 dur=5:00 / ! fringe-finder
```

EL - UT



uv-coverage

estimated rms thermal noise: $14.1 \mu\text{Jy beam}^{-1}$



Longest baseline
10156 km (56.4 M λ)
Hartebeesthoek - Tianma (Hh-T6)

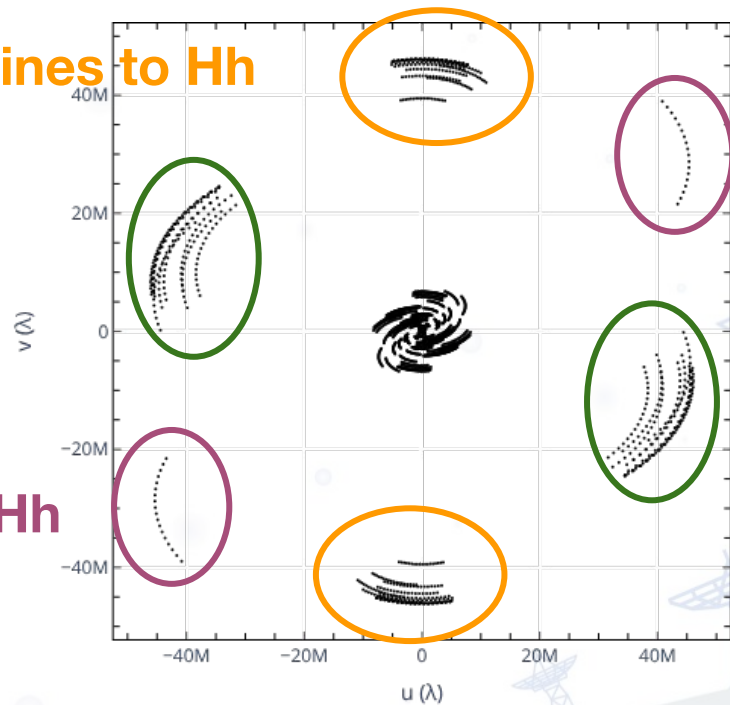
Shortest baseline
6.4084 km (35.6 k λ)
Darnhall - Jodrell Bank (Da-Jb2)

uv-coverage

estimated rms thermal noise: $14.1 \mu\text{Jy beam}^{-1}$

Baselines to Hh

T6-Hh

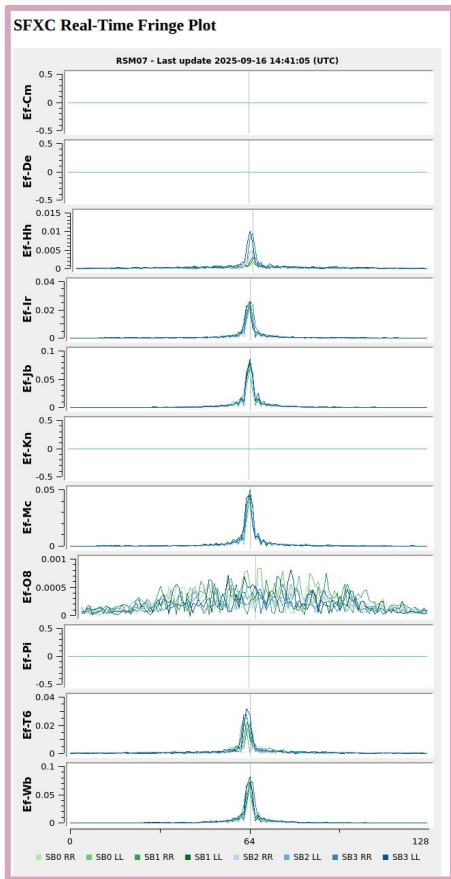


Baselines to T6

Longest baseline
10156 km (56.4 M λ)
Hartebeesthoek - Tianma (Hh-T6)

Shortest baseline
6.4084 km (35.6 k λ)
Darnhall - Jodrell Bank (Da-Jb2)

e-EVN observation



Real-time
correlation



Post-processing
(e.g. PolConvert)



FITS files
metadata
pipeline results



EVN archive

What happened?

RSM07 18cm L+R 1024 Jb2 Wb1 Ef Mc On85 T6 Tr -- Hh Ir MER 259 1300(16/09)-1600(16/09)



What happened?

RSM07 18cm L+R 1024 Jb2 Wb1 Ef Mc ~~On85~~ ~~T6~~ ~~Tr~~ -- Hh Ir ~~MER~~ 259 1300(16/09)-1600(16/09)

On85 Stowed due to strong wind (12:48 UT)

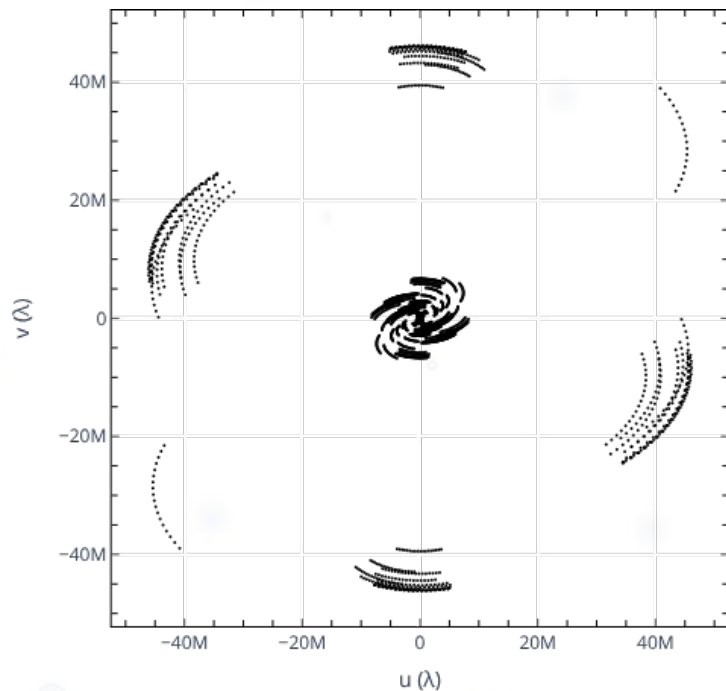
T6 ~65% packet loss. Very slow data transfer

Tr L-band receiver is still under repair

MER ??

uv coverage

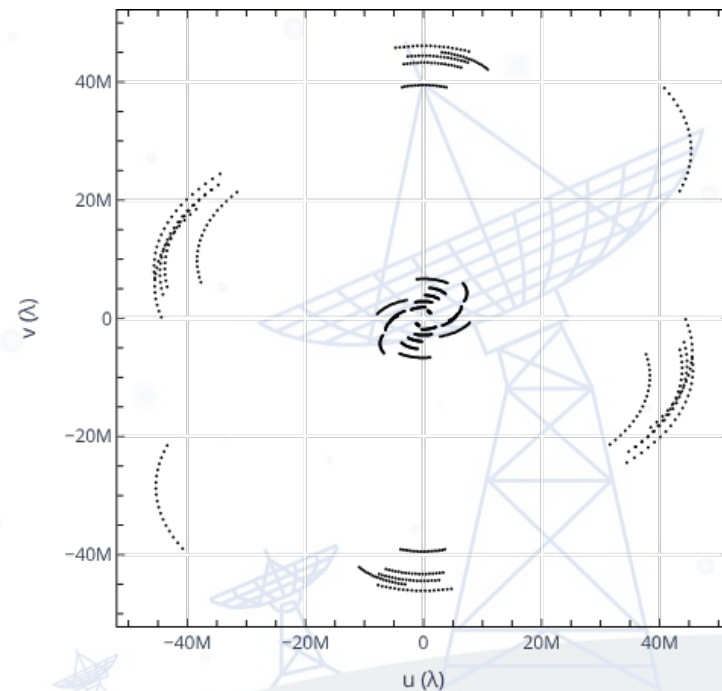
14.1 $\mu\text{Jy beam}^{-1}$



Longest baseline
10156 km (56.4 M λ)
Hartebeesthoek - Tianma (Hh-T6)

Shortest baseline
6.4084 km (35.6 k λ)
Darnhall - Jodrell Bank (Da-Jb2)

18 $\mu\text{Jy beam}^{-1}$



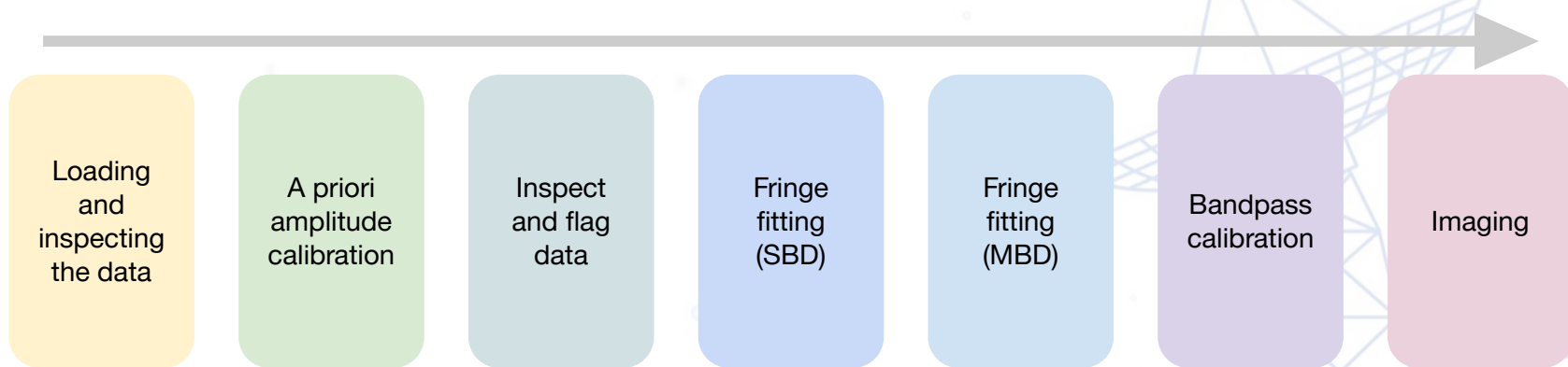
Longest baseline
10156 km (56.4 M λ)
Hartebeesthoek - Tianma (Hh-T6)

Shortest baseline
258.76 km (1.44 M λ)
Effelsberg - Westerbork (Ef-Wb)

Today's plan

Students will be divided into 6 groups

Data reduction will be done together with the tutors



Each group will present their results on Friday