

Joe Orman's Naked-Eye 100

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|----|--------------------------|--------------------------------------|--|
| 1 | <input type="checkbox"/> | Sunrise | As we turn from the night side of our planet to the day side, our closest star appears in the sky. |
| 2 | <input type="checkbox"/> | Equinox Sunrise | About March 20 each year, the sun rises straight east. Look along an east-west aligned street, canal, etc. |
| 3 | <input type="checkbox"/> | Sunspots | Occasionally sunspots get big enough to see without magnification. Use proper eye protection! |
| 4 | <input type="checkbox"/> | Solar Eclipse, Partial | The moon takes a bite out of the sun. Use proper eye protection! |
| 5 | <input type="checkbox"/> | Solar Eclipse, Total | Within the path of totality, the moon completely covers the sun, revealing the beauty of the sun's corona. |
| 6 | <input type="checkbox"/> | Bailey's Beads | Sunlight peeking between the mountains of the moon during a total solar eclipse. |
| 7 | <input type="checkbox"/> | Diamond Ring | A brief flash of direct sunlight signals the beginning and end of a total solar eclipse. |
| 8 | <input type="checkbox"/> | Solar Eclipse, Annular | The moon appears in line with the sun but does not completely cover it, leaving a "ring of fire." |
| 9 | <input type="checkbox"/> | Solar Transit Of Mercury | Fairly rare; 13 or 14 each century. Next occurrence is November 8, 2006. Use proper eye protection! |
| 10 | <input type="checkbox"/> | Solar Transit Of Venus | Very rare; only twice a century. Next occurrence is June 5, 2012. Use proper eye protection! |
| 11 | <input type="checkbox"/> | Sun Halo | On winter days with thin clouds, look for a complete circle around the sun, 22 degrees in radius. |
| 12 | <input type="checkbox"/> | Sundogs (Parhelia) | Appear in thin clouds as bright colored patches 22 degrees to the left and right of the sun. |
| 13 | <input type="checkbox"/> | Sun Pillar | Vertical column of light above sun when sun is on horizon; formed by reflection off ice crystals. |
| 14 | <input type="checkbox"/> | Other Halos | Circumzenithal arc, tangent arcs, Parry arc, 46-degree halo -- some are subtle and rarely seen. |
| 15 | <input type="checkbox"/> | Corona | In thin clouds, colored rings a few degrees across around sun or moon. |
| 16 | <input type="checkbox"/> | Aureole | Bright glow around the sun or moon, colorless and only a few degrees across. |
| 17 | <input type="checkbox"/> | Glory | Looking into fog or clouds from a plane or mountaintop, colored rings around the antisolar point. |
| 18 | <input type="checkbox"/> | Spectre Of The Brocken | Your own shadow in the center of the glory. |
| 19 | <input type="checkbox"/> | Mountain Shadow | From the top of a mountain, look opposite the sunset; perspective makes a cone-shaped shadow. |
| 20 | <input type="checkbox"/> | Rainbow | The primary rainbow appears as an arc 42 degrees in radius centered around the antisolar point. |
| 21 | <input type="checkbox"/> | Double Rainbow | The outer, or secondary, rainbow is 51 degrees in radius. Colors are reversed. |
| 22 | <input type="checkbox"/> | Irisation (Iridescent Clouds) | Multi-colored patch in thin clouds or on cloud edges many degrees from the sun |
| 23 | <input type="checkbox"/> | Mirages | The sky reflected off temperature boundaries close to the ground. |
| 24 | <input type="checkbox"/> | Lightning | Lightning is an awesome sight day or night, but use caution and observe from a safe distance! |
| 25 | <input type="checkbox"/> | Crepuscular Rays | Brilliant streaks of light radiating from clouds backlit by the sun. |
| 26 | <input type="checkbox"/> | Anticrepuscular Rays | Crepuscular rays converging on the antisolar point; often very faint and diffuse. |
| 27 | <input type="checkbox"/> | Sunset | Watch our closest star set, but keep watching afterward for the best sky and cloud colors. |
| 28 | <input type="checkbox"/> | Equinox Sunset | About Sep. 22 each year, the sun sets straight west. Look along an east-west aligned street, canal, etc. |
| 29 | <input type="checkbox"/> | Green Flash | Need a low flat horizon and clear skies. The upper limb of the sun flashes green just before setting. |
| 30 | <input type="checkbox"/> | Belt Of Venus | A band of pink above the horizon; look opposite the sun just before sunrise or just after sunset. |
| 31 | <input type="checkbox"/> | Twilight | After sunset or before sunrise, the sky is an pastel palette of orange, pink, purple, blue and black. |
| 32 | <input type="checkbox"/> | Noctilucent Clouds | Rarely-seen clouds of ice particles at the edge of space after twilight; seen only from high latitudes. |
| 33 | <input type="checkbox"/> | Zodiacal Light | A pale cone of light along the ecliptic; best seen before dawn in the fall or after sunset in the spring. |
| 34 | <input type="checkbox"/> | Gegenschein | A faint patch of light on the ecliptic; look at the antisolar point around midnight. |
| 35 | <input type="checkbox"/> | Aurora Borealis | Northern Lights. From the southern U.S., can occasionally be seen as a reddish glow in the northern sky. |
| 36 | <input type="checkbox"/> | Moonrise | The rising moon silhouetting a distant mountain, tree, or saguaro cactus is an awe-inspiring sight. |
| 37 | <input type="checkbox"/> | Equinox Moonrise | Near the spring and fall equinox the full moon rises straight east, opposite the sunset in the west. |
| 38 | <input type="checkbox"/> | Crescent Moon | On evenings after new moon, look for the delicate crescent above the twilight horizon after sunset. |
| 39 | <input type="checkbox"/> | Earthshine | Sunlight reflected off the earth onto the dark side of the moon; best when moon is thin crescent. |
| 40 | <input type="checkbox"/> | Full Moon | Be sure to also look at the surrounding landscape bathed in the cool moonlight. |
| 41 | <input type="checkbox"/> | Moon Halo | Same as a sun halo, but seen around the moon at night. |
| 42 | <input type="checkbox"/> | Harvest Moon | The full moon closest to fall equinox; rises soon after sunset for several days in a row. |
| 43 | <input type="checkbox"/> | Lunar Eclipse, Partial | The earth's shadow, takes a bite out of the moon. |
| 44 | <input type="checkbox"/> | Lunar Eclipse, Total | The moon passes totally within the earth's shadow, often turning a dark reddish color. |
| 45 | <input type="checkbox"/> | Let The Moon Follow You Home | The moon seems to follow you as you drive along the road -- a trick of perspective. |
| 46 | <input type="checkbox"/> | Moon Reflected In Water | This sight has inspired poets and lovers for ages. |
| 47 | <input type="checkbox"/> | Glitter Path | The sun or moon's reflection forms a column of glittering light on rippling water. |
| 48 | <input type="checkbox"/> | Moonset | Whether full moon or crescent, the last bit to slip beneath the horizon always brings a special sadness. |
| 49 | <input type="checkbox"/> | Equinox Moonset | Near the spring and fall equinox the full moon sets straight west, opposite the sunrise in the east. |
| 50 | <input type="checkbox"/> | Mercury | For a few days every month or two, Mercury rises above the glow of twilight and is easy to see. |

51	<input type="checkbox"/>	Venus	Brightly visible above the morning or evening twilight for several months at a time.
52	<input type="checkbox"/>	Venus In Daytime	Easy to see if you know where to look and can focus your eyes at infinity. Helps if moon is nearby.
53	<input type="checkbox"/>	Mars	Near opposition, Mars is a brilliant object in the night sky.
54	<input type="checkbox"/>	Jupiter	Looks like a bright star; magnification needed to see the 4 Galilean moons.
55	<input type="checkbox"/>	Saturn	Looks like a bright star; magnification needed to see the rings.
56	<input type="checkbox"/>	Planetary Conjunction	Look for 2 or more planets appearing near each other.
57	<input type="checkbox"/>	Star-Planet Conjunction	Occasionally planets appear very close to background stars.
58	<input type="checkbox"/>	Moon-Planet Conjunction	Venus is the crescent Moon's most noticeable companion, but look for other planets near the moon too.
59	<input type="checkbox"/>	Lunar Occultation, Stellar	Antares, Regulus, Aldebaran and Spica all lie near the ecliptic and are occasionally covered by the moon.
60	<input type="checkbox"/>	Lunar Occultation, Planetary	Occasionally the moon also passes in front of one of the planets.
61	<input type="checkbox"/>	Ecliptic	The sun, moon and planets make a straight line across the sky -- the plane of our Solar System.
62	<input type="checkbox"/>	Orion The Hunter	This constellation really looks like a human figure; the three evenly-spaced stars are the Hunter's belt.
63	<input type="checkbox"/>	Betelgeuse	The Hunter's left shoulder is a red giant star, bright and pink to the eye.
64	<input type="checkbox"/>	Orion Nebula	Look for the diffuse patch in the middle of the sword hanging from the Hunter's belt.
65	<input type="checkbox"/>	Sirius	The brightest star in the night sky; twinkles different colors when low in atmosphere. In Canis Major.
66	<input type="checkbox"/>	Summer Triangle	Bright stars Deneb in Cygnus, Vega in Lyra, Altair in Aquila form triangle visible in evening all summer.
67	<input type="checkbox"/>	Winter Hexagon	Sirius, Procyon, Pollux & Castor, Capella, Aldebaran, and Rigel form a hexagon on winter evenings.
68	<input type="checkbox"/>	Hyades	The "V" shaped open cluster in the face of Taurus the Bull; Aldebaran is the bright star among them.
69	<input type="checkbox"/>	Pleiades	A tight cluster of 6 or 7 bright blue stars, in the form of a miniature dipper.
70	<input type="checkbox"/>	Omega Centauri	This globular cluster looks like a fuzzy patch to the naked eye; a telescope shows the individual stars.
71	<input type="checkbox"/>	Big Dipper	The body and tail of Ursa Major, the Big Bear. Close to Polaris in the northern sky.
72	<input type="checkbox"/>	Arc To Arcturus	Follow the curve of the Big Dipper's handle to a bright star -- Arcturus in Bootes.
73	<input type="checkbox"/>	Drive A Spike To Spica	Continue the curve past Arcturus to another bright star -- Spica in Virgo.
74	<input type="checkbox"/>	Big Dipper Double Star	The star where the dipper's handle bends, Mizar, has a fainter companion Alcor -- a good test of vision.
75	<input type="checkbox"/>	Big Dipper Pointer Stars	Follow the last two stars in the bucket to find Polaris, the North Star.
76	<input type="checkbox"/>	Polaris	The North Star, the axis of the sky as the earth turns.
77	<input type="checkbox"/>	Little Dipper	In the constellation Ursa Minor, the Little Bear. Extends from Polaris; a lot fainter than the Big Dipper.
78	<input type="checkbox"/>	Cassiopeia	In the shape of a "Broken W." Close to Polaris in the northern sky.
79	<input type="checkbox"/>	Cygnus The Swan	This cross-shaped constellation really looks like a long-necked bird in flight.
80	<input type="checkbox"/>	Leo The Lion	The sickle shape forms the lion's mane, the bright star Regulus is lion's heart.
81	<input type="checkbox"/>	Southern Cross	The constellation Crux lies near the south celestial pole.
82	<input type="checkbox"/>	Scorpius	This constellation really looks like a scorpion; the bright stars Antares is the scorpion's heart.
83	<input type="checkbox"/>	Antares, The Rival Of Mars	This red giant star in Scorpius is sometimes close to Mars, and they look the same -- bright and pink.
84	<input type="checkbox"/>	Sagittarius	The teapot shape is distinctive in the southern sky on summer nights.
85	<input type="checkbox"/>	Milky Way	Our own galaxy seen edge-on; this faint band crossing the sky is the combined light of millions of stars.
86	<input type="checkbox"/>	Center Of Our Galaxy	Look at the "steam" cloud above the teapot's spout; that's the direction of the center of the Milky Way.
87	<input type="checkbox"/>	Andromeda Galaxy	This faint patch of light is the farthest thing visible to the naked eye, over 2 million light-years away!
88	<input type="checkbox"/>	Magellanic Clouds	These neighboring irregular dwarf galaxies can be seen from the southern latitudes.
89	<input type="checkbox"/>	Perseid Meteor Shower	August 12-13 each year. Between midnight and dawn, lie on a blanket or lawn chair and look up.
90	<input type="checkbox"/>	Leonid Meteor Shower	November 17-18 each year. Between midnight and dawn, lie on a blanket or lawn chair and look up.
91	<input type="checkbox"/>	Geminid Meteor Shower	December 13-14 each year. After 9 p.m., lie on a blanket or lawn chair and look up.
92	<input type="checkbox"/>	Sporadic Meteors	Random "shooting stars" or "falling stars" can be seen any night of the year. Make a wish...
93	<input type="checkbox"/>	Asteroids	Usually too faint to see, but on April 13, 2029, asteroid 2004MN will make a close naked-eye pass.
94	<input type="checkbox"/>	Artificial Satellites	ISS, HST etc. look like stars moving steadily across the sky. Check heavens-above.com for visibility.
95	<input type="checkbox"/>	Iridium Flares	Flash that lasts several seconds; like a slow-moving meteor. Check heavens-above.com for visibility.
96	<input type="checkbox"/>	Rocket Trails	Rocket launches from Vandenberg or White Sands can be seen from hundreds of miles away.
97	<input type="checkbox"/>	Comets	Every year or so one reaches naked-eye visibility. Even rarer are bright "Great Comets" like Hale-Bopp.
98	<input type="checkbox"/>	Whole Sky	Find a wide open space and look at the dome of the sky -- the sky is an infinite sphere centered on you.
99	<input type="checkbox"/>	All-Night Sky	Stay up all night and watch the sky change as the earth turns.
100	<input type="checkbox"/>	Fall Asleep While Watching Sky	Make your bed under the open sky. Lie back, look at the stars, close your eyes and dream of infinity.