

True, 5 planets align June mornings. But ...

June 16, 2023



Of the supposed ‘alignment’ on June 17, 2023, you’ll probably see only these 2 planets: Jupiter (left) and Saturn (right). Image via Alan Dyer / [AmazingSky.com](https://www.amazing-sky.com/). Used with permission.

5 planets align. But can you see them?

We’re seeing a story begin to circulate that – on the morning of June 17, 2023 – five planets will “align.” You can find the story [here](#) and [here](#). And we hate to be party poopers.

But ...

Are the planets up there? Yes. Jupiter, Saturn, Uranus, Neptune and Mercury all lie along a graceful line, stretching from the sunrise.

Can you see all five? Definitely not, unless you are an experienced observer, using optical aid. Uranus is near the sunrise point; you’ll need binoculars, at least, to see it. Neptune probably requires a telescope and a detailed finder chart. And – from the Northern Hemisphere – Mercury, though sometimes bright in our sky, will be awash in the bright glow of the rising sun.

And there are several other reasons this reported “alignment” has us scratching our heads.

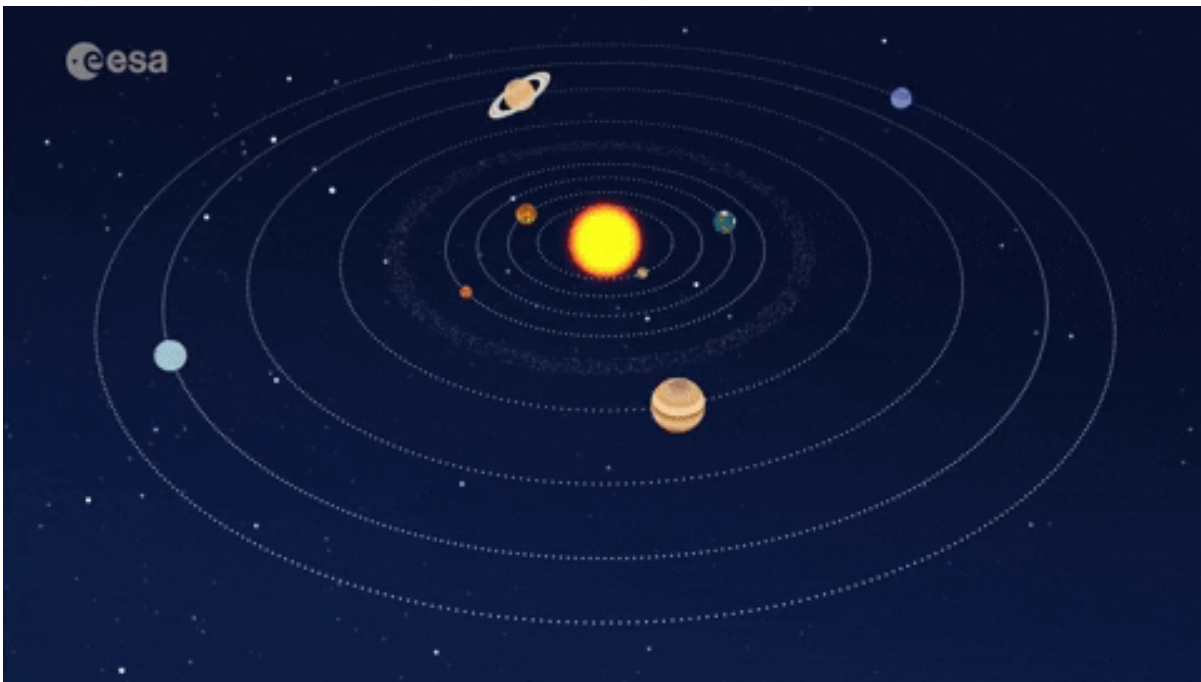


Stories are circulating that – on the morning of June 17, 2023 – 5 planets align just before sunrise. True? Yes. Meaningful? Well ... Count yourself lucky if you can spot more than Jupiter and Saturn. If you're in the Southern Hemisphere, you might spot Mercury, too. And yes, Uranus and Neptune are up there, but require optical aid. Image via [Stellarium](#).

1. The planets are *always* in a line

While the internet is starting to buzz about this planetary “alignment,” the truth is, the planets are *always* in a line.

That's because they orbit the sun more or less in a single plane. That plane, translated onto our sky's dome, traces out a line. So you'll never find a planet super far north in the sky, for example, near the North Star. Planets always follow, more or less, the path of the sun and moon across our sky. We astronomers call this very useful line across the sky by the name [ecliptic](#).



The planets in our solar system orbit the sun in a more or less flat plane. This flat plane translates upon Earth's sky as a line, called the [ecliptic](#). That's why the planets viewed in Earth's sky are *always* in a line. Image via ESA/ Gyphy. <https://giphy.com/gifs/europeanspaceagency-esa-esakids-paxiesakids-h8sRbOtj55JACfGn8R>

2. What's special about June 17?

We can't figure it out ... why June 17?

In fact, Saturn shifted from the evening sky into the morning sky in April. The moon passed it on the morning of June 9. That would have been a good morning to let the moon help you find Saturn.

And Jupiter emerged into the early morning twilight in early May. It's been up there all these past weeks, too, "in a line" with Saturn if you wish, blazing away. Jupiter is pretty high in the sky before sunup now. And Jupiter is also the *2nd-brightest* planet. Of the five planets up before sunrise now, it's the one you're most likely to see. The [moon was near Jupiter earlier this week](#), on June 14. Again, that would have been a good time to see it.

Uranus and Neptune both emerged into the early morning sky in early June. Neptune requires a telescope to be seen. And Uranus requires a very dark sky, and some skill, to be glimpsed with the unaided eye. Most people spot it using optical aid. Both are set against morning twilight now, by the time they're relatively high in the sky. They'll be tough to spot, even for experienced observers.

Finally, Mercury emerged in the morning sky in May (along with Jupiter). It was farthest from the sunrise on May 29, and since then has been creeping back toward the sunrise.

From the Northern Hemisphere, late May and early June were a better time to look for Mercury than now; it's brighter now, but drowned in the light of the dawn as seen from the Northern Hemisphere. The view of Mercury from Earth's Southern Hemisphere is better, however.

So why June 17? Beats us. Maybe because there's a little moon in the sky that morning, less than 1% illuminated? It's near the sunrise point, too. So most people won't spot the moon that day either.

We don't get it. Do you? If so, tell us in the comments below.

How can you see them?

Can you see the five planets "align" before sunrise on June 17. Maybe? If you're lucky? If you have optical aid? If you're an experienced observer?

The fact is ... if you're in the Northern Hemisphere, spotting any number more than two will be remarkable. If you're in the Southern Hemisphere, you can see Mercury, too.

Experienced observers will start looking for the planets about 45 minutes before sunrise. Observers in the Southern Hemisphere will have the advantage, because at this time of the year the ecliptic stands perpendicular to the horizon. In the north, the ecliptic cuts a low line angling just above the horizon. So the south will have more time to search before the sun's light starts to flood the sky.

Bright Jupiter will be easy to spot. It will be low in the east and the brightest point of light in this part of the sky. One down. That was easy! Next up is Saturn. Saturn is higher and farther south. Fortunately, right now it's in the constellation [Capricornus](#), which doesn't hold any stars brighter than Saturn. Two planets down ... now's where it gets challenging.

Your third target might be Mercury. You might also be able to spot it with the unaided eye, but you need an unobstructed horizon to the east-northeast. And while it's currently brighter than Saturn, it's a much more difficult target being lower in a sky that's beginning to brighten with daylight. If you catch Mercury, congrats! Now it's time to dig out the binoculars. And if you don't catch Mercury, move on to the next two planets then come back to look for Mercury later with your binoculars.

Uranus is the 4th-brightest of the five planets we're targeting, but it has the disadvantage of also being close to the rising sun. It lies approximately halfway between Mercury and Jupiter. In good conditions, you might spot it as a greenish-blue dot or even a small disk. No luck? That's okay, let's move on to Neptune.

This one is the dimmest target, but at least it's higher in the sky, meaning you can catch it before dawn *if* you have optical aid. It's about two-thirds of the way from Jupiter to Saturn. Neptune currently lies in the constellation [Pisces](#), below the Circlet asterism. The eighth planet from the sun is hard to find even under the best circumstances.

Generally, the best time to spot Neptune is when a bright planet gets close to it from our point of view. (Mark your calendar for April 29, 2024, to see Neptune near Mars!)

By the way, as they've been "lined up" for most of this month, these five planets will remain lined up for some mornings. But Mercury is drawing ever closer to the sunrise, which will make it even more challenging.

What's so ironic is that, next week – on the day of the June solstice, June 21 – people gazing toward the west after sunset can see the moon and two planets – the brightest planet Venus and red Mars – together in the sky. That's the moon, Venus and Mars, the three worlds in space closest to Earth, all in a tight grouping on the evening of the solstice. Now *that's* worth looking for! [Read more about this \(real\) event here.](#)

Bottom line: It's true. Five planets will “align” on June mornings. I guess. But only two of them are easy (possible?) to see. Learn more about the so-called planetary lineup of June 17, 2023, here.