# MOONBOW PREDICTIONS FOR 2018
# UPPER YOSEMITE FALL

TIMES CALCULATED FOR COOK'S MEADOW
OBSERVING LOCATION: PARKING LOT JUST NORTH OF SENTINEL BRIDGE

| DATE IN 2018 | TIMES (PACIFIC DAYLIGHT TIME) | LUNAR PHASE | REMARKS |
|---|---|---|---|
| May 29 (Tues) | 10:30pm (Tues) to 11:20pm (Tues) | 99% waning | |
| night of May 30-31 (Wed-Thurs) | 11:45pm (Wed) to 12:35am (Thurs) | 97% waning | |
| June 26 (Tues) | 9:55pm (Tues) to 10:25pm (Tues) | 99% waxing | (brightness and duration depend on snow season and snowmelt runoff) |
| June 27 (Wed) | 10:40pm (Wed) to 11:20pm (Wed) | 100% | (brightness and duration depend on snow season and snowmelt runoff) |
| night of June 28-29 (Thurs-Fri) | 11:30pm (Thurs) to 12:05am (Fri) | 99% waning | (brightness and duration depend on snow season and snowmelt runoff) |
| night of June 29-30 (Fri-Sat) | 11:50pm (Fri) To 12:35am (Sat) | 96% waning | (brightness and duration depend on snow season and snowmelt runoff) |

CONDITIONS REQUIRED TO OBSERVE A MOONBOW IN UPPER YOSEMITE FALL

1. bright moonlight (nearly-full Moon)
2. Moon risen above the south rim of the valley (so moonlight can strike Upper Yosemite Fall)
3. sufficient mist and spray (during snowmelt runoff season: April, May, June, sometimes July)
4. clear skies
5. dark skies (Sun more than 9 degrees below the horizon)
6. geometry (the angle between the "anti-lunar direction" [observer's shadow cast by the moonlight] and the
   direction toward the base of Upper Yosemite Fall must be near the "rainbow angle" of 42 degrees)

NOTE
If the snowmelt runoff is unusually strong, then moonbows could appear earlier and last longer than the predicted times.
If the snowmelt runoff is unusually weak, then moonbows would be visible for shorter intervals than the predicted times.