



by TIME NEEDED FOR PHASOR TO GO FROM  
~~PHASOR~~  $(-0.5, -0.5)$  TO  
 $w \approx 2.37$

PHASOR TIME TO GO FROM  $(-0.5, -0.5) \rightarrow w \approx 2.37$   
 TO  $(-0.5, -0.5) \rightarrow w \approx 1.27$   
 (READING OFF BY  
 EYE,  
 SLIDE 4220)

$$\Delta w = 2.37 - 1.27 = 1.1$$

$$\Delta x = \Delta w \sqrt{\frac{\lambda R}{2}}$$

$$\frac{1}{R} = \frac{1}{\text{EARTH-MOON}} + \frac{1}{\text{EARTH-STAR}} \rightarrow \frac{1}{R} = \frac{1}{4 \cdot 10^8} \Rightarrow R = 4 \cdot 10^8$$

$$\Delta x = 1.1 \sqrt{\frac{500 \cdot 10^{-9} \cdot 4 \cdot 10^8}{2}} = 1.1 \cdot 10 = 11$$

$$t = \frac{\Delta x}{v} = \frac{11}{500} = \underline{\underline{22 \text{ msec}}}$$

WE WOULD STILL BE ABLE TO APPROXIMATE  
 IT BY A WEIGHTED-SUM OF POINT SOURCES  
 SCATTERED AROUND, SO WE WOULD OBSERVE  
 THE ABOVE PATTERN SMEARED OUT.