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Celestial Events for 2013
 Hōkūlani Imaginarium
 Windward Community College
 Joseph Ciotti

all times HST

Month	Day	Time	Celestial Event
Jan	1	2:59 pm	Perihelion (earth closest to sun)
	3	5:22 am	Quadrantid Meteor Shower peak using Fluxtimator (note: check "NO" for DST to get Honolulu local time= GMT-10) http://leonid.arc.nasa.gov/estimator.html
	4	5:58 pm	Last Quarter (Waning Half) Moon
	10	12:26 am	Moon at perigee (closest to earth)
	11	9:44 am	New Moon
	18	1:45 pm	First Quarter (Waxing Half) Moon
	22	12:52 am	Moon at apogee (farthest from earth)
	26	6:38 pm	Full Moon
Feb	3	3:56 am	Last Quarter (Waning Half) Moon
	7	2:09 am	Moon at perigee (closest to earth)
	8	7 pm	Mercury-Mars (0.5° apart)
	9	9:20 pm	New Moon
	17	10:31 am	First Quarter (Waxing Half) Moon
	18	8:30 pm	Moon at apogee (farthest from earth)
	25	10:26 am	Full Moon
Mar	4	11:53 am	Last Quarter (Waning Half) Moon
	5	1:20 pm	Moon at perigee (closest to earth)
	11	9:51 am	New Moon
	18	5:13 pm	Moon at apogee (farthest from earth)
	19	7:27 am	First Quarter (Waxing Half) Moon
	20	1:02 am	Vernal Equinox (first day of spring)
	26	11:27 pm	Full Moon
	30	5:55 pm	Moon at perigee (closest to earth)
Apr	2	6:36 pm	Last Quarter (Waning Half) Moon
	9	11:35 pm	New Moon
	15	12:21 pm	Moon at apogee (farthest from earth)
	18	2:31 am	First Quarter (Waxing Half) Moon
	22	4:16 am	Lyrid Meteor Shower peak
	25	9:57 am	Full Moon
	27	9:48 am	Moon at perigee (closest to earth)

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May	2	1:14 am	Last Quarter (Waning Half) Moon
	7	5:00 am	Eta Aquarid Meteor Shower peak
	9	2:22 pm – 5:01 pm	partial solar eclipse
	9	2:29 pm	New Moon
	13	3:31 am	Moon at apogee (farthest from earth)
	17	6:35 pm	First Quarter (Waxing Half) Moon
	18	12:17 pm	Hilo (kau ka lā i ka lolo = “Lāhaina Noon”)
	18	12:17 pm	Kailua-Kona (kau ka lā i ka lolo = “Lāhaina Noon”)
	23	12:21 pm	Hāna (kau ka lā i ka lolo = “Lāhaina Noon”)
	23	12:25 pm	Lāna‘i City (kau ka lā i ka lolo = “Lāhaina Noon”)
	24	12:23 pm	Kahului (kau ka lā i ka lolo = “Lāhaina Noon”)
	24	12:24 pm	Lāhaina (kau ka lā i ka lolo = “Lāhaina Noon”)
	24	6:25 pm	Full Moon
	25	12:25 pm	Kaunakakai (kau ka lā i ka lolo = “Lāhaina Noon”)
	25	3:45 pm	Moon at perigee (closest to earth)
	26	12:29 pm	Honolulu (kau ka lā i ka lolo = “Lāhaina Noon”)
	27	12:28 pm	Kāne‘ohe (kau ka lā i ka lolo = “Lāhaina Noon”)
	28	8 pm	Jupiter-Venus-Mercury (1-3° apart)
	31	8:58 am	Last Quarter (Waning Half) Moon
	31	12:37 pm	Līhue (kau ka lā i ka lolo = “Lāhaina Noon”)
Jun	8	5:56 am	New Moon
	9	11:40 am	Moon at apogee (farthest from earth)
	16	7:24 am	First Quarter (Waxing Half) Moon
	19	8 pm	Mercury-Venus (2° apart)
	20	7:04 pm	Summer Solstice (first day of summer)
	23	1:09 am	Moon at perigee (closest to earth)
	23	1:32 am	Full Moon
	29	6:54 pm	Last Quarter (Waning Half) Moon
Jul	5	8:59 am	Aphelion (earth farthest from sun)
	6	2:36 pm	Moon at apogee (farthest from earth)
	7	9:14 pm	New Moon
	11	12:45 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	12:38 pm	Honolulu (kau ka lā i ka lolo = “Lāhaina Noon”)
	15	5:18 pm	First Quarter (Waxing Half) Moon
	16	12:35 pm	Kaunakakai (kau ka lā i ka lolo = “Lāhaina Noon”)
	17	12:33 pm	Lāhaina (kau ka lā i ka lolo = “Lāhaina Noon”)
	18	12:32 pm	Kahului (kau ka lā i ka lolo = “Lāhaina Noon”)

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	18	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	10:27 am	Moon at perigee (closest to earth)
	21	8 pm	Venus-Regulus (1° apart)
	22	5 am	Mars-Jupiter (1 apart)
	22	8:15 am	Full Moon
	24	12:27 pm	Kailua-Kona (kau ka lā i ka lolo = “Lāhaina Noon”)
	24	12:27 pm	Hilo (kau ka lā i ka lolo = “Lāhaina Noon”)
	28	4:00 am	Delta Aquarid Meteor Shower peak
	29	7:43 am	Last Quarter (Waning Half) Moon
Aug	2	10:53 pm	Moon at apogee (farthest from earth)
	6	11:51 am	New Moon
	12	5:12 am	Perseid Meteor Shower peak
	14	12:56 am	First Quarter (Waxing Half) Moon
	18	3:26 pm	Moon at perigee (closest to earth)
	20	3:45 pm	Full Moon
	27	11:35 pm	Last Quarter (Waning Half) Moon
	30	1:46 pm	Moon at apogee (farthest from earth)
Sep	5	1:36 am	New Moon
	8	7:30 pm	Crescent Moon-Venus (3° apart)
	12	7:08 am	First Quarter (Waxing Half) Moon
	15	6:34 am	Moon at perigee (closest to earth)
	19	1:13 am	Full Moon
	22	10:44 am	Autumnal Equinox (first day of fall)
	26	5:56 pm	Last Quarter (Waning Half) Moon
	27	8:17 am	Moon at apogee (farthest from earth)
Oct	4	2:35 pm	New Moon
	10	1:06 pm	Moon at perigee (closest to earth)
	11	1:02 pm	First Quarter (Waxing Half) Moon
	14	5 am	Mars-Regulus (1° apart)
	16	8 pm	Venus-Antares (1.5° apart)
	18	1:38 pm	Full Moon
	22	4:42 am	Orionid Meteor Shower peak
	25	4:25 am	Moon at apogee (farthest from earth)
	26	1:41 pm	Last Quarter (Waning Half) Moon
Nov	3	2:50 am	New Moon
	5	11:28 pm	Moon at perigee (closest to earth)
	6	1:02 am	South Taurid Meteor Shower peak

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	7	1:12 am	North Taurid Meteor Shower peak
	9	7:57 pm	First Quarter (Waxing Half) Moon
	17	5:16 am	Full Moon
	17	5:48 am	Leonid 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)
	21	11:50 pm	Moon at apogee (farthest from earth)
	25	6 am	Mercury-Saturn ($>0.3^\circ$ apart)
	25	9:28 am	Last Quarter (Waning Half) Moon
Dec	2	2:22 pm	New Moon
	3	sunset	Beginning of Makahiki with sighting of first visible crescent 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)
	4	12:15 am	Moon at perigee (closest to earth)
	9	5:12 am	First Quarter (Waxing Half) Moon
	13	3:50 am	Geminid Meteor Shower peak
	16	11:28 pm	Full Moon
	19	1:49 pm	Moon at apogee (farthest from earth)
	21	7:11 am	Winter Solstice (first day of winter)
	22	6:08 am	Ursid Meteor Shower peak
	25	3:48 am	Last Quarter (Waning Half) Moon
	28	6 am	Crescent Moon-Saturn (4° apart)