

At $\Delta=8.7$ Mm
with a 200 m/s southward flow

$$\tau_{\text{ref}} = 12.85 \text{ minutes}$$

$$\tau_{\text{ref}} = 12.85 + 2\pi/\omega_{\text{ref}} = 16.95 \text{ minutes}$$

$$\tau_{\text{North}} = 12.917 \text{ min}$$

$$\tau_{\text{North}} = 12.917 + 2\pi/\omega_{\text{North}} = 17.074 \text{ min}$$

$$\tau_{\text{South}} = 12.781 \text{ min}$$

$$\tau_{\text{South}} = 12.781 + 2\pi/\omega_{\text{South}} = 16.794 \text{ min}$$

$$\delta\tau_{\text{NS}} = 8.15 \text{ sec}$$

$$\delta\tau_{\text{NS}} = 16.79 \text{ sec}$$