



## Drift Method:

### Let Earth rotate celestial objects into view



The drift method is useful – even for experienced amateurs – if the observer is unsure as to how the object will appear with the aperture of telescope used, and under the prevailing atmospheric and light pollution conditions. If it can't be seen at the calculated time, then it is likely because of a combination of those three factors.

24 hours of RA exist because 24 hours comprise full rotation of Earth. This means that, as our planet rotates, an hour in RA passes overhead from east to west for every hour of time on Earth. This also applies for every point on the celestial sphere, not just the zenith.

#### General Procedure:

1. Find a star positioned at the same declination as the target, but somewhat to its west.
2. In a reference guide, find the coordinates of the guide star and the target.
3. Calculate the difference of their minutes of RA.
4. Position the star in the center of the field of an eyepiece that gives a wide true field.
5. If the difference in their Declination is 20 to 30 minutes: Move the eyepiece northward by 1/2 field if the target is farther north than the star, move it southward by 1/2 field if it is farther south.
6. Wait the calculated RA time difference. Bingo! The target should have drifted into the center of the eyepiece's field. Don't be late or it will have drifted westward out of the field.

#### Example ...

##### NGC 2903

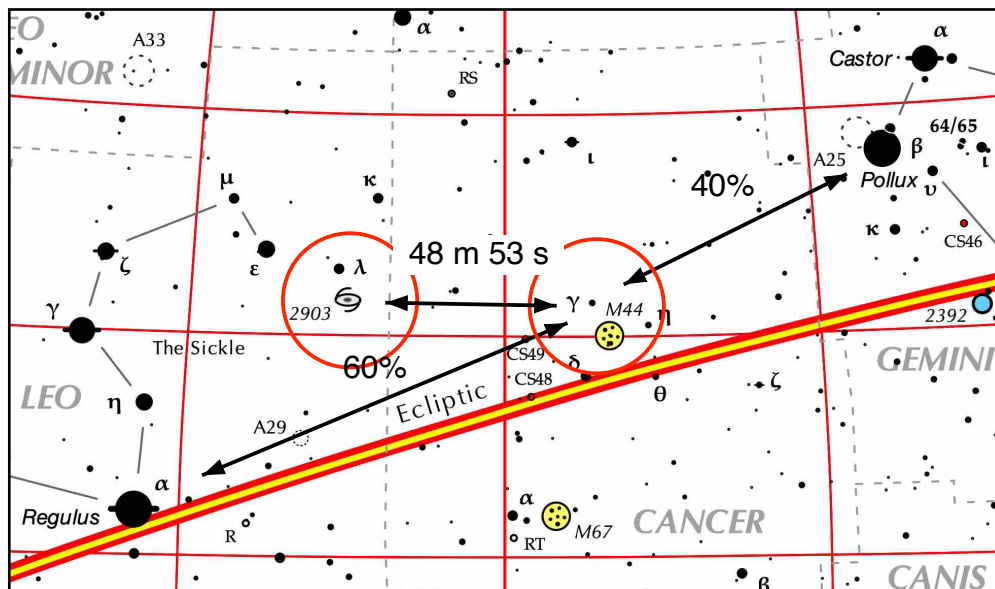
Magnitude 9.0  
Size 11 x 5 min

##### Gamma Cancri

8h 43m 17s  
21° 28' 6"

##### NGC 2903

9h 32m 10s  
21° 30' 3"



**Target: NGC 2903, a large "bright" galaxy – one that Messier missed – in western Leo.**

A. Choose Gamma Cancri as the guide star. At 4.7 magnitude, it lies about 60% the distance between Regulus and Pollux. M44, a large open cluster, is found 2° sw of Gamma.

B. Coordinates:

**Gamma Cancri** – RA: 8 hr, 43m, 17 s.; Dec: 21° 28' 6".

**NGC 2903** – RA: 9h, 32m, 10s; Dec: 21° 30' 3"

C. Declination difference: 2 minutes – not much, no need to nudge the eyepiece.

D. RA difference equals the time wait: 48 m 53 s.

E. Center Gamma Cancri in the telescope field. Wait 48 m 53 s and NGC 2903 will lie in the field. Don't be late!