



# Night Sky Checklist

## October–November–December

### Unaided Eye Astronomy

#### *Constellations & Asterisms*

Observation	✓	Date	Comments
Pegasus			
Great Square			
Andromeda			
Cepheus			
Cassiopeia			
Perseus			

#### *Stars*

Observation	✓	Date	Comments
Alpheratz			
Markab			
Scheat			
Algenib			
Delta Cephei			
Algol			

### *Deep Sky Objects*

<b>Observation</b>	✓	<b>Date</b>	<b>Comments</b>
M31 Andr. Galaxy			
Autumn Milky Way			
Double Cluster			

### *Lagniappe*

<b>Observation</b>	✓	<b>Date</b>	<b>Comments</b>
Orionids			
Taurids			
Leonids			
Geminids			

### **What is This Stuff?**

#### **A Guide to the Night Sky Checklists October–November–December Objects**

*The following information may help you understand why these objects are on the Night Sky Checklists.*

**Constellations and asterisms** (Astronomers recognize 88 official constellations, but asterisms are unofficial and made from parts of one or more constellation. All are imaginary dot-to-dot drawings in the sky. See the Lafayette Science Museum's web site for monthly star maps showing their shapes and positions.)

**Pegasus**, the Flying Horse, was said by the Greeks to have been born from the blood of the Gorgon Medusa as she was killed by Perseus. Several constellations relate to the story of Perseus and Andromeda in some way.

**The Great Square** is an asterism made from three stars in Pegasus and one in Andromeda.

**Andromeda**, the Princess, was saved by Perseus from death by a sea monster.

**Cepheus**, the King, was the father of Andromeda and the husband of Cassiopeia.

**Cassiopeia**, the Queen, was the mother of Andromeda and the wife of Cepheus. She is represented in the sky by her throne. The throne can be used to locate the North Star during the Fall and early Winter when the Big Dipper cannot be seen from Louisiana in the early evening.

**Perseus**, the Hero, saved Andromeda's life during one of many adventures. The meteors of the Perseid meteor shower in August seem to come from this constellation.

***Stars** (The stars on the checklist are easily visible to the unaided eye except in the most light polluted parts of cities.)*

**Alpheratz** is the brightest star in both Andromeda and the Great Square. When the Great Square is high in the south, Alpheratz is the upper left star. Its name comes from an Arabic phrase meaning "navel of the horse," and reflects a time when Alpheratz was considered as part of Pegasus.

**Markab** is the brightest star in Pegasus and the second brightest star of the Great Square. When the Great Square is high in the south, Markab is the lower right star. Its name comes from an Arabic word indicating a horse's saddle.

**Scheat** is the upper right corner of the Great Square when the Square is high overhead in the south. The derivation of its name is uncertain except that it is likely Arabic in origin.

**Algenib** is the lower left star of the Great Square when the Square is high in the south. Its name comes either from an Arabic phrase meaning "the wing" or from one meaning "the side."

**Delta Cephei** is another variable star, this time one that actually varies its brightness over a period of about 5.4 days. Although it is fairly faint even at its best at magnitude 3.6, there are some similar brightness stars near it that help observers notice when its brightness drops off.

**Algol** is an eclipsing variable star in Perseus. Only moderately bright at best at magnitude 2.1, it dims to about 1/3 that brightness for about 10 hours in a cycle of slightly less than 3 days. If you watch it regularly, sooner or later you will catch it at its dimmest. Algol is a binary star, one relatively bright and the other relatively dim. As they orbit each other they happen to be oriented in such a way that the dimmer one can temporarily block our view of the brighter one.

***Deep Sky Objects** (DSOs are interesting objects beyond our solar system. Those identified with "M-numbers" are on a popular list compiled by the French comet hunter Charles Messier roughly around the time of the American Revolution. Most deep sky objects look like "faint fuzzies" to the unaided eye, and many are attractive in binoculars or a low power telescope.)*

**M31, the Andromeda Galaxy**, is one of the most distant things visible to the unaided eye and probably *the* most distant object visible in the murky skies of Acadiana. The Andromeda Galaxy is a spiral of well over 500 billion stars so far away that we can barely see it, at a distance of nearly 3 million light years. It looks like a faint fuzzy about

halfway between the Great Square and Cassiopeia. It's an easy object in binoculars or a low power telescope, but will show no real detail.

**The Autumn Milky Way** can be found best in mid-evening to the north and northeast, visible from Cassiopeia through Auriga. It's the flat plane of our galaxy seen from the inside.

**The Double Cluster in Perseus**, also known as h and Chi Persei, is a faint fuzzy most easily found by following the line of the lower back of Cassiopeia's throne. The clusters lie between 7000 and 8000 light years distant and can be seen with the unaided eye from very dark areas.

### *Lagniappe*

**The Orionid, Taurid, Leonid, and Geminid Meteor Showers** happen during this time.

The **Orionids** appear to come from the constellation Orion, visible in the east and southeast between midnight and dawn, the prime viewing hours. The peak is usually around October 21, and expecting to see 10 meteors per hour is realistic under Acadiana sky conditions.

Watch also for the very minor **Taurid Meteor Shower** from mid-October through mid-November. Very few will be seen throughout this period, but they are often quite bright. They seem to come from Taurus, in the east to southeast before midnight then moving high overhead as the earth turns.

The **Leonids** seem to radiate from Leo, rising in the east during the shower. The peak is usually around November 17 and a rate of 10–20 meteors per hour is realistic under Acadiana conditions.

The **Geminids** may be the strongest shower of the year with rates of 25–40 meteors per hour possible under Acadiana conditions. Although the nights can be chilly, this is one of the few showers that can be seen before midnight with good viewing possible by 8 p.m. The meteors appear to come from Gemini. It's in the east during mid-evening, high overhead by midnight, and still well up in the west by dawn.

The exact dates and expected numbers for these showers vary from year to year. For specific information for the Acadiana area each year, see the Sky Events posted on the Lafayette Science Museum web site or call the Planetarium staff at 337-291-5544.

*UL LSM web site: [www.lafayettesciencemuseum.org](http://www.lafayettesciencemuseum.org)  
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