



www.AstroMax.com

The American Association of Amateur Astronomers

Observing Log

Observer: _____ Location: _____ Page: _____

INDEX	Period - Instrument		Notes
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		

Nature Club Astronomy 2015 Fall Star Party

5:30-10:00PM Cowan Creek Park Pavilion
Binocular & Telescope Observing Program



M31 Andromeda Galaxy

Ever wonder if you can see something a million light-years away with the naked eye? You can with clear, dark skies. It's the Andromeda Galaxy, shown above. Don't expect it to be as clear as this large telescope picture at 2.6 million light years (about 16,000,000,000,000,000 miles) but you will see it faintly with naked eye, and even better with binoculars. Tonight our Sun City Astronomers will show you how to find it along with many other interesting objects up there.

But first, we'll take a brief guided walk through the heavens, looking at the constellations and brightest stars.

Then we'll continue through the evening showing the many wonders in the sky visible through binoculars and others through telescopes.

We will use the Binoculars/Telescopes Observing List on the next two pages to guide you through the stars, nebulae, and galaxies, and you can use it as a reference for examining some of the more interesting characteristics of each.

As you take the guided tour through the heavens, you can also use the Amateur Astronomers Observing Log on the back to record your own discoveries. Our Star Guides will help you use it.

So, sit back, pick up those binoculars and enjoy the show!

— The Sun City Astronomers —

Binocular/Telescope Observing List

Some of the objects we may be able to see

Moon

Waxing Crescent o/a 2 days past new Moon. Apollo Prgrm -- 12 astronauts there

Average distance 238,000 miles. “Super Moon” at full Moon when closest

Only extreme western crescent visible now – see staff handout photo

Mare Crisium, Cleomedes crater above, Macrobius upper left

Mare Fecunditatis, Langrenus crater right, Gutenberg left

Early Evening

Polaris – in Ursa Minor, double star, 2nd magnitude

Mizar – in Ursa Major, multiple star system, largest Mizar – mag 2.4 and Alcor

M57 Planetary Nebula – in Lyra, the Ring Nebula, 2600 ly (telescope object)

M13 Globular Cluster – Hercules

M81 and M82 Galaxy Pair – in Ursa Major (very low and dim, telescope objects)

Epsilon Lyra – “Double Double” star (4)

Alberio – in Cygnus, a beautiful double star with different colors

M29 Open Cluster – Cygnus, 37,000 ly

M27 Planetary Nebula – in Vulpecula, 1100 ly

Collinder 399 “Coathanger”- Asterism in Vulpecula/Brocchi’s Cluster

M15 Globular Cluster – in Pegasus, 42,000 ly

M31 Galaxy –in Andromeda, most distant visible naked eye at 2.6 Mly

M32 and M110 Galaxies – satellites of M31 (telescope objects)

Algol – in Perseus, eclipsing var. star o/a 2.8 day cycle, 4 star syst. (1 adnl susp,) 93 ly average

NGC 869/NGC 884 Double Cluster–Open Clusters in Perseus, 6800 ly/7600 ly

NGC 457 Open Cluster (“ET Cluster”), 7900 ly

M103 Open Cluster in Cassiopeia, 7200 ly

M33 (Pinwheel) Galaxy– in Triangulum (dim, large binocs/telescope), 2.9 Mly

Later in Evening

M36 Open Cluster – Auriga, 4300 ly, just inside eastern border

M37 Open Cluster – Auriga, 4500 ly, just outside eastern border

M38 Open Cluster – Auriga, 3500 ly, center, in same field as M36

Pleiades (M45) – Taurus, 490 ly

Hyades Cluster (Melotte 25) — around Aldebaran in Taurus, 150 ly

Very Late Evening

M42 Orion Nebula and De Mairan’s Nebula (M43) – Orion, 1500 ly

M41 Open Cluster – Canis Major, 2300 ly

M1 Crab Nebula– Taurus (Moon may be problem), 6300 ly

M79 Globular Cluster – Lepus, 4200 ly (telescope object)

M78 Diffuse Nebula – Orion, 1600 ly (telescope object)

Constellations (see SkyChart)

Ursa Major/Ursa Minor Sagittarius (western horizon)

Hercules Lyra Cygnus

Pegasus Aries Triangulum

Cephus Auriga (late)

Taurus (late) Orion (very late)

Cassiopeia (NE horizon)

Perseus (very low in east horizon – may be too low in haze)

Big Dipper and the North Star (wait until well dark to north)

Ursa Major/Ursa Minor – Polaris in Ursa Minor (actually a double star) won’t always be the North Star – will be Vega in constellation Lyra in 14,000 yrs. The Southern celestial pole is near the Southern Cross (no “South Star”).

Note: Many objects may be difficult to find even with telescopes due to the excessive light pollution from the Austin/Round Rock, Georgetown and Liberty Hill areas. Light pollution can be reduced with fully recessed, enclosed lighting fixtures, facing DOWN, not at the sky.