

# Decoding the Foreground Devil



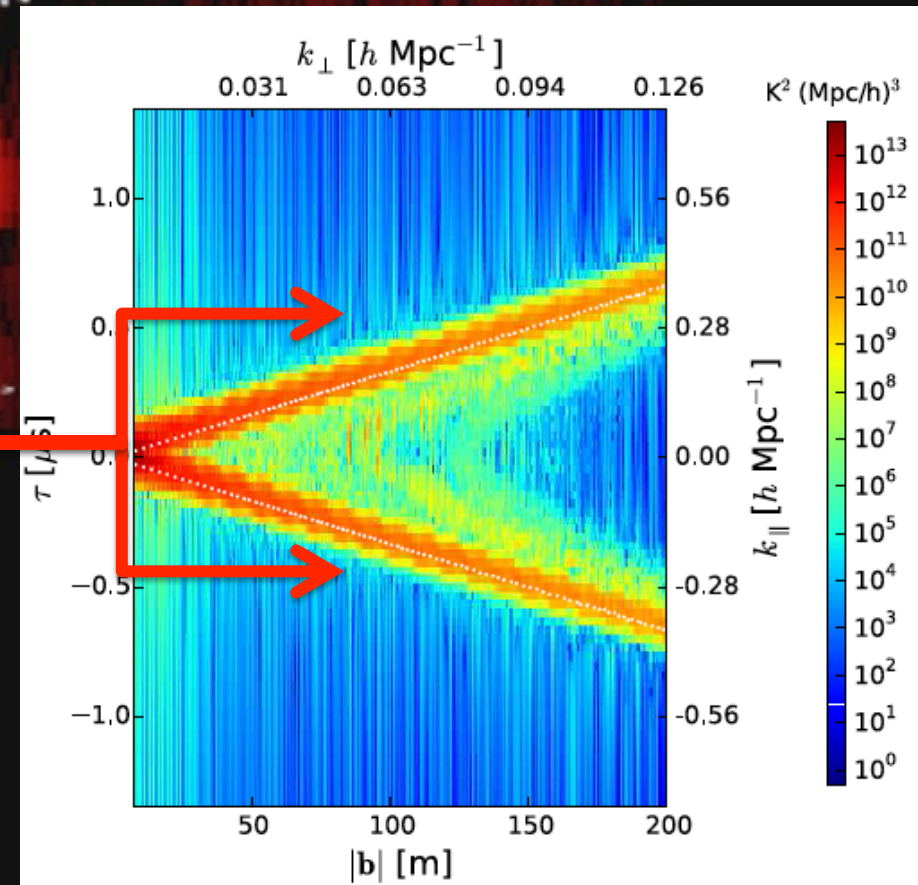
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# Motivation

- Need to do better than treating the wedge as a black box
- Use foreground and instrument signatures to our advantage

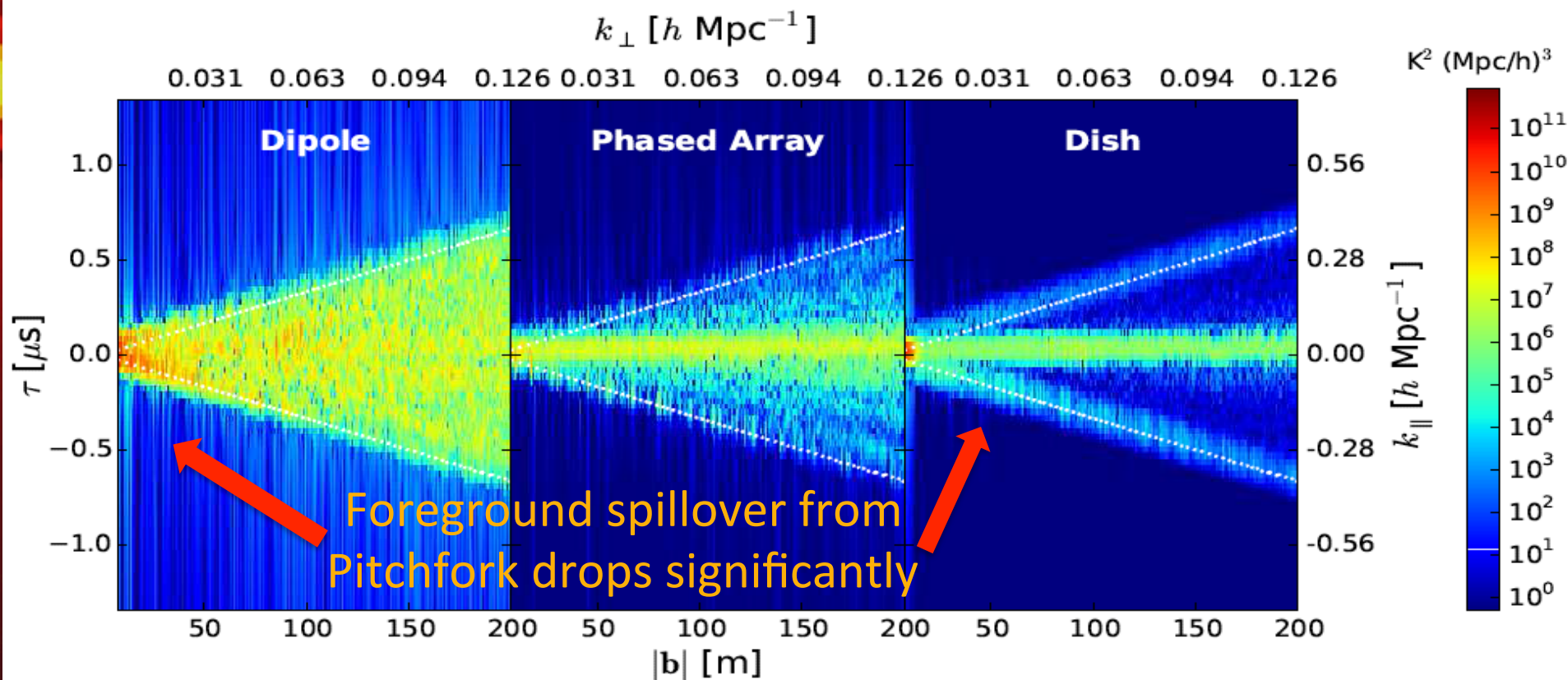
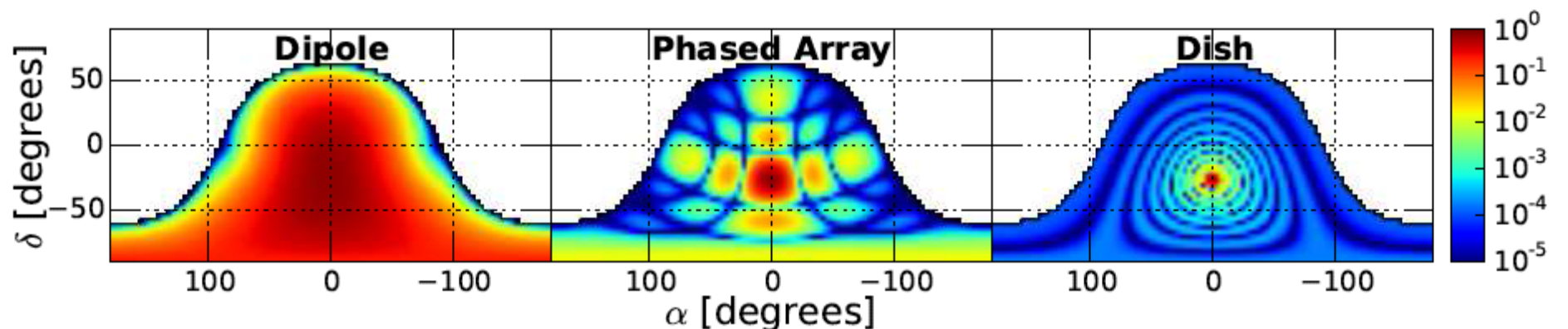
Devil's Pitchfork  
discovered

Interferometers are  
sensitive to the monopole  
even on long baselines due  
to wide-field effects!!!  
(Thyagarajan et al. 2015)



# Pitchfork effect controlled by Antenna Geometry

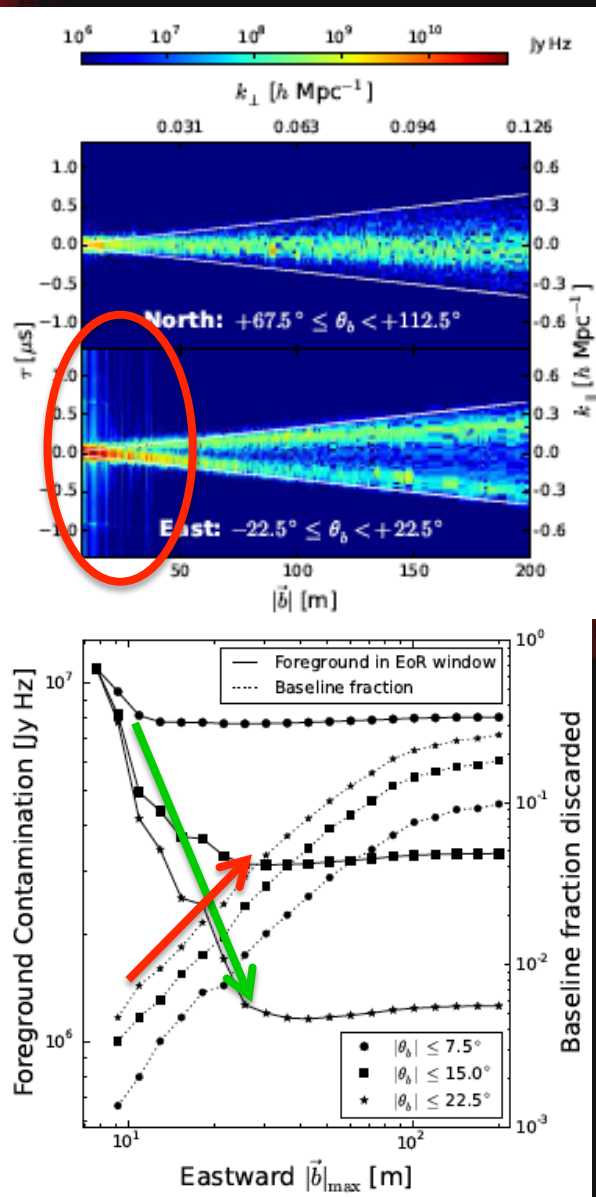
Decoding the Foreground Devil (Nithya)





# Foreground Mitigation using Predictive Modeling

Decoding the Foreground Devil (Nithya)



- Galactic center known to be on the West, thus contaminating few short E-W baselines
- N-S baselines relatively free of contamination

- Flagging just few short E-W baselines (5% of total) brings contamination down by 2 orders of magnitude