

# MEASURING IONOSPHERIC VARIATIONS USING PULSAR POLARIMETRY

with



Charlotte Sobey & Pulsar Working Group

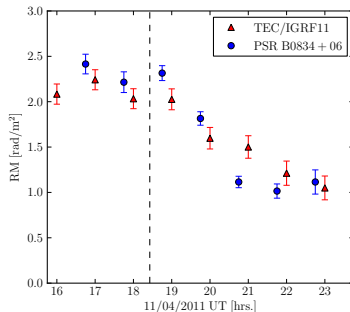
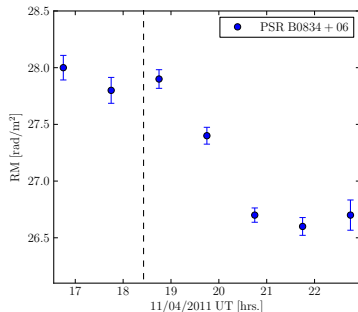
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18 April 2012

# Tracking RM at sunset

PSR B0834+06 with LOFAR superterp HBAs during sunset

$7 \times 10$  min, freq=123 bw=6 MHz,  $RM_{\text{sunset}}^{B0834+06} = +25.5 \pm 0.1 \text{ rad m}^{-2}$

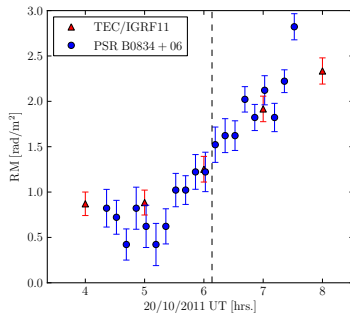
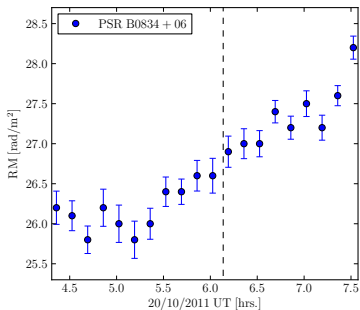


Ionospheric FR model model courtesy C. Sotomayor using data from CODE & IGRF11

# Tracking RM at sunrise

PSR B0834+06 with LOFAR superterp HBAs during sunrise

$20 \times 3$  min, freq=134 bw=9 MHz,  $RM_{\text{sunrise}}^{B0834+06} = +25.38 \pm 0.07 \text{ rad m}^{-2}$

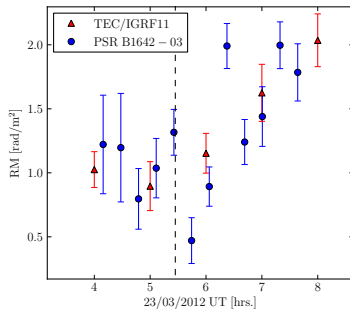
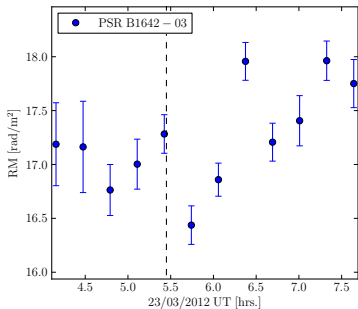


Ionospheric FR model model courtesy C. Sotomayor using data from CODE & IGRF11

# Tracking multiple RMs at sunrise

PSRs B1642-03, B1919+21, B2217+47  
with LOFAR superterp HBAs during sunrise

$12 \times 3$  min, freq=122 MHz, bw=6 MHz,  $RM_{\text{sunrise}}^{B1642-03} = +15.97 \pm 0.08 \text{ rad m}^{-2}$



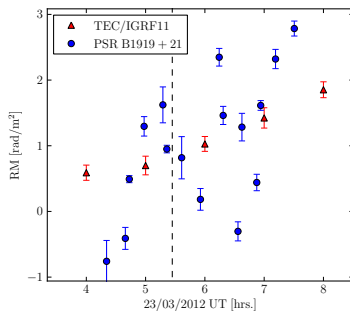
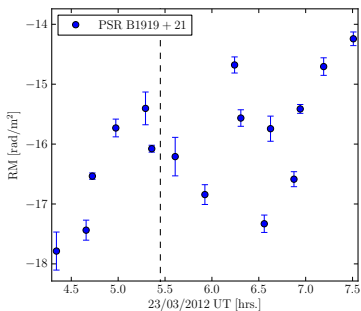
Ionospheric FR model model courtesy C. Sotomayor using data from CODE & IGRF11

# Tracking multiple RMs at sunrise

PSRs B1642-03, B1919+21, B2217+47

with LOFAR superterp HBAs & LBAs during sunrise

$24 \times 3$  min, freq=122/61 bw=6 MHz,  $RM_{\text{sunrise}}^{B1919+21} = -17.0 \pm 0.3 \text{ rad m}^{-2}$

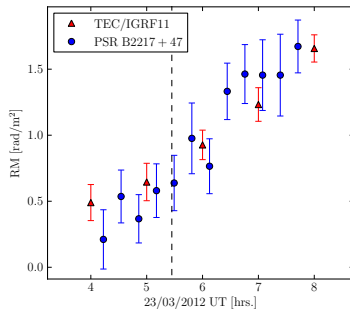
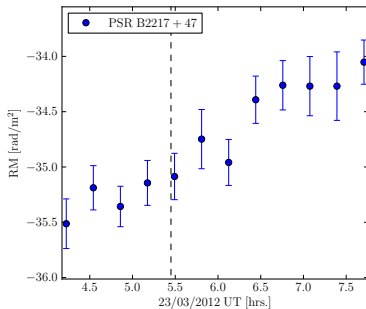


Ionospheric FR model model courtesy C. Sotomayor using data from CODE & IGRF11

# Tracking multiple RMs at sunrise

PSRs B1642-03, B1919+21, B2217+47  
with LOFAR superterp HBAs during sunrise

$12 \times 3$  min, freq=122 bw=6 MHz,  $RM_{\text{sunrise}}^{B2217+47} = -35.73 \pm 0.07 \text{ rad m}^{-2}$



Ionospheric FR model model courtesy C. Sotomayor using data from CODE & IGRF11