

revised 10-12-2015

**Celestial Events for 2015**  
 Hōkūlani Imaginarium  
 Windward Community College  
 Joseph Ciotti

all times HST

| Month | Day | Time                | Celestial Event 2015   |
|-------|-----|---------------------|--|
| Jan   | 3   | 10:59 pm            | Perihelion (earth closest to sun)  |
|       | 3   | best after midnight | Quadrantid Meteor Shower peak  |
|       | 4   | 6:53 pm             | Full Moon  |
|       | 9   | 8:17 am             | Moon at apogee (farthest from earth)   |
|       | 10  | 6:30 pm             | Venus – Mercury conjunction<br>0.6° apart  |
|       | 12  | 11:47 pm            | Last Quarter (Waning Half) Moon  |
|       | 20  | 3:14 am             | New Moon   |
|       | 21  | 10:06 am            | Moon at perigee (closest to earth)   |
|       | 26  | 6:48 pm             | First Quarter (Waxing Half) Moon   |
|       |     |                     |  |
| Feb   | 3   | 1:09 pm             | Full Moon  |
|       | 5   | 8:25 pm             | Moon at apogee (farthest from earth)   |
|       | 11  | 5:50 pm             | Last Quarter (Waning Half) Moon  |
|       | 18  | 1:47 pm             | New Moon   |
|       | 18  | 9:29 pm             | Moon at perigee (closest to earth)   |
|       | 21  | 7:00 pm             | Venus – Mars conjunction<br>0.4° apart   |
|       | 25  | 7:14                | First Quarter (Waxing Half) Moon   |
| Mar   | 4   | 9:35 pm             | Moon at apogee (farthest from earth)   |
|       | 5   | 8:05 am             | Full Moon<br><b>Micro Moon:</b> smallest/dimmest full moon that occurs<br>nearest apogee)            |
|       | 13  | 7:48 am             | Last Quarter (Waning Half) Moon  |
|       | 19  | 9:38 am             | Moon at perigee (closest to earth)   |
|       | 19  | 11:36 pm            | New Moon   |
|       | 20  | 12:45 pm            | Vernal Equinox (first day of spring)   |
|       | 26  | 9:43 pm             | First Quarter (Waxing Half) Moon   |
|       |     |                     |  |
| Apr   | 1   | 2:59 am             | Moon at apogee (farthest from earth)   |
|       | 4   | 2:00 am             | Total Lunar Eclipse<br>—starts on April 3 at 11:03 pm; max on pril 4 at 2:00<br>am; ends at 3:44 am) |
|       | 4   | 2:06 am             | Full Moon  |
|       | 11  | 5:44 pm             | Last Quarter (Waning Half) Moon  |
|       | 16  | 5:53 pm             | Moon at perigee (closest to earth)   |
|       | 18  | 8:57 am             | New Moon   |

revised 10-12-2015

|     |    |                     |  |
|-----|----|---------------------|--|
|     | 22 | 6:30 pm             | Mercury – Mars conjunction<br>1.3° apart           |
|     | 22 | best after midnight | Lyrid Meteor Shower peak                           |
|     | 25 | 1:55 pm             | First Quarter (Waxing Half) Moon                   |
|     | 28 | 5:55 pm             | Moon at apogee (farthest from earth)               |
|     |    |                     |  |
| May | 3  | 5:42 pm             | Full Moon  |
|     | 5  | best after midnight | Eta Aquarid Meteor Shower peak                     |
|     | 11 | 12:36 am            | Last Quarter (Waning Half) Moon                    |
|     | 14 | 2:23 pm             | Moon at perigee (closest to earth)                 |
|     | 17 | 6:13 pm             | New Moon   |
|     | 18 | 12:17 pm            | Hilo (kau ka lā i ka lolo = “Lāhaina Noon”)        |
|     | 18 | 12:21 pm            | Kailua-Kona (kau ka lā i ka lolo = “Lāhaina Noon”) |
|     | 24 | 12:21 pm            | Hāna (kau ka lā i ka lolo = “Lāhaina Noon”)        |
|     | 24 | 12:23 pm            | Kahului (kau ka lā i ka lolo = “Lāhaina Noon”)     |
|     | 24 | 12:25 pm            | Lāna‘i City (kau ka lā i ka lolo = “Lāhaina Noon”) |
|     | 25 | 7:19 am             | First Quarter (Waxing Half) Moon                   |
|     | 25 | 12:24 pm            | Lāhaina (kau ka lā i ka lolo = “Lāhaina Noon”)     |
|     | 26 | 12:12 pm            | Moon at apogee (farthest from earth)               |
|     | 27 | 12:26 pm            | Kaunakakai (kau ka lā i ka lolo = “Lāhaina Noon”)  |
|     | 27 | 12:29 pm            | Honolulu (kau ka lā i ka lolo = “Lāhaina Noon”)    |
|     | 27 | 12:29 pm            | Kāne‘ohe (kau ka lā i ka lolo = “Lāhaina Noon”)    |
|     | 31 | 12:35 pm            | Līhue (kau ka lā i ka lolo = “Lāhaina Noon”)       |
|     |    |                     |  |
| Jun | 2  | 6:19 am             | Full Moon  |
|     | 9  | 5:42 am             | Last Quarter (Waning Half) Moon                    |
|     | 9  | 6:39 pm             | Moon at perigee (closest to earth)                 |
|     | 16 | 4:05 am             | New Moon   |
|     | 21 | 6:38 am             | Summer Solstice (first day of summer)              |
|     | 23 | 7:01 am             | Moon at apogee (farthest from earth)               |
|     | 24 | 1:03 am             | First Quarter (Waxing Half) Moon                   |
|     |    |                     |  |
| Jul | 1  | 4:20 pm             | Full Moon  |
|     | 2  | 7:30 pm             | Venus – Jupiter conjunction<br>1° apart            |
|     | 5  | 8:54 am             | Moon at perigee (closest to earth)                 |
|     | 6  | 2:59 am             | Aphelion (earth farthest from sun)                 |
|     | 8  | 10:24 am            | Last Quarter (Waning Half) Moon                    |
|     | 12 | 12:43 pm            | Līhue (kau ka lā i ka lolo = “Lāhaina Noon”)       |
|     | 15 | 12:37 pm            | Kāne‘ohe (kau ka lā i ka lolo = “Lāhaina Noon”)    |
|     | 15 | 3:24 pm             | New Moon   |
|     | 16 | 5:45 am             | Mercury – Mars conjunction<br>0.7° apart           |
|     | 16 | 12:38 pm            | Honolulu (kau ka lā i ka lolo = “Lāhaina Noon”)    |

revised 10-12-2015

|     |    |                     |   |
|-----|----|---------------------|---|
|     | 16 | 12:35 pm            | Kaunakakai (kau ka lā i ka lolo = “Lāhaina Noon”)   |
|     | 18 | 12:32 pm            | Kahului (kau ka lā i ka lolo = “Lāhaina Noon”)  |
|     | 18 | 12:33 pm            | Lāhaina (kau ka lā i ka lolo = “Lāhaina Noon”)  |
|     | 19 | 12:34 pm            | Lāna‘i City (kau kā la i ka lolo = “Lāhaina Noon”)  |
|     | 19 | 12:30 pm            | Hāna (kau ka lā i ka lolo = “Lāhaina Noon”)   |
|     | 21 | 1:02 am             | Moon at apogee (farthest from earth)  |
|     | 23 | 6:04 pm             | First Quarter (Waxing Half) Moon  |
|     | 24 |                     | <b>New Horizons spacecraft arrives at Pluto after 9-1/2 year journey</b>  |
|     | 24 | 12:27 pm            | Hilo (kau ka lā i ka lolo = “Lāhaina Noon”)   |
|     | 24 | 12:31 pm            | Kailua-Kona (kau ka lā i ka lolo = “Lāhaina Noon”)  |
|     | 28 | best after midnight | <b>Delta Aquarid Meteor Shower peak</b>   |
|     | 31 | 12:43 am            | Full Moon   |
|     |    |                     |   |
| Aug | 2  | 12:11 am            | Moon at perigee (closest to earth)  |
|     | 6  | 4:03 pm             | Last Quarter (Waning Half) Moon   |
|     | 7  | 7:30 pm             | <b>Mercury – Jupiter conjunction<br/>1.5° apart</b>   |
|     | 12 | best after midnight | <b>Perseid Meteor Shower peak</b>   |
|     | 14 | 4:54 am             | New Moon  |
|     | 17 | 4:33 pm             | Moon at apogee (farthest from earth)  |
|     | 22 | 9:31 am             | First Quarter (Waxing Half) Moon  |
|     | 29 | 8:35 am             | Full Moon<br><b>Super Moon: largest/brightest full moon that occurs nearest perigee)</b>  |
|     | 30 | 5:24 am             | Moon at perigee (closest to earth)  |
|     |    |                     |   |
| Sep | 4  | 11:54 pm            | Last Quarter (Waning Half) Moon   |
|     | 12 | 8:41 pm             | New Moon  |
|     | 14 | 1:28 am             | Moon at apogee (farthest from earth)  |
|     | 20 | 10:59 pm            | First Quarter (Waxing Half) Moon  |
|     | 22 | 10:20 pm            | <b>Autumnal Equinox (first day of fall)</b>   |
|     | 27 | 3:46 pm             | Moon at perigee (closest to earth)  |
|     | 27 | 6:26 pm             | <b>Penumbral Lunar Eclipse (starts at moonrise at 6:26pm in its maximum phase and ends at 7:22 pm) NOTE: Penumbral Eclipses are very faint and so difficult to observe .... but it is also a Super Moon</b> |
|     | 27 | 4:50 pm             | Full Moon<br><b>Super Moon: largest/brightest full moon that occurs nearest perigee)</b>  |
|     |    |                     |   |
| Oct | 4  | 11:06 am            | Last Quarter (Waning Half) Moon   |
|     | 11 | 3:17 am             | Moon at apogee (farthest from earth)  |
|     | 12 | 2:06 pm             | New Moon  |
|     | 17 | 5:30 am             | <b>Mars – Jupiter conjunction</b>   |

revised 10-12-2015

|     |    |                     |  |
|-----|----|---------------------|--|
|     |    |                     | 0.5° apart   |
|     | 20 | 10:31 am            | First Quarter (Waxing Half) Moon   |
|     | 21 | best after midnight | Orionid Meteor Shower peak   |
|     | 28 | 6:00 am             | <b>Venus – Mars – Jupiter conjunction</b><br>2° triangle   |
|     | 26 | 2:59 am             | Moon at perigee (closest to earth)   |
|     | 27 | 2:05 am             | Full Moon<br><b>Super Moon:</b> largest/brightest full moon that occurs nearest perigee)   |
|     |    |                     |  |
| Nov | 3  | 2:24 am             | Last Quarter (Waning Half) Moon  |
|     | 5  | best after midnight | South Taurid Meteor Shower peak  |
|     | 7  | 6:00 am             | <b>Venus — Mars — Moon conjunction</b><br>2° apart   |
|     | 7  | 11:48               | Moon at apogee (farthest from earth)   |
|     | 11 | 7:47 am             | New Moon   |
|     | 12 | best after midnight | North Taurid Meteor Shower peak  |
|     | 17 | 5:47 pm             | Pleiades rise at sunset (first condition needed for declaring start of Makahiki; must wait until the sighting of first visible crescent moon after this date)  |
|     | 17 | best after midnight | Leonid Meteor Shower peak  |
|     | 18 | 8:27 pm             | First Quarter (Waxing Half) Moon   |
|     | 23 | 10:06 am            | Moon at perigee (closest to earth)   |
|     | 25 | 12:44 pm            | Full Moon  |
|     |    |                     |  |
| Dec | 2  | 9:40 pm             | Last Quarter (Waning Half) Moon  |
|     | 5  | 4:56 am             | Moon at apogee (farthest from earth)   |
|     | 7  | 6:00 am             | <b>Venus – Waning Crescent Moon conjunction</b><br>0.5° apart  |
|     | 11 | 12:29 am            | New Moon   |
|     | 12 | sunset              | Beginning of Makahiki with sighting of first visible crescent moon (Hilo moon) after rise of Pleiades (this unofficially could be consider beginning of Makahiki; technically someone must visually sight the first crescent moon that occurs after the Mahakihi rise at sunset) |
|     | 14 | best after midnight | Geminid Meteor Shower peak   |
|     | 18 | 5:14 am             | First Quarter (Waxing Half) Moon   |
|     | 20 | 10:53 pm            | Moon at perigee (closest to earth)   |
|     | 21 | 6:48 pm             | Winter Solstice (first day of winter)  |
|     | 22 | best after midnight | Ursid Meteor Shower peak   |
|     | 25 | 1:11 am             | Full Moon  |