

# Tianlai Cylinder Map-making

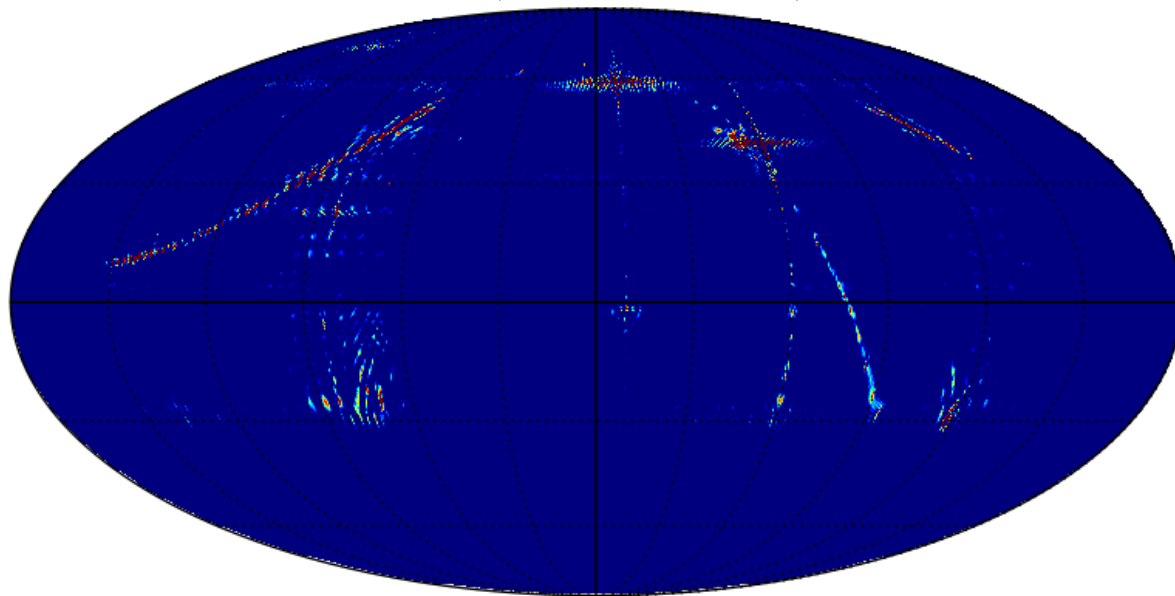
Shifan Zuo

2016.10.13

# Map---All baselines

$$\hat{\mathbf{a}} = (\mathbf{B}^\dagger \mathbf{N}^{-1} \mathbf{B})^+ \mathbf{B}^\dagger \mathbf{N}^{-1} \mathbf{v}$$

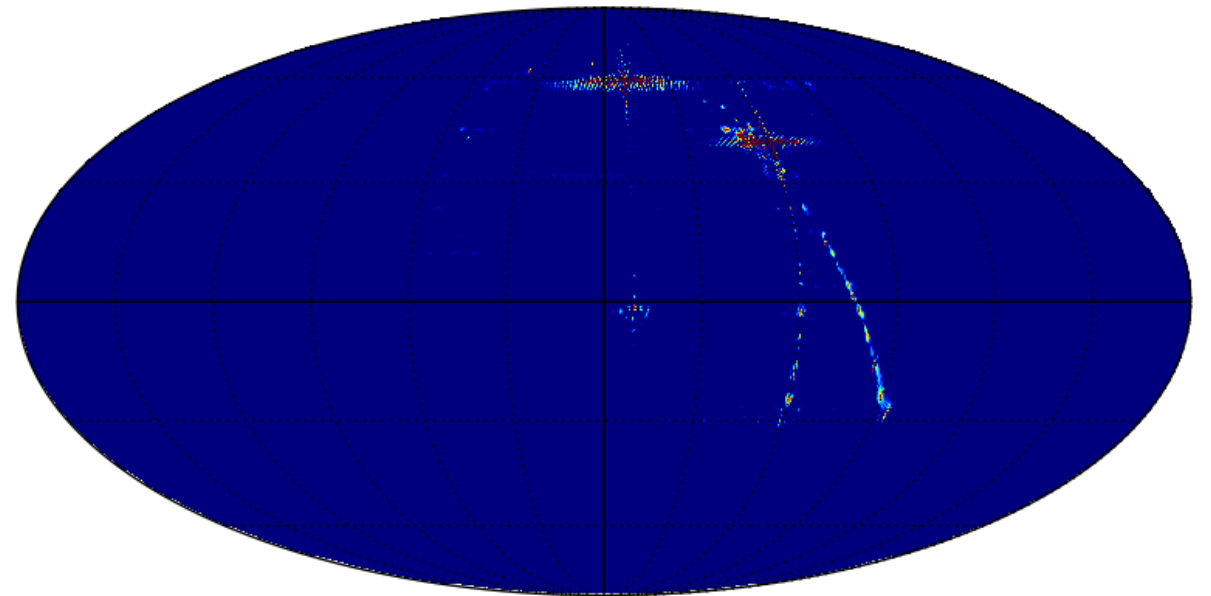
$$= (\mathbf{N}^{-\frac{1}{2}} \mathbf{B})^+ \mathbf{N}^{-\frac{1}{2}} \mathbf{v}$$



14000

50000

Day and night

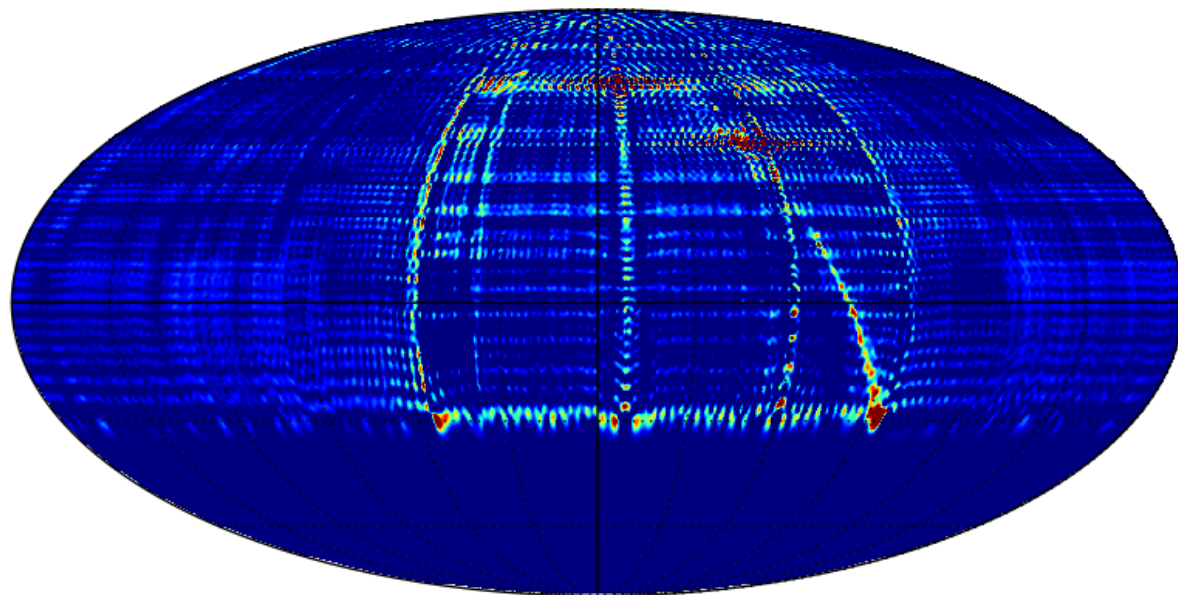


14000

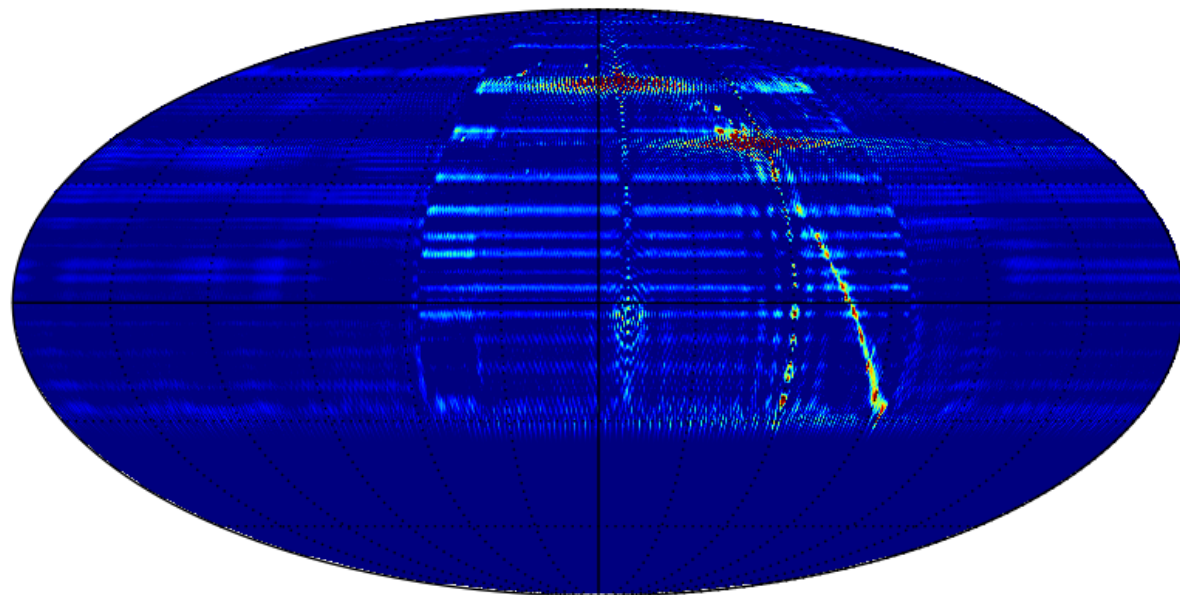
50000

Only night

# Map---Short Baselines



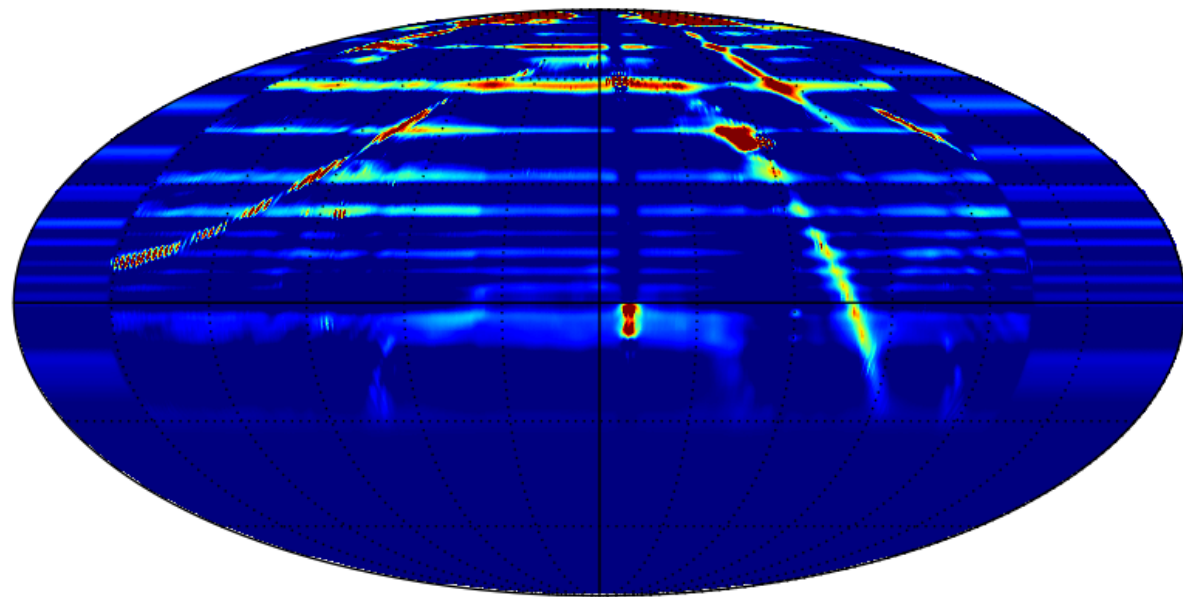
< 13.0m



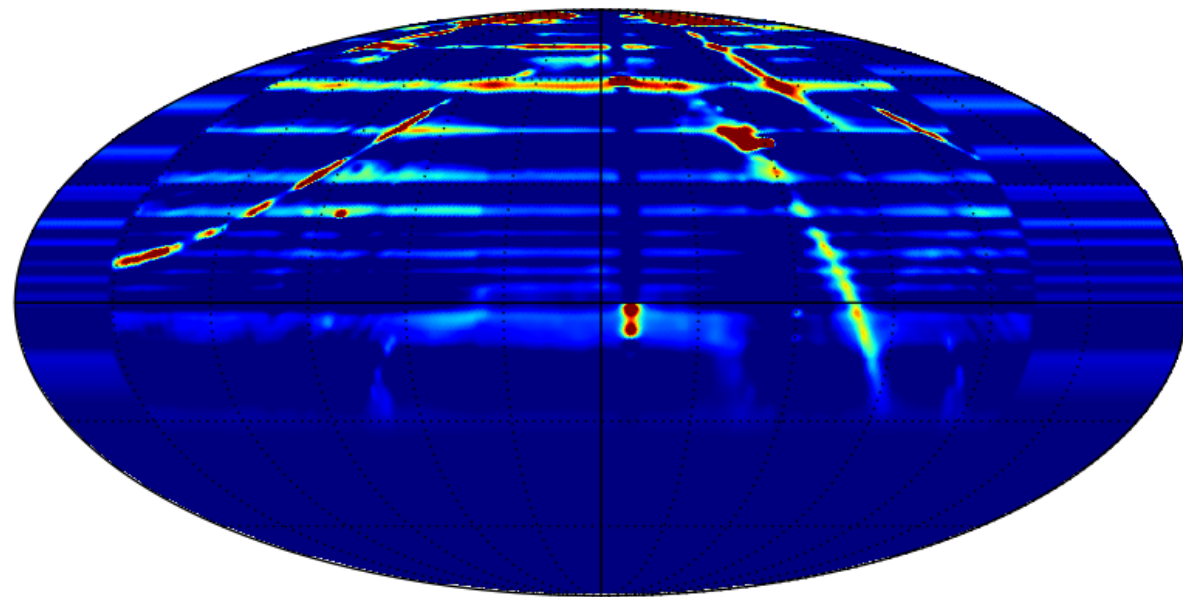
< 20.0m

# Dirty Map

$$\hat{a} = \mathbf{B}^\dagger \mathbf{N}^{-1} \mathbf{v}$$

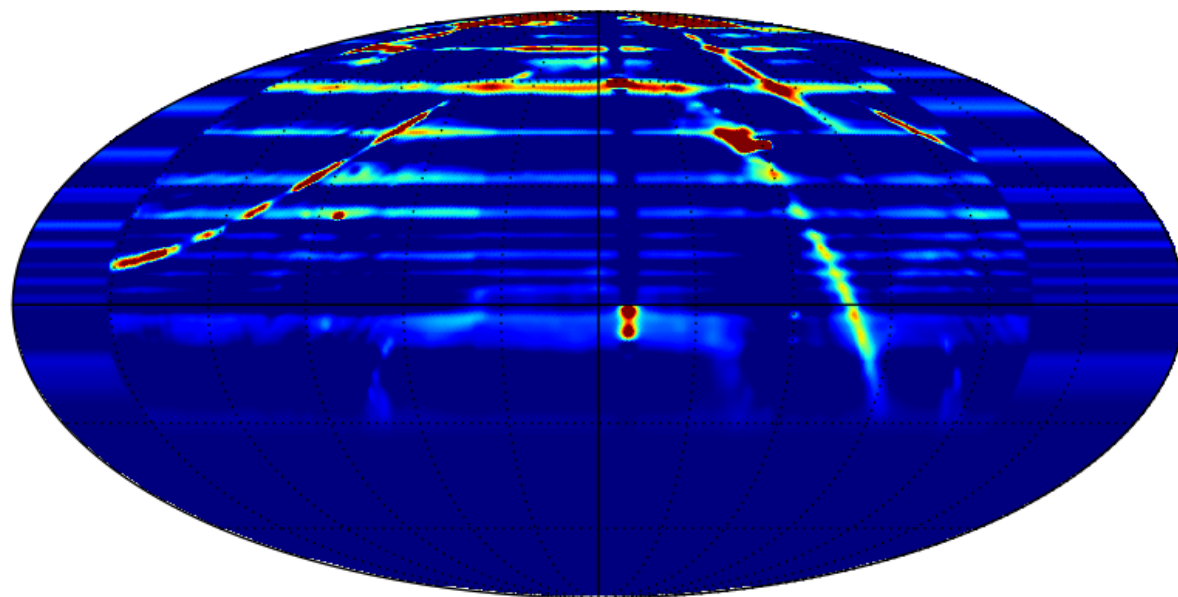


All baselines

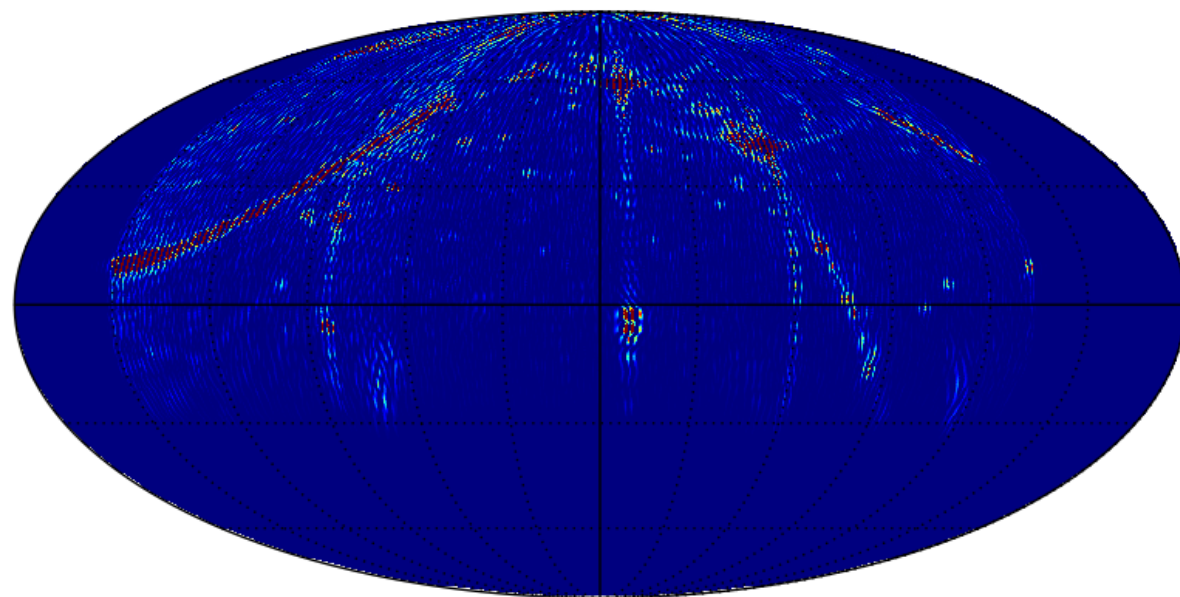


Baselines < 13.0m

# Dirty Map

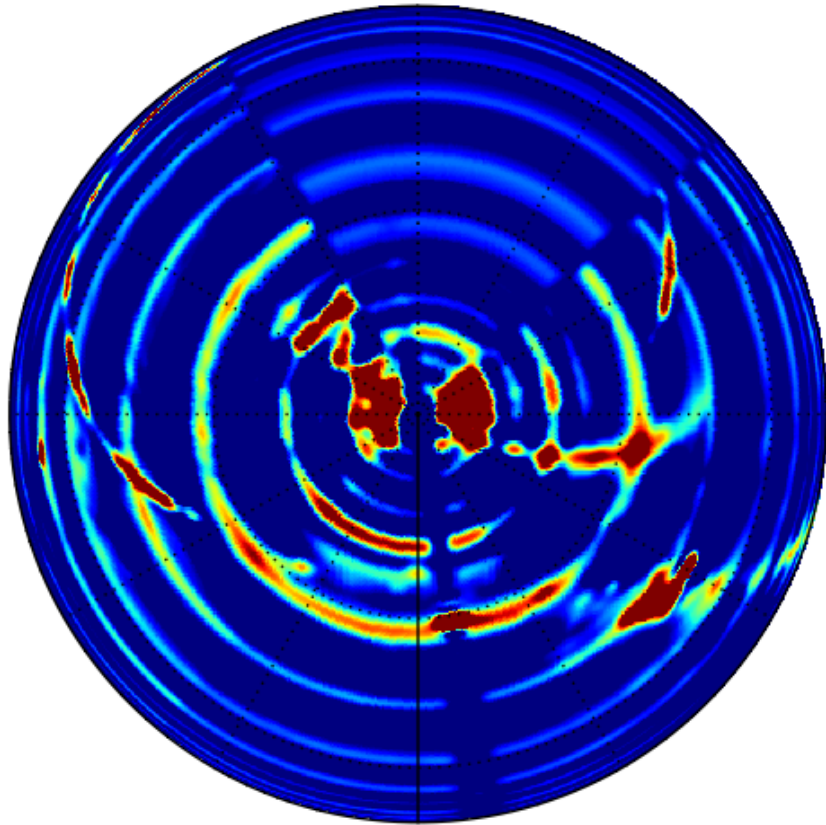


Baselines  $< 13.0\text{m}$

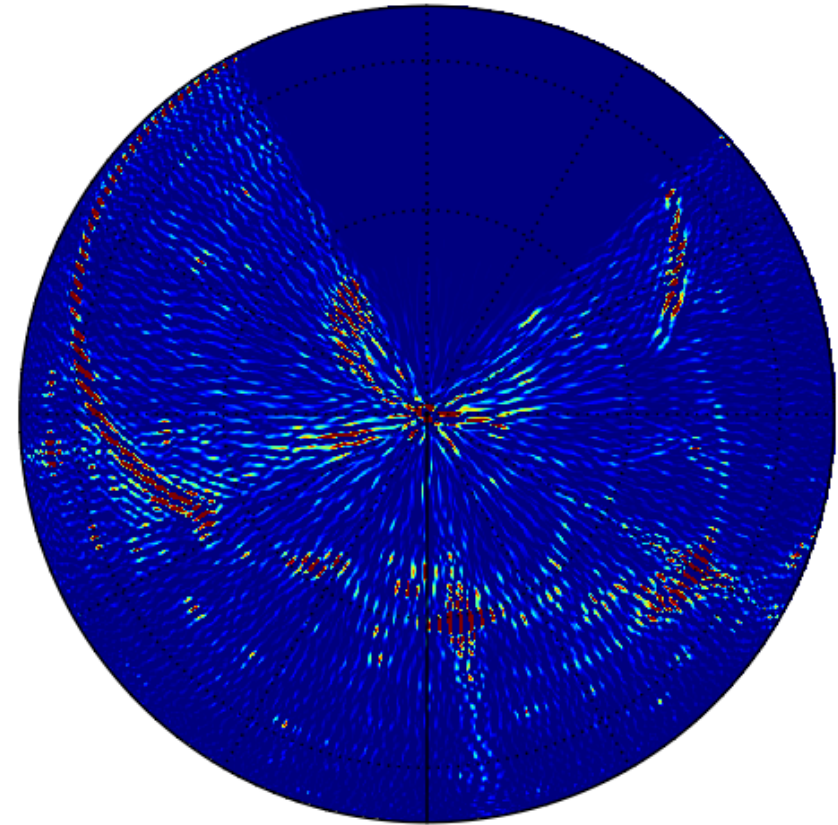


Baselines  $> 13.0\text{m}$

# Dirty Map--In Orthographic Projection



Baselines < 13.0m



Baselines > 13.0m