

# Meteor Activity Outlook for April 18-24, 2020

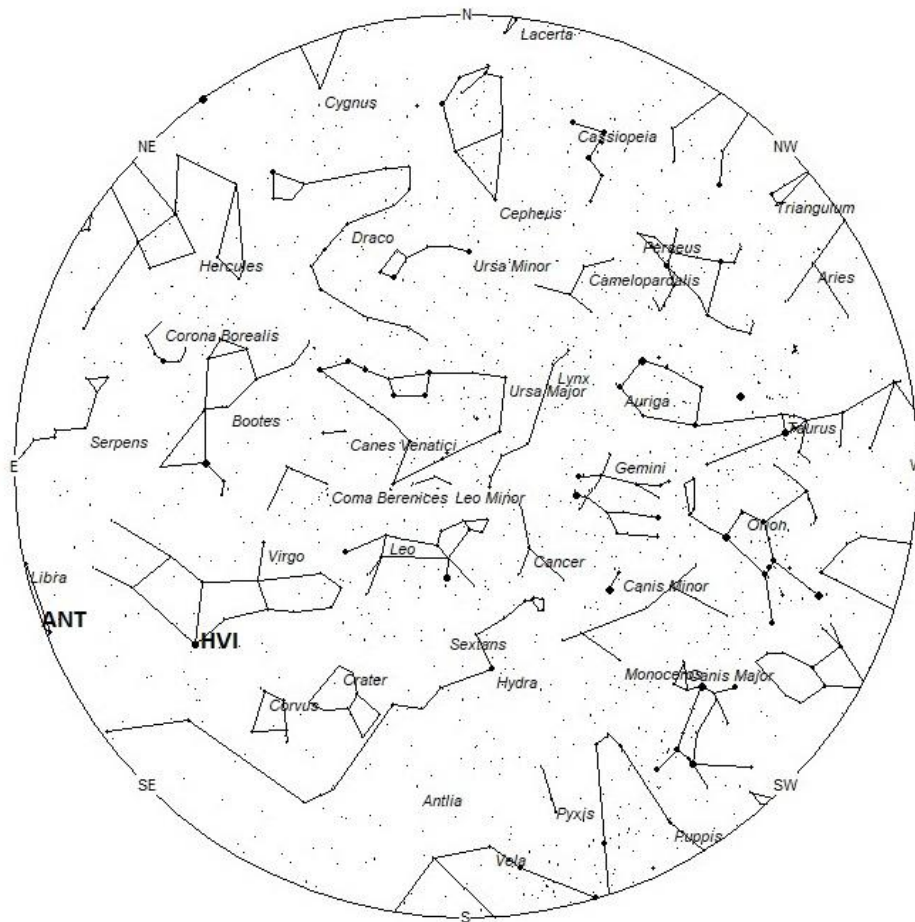


Ingo Queiser captured this fireball on the evening of April 6, 2020 at 19:06 Universal Time from Dresden, Sachsen, Germany. For more details on this event visit: [https://fireball.amsmeteors.org/members/imo\\_view/event/2020/1652](https://fireball.amsmeteors.org/members/imo_view/event/2020/1652)  
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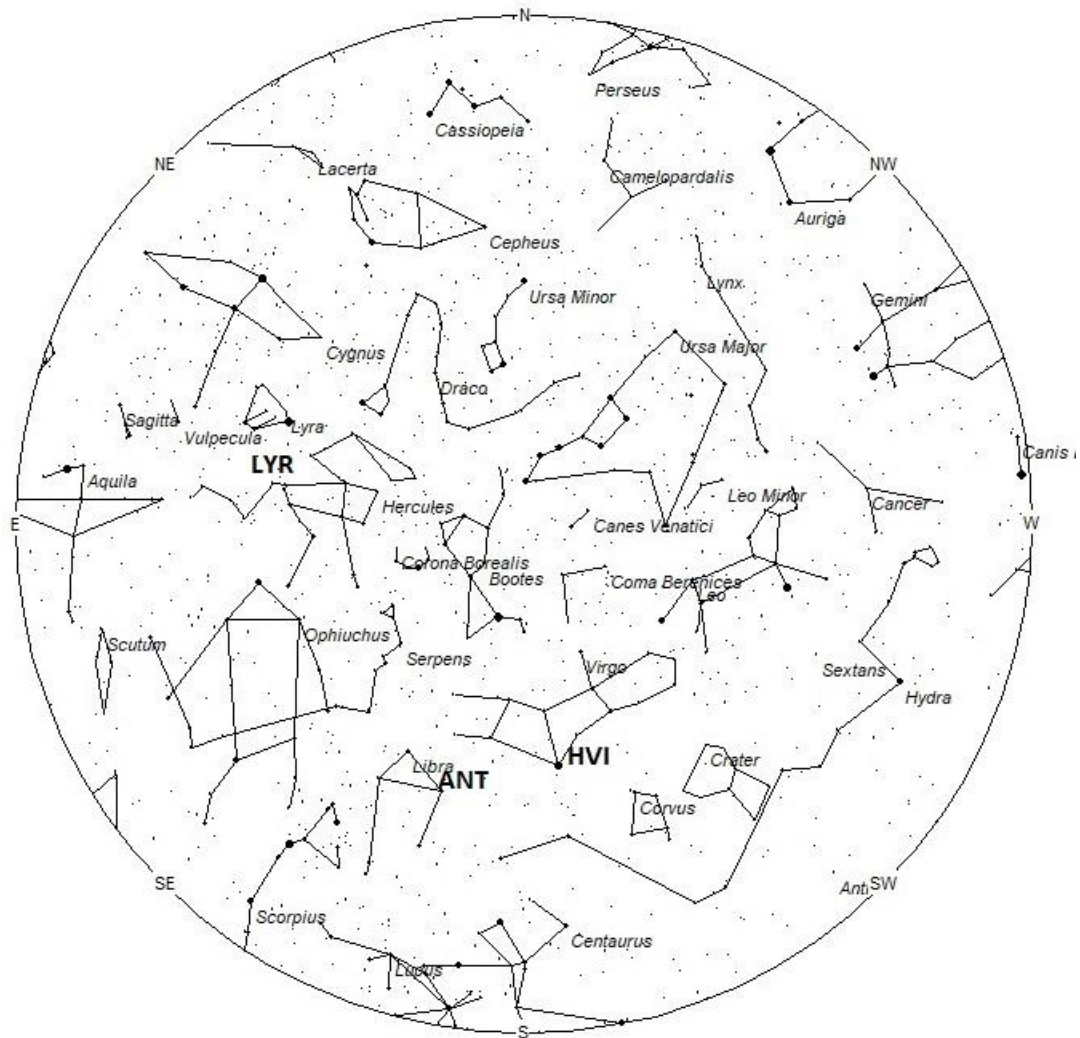
During this period the moon reaches its new phase on Thursday April 23rd. At this time the moon lies near the sun and is invisible at night. This weekend the waning crescent moon will rise during the early morning hours but will not cause any problems for those trying to view the meteor activity. The estimated total hourly meteor rates for evening observers this week is near 2 for those viewing from the northern hemisphere and 3 for those located south of the equator. For morning observers, the estimated total hourly rates should be near 7 as seen from mid-northern latitudes (45N) and 10 as seen from tropical southern locations (25S). The actual rates will also depend on factors such as personal light and motion perception, local weather conditions, alertness and experience in watching meteor activity. Note that the hourly rates listed below are estimates as viewed from dark sky sites away from urban light sources. Observers viewing from urban areas will see less activity as only the brighter meteors will be visible from such locations.

The radiant (the area of the sky where meteors appear to shoot from) positions and rates listed below are exact for Saturday night/Sunday morning April 18/19. These positions do not change greatly day to day so the listed coordinates may be used during this entire period. Most star atlases

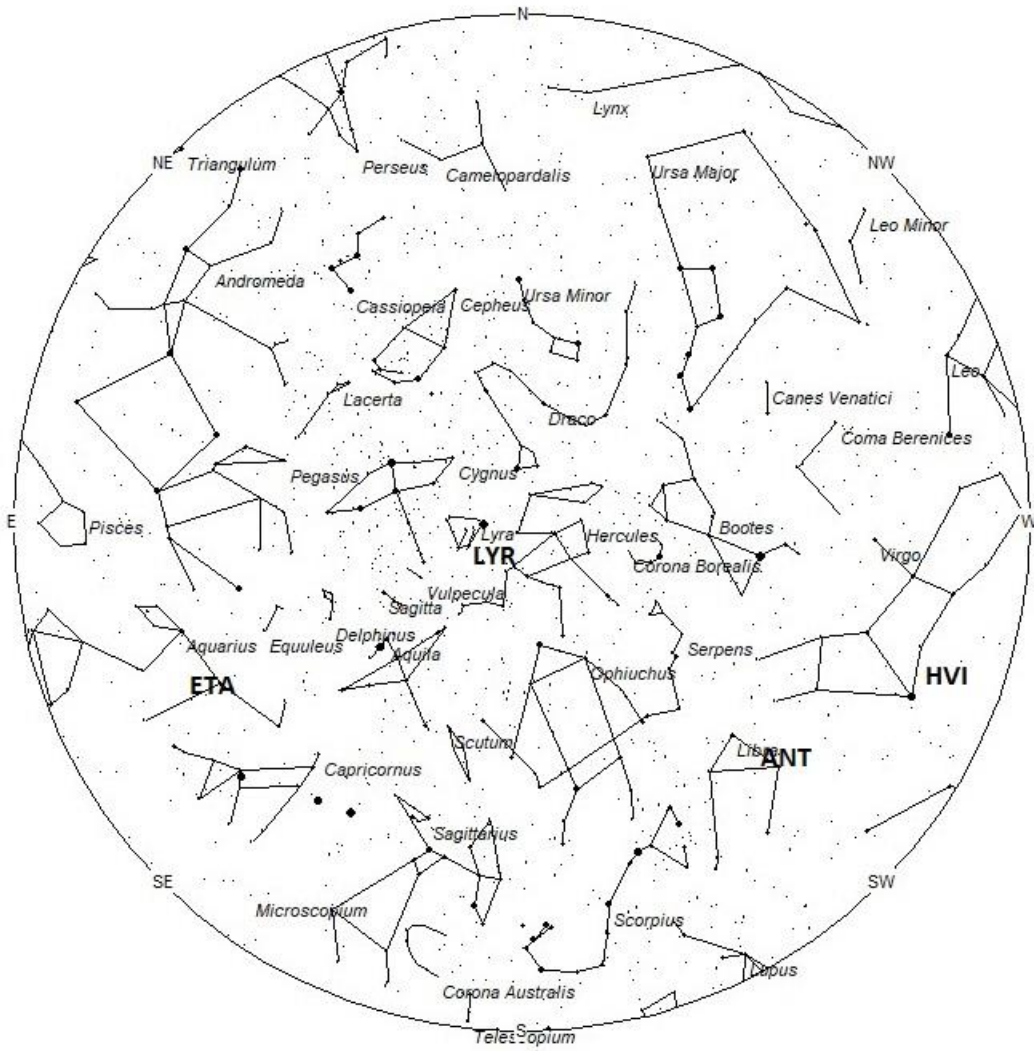
(available at science stores and planetariums) will provide maps with grid lines of the celestial coordinates so that you may find out exactly where these positions are located in the sky. A planisphere or computer planetarium program is also useful in showing the sky at any time of night on any date of the year. Activity from each radiant is best seen when it is positioned highest in the sky, either due north or south along the meridian, depending on your latitude. It must be remembered that meteor activity is rarely seen at the radiant position. Rather they shoot outwards from the radiant, so it is best to center your field of view so that the radiant lies at the edge and not the center. Viewing there will allow you to easily trace the path of each meteor back to the radiant (if it is a shower member) or in another direction if it is a sporadic. Meteor activity is not seen from radiants that are located below the horizon. The positions below are listed in a west to east manner in order of right ascension (celestial longitude). The positions listed first are located further west therefore are accessible earlier in the night while those listed further down the list rise later in the night.



## Radiant Positions at 9pm Local Daylight Savings Time



## Radiant Positions at 1am Local Daylight Savings Time



## Radiant Positions at 5am Local Daylight Savings Time

## **These sources of meteoric activity are expected to be active this week.**

The **pi Puppids (PPU)** are active from April 16-30 with maximum activity predicted to occur on the 23rd. Some of these meteors may be seen from the southern hemisphere from a radiant located at 07:20 (110) -45. This area of the sky is located southern Puppis, 3 degrees southwest of the 3rd magnitude star known as sigma Puppis. This area of the sky is best seen as soon as it becomes dark during the early evening hours. No matter your location, rates are expected to be low. Observers located in the tropical northern hemisphere may also see some activity but at latitudes north of 30 degrees north, the odds are against seeing any activity at all. At 15km/sec. the Pi Puppids would produce meteors of very slow velocity.

The **h Virginids (HVI)** were discovered by Japanese observers (SonotaCo) based on video observations in 2007-2008. These meteors are active from April 20-May 04 with maximum activity predicted to occur on the 30th. The radiant is currently located at 12:56 (194) -08. This area of the sky is located central Virgo, 6 degrees northwest of the 1st magnitude star known as Spica (alpha Virginis). This area of the sky is best seen near midnight LDST, when it is located highest in the sky. No matter your location, rates are expected to be less than 1 per hour. At 17km/sec. these meteors would produce meteors of very slow velocity.

The center of the large **Anthelion (ANT)** radiant is currently located at 14:44 (221) -16. This position lies in western Libra, 2 degrees west of the 3rd magnitude star known as Zubenelgenubi (alpha Librae). Due to the large size of this radiant, Anthelion activity may also appear from eastern Virgo as well as Libra. This radiant is best placed near 0200 local summer time (LDST), when it lies on the meridian and is located highest in the sky. Rates at this time should be near 1 as seen from the northern hemisphere and 2 per hour as seen from south of the equator. With an entry velocity of 30 km/sec., the average Anthelion meteor would be of slow velocity.

The **Lyrid (LYR)** shower reaches maximum activity on the morning of April 22nd with the radiant is located at 18:09 (272) +33. This area of the sky is actually located in eastern Hercules, 8 degrees southwest of the brilliant zero magnitude star known as Vega (alpha Lyrae). This radiant is best placed during the last hour before dawn when it lies highest above the horizon in a dark sky. Rates at maximum are normally 10-15 per hour as seen from mid-northern latitudes. As seen from the southern hemisphere they will only produce 1-2 per hour as the Lyrid radiant lies much lower in the sky. With an entry velocity of 46 km/sec., the average meteor from this source would be of medium-fast velocity.

Meteors from the **eta Aquariids (ETA)** should begin to appear this week. Rates will be low but will slowly climb as we approach the May 6 peak. The radiant is currently located at 21:34 (323) -07. This area of the sky is located in northern Aquarius, just southeast of the 3rd magnitude star known as Sadalsuud (beta Aquarii). These meteors are not visible prior to 0200 LDST and are best seen just before the start of dawn. With an entry velocity of 66 km/sec., the average meteor from this source would be of swift velocity.

As seen from the mid-northern hemisphere (45N) one would expect to see approximately 5 **sporadic** meteors per hour during the last hour before dawn as seen from rural observing sites. Evening rates would be near 2 per hour. As seen from the tropical southern latitudes (25S),

morning rates would be near 8 per hour as seen from rural observing sites and 3 per hour during the evening hours. Locations between these two extremes would see activity between the listed figures.

<b>SHOWER</b>	<b>DATE OF MAXIMUM ACTIVITY</b>	<b>CELESTIAL POSITION</b>	<b>ENTRY VELOCITY</b>	<b>CULMINATION</b>	<b>HOURLY RATE</b>	<b>CLASS</b>
		<b>RA (RA in Deg.) DEC</b>	<b>Km/Sec</b>	<b>Local Daylight Saving Time</b>	<b>North- South</b>	
pi Puppids (PPU)	Apr 23	07:20 (110) -45	15	19:00	<1 - <1	III
h Virginids (HVI)	Apr 30	12:56 (194) -08	17	00:00	<1 - <1	II
Anthelion (ANT)	-	14:44 (221) -16	30	02:00	1 - 2	II
Lyrids (LYR)	Apr 22	18:09 (272) +33	46	05:00	1 - <1	I
eta Aquariids (ETA)	May 06	21:34 (323) -07	66	08:00	<1 - <1	I