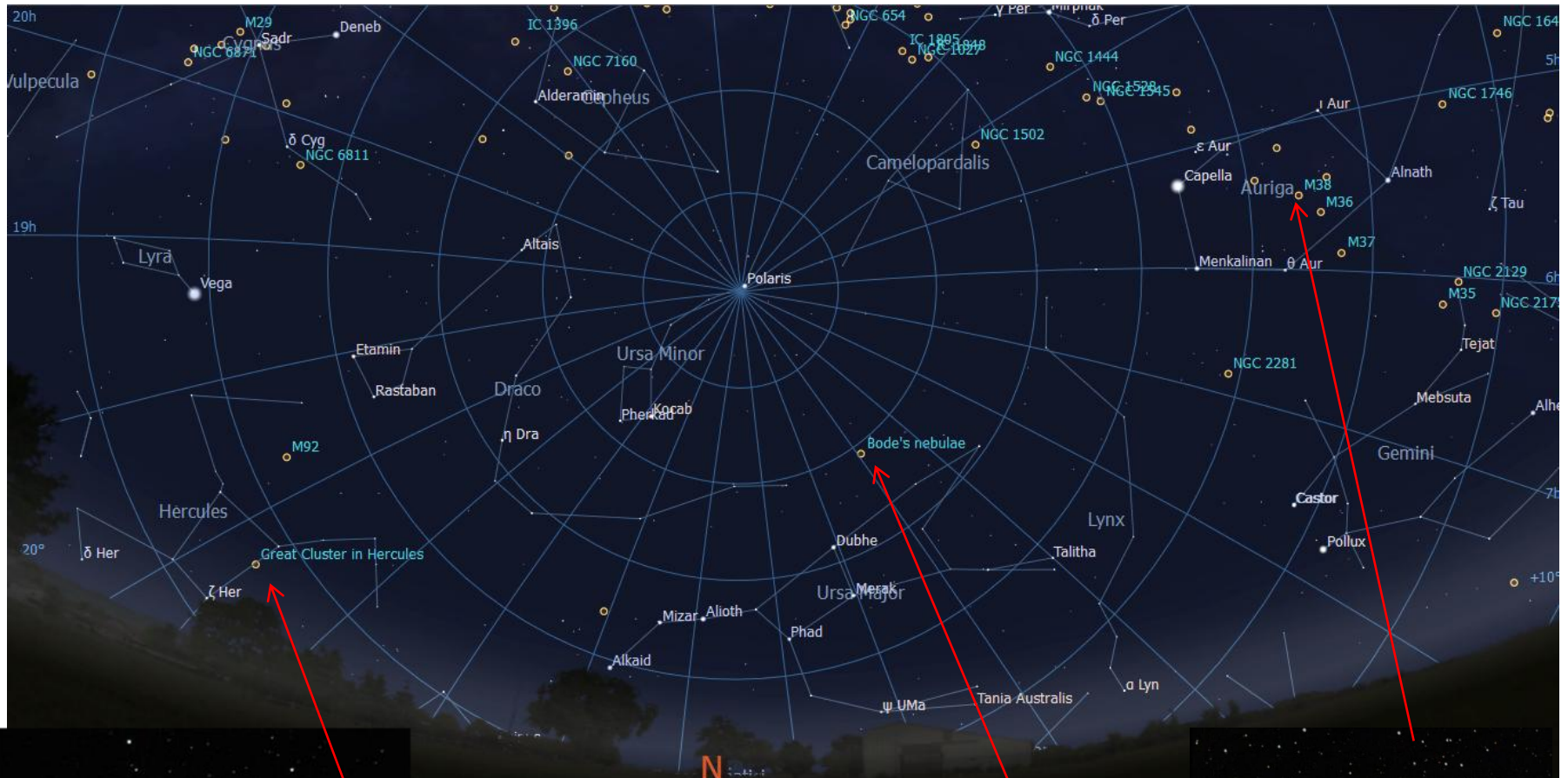


# Nov10 Sky notes

View facing North 9:00pm on Nov 4th 2010

(80deg Field of View)



M13- 25,100 lt yrs away



M81/M82- 12 million lt yrs away

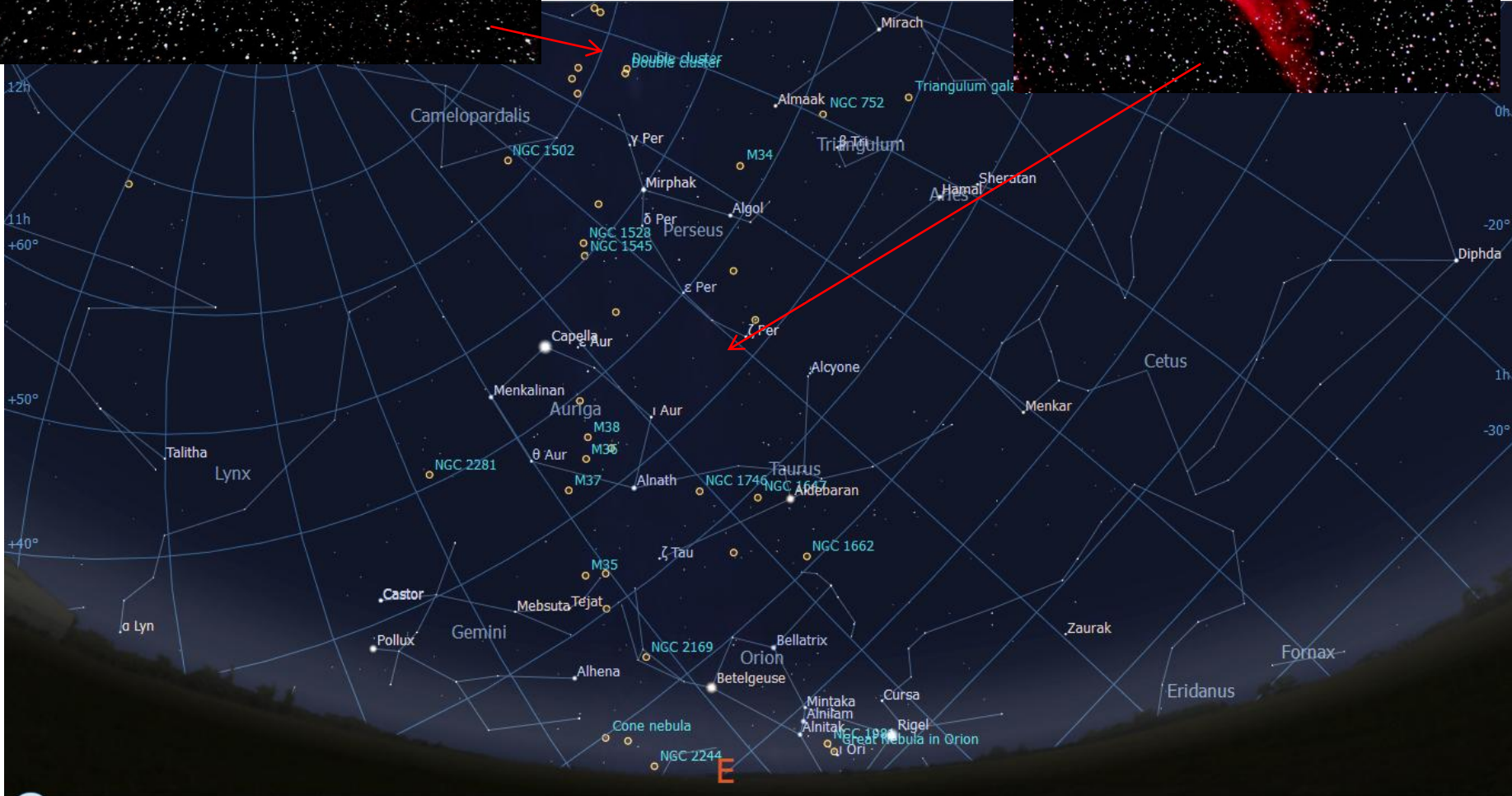
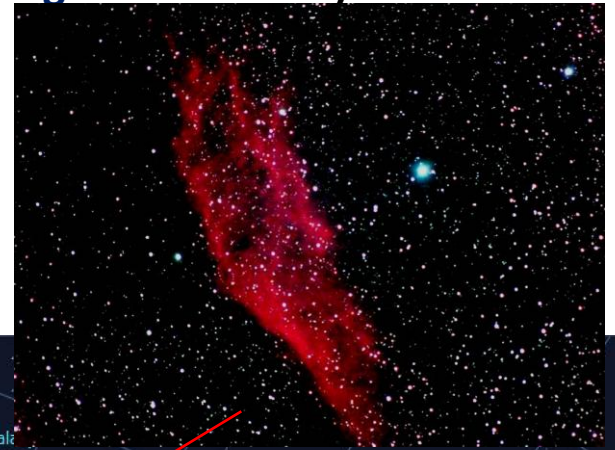


M38 – 2750 lt yrs away

View facing East 9:00pm on Nov 4th<sup>th</sup> 2010 (80deg Field of View)

Double Cluster – 7600 / 6800lt yrs

California Nebula  
NGC1499  
1000 lt yrs away



# Constellation of the Month (Nov 10) : Taurus

Crab Nebula M1



Supernova remnant (11x 8 lt yrs)  
Pulsar at centre  
(6500 lt yrs distance)

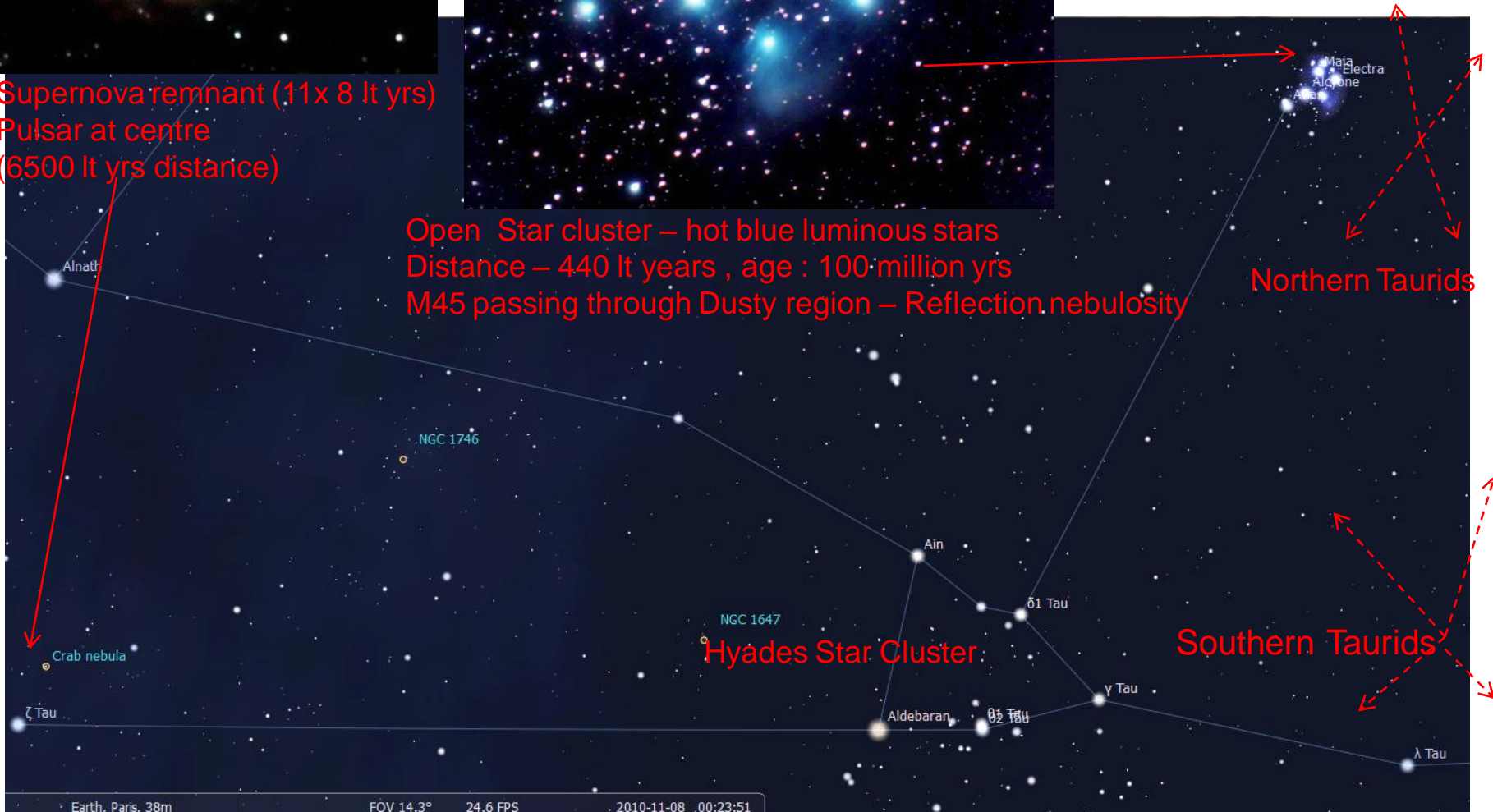
Pleiades Open Cluster M45



Open Star cluster – hot blue luminous stars  
Distance – 440 lt years , age : 100 million yrs  
M45 passing through Dusty region – Reflection nebulosity

Northern Taurids:  
Peak activity : 4-7 Nov

Southern Taurids:  
Peak activity : 30 Oct – 7 Nov  
Only 7 meteors / hour  
Sand – grain & pebble sized  
Particles- fire-balls



Northern Taurids

Southern Taurids

View facing South 9:00pm on Nov 4th<sup>th</sup> 2010

(93deg Field of View)

M31



2,500,000 It yrs away

North American Nebula  
NGC7000  
(1600 It yrs)



20,000 It yrs away



M15

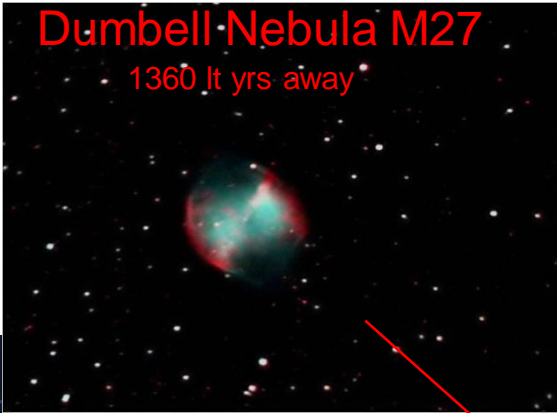


View facing West 9:00pm on Nov 4th 2010

(64deg Field of View)

Dumbbell Nebula M27

1360 lt yrs away

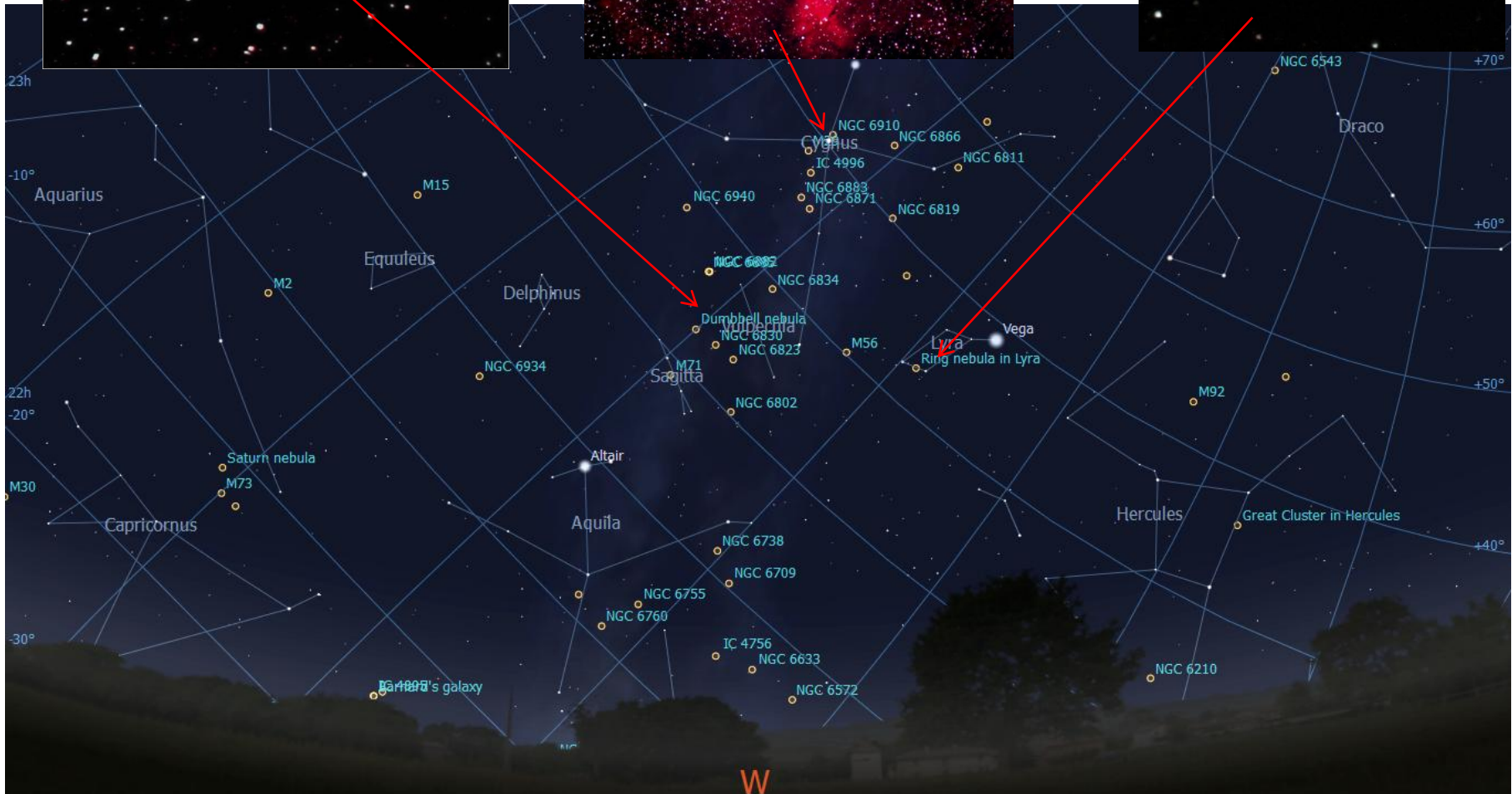


Butterfly Nebula IC1318

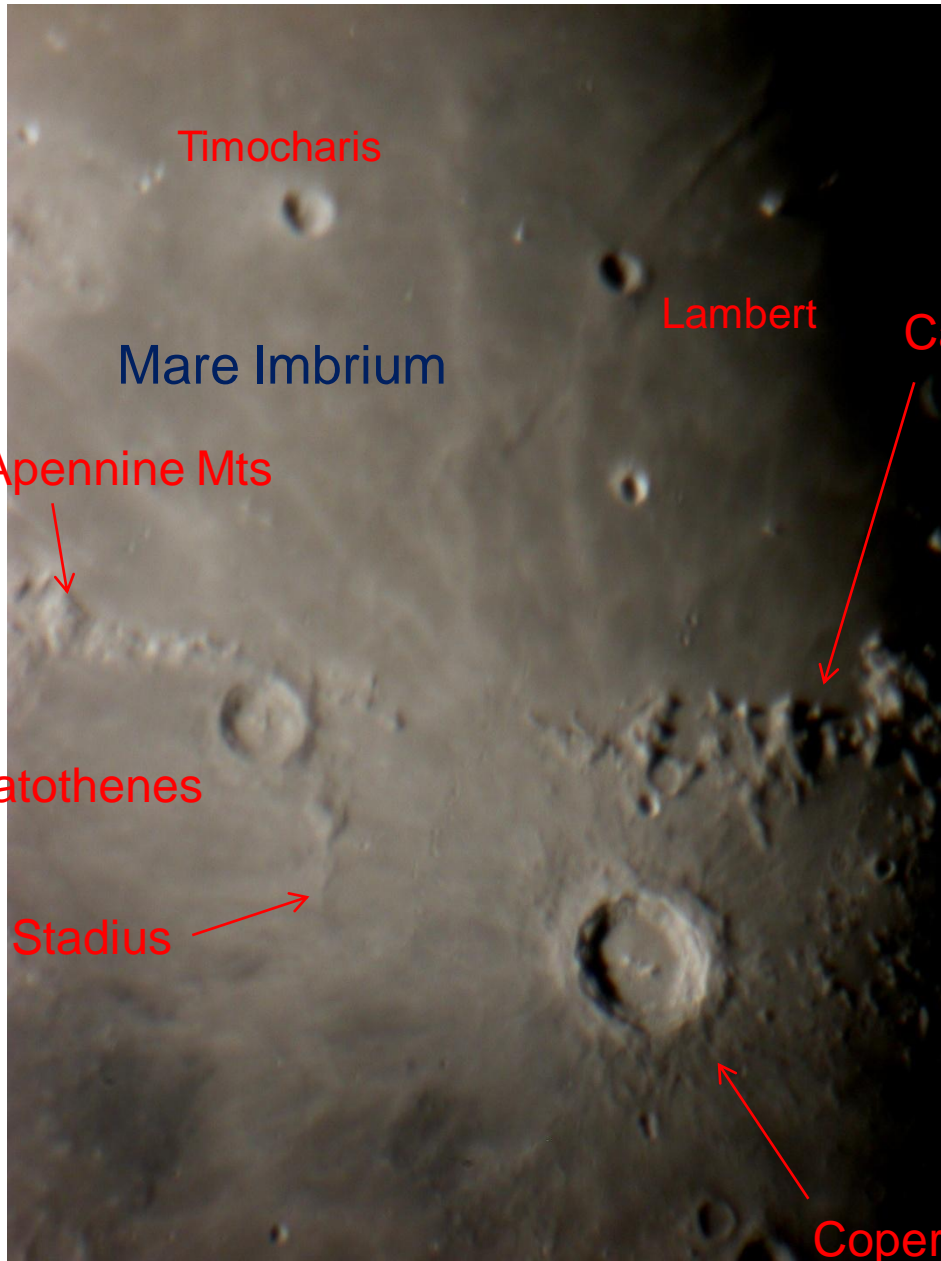


Ring Nebula M57

2300 lt yrs from earth



## Lunar Features –Region around Copernicus Crater ( Nov 10)



### Lunar Phases :

New Moon (Nov6th)  
First Quarter(Nov 13<sup>th</sup>)  
Full Moon (Nov 21<sup>st</sup>)  
Last Quarter(Nov28th)

### Copernicus crater :

About 93km wide (floor 55km)  
3.7km deep – central peak  
Terraced walls – ejecta blanket  
Bright rays – over 700km across Maria

### Carpathian Mts

Over 400 km long

### Apennine Mts

Over 600km long – rising to 5km above  
Mare Surface

### Stadius ( Ghost crater)

Crater flooded by basaltic lava flows

### Eratosthenes

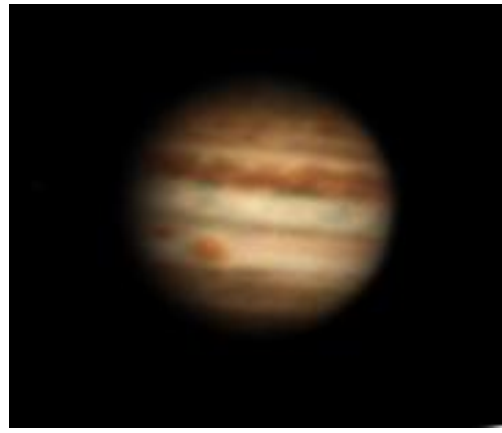
58km diameter- 3.6km deep  
Circular rim – terraced inner wall

Copernicus

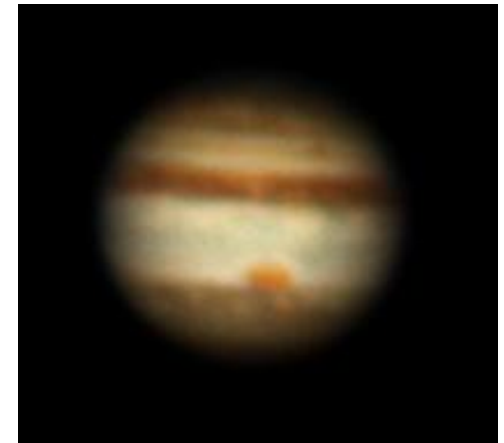
## Planetary Feature – Disappearance of the SEB of Jupiter ( Nov 10)



Oct 09 2009



Dec 09 2009 (SLOOH 14" SCT)



Sept 10 2010

**Jupiter** – currently prominently visible almost due south (Magn -2.8, 44" diameter)

Why has **Jupiter`s South Equatorial belt (SEB)** faded over the last year ?

- Belt may be hiding under higher clouds (ammonia cirrus  $\text{NH}_3$ )
- Changes in global wind patterns may have brought ammonia-rich material into cold zone above the **SEB** - high altitude icy clouds
- **SEB** has faded before (1973-75, 1989-90, 1993, 2007 and 2010)
- Possibly dramatic return of **SEB** – spectacular outburst of storms and vortices

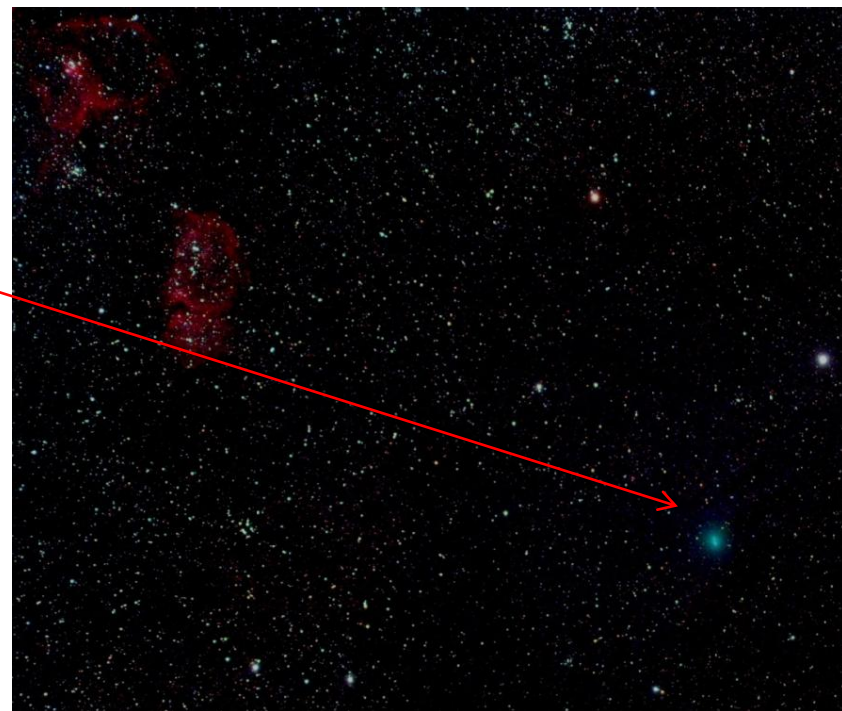
## Comet Hartley / 103P (Nov 2010)



Comet reached **Perihelion on Oct 21<sup>st</sup>**

Fairly faint and diffuse comet  
(not easily seen visually) – green **colouration**

**EPOXI mission** – comet flyby by **Deep Impact Spacecraft** (Nov 4<sup>th</sup> -600 miles dist )



**80mm f/4.5 lens (S.Harding 11/10/10)**

Double Cluster / Heart Nebula / comet Hartley - 3min exp

**80mm f/4.5 lens  
(S.Harding 10/10/10)**



Comet Hartley showing tail & deg coma (N. Howes)----2hr exposure  
(**Robotic Faulkes telescope , Hawaii Oct 17<sup>th</sup>**)