TileWall Kinect Control

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# Link Format

<http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=Dec,Ra,Zoom,Rotation,0>

# Mode

[Get Information](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=state)

[Look at Sky](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky)

[Look at Solar System](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=SolarSystem)

[Look at Mars](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Planet)

[Look at Earth](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Earth)

# Special Commands

* 2017 Eclipse
  + [Set to Date of Solar Eclipse (21-Aug-2017)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=load&datetime=8/21/2017)
  + [Carbondale, IL (zoomed in)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Earth&flyto=37.7260,-89.2200,0.025,0,0)
  + [Carbondale, IL (from approx. 100 kft above)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Earth&flyto=37.7260,-89.2200,100,0,0)
* [Get State](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=state)
* [Chicago at C67P scale (large, BLACK model)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Earth&flyto=41.8554857204927,-87.6198032431914,0.11,0,0)
* [Chicago at Itokawa scale (large, BLACK model)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Earth&flyto=41.866389,-87.606667,0.025,0,0)

# [Themed Image Sets](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#)

* [Cosmic Wonder](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.k6q80z1murq9)
* [Earth Topography](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.lcfbp2galt2j)
* [Earth 3D Cities](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.1y5sn5a92xd9)
* [Galaxy Mergers](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.w1xmx6d2vfhb)
* [Mars Topography](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.1p9rfxc20elv)
* [Navigating Our Milky Way Galaxy](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.v6c4xnphmz74)
* [Observatories](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.k96n4p3mcsjm)
* [Welcome to the Universe](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.tqwatmpr1hmb)
* [Testing layers](https://docs.google.com/document/d/1eY6mC9jJ3DrqbOZKux3jbw7yWBVFftPbqADQM-NySoo/edit#heading=h.ixmn4drthp56)

# Galaxies

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| --- | --- | --- | --- |
| **Object** | **Distance** | **Size** | **Notes** |
| [Andromeda(M31)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=41.269444444444,0.71566666666667,12,0,0) | 2.5Mly (778 kpc) | 220,000 light-years (67,000 pc)across | The nearest spiral galaxy to the Milky Way, the two are expected to collide in about 4.5 billion years. |
| [Antennae Galaxies](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-18.8808333333333,12.0313888888889,0.328437261281337,4.91659250286803,0) | 45 Mly |  | The Antennae Galaxies (a.k.a. NGC 4038/NGC 4039 or Caldwell 60/61) are two galaxies that are currently colliding and will eventually become one object. The collision is compressing gas resulting in a phase of heavy star formation known as starburst. |
| [Black Eye Galaxy(M64)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=21.6844444444444,12.9452777777778,0.21962449754760,-1.9006635554218,0) | 24 Mly |  | This is a spiral galaxy with thick dust that blocks out starlight. It is strange because the dust orbits in the opposite direction of the stars. |
| [Bode's(M81)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=69.065277777778,9.9258888888889,2.23696695113765,0,0) | 11.8Mly (3.6Mpc) |  | Bode's Galaxy (a.k.a., Messier 81 or NGC 3031) is a spiral galaxy named for Johann Elert Bode who discovered this galaxy in 1774. It is the largest galaxy in the M81 Group, a group of 34 galaxies located in the constellation Ursa Major, and lies ~11.7 Mly (3.6 Mpc) from Earth. Messier 81 is gravitationally interacting with Messier 82 and NGC 3077. Messier 81 has an active galactic nucleus, which harbors a 70 million M supermassive black hole. One supernova (SN 1993J) has been detected in Messier 81, discovered on 28 March 1993 by F. Garcia in Spain. |
| [Cartwheel](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-33.71638888888889,0.6280833333333333,0.15,0,0) | 500 Mly | 150,000 ly | This is a lenticular galaxy & ring galaxy about 2.9–4.8 × 109 solar masses, & rotates at 217 km/s. It was discovered by Fritz Zwicky in 1941. It shows non-thermal radio & optical spokes, but they are not the same spokes. It was once a normal spiral galaxy before it apparently underwent a head-on collision with a smaller companion approximately 200 million years prior to the image. |
| [Centaurus A](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-43.0047222222222,13.425,1.9367296384201,0,0) | 10-15 Mly |  | This galaxy is round in shape with a strange line of dust seen through the middle. It is believed its strange shape resulted from two galaxies merging together. |
| [Cigar Galaxy (M82)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=69.6838888888889,9.92944444444444,1.15360491032996,0,0) | 11.5 Mly |  | This is a starburst galaxy that produces new, hot stars at a very high rate. It is about 5 times brighter than the Milky Way. |
| [ESO 510-G13](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-26.7786111111111,13.9177777777778,0.201488308219046,0.700575161750524,0) | 150 Mly |  | This is a disk shaped galaxy, known as a spiral galaxy, viewed from its side. Its disk is not straight, but warped likely due to gravitational interactions with another galaxy in the past. |
| [Eyes Galaxies](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=13.016848675626,12.4614012036913,1.4098655715537,0.00628318530717959,0) | 52 Mly |  | These are two galaxies that are interacting with one another, resulting in the odd shapes you see. They are part of the Markarian Chain of Galaxies, a curved line of galaxies that appear to move together. |
| [Hoag's Object](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=21.5852777777778,15.2875,0.120531547960043,0,0) | 600 Mly | 121 kly | This is a ring galaxy, characterized by it's blue ring and central yellow bulge. It is not a typical shape for a galaxy and its structure is a mystery for astronomers. |
| [Large Magellanic Cloud](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-69.756111111111,5.3929166666667,25.1774344298342,0,0) | 157 kly |  | The larger of two naked eye dwarf galaxies that orbit the Milky Way. It can be seen from the Southern Hemisphere. It is about 10 billion solar masses. It has a spiral arm, but is overall an irregular galaxy.  [SN 1987A](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-69.756111111,5.39294444446667,2,0,0) |
| [Leo Triplet(M66 Group)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=13.2552497947974,11.3304391765324,5.57192519334547,0,0) | 30 Mly |  | These are three spiral galaxies that are astronomically close to one another. They show off the different angles and orientations that we can see in the flat spiral galaxies. |
| [M60](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=11.5525,12.727666666667,0.406393005942217,0,0) | 55 Mly |  | Messier 60 (also known as NGC 4649) is an elliptical galaxy in the constellation Virgo. It is part of a pair of galaxies known as Arp 116 with NGC 4647. |
| [M87 (a.k.a. Virgo A)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=12.3927777777778,12.5136111111111,0.406393005942217,0,0) | 53.5 Mly |  | This is very large round galaxy known as an elliptical galaxy. It has powerful jets made of plasma that are a result of a supermassive black hole in the center and seen in radio wavelengths. The jet extends for about 5,000 light years. |
| [Mayall's Object](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=40.8511325928553,11.0648102353023,0.0834189826875253,-0.128805298797182,0) | 450 Mly |  | This peculiar object was discovered in 1940 by Nicholas U. Mayall. We now believe it is two galaxies that collided. This collision created a shockwave that funneled matter to the center and created the ring shape. |
| [Mice Galaxies](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=30.73,12.7697222222222,0.301196362282438,-1.30376095123976,0) | 290 Mly |  | The Mice galaxies are two spiral galaxies that are interacting with each other and will likely form one galaxy later. The blue streams of light are the remnants of the galaxies' spiral arms. |
| [Milky Way (Galactic Center)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-29.00781055555556,17.76112247222222,0,0,0) |  |  | The “milky” in Milky Way is derived from its appearance as a dim glowing band arching across the night sky in which the naked eye cannot distinguish individual stars. ([rotate to horizontal](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-29.00781055555556,17.76112247222222,0,-1,0)) Galileo Galilei first resolved the band of light into individual stars with his telescope in 1610. Located at the very center is an intense radio source named [Sagittarius A\*](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-29.00781055555556,17.76112247222222,0.5,0,0), which is likely to be a supermassive black hole about 4.1 million solar masses. |
| [NGC 602](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-73.558333333333,1.4902777777778,0.145,0,0) | 196 kly |  | NGC 602 is a young, bright open cluster of stars located in the SMC. Radiation and shock waves from the stars have pushed away much of the lighter surrounding gas and dust that compose the nebula known as N90, and this in turn has triggered new star formation in the ridges of the nebula. |
| [NGC 1316 (a.k.a. Fornax A)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-37.2072222222222,3.37833333333333,0.145355437191987,0,0) | 62 Mly |  | This galaxy is the result of several other galaxies that have merged together. The gas and stars from these galaxies are consumed by a supermassive black hole in the center and emit large amounts of radio waves. (This galaxy is what's called a lenticular galaxy. It is also a radio galaxy.) |
| [NGC 3314](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-27.68472222222222,10.62013888888889,0.3,0,0) | 117 to 140 Mly |  | NGC 3314 is a pair of overlapping spiral galaxies in the constellation Hydra. This unique alignment gives astronomers the opportunity to measure the properties of interstellar dust in the face-on foreground galaxy (NGC3314a), which appears dark against the background galaxy (NGC 3314b). Unlike interacting galaxies, the two components of NGC3314 are physically unrelated. |
| [NGC 4993 (LIGO Kilonova)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-23.38416667,13.16322222,0.25,0,0) | 130 Mly (40 Mpc) |  | NGC 4993 (a.k.a. NGC 4994), an elliptical or lenticular galaxy, was discovered in 1789 by William Herschel. Several different teams of scientists used Hubble over the two weeks following the GW170817 gravitational wave event alert to observe NGC 4993. Using Hubble’s high-resolution imaging capabilities they managed to get the first observational proof for a kilonova, the visible counterpart of the merging of two extremely dense objects — most likely two neutron stars. (See [Wikipedia - NGC 4993](https://en.wikipedia.org/wiki/NGC_4993) and [Wikipedia - GRB 170817A](https://en.wikipedia.org/wiki/GRB_170817A)) |
| [NGC 5866 (M102, Spindle Galaxy)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=55.763333333333,15.108194444444,0.25,0,0) | 50 ± 3 Mly |  | NGC 5866 (a.k.a., Spindle Galaxy/M102) is a relatively bright lenticular or spiral galaxy in the constellation Draco. (HST image) |
| [NGC 5907](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=56.328888888889,15.264944444444,0.6,0,0) | 53.5 ± 8.1 Mly |  | NGC 5907 (a.k.a. Knife Edge or Splinter galaxy) is a spiral galaxy with a looping stellar stream surrounding the galaxy. |
| [NGC6050](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=17.7565752955526,16.0897420768728,0.0906028156250871,0,0) | 450 Mly |  | These are three interacting spiral galaxies that are part of the Hercules cluster of galaxies. The group spans around 150,000 lightyears. |
| [Pinwheel(M101)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=54.349166666667,14.0535,1.12951329230358,0,0) | 21 Mly |  | The Pinwheel Galaxy is an example of a flat, disk-shaped galaxy with beautiful swirling shape known as spiral galaxies. It is around 100 billion times more massive than our sun. |
| [Sagittarius Dwarf Elliptical Galaxy](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-30.545277777778,18.922083333333,5,0,0) | 65 ± 7 kly | ~10,000 lyr | Sgr dE (or Sag DEG) is an elliptical loop-shaped satellite galaxy of the Milky Way Galaxy, travelling in a polar orbit at a distance of ~50,000 ly from the core of the Milky Way (about 1/3 the distance of the Large Magellanic Cloud). It consists of four globular clusters. |
| [Small Magellanic Cloud](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-72.82861111111,0.87911111111111,18.8972928249541,0,0) | 197 kly | 7 kly | The smaller of two naked eye dwarf galaxies that orbit the Milky Way. It can be seen from the Southern Hemisphere. There is also a high population of X-ray Binaries. |
| [Sombrero Galaxy (M104)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-11.623055555556,12.6665,0.25,0,0) | 28 Mly |  | The Sombrero Galaxy is an unbarred spiral galaxy in the constellation Virgo. It has a bright nucleus, an unusually large central bulge, and a prominent dust lane in its inclined disk. |
| [Stephan's Quintet](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=33.9629241441575,22.6001875067197,0.484829267800775,2.2776546738526,0) | 280 Mly |  | This is a compact grouping of 5 galaxies that was discovered in 1877 in France. Four of these galaxies are gravitationally interacting and will likely merge form one galaxy in the future. |
| [Triangulum Galaxy](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=30.66,1.5641388888889,3.49304606816698,0,0) | ~3 Mly |  | Catalogued as Messier 33 or NGC 598. Also, sometimes informally referred to as the Pinwheel Galaxy, a nickname it shares with Messier 101. The Triangulum Galaxy is a spiral galaxy and is the third-largest member of the Local Group of galaxies, which includes the Milky Way Galaxy, the Andromeda Galaxy and about 30 other smaller galaxies. It is one of the most distant permanent objects that can be viewed with the naked eye. |
| [Whirlpool(M51)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=47.195277777778,13.497972222222,0.615319867794834,1.60535384918949,0) | 23Mly (7.1Mpc) | 72,000 light-years across | The brightest galaxy in the M51 Group, this galaxy has a companion (NGC5195). |

## Galaxy Clusters

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| **Object** | **Distance** | **Size** | **Notes** |
| [Abell 1689](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-1.33484540604825,13.1914731173651,0.518142928559599,0.446106156809751,0) | 2.5 Gly |  | This is one of the most massive concentrations of galaxies known as a galaxy cluster. The thin, curved bands you see is the light from even more distant galaxies that is bent due to Abell 1689's large amount of gravity, a phenomena known as gravitational lensing. |
| [Bullet Cluster](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-55.9441666666667,6.97444444444444,0.800376546297105,0.223053078404873,0) | 3.7 Gly |  | This collision between two galaxy clusters seems to have left a dark matter cluster in the space between them. The blue overlays the distribution of dark matter; the pink light shows x-rays that come from heated gas in the clusters. |
| [CL0024+17](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=17.16194444444444,0.4430555555555555,1,0,0) |  |  | CL0024+17 is a cluster of galaxies located in Pisces. The blue streaks near the center of the image are the smeared images of very distant galaxies that are not part of the cluster. The distant galaxies appear distorted because their light is being bent and magnified by the powerful gravity of Cl 0024+17, an effect called gravitational lensing, which is allowing astronomers to probe the distribution of dark matter in space. While mapping the dark matter in this cluster, astronomers found a dark-matter ring near the cluster's center. The ring's discovery is among the strongest evidence that dark matter exists. |
| [Coma Cluster](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=27.9677777777778,12.9997222222222,3.30136208582487,0,0) | 333 Mly |  | The Coma Cluster is a galaxy cluster made of over 1,000 galaxies grouped together. It has an array of galaxy types including spirals and ellipticals. |
| [Hubble Deep Field](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=62.2126906363166,12.6133422810895,0.300580857107838,1.19380520836412,0) |  | 2.5 arcminutes | This is a very small area of the sky, but has some of the youngest and most distant galaxies known within its field of view. |
| [Hubble Ultra Deep Field](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-27.791416666667,3.5441666666667,0.3006,1.1938,0) |  | 2.5 arcminutes | HUDF is an image of a small region of space located southwest of Orion in the southern-hemisphere constellation Fornax, composited from Hubble Space Telescope data accumulated over a period from 24-Sep-2003 to 16-Jan-2004. Looking back approximately 13 billion years (between 400 and 800 million years after the Big Bang), the image contains an estimated 10,000 galaxies. The rectangular image is 2.4 arcminutes to an edge, or 3.4 arcminutes diagonally. This is less than one tenth of the angular diameter of a full moon viewed from Earth, smaller than a 1 mm by 1 mm square of paper held at 1 meter away, and equal to roughly one thirteen-millionth of the total area of the sky. The upper left corner of the image points toward north (−46.4°) on the celestial sphere. |
| [El Gordo](http://www.worldwidetelescope.org/wwtweb/goto.aspx?object=Image_File&ra=1.04791666666667&dec=-49.2494444444444&zoom=0.4)(STILL WORKING ON THIS) |  |  | Officially named 'ACT-CL J0102-4915', this galaxy cluster is nicknamed 'El Gordo', meaning "the Fat One" or "the Big One" in Spanish. It is located more than 7 billion light-years from Earth. (See [Wikipedia - El Gordo](http://en.wikipedia.org/wiki/El_Gordo_(Galaxy_cluster)) and [HubbleSite - Full Story on El Gordo](http://hubblesite.org/newscenter/archive/releases/2014/22/full/).) Or [El Gordo TEST](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-49.24944444444444,1.047916666666667,0.3,1.2,0)? |
| [RCS2 032727-132623](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-13.4490119651601,3.45839334965025,0.75,1.7,0) |  |  | This Hubble image shows one of the most striking examples of gravitational lensing, a nearly 90-degree arc of light in the galaxy cluster "RCS2 032727-132623". (RCS = Red-sequence Cluster Survey) Hubble's view of the distant background galaxy, which lies nearly 10 billion light-years away, is significantly more detailed than could be achieved without the help of the gravitational lens. |

# Nebulae

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| **Object** | **Distance** | **Size** | **Notes** |
| [Carina Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-59.867777777778,10.752361111111,5,0,0) | ~6.5-10 kly |  | The Carina Nebula (a.k.a., Eta Carinae Nebula) is a large bright nebula that surrounds several open clusters of stars. It is ~4x larger than the Orion Nebula. |
| [Cat's Eye Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=66.6333664293174,17.9758851185194,0.159779070363401,0,0) | 3.3 kly |  | The Cat's Eye is a planetary nebula. It is the result of star that died by losing its outermost layers about 1,000 years ago. |
| [Crab Nebula(M1)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=22.016667,5.575,1,0,0) | 6.5 kly |  | The Crab Nebula is a Supernova remnant. The Supernova that produced the Crab Nebula was observed by astronomers across the world in 1054. It is expanding at 1500 km/s. |
| [Eagle Nebula(M16)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-13.8299651556523,18.3141089508621,0.3,-0.75,0) | 7 kly | 9.5 ly high | Home to the Pillars of Creation. The Pillars of Creation is a title given to a famous Hubble Space Telescope image of a region of the Eagle Nebula. The image show pillars of cool gas that are being eaten away by the ultraviolet light from nearby hot stars. |
| [Egg Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=36.693833333,21.0385416667,.1,0,0) | 3 kly |  | This is a protoplanetary nebula. You can see a dusty disk structure in the center and symmetric outflows. |
| [Elephant's Trunk Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=57.4702777777778,21.6008333333333,1.79509597240965,1.3226105071613,0) | 2.4 kly |  | The Elephant's Trunk Nebula is made of dust and hot gas within a cluster of stars. New stars are believed to be forming here. |
| [Helix Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-20.837111111111,22.494041666667,2.5,0,0) | 695 ly (213 pc) | 2.5 ly | The Helix Nebula is a large planetary nebula located in the constellation Aquarius. It has sometimes been referred to as the "Eye of God" in pop culture. Gases from the star in the surrounding space appear, from our vantage point, as if we are looking down a helix structure. The remnant central stellar core, known as a planetary nebula nucleus or PNN, is destined to become a white dwarf star. The observed glow of the central star is so energetic that it causes the previously expelled gases to brightly fluoresce. Currently, the age is estimated to be 10,600 years (+2,300 or −1,200), based solely upon a measured expansion rate of 31 km/s. |
| [Homunculus Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-59.6847503322875,10.7510578954714,0.0463252946340543,0,0) | 7.5 kly |  | The Homunculus (from Latin meaning Little Man) is an emission nebula, believed to have been ejected in an enormous outburst from the massive star system Eta Carinae. Light from this event reached Earth in 1841; at that time, Eta Carinae briefly became the second-brightest star in Earth's sky, after Sirius. The ejected gas & dust have since obscured much of its light, however future eruptions remain a distinct possibility. |
| [Horsehead Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-2.44726246635728,5.68350584408134,1.37903635195889,-1.73101755212798,0) | 1.5 kly |  | The Horsehead is a dark nebula that is part of a large cloud of gas currently forming new stars, known as the Orion nebula.The pink color is light coming from very hot Hydrogen. |
| [Lagoon Nebula(M8)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-24.3833333,18.0633333,4.4,0,0) | 4.1 kly | 110 x 50 ly | This is an HII region and is a naked eye star forming region. |
| [Orion Nebula(M42)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-5.3911111111111,5.5881388888889,2.7,0,0) | 1.3 kly | 24 ly | The Orion Nebula is a giant stellar nursery. Several hundred stars can be observed in various stages of star formation. (See example of a [edge-on proplyd](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-5.407,5.5865,0.1,0,0) & [face-on proplyd](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-5.40,5.5884,0.1,0,0).) |
| Rho Ophiuchi | 460 ly |  | Rho Ophiuchi cloud complex is one of the closest star-forming regions to the Solar System. It consists of two major regions of dense gas and dust. |
| [Ring Nebula(M57)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=33.029175,18.893077,0.119030141256468,0,0) | 2.3 kly |  | The Ring Nebula is the end of a small star's life called a planetary nebula. It will leave behind the cooling embers of the star's core known as a white dwarf in the center. |
| [Rosette Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=4.96593592524323,6.53048544358686,8.28910417042922,0,0) | 5.2 kly |  | A cluster of hot young stars exists at the core of the Rosette Nebula. The winds from these stars compress the surrounding gas causing new stars to form. |
| [Tarantula Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-69.095,5.6438888888889,8,0,0) | 160 kly |  | The Tarantula Nebula is an H II region in the Large Magellanic Cloud. (see [Wikipedia - Tarantula Nebula](https://en.wikipedia.org/wiki/Tarantula_Nebula)) |
| [Veil Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=31.1408333333333,20.8513888888889,10.8401140468817,-0.358141562509237,0) | 1.47 kly | 70 ly | The Veil Nebula is part of the remains of a star that died in an explosion called a supernova. It is made up of very hot gas and is about 70 light years wide. The Veil Nebula constitutes the visible portions of the Cygnus Loop (radio source W78), a large but relatively faint supernova remnant in the constellation Cygnus. |

# Stars

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| **Object** | **Distance** | **Size** | **Notes** |
| [Alpha Centauri](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-60.833974444444,14.660137527778,6.7,0,0) | 4.37 ly (1.34 pc) | 1.23 solar radii (A) & 0.87 solar radii (B) | Alpha Centauri is the closest star system to the Solar System. It consists of three stars: the pair Alpha Centauri A and Alpha Centauri B and a small and faint red dwarf, Proxima Centauri, that may be gravitationally bound to the other two. |
| [Betelgeuse](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=7.4070627777778,5.91952925,4.86901048131776,0,0) | 643 ly | ~5 AU | This is a red supergiant in the constellation Orion. It is one of the largest known stars. |
| [Canopus](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-52.695660555556,6.3991971944444,7,0,0) | 310 ly |  | This is the second brightest star in the night sky and is in the constellation Carina. It can be seen from the Southern Hemisphere. Also, based on it's distance and apparent magnitude, it is one of the most luminous stars in the Galaxy. |
| [Eta Carinae](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-59.6847503322875,10.7510578954714,0.0463252946340543,0,0) | 8 kly |  | Eta Carinae is a star system with 2 stars orbiting each other, one of which is at least 100 times more massive than the sun. It is surrounded by a thick red nebula. |
| [Fomalhaut](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-29.622222222222,22.960861111111,2.80003203845554,0,0) | 25.1 ly | 1.8 solar radii | This is believed to be a young star that is only a few hundred million years old. Fomalhaut has a debris disk surrounding the star and a confirmed planet orbiting within that disk. |
| [HL Tau](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=18.23268055555556,4.527343611111111,0.1,0,0) | 450 ly |  | HL Tauri is a very young T Tauri star in the Taurus Molecular Cloud. The luminosity and effective temperature of HL Tauri imply that its age is less than 100,000 years. It is surrounded by a protoplanetary disk marked by dark bands visible in submillimeter radiation that may indicate a number of planets in the process of formation. [ZOOM IN](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=18.23361,4.527325,0.0025,0,0) |
| [Polaris](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=89.264166666667,2.5301944444444,2.80003203845554,0,0) | 433 ly |  | This is the North Star because it is always seen due north. It is the brightest star in Ursa Minor (Little Bear, Little Dipper.) |
| [Pollux](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=28.026388888889,7.7553888888889,6.67158545334998,0,0) | 34 ly | 9 solar radii | This star is one of the head of the twins in the constellation Gemini. It is twice as massive as the sun and 9 times the radius. It also has a known 2.6 Jupiter mass planet orbiting around it. |
| [Proxima Centauri](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-62.679483611111,14.495263527778,6.7,0,0) | 4.25 ly | 0.14 solar radii | Proxima Centauri is a red dwarf. It may form a third component of the Alpha Centauri binary star system, but at a separation of 15,000 ± 700[19] AU its orbital period is likely greater than 500,000 years. |
| [Sirius](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-16.716115833333,6.7524770277778,13.8801579925229,0,0) | 8.6 ly |  | This is the brightest star in the night sky and is in the constellation Canis Major (Big Dog). Sirius is on the collar of the dog. It also has a known companion star. |

## Star Clusters

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| **Object** | **Distance** | **Size** | **Notes** |
| [M2](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-0.816666667,21.5583333333333,1.4,0,0) | 33 kly | 175 ly | One of the largest globular clusters known. Under dark skies, it is visible to the Naked Eye. It has 150,000 stars and 21 are known to be variable. |
| [M3](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=28.3833,13.7033333,1.4,0,0) | 33.9 kly | 180 ly | This is a rather metal rich globular cluster. |
| [M4](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-26.53333,16.3933333,1.4,0,0) | 7.2 kly | 70 ly | This was one of the first globular clusters to be resolved into individual stars. It also houses one of the oldest known stars, which is a white dwarf. |
| [M5](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=2.083333,15.31,1.4,0,0) | 24.5 kly | 160 ly | It is one of the oldest known clusters at about 13 billion years old. |
| [Butterfly Cluster(M6)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-32.21666667,17.6683333333333,2.5,0,0) | 1.6 kly | 12 ly | This is an open cluster made primarily out of hot, bright, blue B stars. Though it's brightest star is an orange giant. |
| [Ptolemy Cluster(M7)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-34.81666667,17.8983333,2.2,0,0) | 980 ly | 50 ly | It is a naked eye open cluster that has been known since ancient times. It is found near the stinger in Scorpius the Scorpion. |
| [M9](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-18.5166666,17.32,1.0,0,0) | 5.5 kly | 90 ly | This is one of the closer globular cluster to Earth. |
| [M10](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-4.1,16.9516666666667,1.4,0,0) | 14.3 kly | 83.2 ly | This is a globular cluster. There is a significant fraction of binaries that live in the core since. They have migrated there due to their larger mass. |
| [M15](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=12.16666667,21.5,1.40625,0,0) | 33.6 kly | 175 ly | M15 is dense collection of more than 100,000 stars known as a globular cluster. M15 is one of the oldest globular clusters with an estimated age of 12 billion years. |
| [NGC 602](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-73.558333333333,1.4902777777778,1.4,0,0) |  |  | This is a Hubble image of NGC 602, a young, bright open cluster of stars located in the Small Magellanic Cloud. The picture spans about 200 light-years. |
| [Pleiades (M45)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=24.1302672748401,3.78459823605575,4.40382446701674,0,0) | 400 ly |  | The Pleiades are one of the most beautiful objects in the night sky. The cluster contains around 1,000 stars, seven of which are visible with the naked eye. |
| [Westerlund 2](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-57.7636,10.39947222222222,0.75,0,0) | 20 kly |  | This Hubble image was released on April 23, 2015, to help celebrate the Hubble Space Telescope's silver anniversary of 25 years in space. Westerlund 2 is a giant cluster of about 3,000 stars, with an estimated age of about one or two million years. |

## Constellations

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| **Object** | **Distance** | **Size** | **Notes** |
| [Aquarius](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-15,23,0,0,0) | (see [Wikipedia - Aquarius](http://en.wikipedia.org/wiki/Aquarius_(constellation))) |  | Aquarius, "The Water-Bearer", is one of the constellations of the zodiac. Eleven exoplanet systems have been found in Aquarius as of 2013. Deep-sky objects: [Helix Nebula (NGC 7293)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-20.837111111111,22.494041666667,2.5,0,0). |
| [Aries](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=20.0,3.0,0,0,0) | (see [Wikipedia - Aries](http://en.wikipedia.org/wiki/Aries_constellation) & [Teegarden's star](http://en.wikipedia.org/wiki/Teegarden%27s_Star)) |  | Aries, "The Ram", is one of the constellations of the zodiac. Notable objects: [NGC 772](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=19.0075,1.9887777777778,0.5,0,0) (an unbarred spiral galaxy w/ a notable supernova); [Arp 276](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=19.599444444444,2.4696944444444,0.5,0,0) (a pair of interacting galaxies NGC 935, the northern member of the pair, & IC 1801). |
| [Cancer](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=20,9,0,0,0) | (see [Wikipedia - Cancer](http://en.wikipedia.org/wiki/Cancer_(constellation))) |  | Cancer, "The Crab", is one of the constellations of the zodiac. Notable objects: the open clusters [Beehive Cluster (a.k.a. Praesepe, or Messier 44)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=19.683333333333,8.6733333333333,2.5,0,0) & [Messier 67](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=11.816666666667,8.8566666666667,0.5,0,0). |
| [Capricornus](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-20,21,0,0,0) | (see [Wikipedia - Capricornus](http://en.wikipedia.org/wiki/Capricornus_(constellation))) |  | Capricornus, "The (horned) Goat", is one of the constellations of the zodiac. Its brightest star is Deneb Algedi. [M30](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-23.179055555556,21.672786111111,0.5,0,0) |
| [Cassiopeia](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=60,1,0,0,0) | (see [Wikipedia - Cassiopeia](http://en.wikipedia.org/wiki/Cassiopeia_(constellation))) |  | The four brightest stars of Cassiopeia are all brighter than third magnitude; Alpha Cassiopeiae, traditionally called "Shedir", is a double star. Deep-sky objects: Two open clusters, [M52 (NGC 7654)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=61.583333333333,23.403333333333,0.5,0,0) & [M103 (NGC 581)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=60.7,1.5533333333333,0.5,0,0); SN 1572 (a.k.a. Tycho's Supernova). |
| [Gemini](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=20,7,0,0,0) | (see [Wikipedia - Gemini](http://en.wikipedia.org/wiki/Gemini_(constellation))) |  | Gemini, "The Twins", is one of the constellations of the zodiac. Notable objects: the open cluster [M35 (NGC 2168)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=24.35,6.1516666666667,0.5,0,0). |
| [Hercules](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=30,17,0,0,0) | 20.62 ly, 6.32 pc (i.e., distance to its nearest star, Gliese 661) |  | The constellation Hercules is named after the Roman mythological hero, which was adapted from the Greek hero "Heracles". Its brightest star is \_\_. |
| [Hydra](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-20,10,0,0,0) | 20.67 ly, 6.34 pc (i.e., distance to its nearest star, LHS 3003)  (see [Wikipedia - Hydra](http://en.wikipedia.org/wiki/Hydra_(constellation))) |  | Hydra is the largest of the 88 modern constellations, measuring 1303 square degrees, & is also one of the longest at over 100 degrees. It is commonly represented as a water snake. It should not be confused with the similarly named constellation of Hydrus. Its brightest star is Alphard (designated Alpha Hydrae), an orange giant of magnitude 2.0, 177 light-years from Earth. |
| [Leo](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=15,11,0,0,0) | (see [Wikipedia - Leo](http://en.wikipedia.org/wiki/Leo_(constellation))) |  | Leo, "The Lion", is one of the constellations of the zodiac. Notable objects: [Messier 95](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=11.703888888889,10.732694444444,0.5,0,0); the [Leo Triplet (M66 Group)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=13.2552497947974,11.3304391765324,5.57192519334547,0,0), a small group of spiral galaxies (M65, M66, & NGC 3628). |
| [Libra](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-15,15,0,0,0) | (see [Wikipedia - Libra](http://en.wikipedia.org/wiki/Libra_(constellation))) |  | Libra is one of the constellations of the zodiac. Its name is Latin for "weighing scales". Libra is home to a planetary system consisting of at least 6 planets around the red dwarf star [Gliese 581](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-7.7222222222222,15.323888888889,0.5,0,0), incl. one planet that is considered to be the first Earth-like extrasolar planet to be found within its parent star's habitable zone (for more details, see [Wikipedia - Gleisa\_581](http://en.wikipedia.org/wiki/Gleisa_581)). |
| [Lyra](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=40,19,0,0,0) | 18.51 ly, 5.67 pc (i.e., distance to its nearest star, 2MASS J18353790+3259545) |  | Lyra (Latin for "lyre") is a small constellation. Its brightest star is Vega, which is a corner of the Summer Triangle and, with an apparent brightness of 0.03m, is the third brightest star of the northern hemisphere. In Lyra are the objects M56 (a globular cluster), M57 (a.k.a. the "Ring Nebula"), and Kuiper 90 (a red dwarf system, a.k.a. "17 Lyrae C"). |
| [Ophiuchus](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=0,17,0,0,0) | (see [Wikipedia - Ophiuchus](http://en.wikipedia.org/wiki/Ophiucus)) |  | Ophiuchus (pronounced "Ofyookus", Greek for "serpent-bearer") is one of thirteen constellations that cross the ecliptic. It has therefore been called the "13th sign of the zodiac". Deep-sky objects: [M9](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-18.5166666,17.32,1.0,0,0), [M10](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-4.1,16.9516666666667,1.4,0,0), M12, M14, M19, M62, and M107, as well as the nebula IC 4603-4604. |
| [Orion](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=0,5.5,0,0,0) | 17.51 ly, 5.37 pc (nearest star in the constellation) to 1,359 ly [farthest of the 7 main stars in the constellation, Alnilam (Epsilon Orionis, ε Orionis)] | Area = 594 sq. deg. (26th) | Orion, "The Hunter" (from Greek mythology). [Betelgeuse (α Ori)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=7.4070627777778,5.91952925,4.86901048131776,0,0), [Orion Nebula(M42)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-5.3911111111111,5.5881388888889,2.7,0,0) (example of a [edge-on proplyd](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-5.407,5.5865,0.1,0,0) & [face-on proplyd](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-5.40,5.5884,0.1,0,0)), [Horsehead Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-2.44726246635728,5.68350584408134,1.37903635195889,-1.73101755212798,0). |
| [Pisces](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=15,1,0,0,0) | (see [Wikipedia - Pisces](http://en.wikipedia.org/wiki/Pisces_(constellation))) |  | Pisces (Latin plural for "fish") is one of the constellations of the zodiac. Its brightest star is Eta Piscium. Deep-sky objects: [M74](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=15.783611111111,1.6116111111111,0.5,0,0) (a loosely-wound (type Sc) spiral galaxy), CL 0024+1654 (a massive galaxy cluster that lenses the galaxy behind it), [CL0024+17](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=17.16194444444444,0.4430555555555555,1,0,0) (ditto), & 3C 31 (an active galaxy and radio source in Perseus). |
| [Sagittarius](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-25,19,0,0,0) | (see [Wikipedia - Sagittarius](http://en.wikipedia.org/wiki/Sagittarius_(constellation))) |  | Sagittarius, "The Archer", is one of the constellations of the zodiac. Its brightest star is Kaus Australis. [M20 (Trifid Nebula)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-23.03,18.039722222222,0.5,0,0) & Sagittarius Star Cloud |
| [Scorpius](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-30.736666666667,16.8875,0,0,0) | 980 ly (distance to Ptolemy Cluster, near the "stinger") (see also [Wikipedia - Scorpius](http://en.wikipedia.org/wiki/Scorpius_(constellation))) | 50 ly (size of Ptolemy Cluster) | Scorpius, "The Scorpion", is the constellation that corresponds to the Zodiacal sign of Scorpio. Its brightest star is Antares. Near the "stinger" is a naked eye open star cluster called the [Ptolemy Cluster(M7)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-34.81666667,17.8983333,2.2,0.5,0), which has been known since ancient times. Also, the [Butterfly Cluster(M6)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-32.21666667,17.6683333333333,2.5,0,0). |
| [Taurus](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=15,4,0,0,0) | (see [Wikipedia - Taurus](http://en.wikipedia.org/wiki/Taurus_(constellation))) |  | Taurus, "The Bull", is one of the constellations of the zodiac. Notable objects: [Pleiades (M45)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=24.1302672748401,3.78459823605575,4.40382446701674,0,0), an open cluster easily visible to the naked eye; the [Crab Nebula (M1, NGC 1952, Taurus A)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=22.016667,5.575,1,0,0), a supernova remnant & pulsar wind nebula. |
| [Ursa Major](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=55.38,10.67,0,0,0) | (see [Wikipedia - Ursa Major](http://en.wikipedia.org/wiki/Ursa_major)) |  | Ursa Major (Latin: "Larger Bear"), a.k.a. the Great Bear, contains [Bode's Galaxy (M81 or NGC 3031)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=69.065277777778,9.9258888888889,2.23696695113765,0,0); [Cigar Galaxy (M82 or NGC 3034)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=69.6838888888889,9.92944444444444,1.15360491032996,0,0); [Mayall's Object](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=40.8511325928553,11.0648102353023,0.0834189826875253,-0.128805298797182,0); the [Pinwheel Galaxy (M101)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=54.349166666667,14.0535,1.12951329230358,0,0). |
| [Ursa Minor](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=75,15,0,0,0) | (see [Wikipedia - Ursa Minor](http://en.wikipedia.org/wiki/Ursa_minor)) |  | Ursa Minor (Latin: "Smaller Bear"), also known as the Little Bear, is a constellation in the northern sky. Like the Great Bear, the tail of the Little Bear may also be seen as the handle of a ladle, hence the name Little Dipper. Ursa Minor is notable as the location of the north celestial pole, although this will change after some centuries due to the precession of the equinoxes. |
| [Virgo](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=0,13,0,0,0) | (see [Wikipedia - Virgo](http://en.wikipedia.org/wiki/Virgo_(constellation))) |  | Virgo, "The Virgin", is one of the constellations of the zodiac. Notable objects: [M87 (a.k.a. Virgo A)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=12.3927777777778,12.5136111111111,0.406393005942217,0,0), the largest galaxy in the Virgo cluster & a major radio source, partially due to its jet; the [Sombrero Galaxy (M104)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-11.623055555556,12.6665,0.25,0,0), an unbarred spiral galaxy; & the [Eyes Galaxies (NGC 4435-NGC 4438, a.k.a. Arp 120)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=13.016848675626,12.4614012036913,1.4098655715537,0.00628318530717959,0), a pair of galaxies ~52 million light-years away. |

## Constellations (Detailed Notes)

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| --- | --- | --- | --- |
| **Object** | **Distance** | **Size** | **Notes** |
| [Aries](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=20.0,3.0,0,0,0) | (see [Wikipedia - Aries](http://en.wikipedia.org/wiki/Aries_constellation) & [Teegarden's star](http://en.wikipedia.org/wiki/Teegarden%27s_Star)) |  | Aries, "The Ram", is one of the constellations of the zodiac, the groups of stars through which the apparent course of the sun passes during the year. Aries (the Latin word for ram) is located in the Northern Hemisphere between the constellations Pisces (to the west) & Taurus (to the east). Its brightest star is Hamal, & its nearest star is Teegarden's Star. As of 2002, the Sun resides in the constellation Aries from April 19 to May 20 as it moves through the ecliptic. Several meteor showers appear to radiate from Aries, incl. the Daytime Arietids & the Epsilon Arietids. Deep-sky objects: [NGC 772](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=19.0075,1.9887777777778,0.5,0,0) (an unbarred spiral galaxy w/ a notable supernova), NGC 678 & NGC 680 (a pair of galaxies only ~200,000 light-years apart), NGC 821 (an E6 elliptical galaxy, which has hints of an early spiral structure), [Arp 276](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=19.599444444444,2.4696944444444,0.5,0,0) (a pair of interacting galaxies NGC 935, the northern member of the pair, & IC 1801), & Segue 2 (a dwarf spheroidal galaxy that is a satellite galaxy of the Milky Way, recently discovered to be a potential relic of the epoch of reionization). Aries contains several stars with extrasolar planets. |
| [Taurus](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=15,4,0,0,0) | (see [Wikipedia - Taurus](http://en.wikipedia.org/wiki/Taurus_(constellation))) |  | Taurus, "The Bull", is one of the constellations of the zodiac. Its brightest star is Aldebaran, an orange-hued, spectral class K5 III giant star. During November, the Taurid meteor shower appears to radiate from the general direction of Taurus. In the northeastern quadrant of the Taurus constellation lie the [Pleiades (M45)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=24.1302672748401,3.78459823605575,4.40382446701674,0,0), one of the best known open clusters, easily visible to the naked eye. Also, a supernova remnant & pulsar wind nebula called the [Crab Nebula (M1, NGC 1952, Taurus A)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=22.016667,5.575,1,0,0). |
| [Gemini](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=20,7,0,0,0) | (see [Wikipedia - Gemini](http://en.wikipedia.org/wiki/Gemini_(constellation))) |  | Gemini, "The Twins", is one of the constellations of the zodiac, and it is associated with the twins Castor & Pollux in Greek mythology. Correspondingly, the two brightest stars in Gemini are named Castor & Pollux, with the brightest being Pollux. Pollux has an extrasolar planet revolving around it, as do two other stars in Gemini, HD 50554 & HD 59686. To look at Gemini is to look away from the Milky Way; as a result, there are relatively few deep-sky objects of note, incl. the Eskimo Nebula (a.k.a., Clown Face Nebula, or NGC 2392) & Medusa Nebula, the open cluster [M35 (NGC 2168)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=24.35,6.1516666666667,0.5,0,0), & Geminga (a neutron star ~550 light years from Earth). Other objects of note are NGC 2129, NGC 2158, NGC 2266, NGC 2331, NGC 2355, and NGC 2395. |
| [Cancer](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=20,9,0,0,0) | (see [Wikipedia - Cancer](http://en.wikipedia.org/wiki/Cancer_(constellation))) |  | Cancer, "The Crab", is one of the constellations of the zodiac. Its brightest star is Al Tarf. Cancer is best known among stargazers as the home of an open cluster called the [Beehive Cluster (a.k.a. Praesepe, or Messier 44)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=19.683333333333,8.6733333333333,2.5,0,0), 577 light-years from Earth. The smaller, denser open cluster [Messier 67](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=11.816666666667,8.8566666666667,0.5,0,0) can also be found in Cancer, 2500 light-years from Earth. |
| [Leo](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=15,11,0,0,0) | (see [Wikipedia - Leo](http://en.wikipedia.org/wiki/Leo_(constellation))) |  | Leo, "The Lion", is one of the constellations of the zodiac. Its brightest star is Regulus. Leo contains many bright galaxies; Messier 65, Messier 66, [Messier 95](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=11.703888888889,10.732694444444,0.5,0,0), Messier 96, Messier 105, and NGC 3628 are the most famous, the first two being part of the [Leo Triplet (M66 Group)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=13.2552497947974,11.3304391765324,5.57192519334547,0,0), a small group of spiral galaxies (M65, M66, & NGC 3628) ~35 million light-years away. The M96 Group is located physically near the Leo Triplet; these two groups may actually be separate parts of a much larger group. The Leo Ring, a cloud of hydrogen and helium gas, is found in orbit of two galaxies found within this constellation. The Leonids meteor shower occur in November, peaking on November 14–15. |
| [Virgo](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=0,13,0,0,0) | (see [Wikipedia - Virgo](http://en.wikipedia.org/wiki/Virgo_(constellation))) |  | Virgo, "The Virgin", is one of the constellations of the zodiac. Its brightest star is Spica. There are 34 known exoplanets orbiting 28 stars in Virgo, including PSR B1257+12 (three planets), 70 Virginis (one planet), Chi Virginis (one planet), 61 Virginis (three planets), and NY Virginis (two planets). Because of the presence of a galaxy cluster (consequently called the Virgo cluster) within its borders , this constellation is especially rich in galaxies. [M87 (a.k.a. Virgo A)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=12.3927777777778,12.5136111111111,0.406393005942217,0,0) is the largest galaxy in the Virgo cluster, & it is a major radio source, partially due to its jet of electrons being flung out of the galaxy by its central supermassive black hole (the jet is visible in several different wavelengths). Virgo also contains the [Sombrero Galaxy (M104)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-11.623055555556,12.6665,0.25,0,0), an unbarred spiral galaxy, & the [Eyes Galaxies (NGC 4435-NGC 4438, a.k.a. Arp 120)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=13.016848675626,12.4614012036913,1.4098655715537,0.00628318530717959,0), a pair of galaxies ~52 million light-years away. |
| [Libra](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-15,15,0,0,0) | (see [Wikipedia - Libra](http://en.wikipedia.org/wiki/Libra_(constellation))) |  | Libra is one of the constellations of the zodiac. Its name is Latin for "weighing scales". It is fairly faint, with no first magnitude stars; its brightest star is Zubeneschamali. Libra is home to a planetary system consisting of at least 6 planets around the red dwarf star [Gliese 581](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-7.7222222222222,15.323888888889,0.5,0,0), incl. one planet that is considered to be the first Earth-like extrasolar planet to be found within its parent star's habitable zone (for more details, see [Wikipedia - Gleisa\_581](http://en.wikipedia.org/wiki/Gleisa_581)). Deep-sky objects: NGC 5897 (bright globular cluster). |
| [Scorpius](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-30.736666666667,16.8875,0,0,0) | 980 lyrs (distance to Ptolemy Cluster, near the "stinger") (see also [Wikipedia - Scorpius](http://en.wikipedia.org/wiki/Scorpius_(constellation))) | 50 lyrs (size of Ptolemy Cluster) | Scorpius, "The Scorpion", is the constellation that corresponds to the Zodiacal sign of Scorpio. Its brightest star is Antares. Near the "stinger" is a naked eye open star cluster called the [Ptolemy Cluster(M7)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-34.81666667,17.8983333,2.2,0.5,0), which has been known since ancient times. Also, the [Butterfly Cluster(M6)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-32.21666667,17.6683333333333,2.5,0,0). |
| [Sagittarius](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-25,19,0,0,0) | (see [Wikipedia - Sagittarius](http://en.wikipedia.org/wiki/Sagittarius_(constellation))) |  | Sagittarius, "The Archer", is one of the constellations of the zodiac. Its brightest star is Kaus Australis. [M20 (Trifid Nebula)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-23.03,18.039722222222,0.5,0,0) & Sagittarius Star Cloud |
| [Capricornus](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-20,21,0,0,0) | (see [Wikipedia - Capricornus](http://en.wikipedia.org/wiki/Capricornus_(constellation))) |  | Capricornus, "The (horned) Goat", is one of the constellations of the zodiac. Its brightest star is Deneb Algedi. [M30](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-23.179055555556,21.672786111111,0.5,0,0) |
| [Aquarius](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-15,23,0,0,0) | (see [Wikipedia - Aquarius](http://en.wikipedia.org/wiki/Aquarius_(constellation))) |  | Aquarius, "The Water-Bearer", is one of the constellations of the zodiac. Its brightest star is Sadalsuud. Eleven exoplanet systems have been found in Aquarius as of 2013. Deep-sky objects: Because of its position away from the galactic plane, the majority of deep-sky objects in Aquarius are galaxies, globular clusters, & planetary nebulae, incl. the globular clusters Messier 2 (NGC 7089) & Messier 72, the open cluster Messier 73, the Saturn Nebula (NGC 7009), the famous [Helix Nebula (NGC 7293)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-20.837111111111,22.494041666667,2.5,0,0), planetary nebula NGC 6781, & spiral galaxy (type S) NGC 7727. |
| [Pisces](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=15,1,0,0,0) | (see [Wikipedia - Pisces](http://en.wikipedia.org/wiki/Pisces_(constellation))) |  | Pisces (Latin plural for "fish") is one of the constellations of the zodiac. Its brightest star is Eta Piscium. Deep-sky objects: [M74](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=15.783611111111,1.6116111111111,0.5,0,0) (a loosely-wound (type Sc) spiral galaxy), CL 0024+1654 (a massive galaxy cluster that lenses the galaxy behind it), & 3C 31 (an active galaxy and radio source in Perseus). |
| [Ophiuchus](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=0,17,0,0,0) | (see [Wikipedia - Ophiuchus](http://en.wikipedia.org/wiki/Ophiucus)) |  | Ophiuchus (pronounced "Ofyookus", Greek for "serpent-bearer") is one of thirteen constellations that cross the ecliptic. It has therefore been called the "13th sign of the zodiac". However, this confuses sign with constellation. The signs of the zodiac are a twelve-fold division of the ecliptic, so that each sign spans 30° of celestial longitude, approximately the distance the Sun travels in a month, and (in the Western tradition) are aligned with the seasons so that the March equinox falls on the boundary between Aries and Pisces. Constellations, on the other hand, are unequal in size and are based on the positions of the stars. The brightest star in Ophiuchus is Rasalhague. Barnard's Star, one of the nearest stars to the Solar System (the only stars closer are the Alpha Centauri binary star system and Proxima Centauri), lies in Ophiuchus. Other notable features incl. the Ophiuchus Superbubble and Kepler's Supernova (first observed on October 9, 1604, near θ Ophiuchi). Deep-sky objects: Ophiuchus contains several star clusters, such as IC 4665, NGC 6633, [M9](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-18.5166666,17.32,1.0,0,0), [M10](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-4.1,16.9516666666667,1.4,0,0), M12, M14, M19, M62, and M107, as well as the nebula IC 4603-4604. From 29 Nov - 17 Dec the Sun is in the constellation Ophiuchus. |
| [Cassiopeia](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=60,1,0,0,0) | (see [Wikipedia - Cassiopeia](http://en.wikipedia.org/wiki/Cassiopeia_(constellation))) |  | This constellation is named after the vain queen Cassiopeia in Greek mythology. It is easily recognizable due to its distinctive 'W' shape, formed by five bright stars. The four brightest stars of Cassiopeia are all brighter than third magnitude; Alpha Cassiopeiae, traditionally called "Shedir", is a double star. Cassiopeia is bordered by Andromeda to the south, Perseus to the southeast, & Cepheus to the north; it is opposite the Big Dipper, and from northern latitudes can be seen most clearly in early November. Deep-sky objects: Two open clusters, [M52 (NGC 7654)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=61.583333333333,23.403333333333,0.5,0,0) & [M103 (NGC 581)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=60.7,1.5533333333333,0.5,0,0); [SN 1572](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=64.154166666667,0.4225,0.5,0,0) (a.k.a. Tycho's Supernova, "B Cassiopeiae" (B Cas), or 3C 10), which was a supernova of Type Ia, one of about eight supernovae visible to the naked eye in historical records - it burst forth in early November 1572 & was independently discovered by many individuals. |
| [Hercules](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=30,17,0,0,0) | 20.62 ly, 6.32 pc (i.e., distance to its nearest star, Gliese 661) |  | The constellation Hercules is named after the Roman mythological hero, which was adapted from the Greek hero "Heracles". Its brightest star is \_\_. |
| [Lyra](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=40,19,0,0,0) | 18.51 ly, 5.67 pc (i.e., distance to its nearest star, 2MASS J18353790+3259545) |  | Lyra (Latin for "lyre") is a small constellation. Its brightest star is Vega, which is a corner of the Summer Triangle and, with an apparent brightness of 0.03m, is the third brightest star of the northern hemisphere. In Lyra are the objects M56 (a globular cluster), M57 (a.k.a. the "Ring Nebula"), and Kuiper 90 (a red dwarf system, a.k.a. "17 Lyrae C"). |
| [Orion](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=0,5.5,0,0,0) | 17.51 ly, 5.37 pc (nearest star in the constellation) to 1,359 ly [farthest of the 7 main stars in the constellation, Alnilam (Epsilon Orionis, ε Orionis)] | Area = 594 sq. deg. (26th) | Orion, "The Hunter" (from Greek mythology), is composed of 7 main stars, with the brightest being Rigel [β Ori (0.12m)], a blue-white supergiant (it is the sixth brightest star in the night sky), & the nearest star in the constellation being GJ 3379 (17.51 ly, 5.37 pc). Its second brightest star, [Betelgeuse (α Ori)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=7.4070627777778,5.91952925,4.86901048131776,0,0), seen as The Hunter's right (i.e., to our left) shoulder, is a red supergiant. The [Orion Nebula(M42)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-5.3911111111111,5.5881388888889,2.7,0,0) is visible to the neaked eye as a blurry patch of light in Orion's "sword". The[Horsehead Nebula](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=-2.44726246635728,5.68350584408134,1.37903635195889,-1.73101755212798,0) is part of the Orion Nebula. Orion borders the constellations of Gemini, Taurus, Eridanus, Lepus, & Monoceros. |
| [Ursa Major](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=55.38,10.67,0,0,0) | (see [Wikipedia - Ursa Major](http://en.wikipedia.org/wiki/Ursa_major)) |  | Ursa Major (Latin: "Larger Bear"), also known as the Great Bear, is a constellation visible throughout the year in most of the northern hemisphere. It is dominated by the widely recognized asterism known as the Big Dipper or Plough, which is a useful pointer toward north. Ursa Major contains [Bode's Galaxy (M81 or NGC 3031)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=69.065277777778,9.9258888888889,2.23696695113765,0,0), a large spiral galaxy with an active galactic nucleus (harboring a 70 million M☉[8] supermassive black hole), which is located ~12 million light-years from Earth. Also, [Cigar Galaxy (M82 or NGC 3034)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=69.6838888888889,9.92944444444444,1.15360491032996,0,0), a starburst galaxy ~12 million light-years away, which is ~5x as bright as the whole Milky Way. And [Mayall's Object](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=40.8511325928553,11.0648102353023,0.0834189826875253,-0.128805298797182,0) (also classified under the Atlas of Peculiar Galaxies as Arp 148), which is the result of two colliding galaxies located 500 million light years away. Plus, the [Pinwheel Galaxy (M101)](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=54.349166666667,14.0535,1.12951329230358,0,0), a face-on spiral galaxy distanced 21 million light-years (six megaparsecs) away. |
| [Ursa Minor](http://tilewall.adlerplanetarium.org:5050/layerApi.aspx?cmd=mode&lookat=Sky&flyto=75,15,0,0,0) | (see [Wikipedia - Ursa Minor](http://en.wikipedia.org/wiki/Ursa_minor)) |  | Ursa Minor (Latin: "Smaller Bear"), also known as the Little Bear, is a constellation in the northern sky. Like the Great Bear, the tail of the Little Bear may also be seen as the handle of a ladle, hence the name Little Dipper. Ursa Minor is notable as the location of the north celestial pole, although this will change after some centuries due to the precession of the equinoxes. |