

Starmap 2018

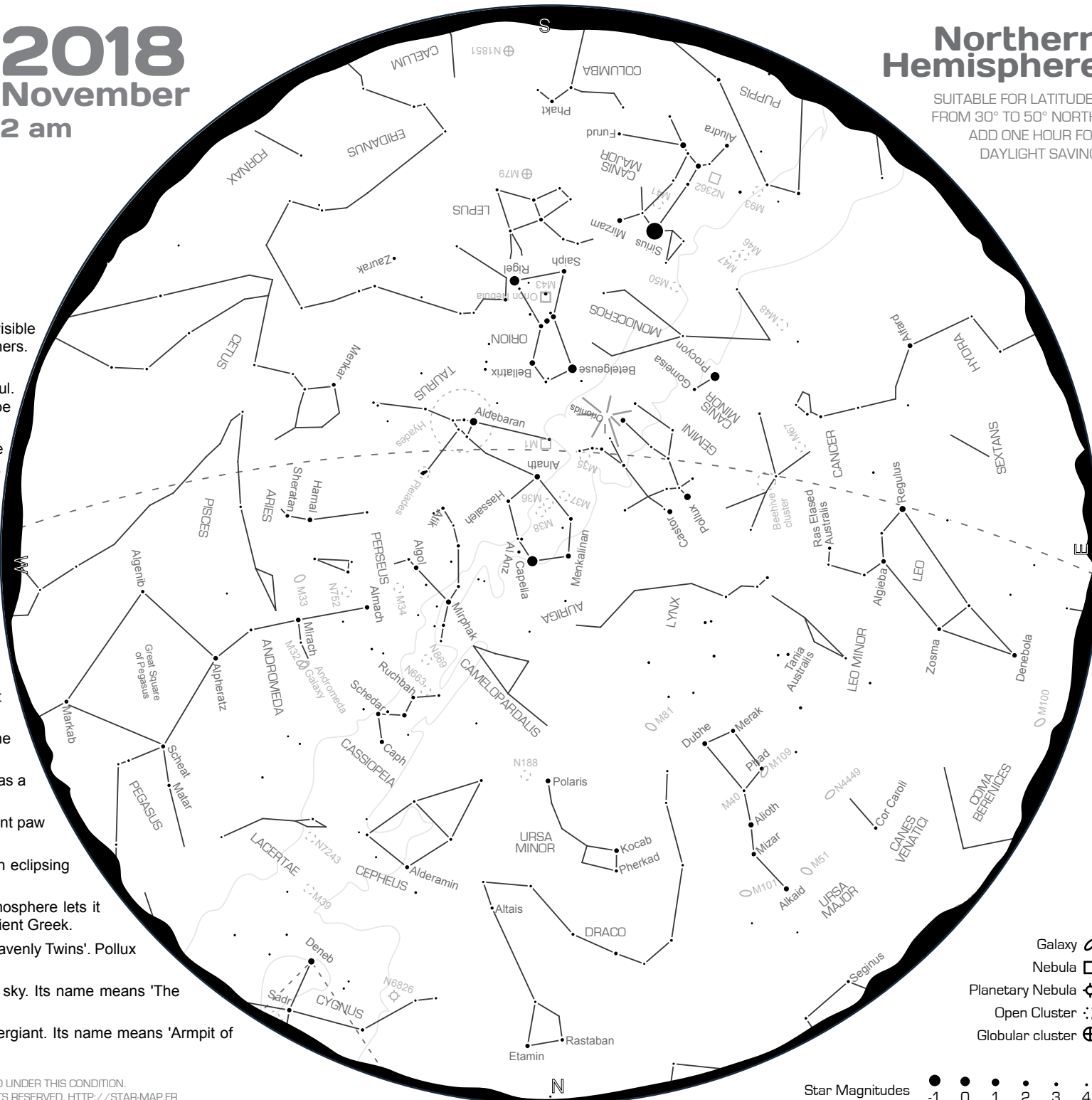
November
2 am

Northern Hemisphere

SUITABLE FOR LATITUDES
FROM 30° TO 50° NORTH.
ADD ONE HOUR FOR
DAYLIGHT SAVING.

VISIBLE TONIGHT TO THE NAKED EYE

- The Andromeda galaxy is the closest galaxy to ours. An object visible with naked eyes. One of the first objects to be observed by beginners. Easy to locate.
- The Orion Nebula is one of the must-see object. Simply beautiful. Generally the first deep sky object observed by beginners. Can be seen with the naked eye even in bad conditions.
- ⋯ The Pleiades or Seven Sisters is one of the nicest objects visible in the northern Hemisphere. Very easy to spot with the naked eye, even without reference star.
- ⋯ Beehive Cluster, or Praesepe, a cluster in the Cancer. Wonderful with the naked eye in very dark skies.
- ⋯ The Hyades, the closest open cluster in Taurus. With very dark skies, the cluster is amazingly crowded. Not really visible with light pollution.
- ★ Alcyone. A blue star belonging to the Pleiades. Best observed with binoculars to see the haze of the cluster.
- ★ Aldebaran. A red giant in Taurus. Its name means 'The Follower'. Close to the Hyades.
- ★ Bellatrix. Bellatrix means 'Female Warrior'. It is located at the 'Left Shoulder' of Orion.
- ★ Mizar. Forms a binary system with Alcor. They are often called 'The Horse and the Rider'. Its name means 'Waistband'.
- ★ Alderamin. Meaning 'The Right Arm' (of Cepheus). A white star. Has a very high rotation speed.
- ★ Regulus. Means 'Little Prince'. The brightest star in Leo, at the front paw of the Lion.
- ★ Algol. The 'Demon' star. A bright star in Perseus. The best known eclipsing binary.
- ★ Sirius. The brightest star in the sky. So bright that the Earth atmosphere lets it twinkle in a spectacular manner. Its name means 'glowing' in Ancient Greek.
- ★ Pollux. The brightest star of Gemini. Castor and Pollux are the 'Heavenly Twins'. Pollux has a confirmed exoplanet.
- ★ Rigel. The brightest star of Orion. The sixth brightest star in the sky. Its name means 'The Foot of the Giant'.
- ★ Betelgeuse. The eighth brightest star in the night sky. A red supergiant. Its name means 'Armpit of the central one'.



- Galaxy ○
- Nebula □
- Planetary Nebula ◇
- Open Cluster ⋯
- Globular cluster ⊕

Star Magnitudes -1 0 1 2 3 4

WITH BINOCULARS AND SMALL TELESCOPES

NGC869	☾	The Double Cluster NGC 869 and 884 belongs to the favorites of amateur astronomers. Easy to locate from Cassiopeia.
M1	✧	A supernova remnant, observed in 1054 by Chinese, Arab and Japanese astronomers. A hazy patch of nebulosity near the star ζ-Tauri.
M43	◻	The companion of the Orion Nebula. Best observed with small telescopes. Appears as a nebulosity surrounding 5 stars.
M47	☾	Beautiful open cluster in Puppis. Very bright and rich field. A medium-sized fuzzy patch. Near Sirius.
NGC752	☾	Large number of bright stars over one degree. Large and dense cluster. Close to Almach in Andromeda.
M32	◯	The small companion of the Andromeda galaxy. A round and even halo with no details, very distinct and bright core.
M33	◯	One of the nicest galaxy to be observed from Earth. Nebulous, moderate in size, faint in the middle and brighter at the edge. A must for astrophotography. Needs a large field.
M34	☾	An open cluster with many faint stars. Contains about 100 stars. Use Algol as a reference in the PathFinder.
M35	☾	Faint but easy object for binoculars. Composed of approximately 40 stars. Large and scattered.
M36	☾	An open cluster, less impressive than M37, one of the three Messier clusters in Auriga.
M37	☾	An open cluster best observed with a telescope. A medium-brightness fuzzy patch with a brighter center.
M38	☾	M38 is easy to find by star hopping from Elnath. Intermediate between M36 and M37 in terms of the number of stars.
M40	♣	Winnecke 4 is a faint double star in Ursa Major. Both stars are slightly red. Just above Megrez, easy to locate.
M41	☾	An open cluster just below Sirius. A beautiful cluster composed of bright stars. It appears as a small area overflowing with faint stars
M46	☾	A nice open cluster. Well observed with binoculars or a wide-angle telescope field. Compare its contrast with M47.



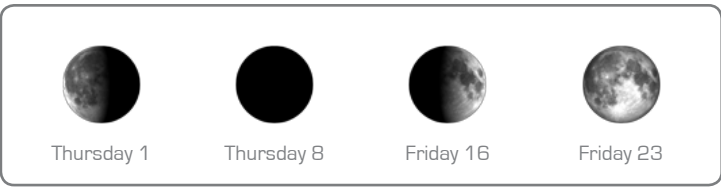
Available on the
App Store

Starmap

A PLANETARIUM IN YOUR POCKET

The most informative and interactive hand-held planetarium App ! Starmap is available on the iPhone™, iPad™, and iTouch™. When your device has a compass, Starmap displays exactly the portion of the sky you are pointing at. Hold the device parallel to your line of vision and discover the map smoothly scanning the sky as you move.

MOON CALENDAR



HOW TO USE THE MAP

The map shows what you see looking at the zenith. The apparent inversion of East and West compared to road maps is normal. Hold the map face down above your head, and the cardinal points will be oriented as usual.

As a starting point, face North, holding the map in your eyesight direction, with its North down. As you change the direction, rotate the map accordingly.

The objects listed on the first page can be observed with naked eyes, in clear skies, with moderate light pollution. Close your eyes one minute and let them adapt to darkness. You will be surprised how many more details will be apparent.

Using binoculars, preferably with a tripod, will considerably enhance your star gazing experience. Many deep sky objects like galaxies and clusters will be within reach. Jupiter satellites and Saturn's rings will also be visible. A spectacular experience for beginners in astronomy...

Avoid the nights when the Moon is too bright as its light would make the observation of faint objects difficult.

FOR LARGER TELESCOPES ^[1]

NGC2244	☾	The open cluster located in the Rosette Nebula.
NGC2237	◻	The Rosette Nebula is a very good candidate for large field astrophotography. Bluish center surrounded by red clouds.
NGC7662	✧	The Snowball Nebula is worth a long exposure. A blue structured haze with a still visible central remaining star.
NGC2261	◯	The Hubble's Variable Nebula is a reflection nebula illuminated by R Monocerotis. A small comet-shaped fuzzy patch.
IC405	◻	The Flaming Star Nebula is a wonderful object in Auriga. Appears as a haze in the eyepiece. Will need a long exposure.
M52	☾	A small open cluster near Caph, in Cassiopeia. Difficult object, rather small and faint with a round shape.
M74	◯	A beautiful spiral galaxy best observed with astrophotography. Beautiful color. A nice but difficult target.
M76	✧	The Little Dumbbell Nebula is a small planetary nebula reserved for advanced astrophotographer. Appears as a haze with a central bar in the eye piece.
M77	◯	A nice spiral galaxy with a faint core. It appears as a large spiral with broad arms. Best revealed though long exposures.
M78	✧	A faint and small planetary nebula in Orion. A small object best observed with astrophotography. Appears as a nebulosity surrounding 2 stars in the eye piece.
M82	◯	The Cigar Galaxy looks very elongated. Difficult to see even in the eyepiece. Generally appears on photos of its neighbor M81.

[1] In order to keep the map readability, these objects are not displayed on the map