Sunrise Photography: The Definitive Guide

PhotoPills

www.photopills.com

Feel free to share this eBook

December 2020

Never Stop Learning

The Definitive Guide to Shooting Hypnotic Star Trails

How To Shoot Truly Contagious Milky Way Pictures

Understanding Golden Hour, Blue Hour and Twilights

7 Tips to Make the Next Supermoon Shine in Your Photos

MORE TUTORIALS AT PHOTOPILLS.COM/ACADEMY

Understanding Azimuth and Elevation

How To Plan the Milky Way Using The Augmented Reality

How to find moonrises and moonsets

How To Plan The Next Full Moon

PhotoPills Camp

Join PhotoPillers from around the world for a 7 fun-filled days of learning and adventure in the island of light!

Learn More

The light that you can see during a Sunrise is incredible. And I have a hard time describing what it feels like to see the Sun as it rises.

To photograph it is one of the greatest satisfactions that I can experience. However, many people miss this fabulous photographic opportunity that happens every day of the year...

Don't be like them.

If you don't know how to capture wonderful Sunrise photos, it's okay.

In this article you'll find the answer to all your questions and I'll show you...

- How to find inspiration by looking at tons of Sunrise photos...
- How to master the **PhotoPills** app to help you imagine your photo, find a powerful location and plan it.
- What equipment do you need to photograph to photograph a Sunrise...

- How to photograph a Sunrise step by step and what are the camera settings for Sunrise photography.
- How to make the best use of natural light (**golden hour**, **blue hour** and twilights).
- The best applications for shooting Sunrises that I use regularly.
- And many more Sunrise photography tips and tricks!

Are you up for it?

Let's go for it!

> *"There's always a story. It's all stories, really. The sun coming up every day is a story. Everything's got a story in it. Change the story, change the world." — **Terry Pratchett***

Content

Section 1:

13 Sunrise photography ideas to motivate you

The first step to take a Sunrise picture is to have a great idea. You'll have time to plan it (**section 4**) and capture it (**section 7**) later.

Right now you should focus on being creative and put your imagination to work to get a photographic idea of the Sunrise you want to capture.

Concentrate and think...

Where do you want to take the picture? What do you want to include in the frame? Do you want the Sun in it or not? How would you like the clouds to look?

Sometimes it's not easy to answer all these questions and get things straight.

That's why I thought that these 13 ideas could help you to photograph Sunrises. I have included a practical example in each of them. These are photos that I've been taking in the last years.

And I've planned all of them with **PhotoPills**! ;)

Little Sun (1)

Nikon Z6 | 280mm | f/11 | 24s | ISO 100 | 7000K | Reverse soft GND 0.9 (3 stops) filter

I love shooting with a wide angle so that the picture reflects the immensity of the landscape. In this case, if I want to include the Sun during a Sunrise, I have to assume that it will be very small in the frame.

But I don't mind. It's an artistic decision.

And here's the perfect example: I wanted the Sun not only to be aligned with the rocks, but I

also wanted it to be the vortex of the triangle starting from the lower corners up to the Sun. By doing this, I reinforce the composition and give more importance to the Sun despite its size. See?

Big Sun (2)

Nikon Z6 | 700mm | f/11 | 1/6400s | ISO 100 | 5600K | 1.4x teleconverter

The light produced during the **golden hour** is perfect for taking backlit pictures. Place the light source right behind your subject and you'll have plenty of photo opportunities.

Check out the photo above. Thanks to the **PhotoPills** application I planned a photo of a huge Sun rising behind the Favàritx lighthouse, my favourite one in Menorca (Spain). Once I knew the shooting spot, date and time, I just had to wait for the Sun to do its magic... ;)

Blue hour (3)

Nikon Z6 | 18mm | f/16 | 8s | ISO 100 | 7800 | Soft GND 0.9 (3 stops) filter

The Favàritx lighthouse is one of my favorite photographic subjects in the world. Whenever I get a chance, I try to capture it...

It's also a perfect location for Sunrises, Moonrises and also for **Sunsets** and Moonsets. So it's perfect to photograph it next to the Sun, the **Moon**, or as in this photo during the **blue hour**, just before the Sun rises.

Sunrise portrait (4)

Fuji X-T2 | 12mm | f/13 | 1/80s | ISO 200 | 8293K

One of the main traits of the **golden hour** is its characteristic color palette: yellows, oranges, reds.

When shooting a Sunrise portrait during the golden hour a very interesting option is backlighting. Placing the Sun behind your subject gives you that magical glow.

In this case, the starburst effect of the Sun also adds a special touch.

Rock formations (5)

Nikon D4s | 280mm | f/8 | 1/6s | ISO 200 | 5800K | Soft GND 0.9 (3 stops) filter

I haven't experienced again the sensations that I lived photographing the Sunrises during the **expedition to Namibia**. It's probably due to the fact that it's in the middle of the Tropic of Capricorn and its arid desert climate. That light enhances the reddish tones of the soil and the rocks.

This panorama includes a rock known as the "finger-shaped rock" or, as we call it, the "finger of the gods". The Vingerklip reigns over the Ugab Valley from the top of a hill thanks to its 35 meters of height. And although the clouds didn't show up that morning, the mauve and pink tones of the sky gave me a unique spectacle.

Fog (6)

Nikon D4s | 35mm | f/5.6 | 1/50s | ISO 400 | 6500K | Soft GND 0.9 (3 stops) filter without filter holder

This photo is the perfect example of a scene you find yourself in without expecting it and which disappears in the blink of an eye.

I was driving to the port of Alcudia (Mallorca, Spain) to take the ferry back home to Menorca (Spain). Suddenly, I came across this show. The fog acted as a diffuser of the dawn light and at the same time, it hid the buildings behind the almond trees.

When I found a spot on the road to pull over, I got out of the car. With hardly any time to think, I focused, composed and shot.

Wildlife photography (7)

Nikon D500 | 390mm | f/5.6 | 1/250s | ISO 100 | 6500K

This was one of the most surprising moments we had the opportunity to experience during the **PhotoPills expedition to Namibia**, when a couple of lions were feeding (although there is only one in the picture).

They were next to the Klein Namutoni waterhole, and the light during the **golden hour** was perfect. So I quickly picked up my camera with the telezoom lens and started shooting almost from the ground so that I could capture a nice reflection of the animals as well.

Sunburst (8)

Nikon D4s | 23mm | f/11 | 1/1000s | ISO 125 | 6600K | Soft GND 0.9 (3 stops) filter

This is a photo of a unique prehistoric construction in Menorca (Spain). It's called the Naveta d'Es Tudons and is a very special funerary complex.

In **section 8** you'll find more details on how to capture beautiful and warm Sunrises that include the starburst effect.

Moon rising at Sunrise (9)

Nikon Z6 | 85mm | f/2.8 | 1s | ISO 1600 | 6500K | 5-shot panorama

I admit it: I love photographing the **Moon** lit by Earthshine. And if I'm lucky enough to combine it with the stars and a lighthouse, I get an infinite satisfaction.

To capture the Moon lit by Earthshine, as in this case, you need a rising or setting Sun. Remember that this light is produced when the Earth is reflected by the Sunlight and it illuminates (indirectly) that part of the Moon.

Sun outside the frame (10)

Nikon Z6 | 85mm | f/8 | 4.2s | ISO 100 | 6000K | 6-shot panorama | Soft GND 0.9 (3 stops) filter

There is absolutely no obligation to include the Sun in your frame. Look at the photo above: the Sun is not in the composition. But it's projecting a beautiful warm light onto the landscape.

The combination of the warmth of the Sun along with the cool tones of the rocks and the water creates a beautiful contrast. Add to this the silk effect in the water and you have a magical image.

Sunrise silhouette (11)

Nikon D700 | 500mm | f/6.7 | 1/350s | ISO 400 | 6050K

Planning and capturing this photo was a real challenge. The idea was to capture a huge Sun at dawn in such a way that it would create a silhouette of the Lighthouse of l'Illa de l'Aire in Menorca (Spain).

I wanted the silhouette of the lighthouse to be easily recognizable. So I looked for a shooting spot from which I could highlight it within my composition.

Reflection (12)

Nikon D4s | 18mm | f/16 | 0.6s | ISO 100 | 7000K | Soft GND 0.9 (3 stops) and polarizer filters

I can't help but photograph the Favàritx lighthouse over and over again. It's a powerful magnet that I find impossible to resist to.

In order to photograph this dawn **golden hour**, I had to wait until it had rained first. The pool you see in the foreground is far from the sea and the only way to see it full is after a heavy rain.

But I also had to trust that the sky had the right clouds: not too high, not too low, not too dense, not too thin... This is the only way I could get the Sun to heat them up and cast a strong orange tint on them.

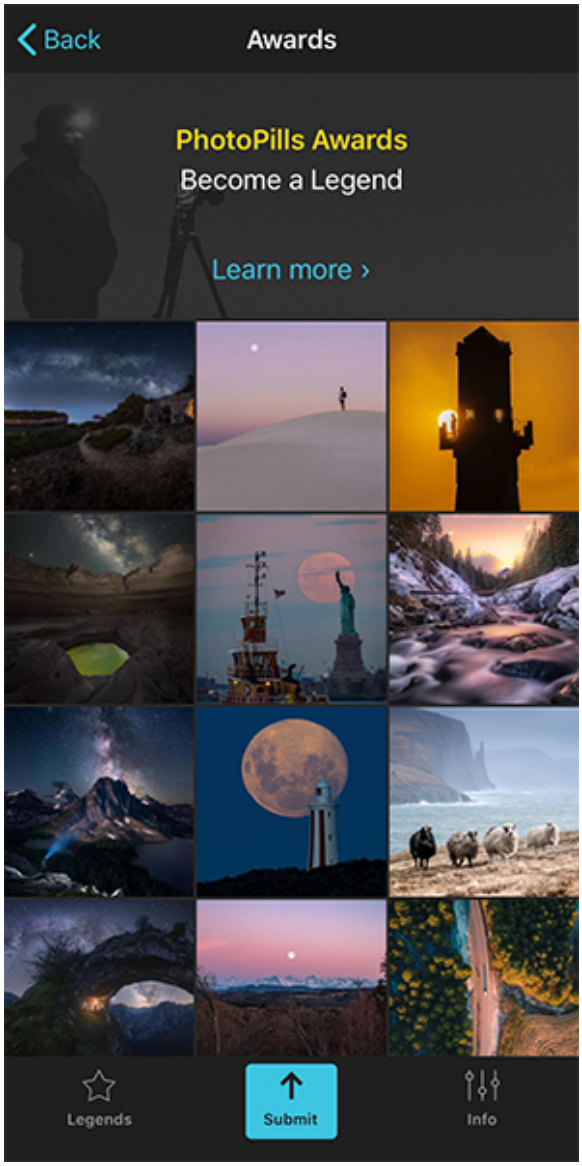
Long exposure (13)

Nikon D4s | 27mm | f/5.6 | 45s | ISO 200 | 6500K | ND 1.8 (6 stops), reverse soft GND 0.6 (2 stops) and polarizer filters

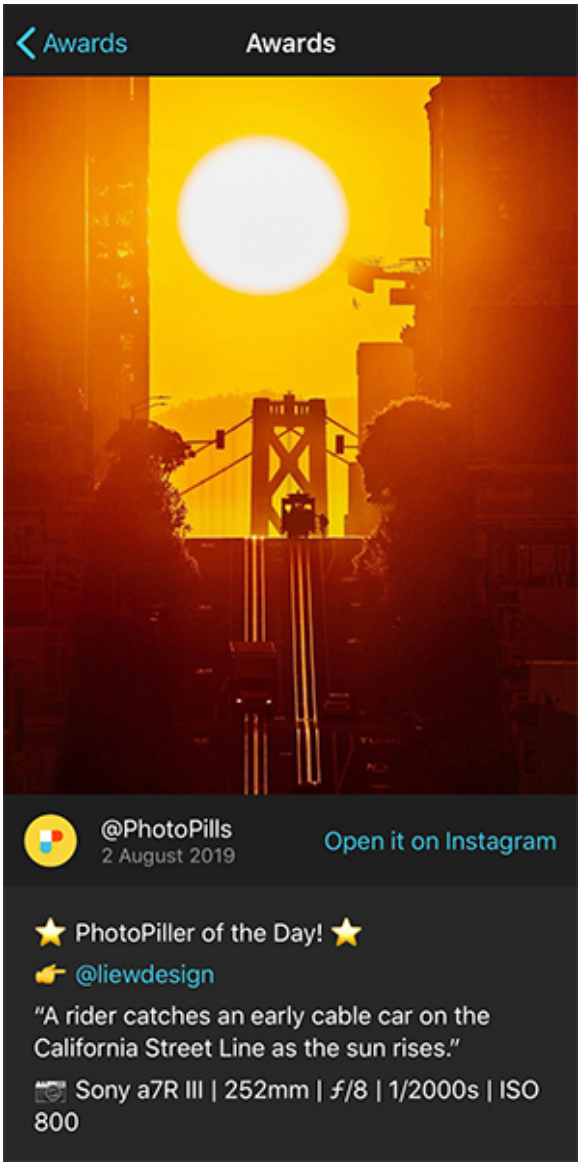
Sunrises by the sea are a real treat for the eyes. I love to photograph a Sunrise with the water and the rocks.

I'm very lucky to live where I do, on the beautiful island of Menorca (Spain). Here, the **seascapes** are unique. They are perfect the place to make **long exposures with filters**.

Photos by PhotoPillers (14) [bonus track]



PhotoPills Awards - Have a quick glance at our Instagram feed to see all the featured images.



PhotoPills Awards - If you're interested in a particular photo, tap it to see all the details.

So...

Do you feel inspired after seeing the previous examples?

If you're still struggling to get some creative ideas, you can get some inspiration with tons of pictures that PhotoPillers have imagined, planned and captured all over the world.

And if apart from seeing pictures of Sunrise, you could see pictures of **golden hour**, **blue hour**, **Sunset**, **Moon**, **Milky Way**, **Star Trails**, **Meteor Showers**, **drone**, **lunar eclipses**, **solar eclipses**...

That would be amazing, wouldn't it?

Well...

If you want to see them, you can find them in our **Instagram** account (follow us!) and in the PhotoPills application (Menu *My stuff* > **Awards**).

Would you like to submit your photos so we feature them?

You have all the information here: **PhotoPills Awards**.

Fine...

Now that you have a lot of ideas to inspire you, it's time to move on to the next part of the plan: finding the best location.

Are you ready?

Section 2:

Discover the best Sunrise location

Nikon D4s | 14mm | f/11 | 0.4s | ISO 100 | 5250K | ND 0.9 (3 stops) and soft GND 0.9 (3 stops) filters

I've lost count of the times I've been asked for the exact location where I took a picture or how I find cool locations, even though I live on an island! :)

I'm not going to be unfair to you so I decided to reveal my secret to you...

There's no secret.

There's no magic formula.

To find the best location to photograph the Sunrise all you need is time.

Time to research what the ideal location needs to have so you can capture the Sunrise you want to capture and to determine where it is.

These are the steps I usually follow. I hope they help you.

Find the Sunrise and light directions with PhotoPills (1)

That's the first thing you need to know.

Where exactly is the Sun going to rise?

But to know that you need a reference: the position from which you want to take the photo.

This way, if you know the direction in which the Sun rises (the light direction) it will be easier to find the ideal location to photograph the Sunrise.

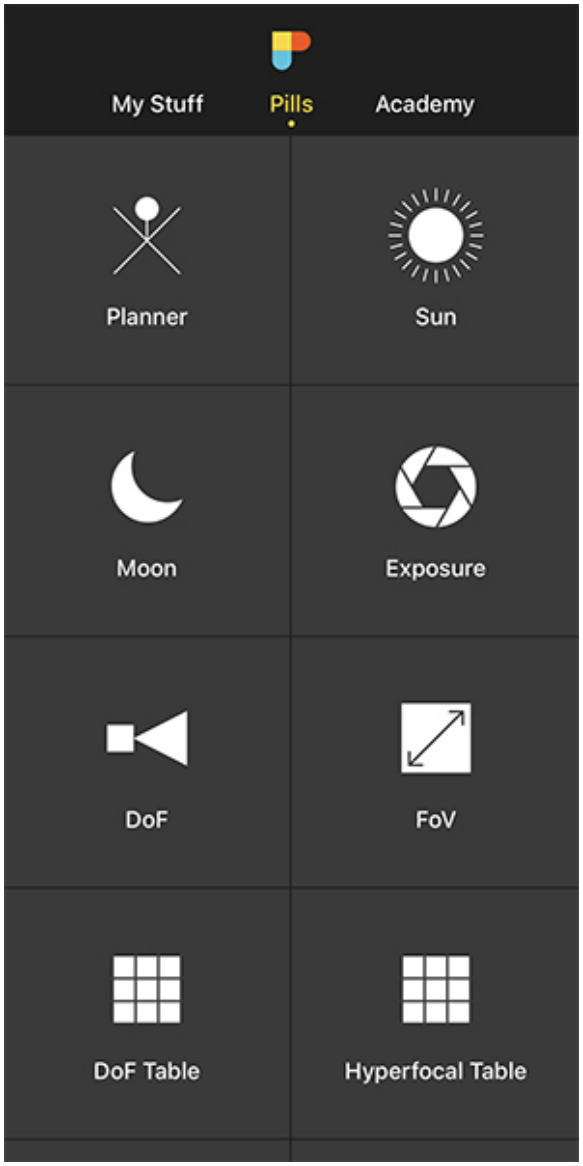
And to do this, it's best to use **PhotoPills**.

PhotoPills tells you:

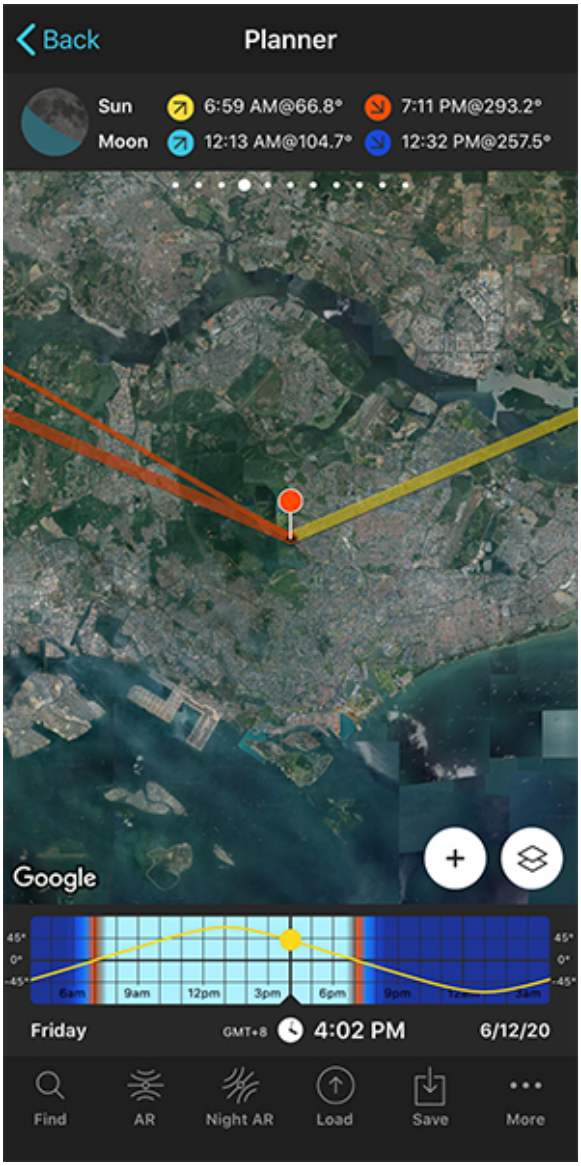
- The Sunrise direction according to a specific location and date.
- The exact date and time in which the Sun rises in a specific direction on a certain location. I'll explain it in depth in **section 4**.

I'll explain you step by step how you can easily use the **PhotoPills** application to find out all this information.

Open **PhotoPills** and tap *Planner* (Menu *Pills*).



PhotoPills - Pills Menu. Tap Planner to start.



PhotoPills Planner - General view of the PhotoPills Planner, the Red Pin position and the Sun information.

You have all the tools you need on the Planner. Just follow these steps:

- Use the **Time Bar** (the colorful bar you see below the map) to set the date you want to photograph the Sunrise Swipe it to change time. Or tap it to access the calendar. You can also double tap it to set the current date and time.
- The thick yellow line shows the Sunrise direction on the map. The thin orange line is the Sun direction at the selected date and time.
- Using the Sunrise direction as a reference, move the Red Pin to a potential shooting spot, and figure out if that location works out for that particular Sunrise.

- If it doesn't work out for that Sunrise, try another location... and as many as it takes until you find the best Sunrise location.

Let's have a look at an example.

PhotoPills Planner - Panel 4 indicates Sunrise time (06:59 am) for the selected date and Red Pin position.

PhotoPills Planner - Panel 3 shows the Sun elevation (13.79°) for the selected date, time and Red Pin position.

Let's say you're spending a few days in Singapore. And you want to shoot a unique Sunrise for instance next Saturday June 12, 2021. Set the date on the Time Bar.

Now, swipe the top panels until you get to **Panel 4**. On that particular day, in Singapore the Sun rises at 06:59 am.

And if you swipe the top panels to **Panel 3**, you can check that the Sunrise direction (thick yellow line) points to the east, at an azimuth of 66.5° approximately.

The azimuth is the angle measured from north to the Sun position. For now, you don't need to know anything else. I'll give you more details about **the azimuth and the elevation** of the Sun in **section 3**.

Now place the **Red Pin** on a tentative shooting spot. In Singapore there are a lot of interesting locations, such as the docks facing the amazing Marina Sands Bay hotel. If you don't know how to do it, **this video shows you how to move the Red Pin**.

This is an interesting location because

- it's facing east,
- it's on the edge of the bay so there's plenty of space to move around,
- it has an interesting subject – the Marina Sands Bay hotel,
- and the horizon is relatively free of obstacles so you can end up with a nice composition.

As you can see in the screenshot above, there are 3 lines originating from the Red Pin:

- The thick yellow line shows the direction of the Sunrise.
- The thick orange line shows the direction of the Sunset.
- The thin yellow line shows the position of the Sun.

All this information is for the selected date, time and Red Pin position. In this case, June 12, 2021 at 08:02 am.

Thanks to the **Time Bar** you can update the Sun information:

- If you swipe it to the left, you move time forward.
- If you swipe it to the right, you move time backward.

So you can see how the Sun position (and light direction) changes as time goes by.

You can also change the date using the Calendar (Date & time screen). Tap the Time Bar once to access the Calendar.

A good starting point is to check the Sunrise position on the solstices. That way, you can see how the Sunrise position moves throughout the year.

Moreover, you can **use the Find tool of the Planner to figure out when the Sun will rise (or set) in a determined position**.

I'll explain you how in **section 4**.

Locate beautiful landscapes (2)

Nikon D4s | 18mm | f/11 | 40s | ISO 100 | 6250K | ND 1.8 (6 stops), soft GND 0.9 (3 stops) and polarizer filters

The **landscape** you encounter at the location is critical.

It's the setting in which your story will take place, the place where you'll be able to photograph that Sunrise that will make us all freak out.

Look at any detail that might be useful. Be thorough while you investigate and avoid leaving loose ends. This way you make sure you find the best place to photograph the Sunrise.

Let's see what ingredients your location should have.

Why a landscape?

Pick the one you like the most a natural or an urban one.

And confirm that the landscape offers you room enough in your frame to:

- Include the Sun (or the light coming from it).
- Show where the Sunrise takes place. Is it on the modern streets of New York? In the middle of the temples of Angkor Wat or in the wonderful Kruger National Park?
- Add a powerful subject. I'll get into this in the next section.

Take a good look at its orientation

Your idea is to photograph a Sunrise.

So you should take the following into account:

- Take your shot from the west. That is, facing east.
- Take some test shots shooting to the north or to the south, and play with the light entering the frame from the side.

Try to make sure there's plenty of room to move around

The more space you have, the more compositions you can get. And if the photo you've imagined only has one possible composition (although I would be surprised about this), having more space will help you in case you have to make small corrections.

What kind of light do you want? Backlight, light from the side? Or do you prefer to include the Sun in the frame? Depending on your answer, you'll have to change your shooting direction.

And even if you're focused on choosing the frame, turn around. Take a look at what you have on your back and look around because sometimes the best action happens in the opposite direction (180º from the Sunrise location).

Another option is to take the photo from further away depending on how big (or small) you want the Sun and/or the subject to look in the photo. You have a more detailed explanation in **section 3**.

Include an interesting subject (3)

Nikon D4s | 18mm | f/11 | 1/20s | ISO 100 | 5650K | Soft GND 0.9 (3 stops) filter

A location stops being spectacular when you don't include a point of interest. It's the magnet that will help you attract the eye of the spectator.

And the greater the interaction between the scene light, the location and the subject, the greater the impact of the image.

Find a subject you can photograph from the west if you want to include the Sun in the frame. Or you can capture it from the north or south if you want light to enter your frame from the side.

It depends on what you want to convey.

The point of interest is the composition subject

As I said before, the point of interest is the magnet that attracts the spectator's attention. It's the element of the frame that draws their attention and makes them spend more time looking at the image.

That's why it's so important. Because it's the main character in your story.

So you have to be careful when you choose it. Don't just settle for anything.

"Toni, what do you mean by anything?"

Avoid elements that aren't original, that have no strength, that don't convey anything.

Instead, look for elements that stand out like a boat in the immensity of the sea, the silhouette of a pedestrian walking on a bridge or a windmill in the fog.

Seek the extraordinary in the ordinary.

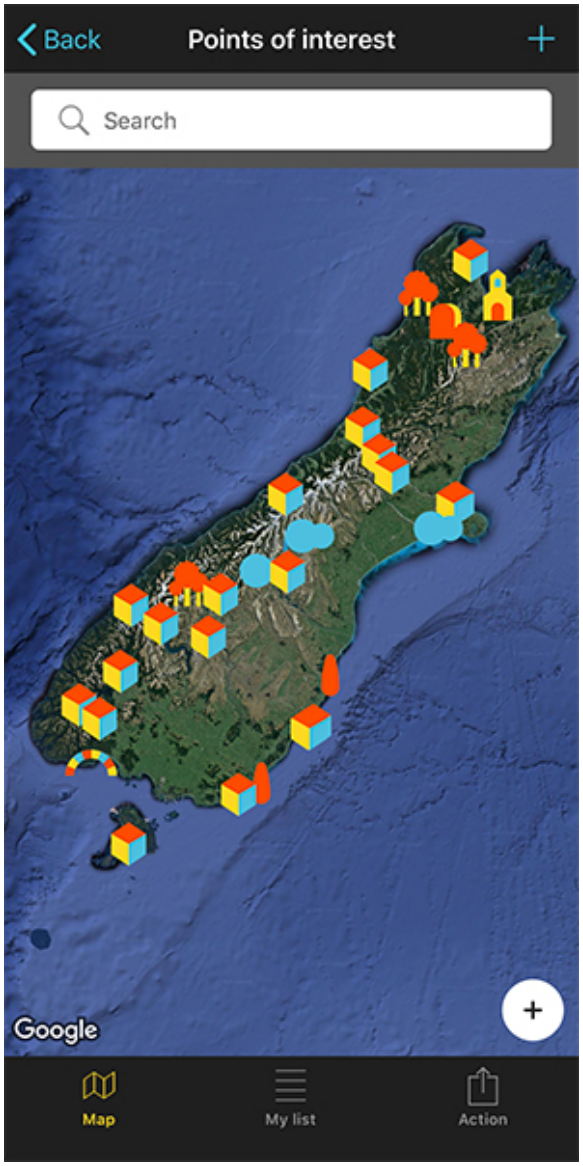
And if you're short on ideas, take a look at the PhotoPills POI database.

"And what's that?"

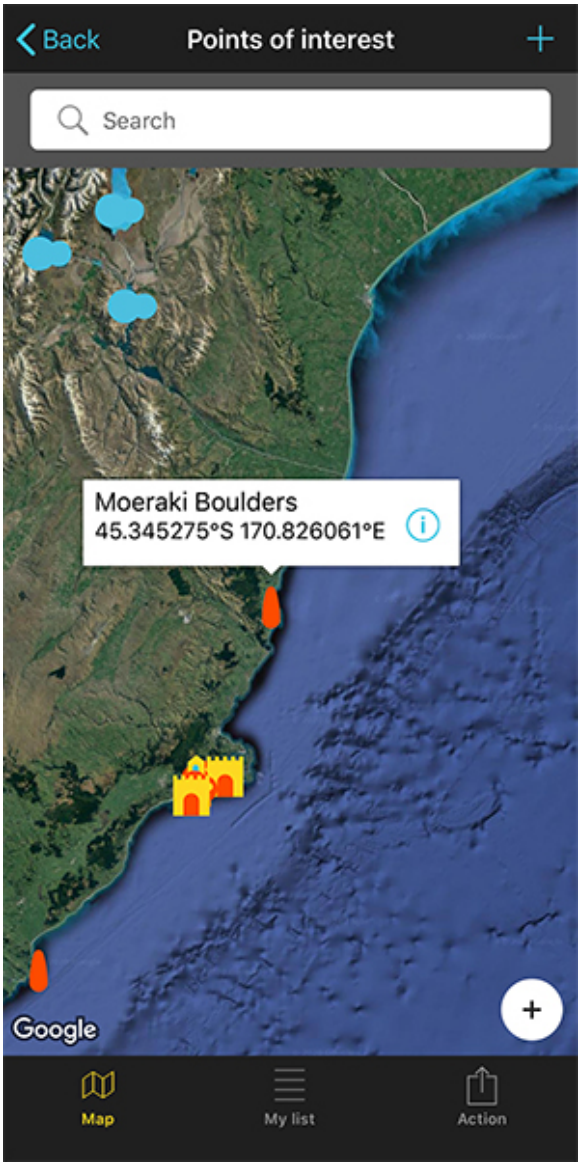
The PhotoPills Points of interest (POIs) database :)

To find it, open **PhotoPills** and tap **Points of interest** (*My Stuff* Menu).

Tap *Map* (at the bottom of the screen) and navigate the world. You'll discover new places thanks to our database of 10,000+ POIs all around the world!



PhotoPills POIs - General view of the Points of interest (POIs) in New Zealand's South Island.



PhotoPills POIs - Detail of the Moeraki Boulders, a Point of interest (POI) in New Zealand's South Island.

Don't neglect the foreground

In landscape photography, the foreground is key. Always. Whether it's a Sunrise or any other time of day.

And this is so for two reasons.

The first one is technical.

Although some landscape photographers take pictures with a telephoto lens, a wide angle lens is much more popular.

The thing about this type of lens is that it gives the impression that all the elements of the composition are far away. What if you don't include a compelling foreground in your photo? The image will most likely be flat and dull.

With the amount of photos and visual stimuli out there today, if you don't capture the spectator's eye and get them to wonder, your image will just be ignored.

The second reason is artistic.

The foreground is the gateway to the image. Think of it as the starting point of the story you want to tell.

A good foreground also gives the photo much more depth. Because the idea is that the spectator related to what's happening, so much so that he or she even has the impression of actually being there.

Research thoroughly (on and offline) (4)

The truth is, there are no shortcuts.

And if you think you've found one, you risk missing the best location. If you want to capture a spectacular Sunrise, the exact one you've imagined, you have to be thorough.

Research... Research endlessly until you find what you're looking for.

Go to every source of information you can think of. Here are some sources that may help you:

- Your main source of inspiration should be the photos of other photographers that draw your attention. Have a look at **Instagram**, **Flickr**, **500px**, **Unsplash**, **Getty Images**, **Shutterstock**, **Adobe Stock** and **Google Images**.
- Learn from other photographers discoveries and check the locations they have previously explored. Certain communities, such as **Locationscout** and **ShotHotspot**, offer this information.
- Analize publications like travel magazines (**National Geographic**, **Condé Nast Traveler** and **Travel + Leisure**), travel curated content (**Behance**, **Maptia** and **Landscape Stories**), travel guides (**Lonely Planet**) and the photography section of newspapers such as **The Atlantic**, **The Guardian** and **The New York Times**.
- Revisit your favorite photographers' websites and pay attention to their galleries. Have you checked the PhotoPills Masters' websites participating in the **PhotoPills Camp**?
- Don't forget the Wikipedia! It has tons of lists of interesting places. Let's say you're

looking for lighthouses... Type in Google **"lighthouse list Wikipedia"** and you'll be surprised.

- A reliable and full of surprises source of information are the locals. No one knows the area better and provides greater advice.
- How long since your last visit to a library or a bookstore? Yes, books will tell you more about the local history and natural biodiversity of an area or town.
- Try to visit the nearest Town Hall or tourist office and look for first hand information.
- Again, check the Points of interest (POIs) included in **PhotoPills**.
- And finally, scout the area. It's usually the most effective strategy :)

Take time to work on your composition (5)

Nikon D500 | 750mm | f/5.6 | 1/250s | ISO 500 | 6500K

My first advice is to always look for the simplest and cleanest composition possible. This way, it will be easier to convey all the emotions to the spectator and she'll understand the whole story.

When you're at the location, look at the subject and the other elements you can combine with in the frame.

Put something in the frame that's eye-catching. It's important that you attract the spectator's attention. Your main challenge is to get her to spend several minutes looking at your image, looking for details and discovering the story you're telling her...

You'll achieve this with intention, knowing what you want to tell and how you want to tell it.

And the only way to do that is by making decisions... ;)

The decisions you have to make are actually quite simple.

You just have to ask yourself:

"Should I include this element in the frame?"

And then ask yourself why it should be (or not).

As I was saying before, all the elements in your composition have to be there for a reason. Don't leave anything to chance. Don't include superfluous elements or elements that don't add something to the story and don't provoke an emotion in the viewer.

And they should literally be a visual roadmap so the spectator follows your path as they look at the image.

Composition is a dense and complete subject that I could write about for hours (and days!), but that's not the point of this article.

However, here are some ideas to start experimenting with.

- Use a symmetry.
- Include triangles, circles and other shapes.
- Imply motion or rhythm.
- Produce an atmosphere.
- Use leading lines.
- Implement the color psychology: reds, oranges and yellows are warm while green, blues and magentas are cold.
- Add some texture.
- Establish a balance between the different visual weights.

- Create volume.
- Convey a sense of scale.
- Play around with positive and negative space.

Section 3:

5 key things you should consider before planning a Sunrise

You already have a powerful location to photograph a Sunrise and you've determined an interesting element that will be the subject of your composition.

PhotoPills' motto is to have a good idea, plan it and take the picture.

You know... **Imagine. Plan. Shoot!**

But before we get into the planning, you still have to make some decisions:

- Do you want the scene to be lit from the side?
- Do you want to photograph the whole scene with a wonderful Sunrise in the frame?
- Would you rather focus the spectator's attention on your subject and a huge Sun?

This is all part of the creative process so that your photographic idea becomes a reality.

And while that process lasts, you have to take into account also 5 important things that I'm going to talk about in this section. They will help you create what you have imagined.

And they will also help you to plan it (**section 4**) with the **PhotoPills** app faster. If you have a good idea of what you want to shoot, it will be easier to find the exact shooting spot and the date and time of the Sunrise you want to capture.

The shooting spot determines the Sun size relative to the size of the subject (1)

Nikon Z6 | 700mm | f/11 | 1/8000s | ISO 100 | 5600K | 1.4x teleconverter

I'm always amazed by how many photographers make the same mistake. Most believe that to get a huge Sun compared to the size of the subject you need a long focal length (a telephoto lens).

Actually, no.

The fact is that the closer you are to your subject, the smaller the Sun looks to be compared to it. Conversely, the further away you are from your subject, the bigger the Sun is compared with it.

Without going into complicated explanations, you just need to know that this happens because of the angular diameter of the Sun.

What is the angular diameter of the Sun

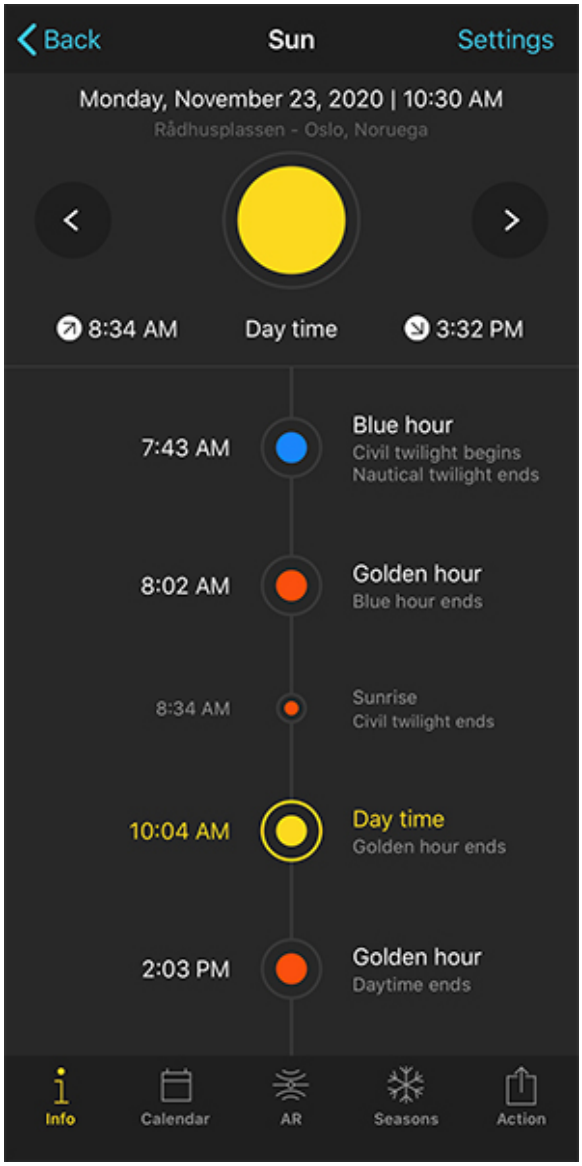
The angular diameter of the Sun is actually the diameter of the Sun measured in angle.

"OK... And where can I find the angular diameter of the Sun?"

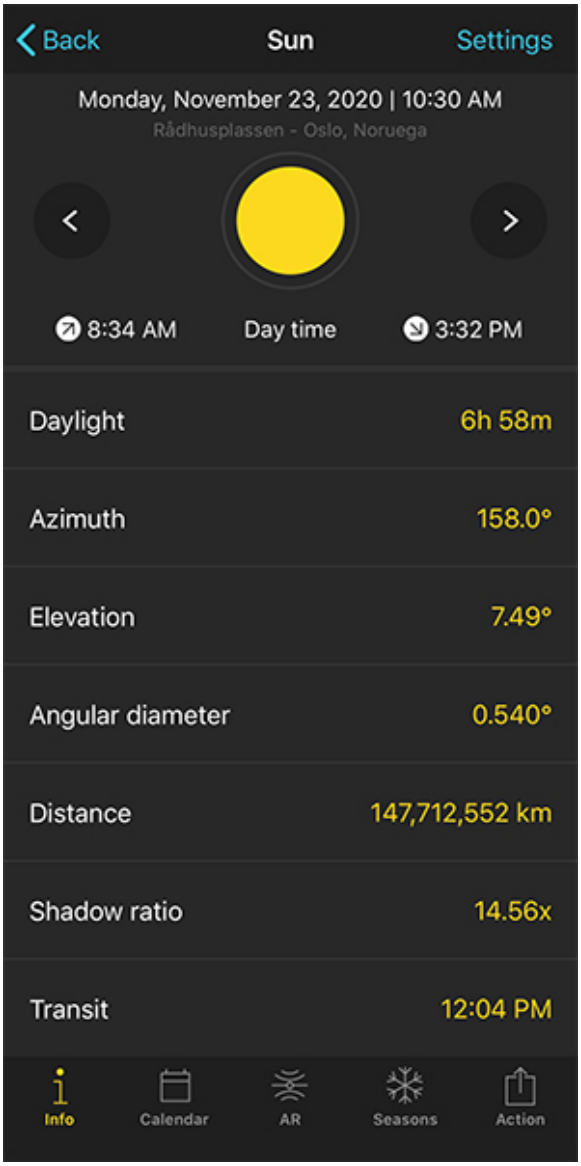
Easy peasy!

Open **PhotoPills** and tap **Sun** (*Pills* Menu). By default, the information that appears corresponds to your current location (according to your smartphone GPS) and the current date and time.

If you scroll down, you'll see that the angular diameter of the Sun is almost at the end.



PhotoPills Sun Pill - It displays all key Light, Sun, Moon and Milky Way events for the selected date and location.



PhotoPills Sun Pill - Scroll down the screen to find out more information.

Tip!

If you want to change the location and/or date and/or time, tap *Settings* (top right corner). On the new screen, you can change:

- The location by taping on *Position*. Slide the *Autoupdate* button to unlock the rest of the screen. You can use
  - The search box if you want to type an address.
  - The coordinates option if you know the latitude and longitude.
- The date by taping on *Date*. Slide the *Current date and time* button to unlock the rest of

the screen. Tap

  - *Date* to change the date.
  - *Hour* to change the hour.

- You can also determine whether you want PhotoPills to automatically detect the time zone or not.

There is something important that I'd like to tell you.

From the Earth, the angular diameter of the Moon and the Sun are quite similar (roughly 0.5º).

That's because of two facts:

- The Sun's physical diameter is 400 times bigger than the Moon.
- The Moon is approximately 400 times closer to the Earth.

The combination of both factors means that the Sun and the Moon seem to have the same size when you look at them from the Earth.

So what works for the Sun, works for the **Moon** as well!

And now, the key factor...

How to determine the distance between the shooting spot and the subject to get a Sun of a certain size

Math alert!

Don't panic, it's not as hard as it looks like.

But if you have any question, leave a comment at the end of this guide ;)

Let's say you want the Sun to be a certain size compared to the subject. And to get it, you need to know how far away from the subject you need to be.

In other words, how far away the Red Pin (shooting spot) has to be from the subject.

So far so good, right?

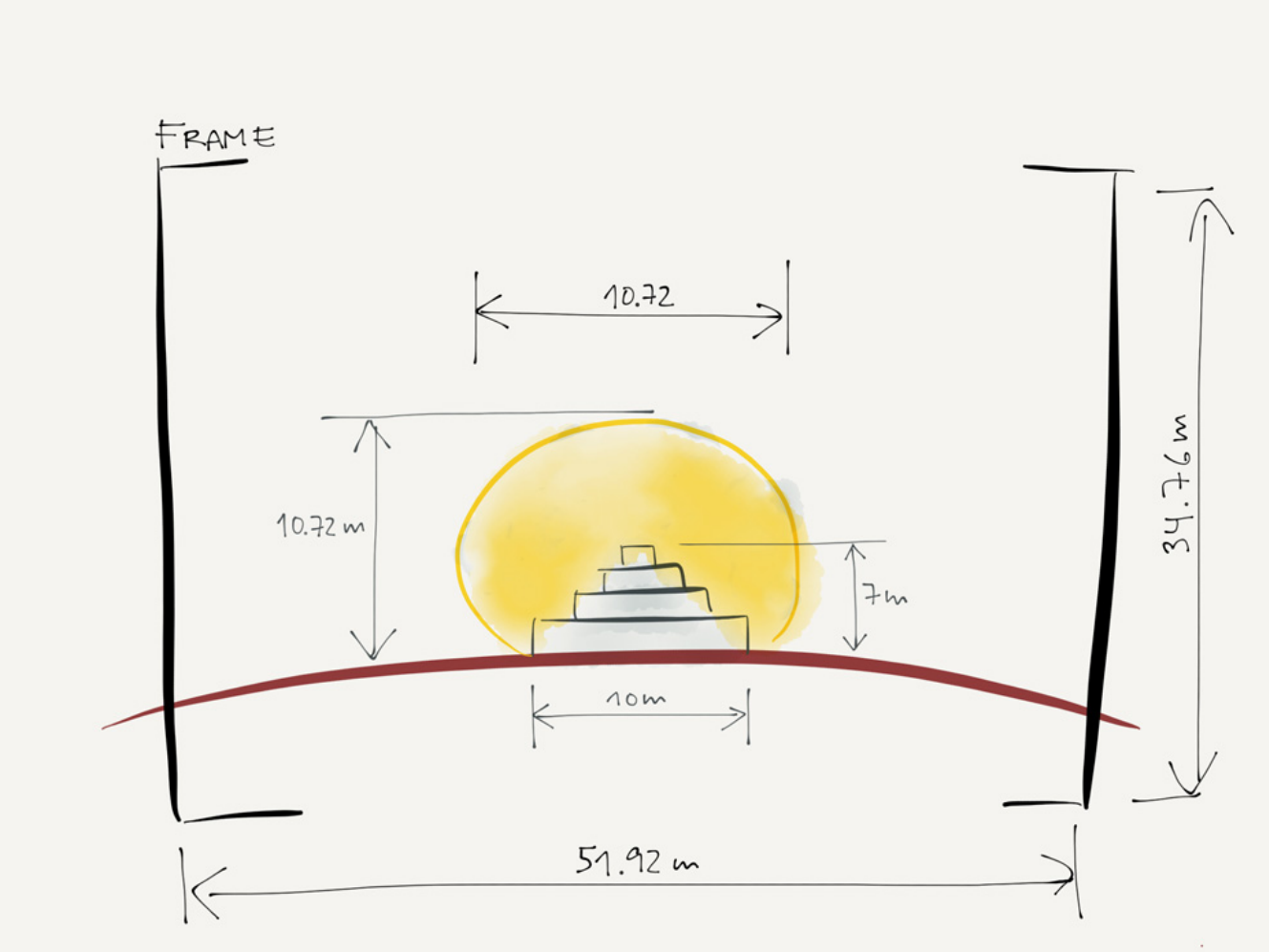
The following equation answers your question:

$$\text{Shooting distance} = \text{Sun diameter} / [2 \times \tan(\text{Sun angular diameter}/2)]$$

In this case, the Sun diameter is the size (in meters, for example) you want the Sun to have.

Now, imagine that you have found a great location with a powerful subject and you want to photograph the Sun setting behind the subject.

The photo you've imagined would look more or less like this:



You're familiar with the spot and you know that the subject width is 10 meters. So the idea here is to capture a Sun with a size (diameter) of 10 meters.

And now, suppose the Sun angular diameter is 0.556°.

It's a number I picked randomly to use in this example. But you can know the angular diameter of the Sun for a specific location and date checking out the **Sun pill**.

Let's solve the equation:

$$\text{Shooting distance} = \text{Sun diameter} / [2 \times \tan(\text{Sun angular diameter}/2)]$$

$$\text{Shooting distance} = \text{Sun diameter} / 0.0097$$

Shooting distance = Sun diameter × 103.05

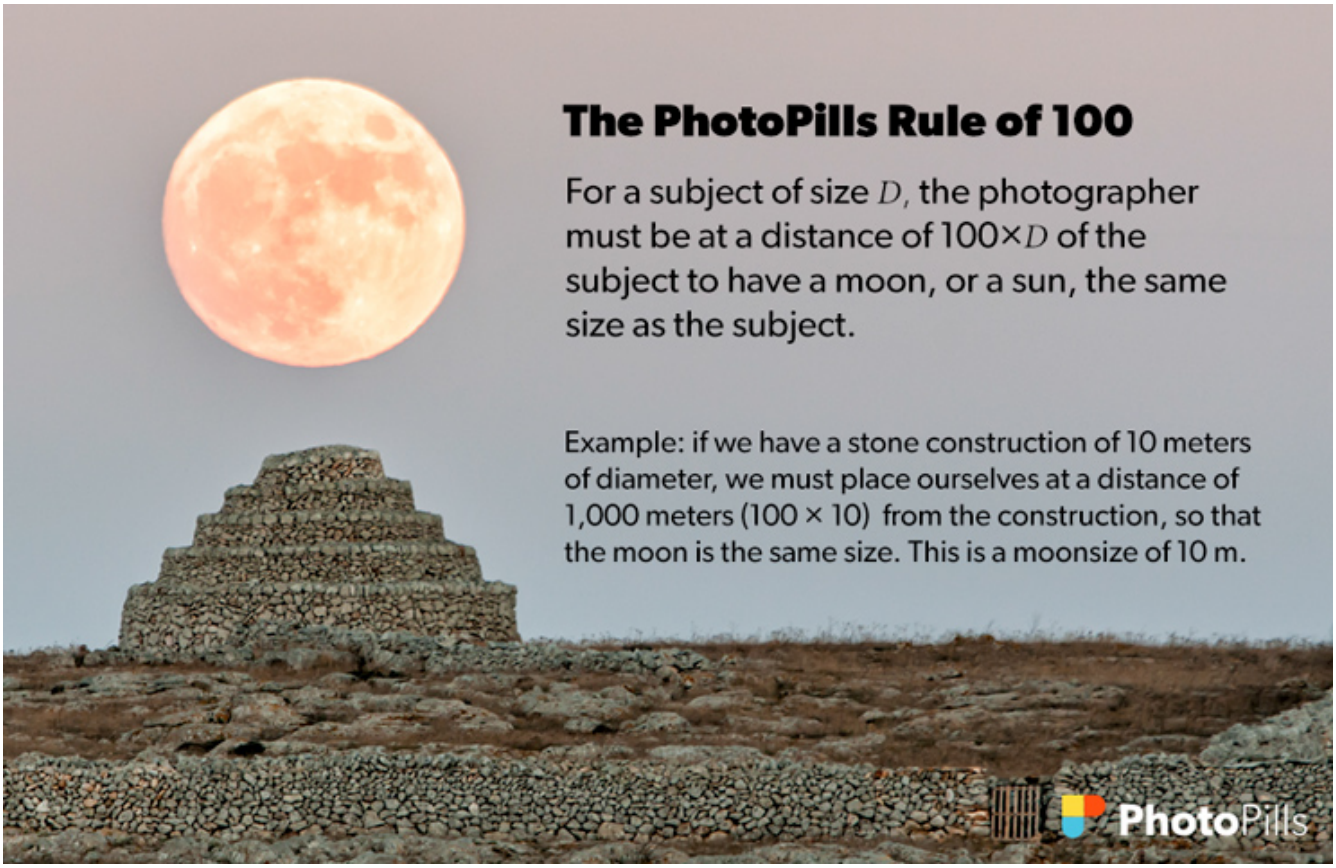
1030.49 = 10 × 103.05

Therefore, you have to be at a distance of 1,030.49 meters from the subject. Or a little more than 1 kilometre.

Apply the PhotoPills Rule of 100

In the equation, the multiplying factor (103.05) is roughly 100.

So, every time you calculate the shooting distance apply the PhotoPills Rule of 100.



Or better yet...

Forget any calculations and let **PhotoPills** do all the work for you! ;)

Determine the shooting distance and Sun size with PhotoPills

Open **PhotoPills** and tap *Planner* (*Pills* Menu). Then, place the **Red Pin** in the shooting spot. If you don't know how to do it, **this video shows you how to move the Red Pin**.

Now, slide the top panels to get to **Panel 2**, and tap the button to activate the **Black Pin**. Place it over your subject, where you want the Sun to be. Panel 2 tells you the shooting distance (the distance between the Red Pin and the Black Pin).

Slide your finger over the **Time Bar** and move time to align the Sun with the Black Pin. Have a look at Panel 2: the size of the Sun is indicated in brackets.

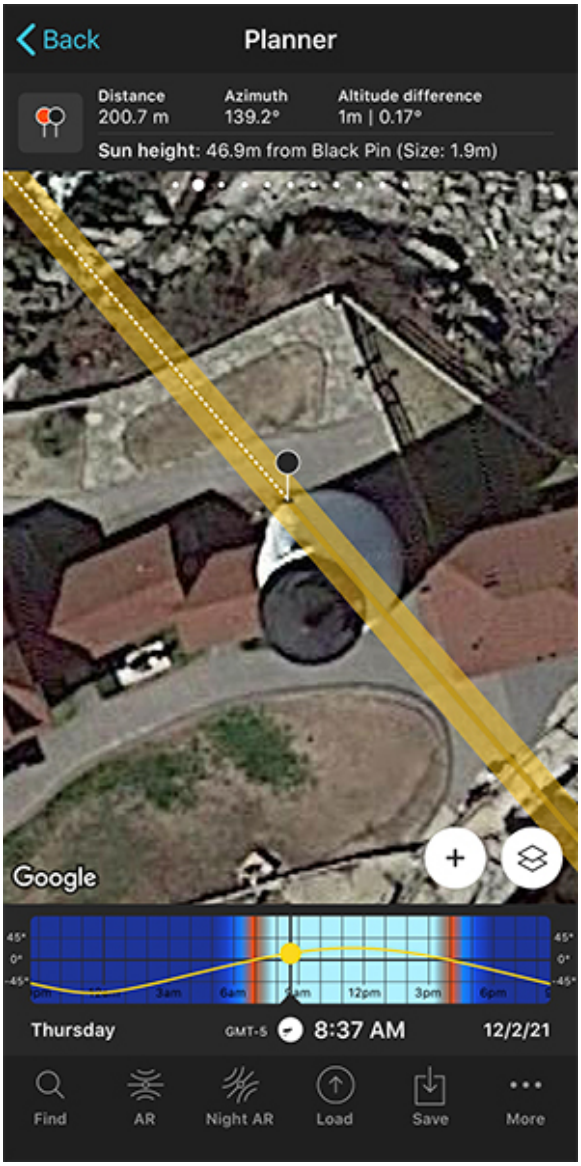
But best of all, you can see the size of the Sun on the map!

All you have to do is tap the **Map Settings** button next to the **(+) button** on the map (lower right corner). Then tap the **Sun layer** and activate the **Show Sun size** option.

Go back to the map and zoom in on the Black Pin. The light yellow line (the one showing the Sun azimuth) shows you the size of the Sun. That way you can visualize how big the Sun is going to be compared to the width of your subject.

Note: *If you have the impression that PhotoPills is not showing the size of the Sun on the map, check that there is a considerable distance between the Red Pin and the Black Pin. If they are very close to each other, you'll hardly see the size of the Sun, as the Sun is very small in relation to your subject size. If you move the Red Pin away from the Black Pin following the direction (azimuth) of the Sun, you'll see that its size increases.*

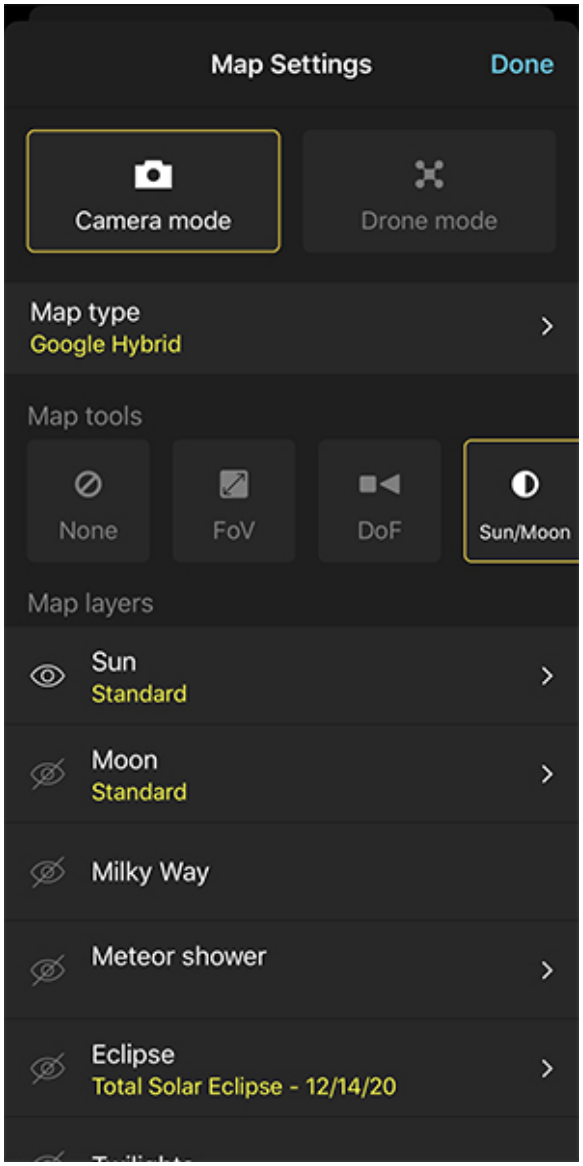
PhotoPills Planner - Panel 2 indicates the size of the Sun (1.9 m) you'll get for the shooting distance (200.7 m).



PhotoPills Planner - The Planner now shows the size of the Sun on the map. It also allows you to quickly visualize the size of the Sun relative to the width of the subject.

In addition to this, the **Sun/Moon map tool** helps you to calculate the shooting distance you need to get the Sun the size you want. To turn it on tap the **Map Settings** button next to the **(+) button** on the map. In the map tools section, select *Sun/Moon*.

I'll explain you everything with a real example in **section 4**.



PhotoPills Planner - From the Map Settings screen you can select the Sun/Moon Map tool.

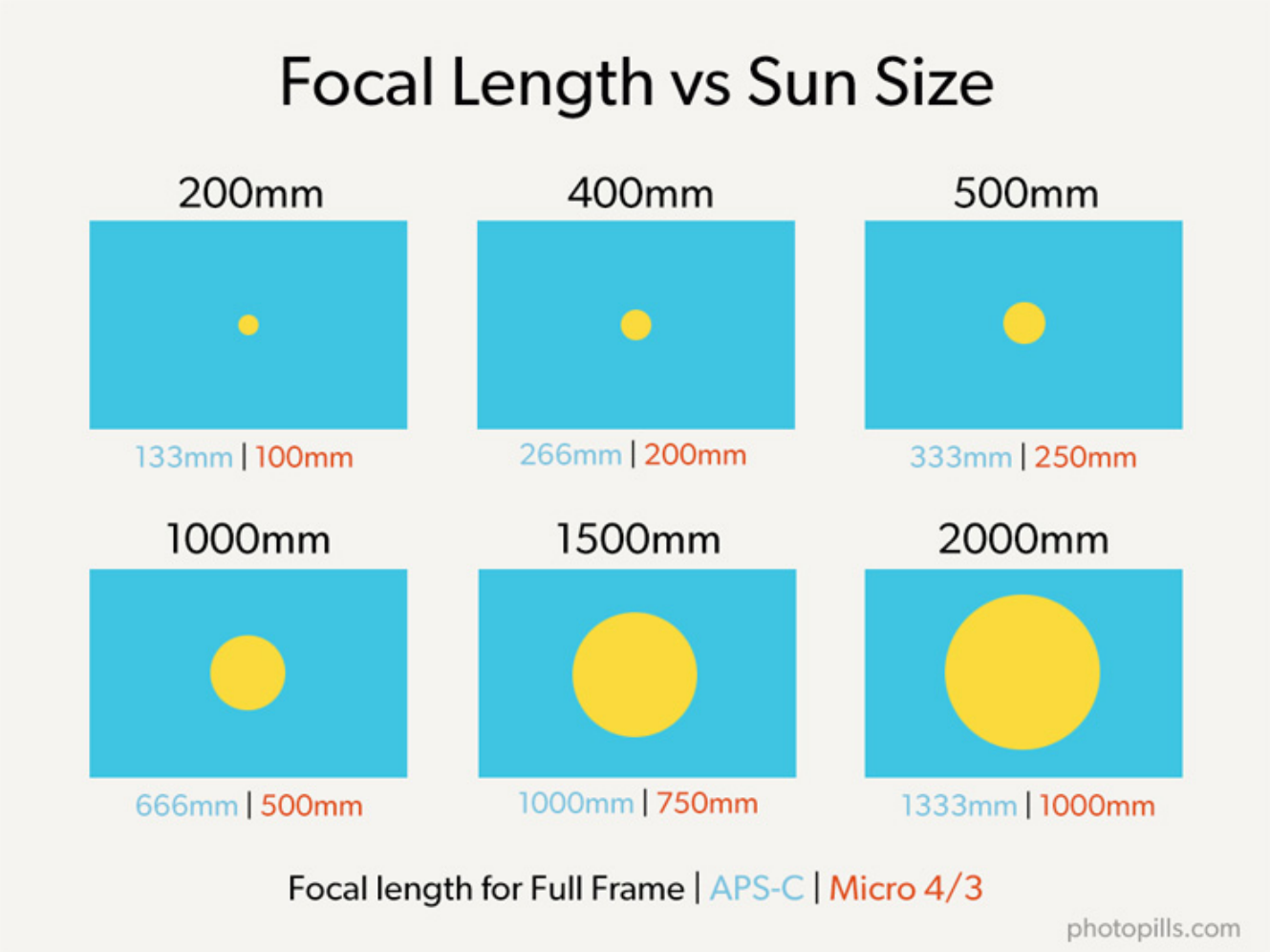
PhotoPills Planner - The Sun/Moon map tool allows you to decide the size of the Sun/Moon you want and view the required shooting distance on the map.

See? That wasn't so hard.

"You're right, I had no idea! So what determines focal length?"

Keep reading and you'll find it out... ;)

The focal length determines the Sun size in the frame (2)



Whenever you want to take a Sunrise photo, think about how big you want the Sun to be in the photo (in the frame).

In addition to this, you know that the size of the Sun will depend on the focal length you use.

Sun as a dot

Do you want to focus on the beauty of the landscape and you don't mind if the Sun looks too small?

Use a wide angle (10-35mm) and the landscape will take up most of the frame.

It's important that you also include a strong foreground. This way you avoid ending up with an unbalanced photo. You have to make sure that the visual weights of all the elements in

the frame are balanced.

To do this, get close to an element you want to highlight in the foreground, such as a group of flowers or a rock, and it will look larger in the photo.

Small Sun

Using intermediate focal lengths (35-200mm) you have a smaller field of view.

Therefore, the longer the focal length, the less landscape you can include in the frame. This is the perfect way to simplify your composition and get the spectator to focus on the most interesting area.

At the same time, the Sun will look larger in the frame.

And vice versa if you use a short focal length.

Big Sun (or huge!)

As what I just explained, if you want the Sun to be the subject of your photo, use long focal lengths (>200mm). If you don't have a long lens, a good alternative is to use a multiplier.

By selecting a long focal length, you reduce the field of view leaving little landscape in your composition. The Sun and the subject take up most of the frame.

Determine the focal length with PhotoPills

You want to capture a certain part of the landscape and/or have a Sun of a certain size in the frame. But you're not sure what focal length to use.

Use **PhotoPills** and you'll see:

- The Sun size on the map (depending on the shooting distance).
- The field of view on the map (depending on focal length, camera...).

It's very easy!

Open the PhotoPills app and tap *Planner* (*Pills* Menu).

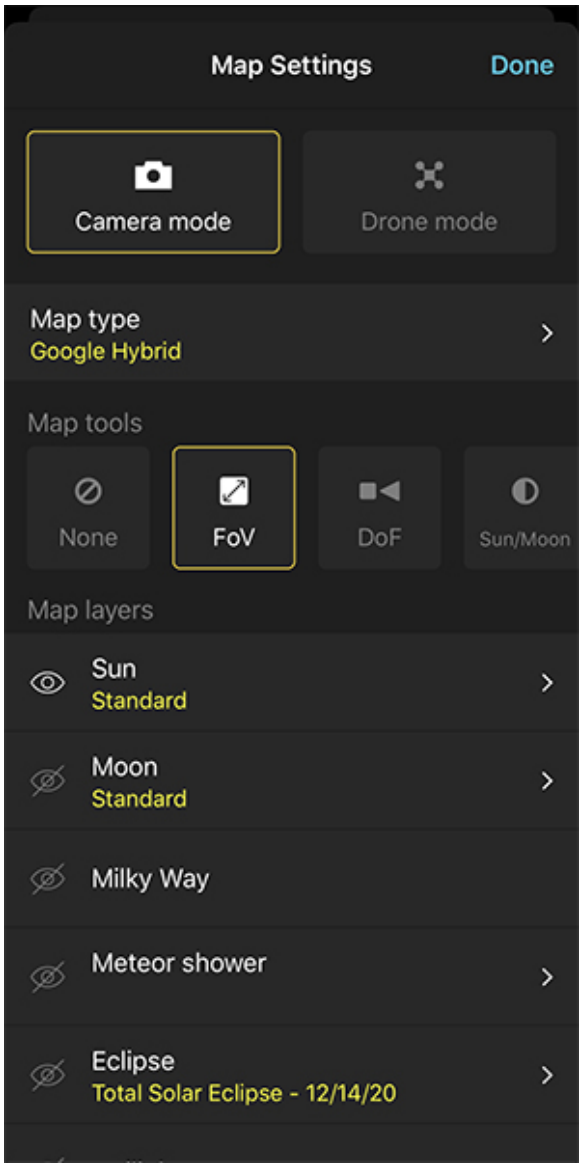
Tap the **Map Settings** button. You have it on the map, next to the **(+) button**.

On the Map Settings screen, in the Map Tools section, tap the *FoV* (Field of View) button. Tap *OK* (top right corner) in iOS or the back arrow in Android.

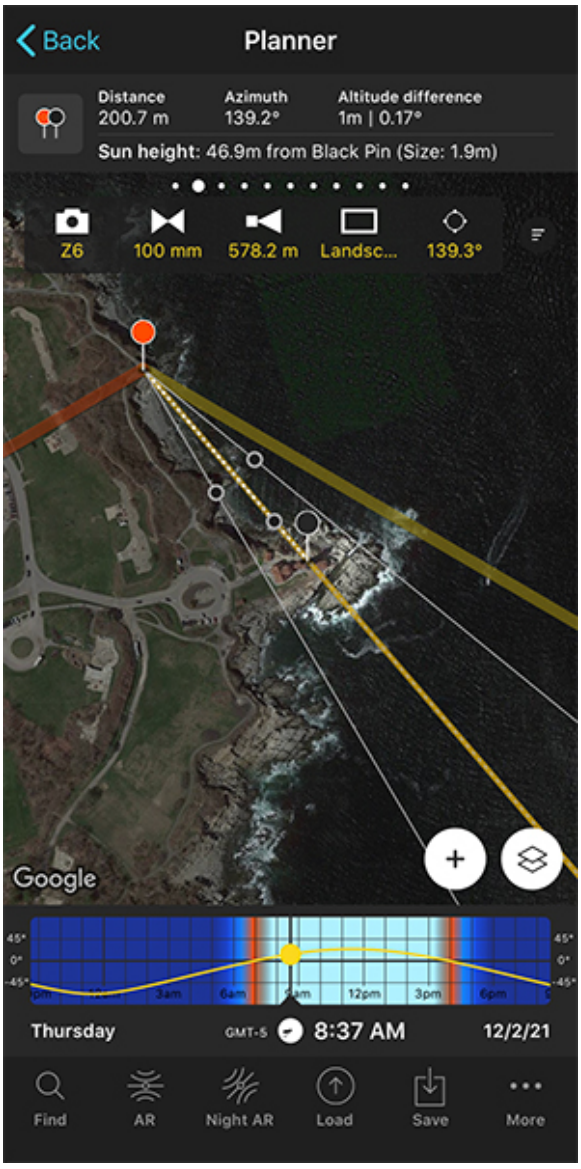
You'll see a new panel on the map.

Imagine you're using a Nikon Z6 with a 200mm at f/8 and you're focusing right at the distance to the Black Pin.

The framing is in landscape mode (horizontal) and you want to frame towards the Black Pin position. Tap the *Azimuth framing* button (the last button). On the Azimuth screen, tap the *Align with Black Pin* option. The field of view is now aligned with the Black Pin.



PhotoPills Planner - On the Map Settings screen, tap the FoV button to activate the Field of View tool.

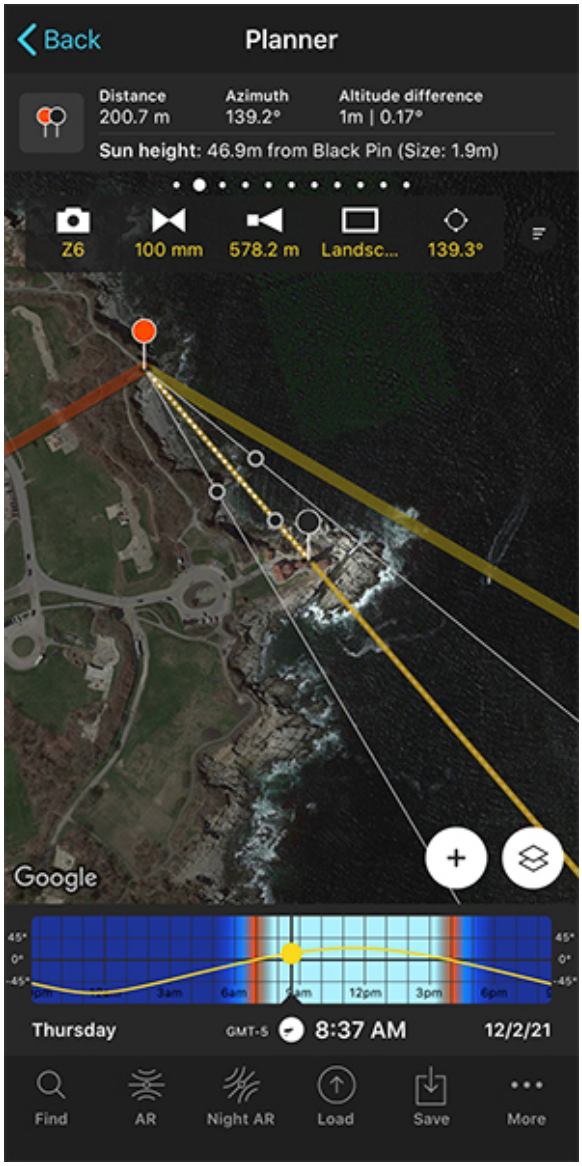


PhotoPills Planner - To view the field of view on the map type the camera, focal length, shooting distance, shooting mode (horizontal/vertical) and shooting direction.

Zoom in on the map around the Black Pin to see which part of the landscape fits into the frame.

And if you have the **Show Sun size** option activated, you will also be able to see how big the Sun will be relative to the frame.

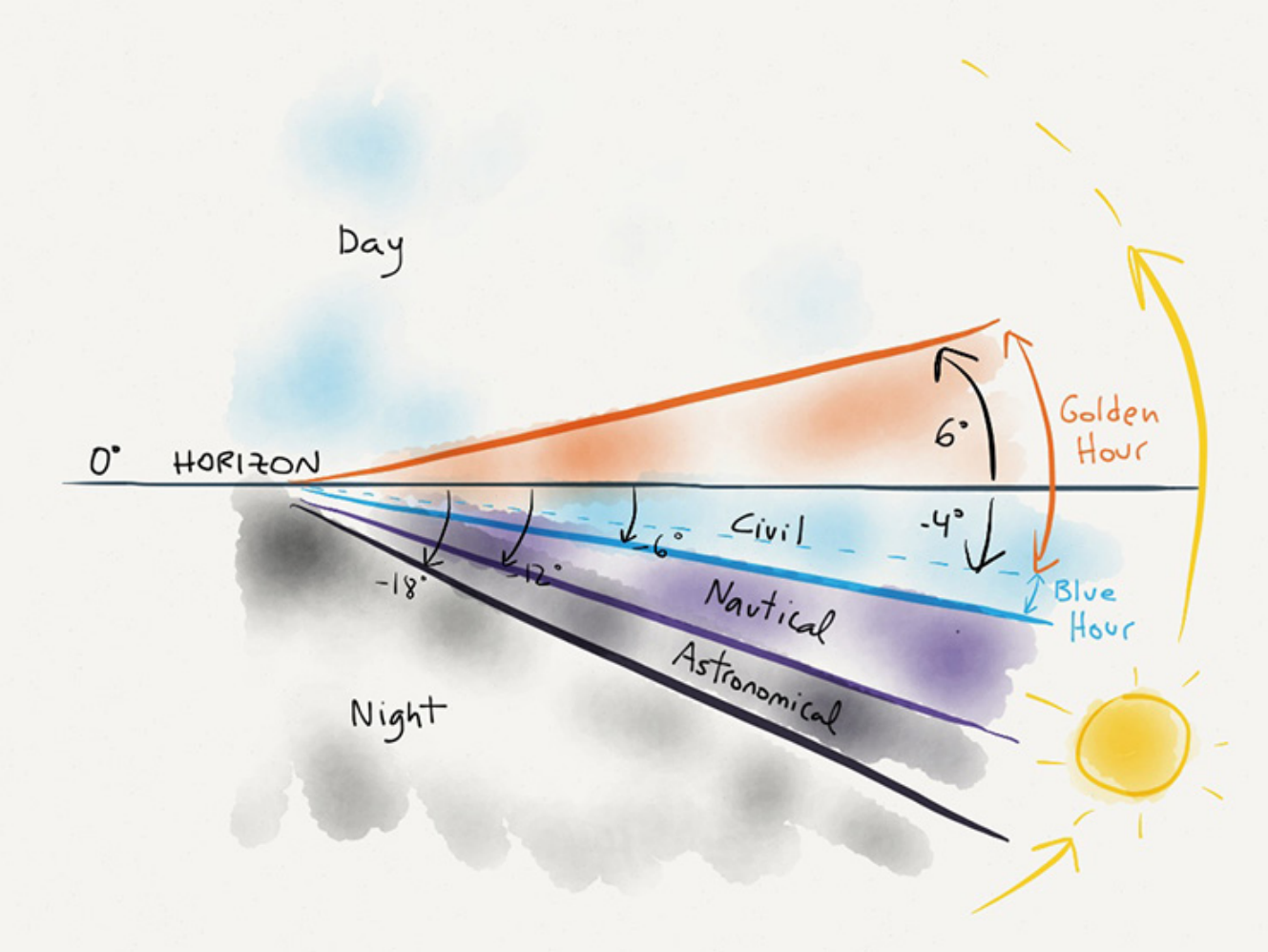
To activate it, tap the **Map Settings** button next to the **(+) button** on the map. Then tap the **Sun layer** and activate the **Show Sun size** option.



PhotoPills Planner - View of the map with the Field of View (FoV) tool activated.

PhotoPills Planner - By activating the Field of View (FoV) tool and the Sun size on the map, you can have an idea of the photo you will get.

How natural light behaves (3)

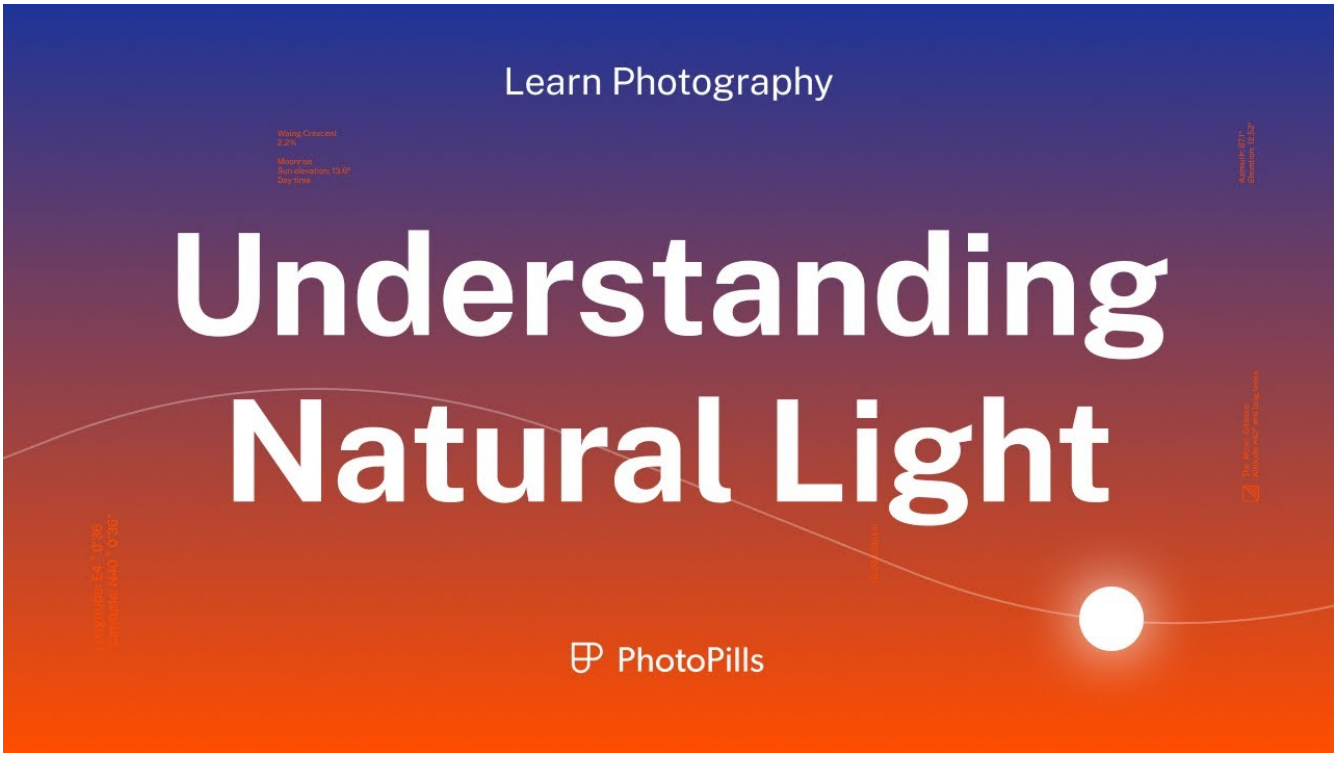


The elevation of the Sun determines the type of natural light at different times of the day. In other words, **natural light** depends on how high the Sun is in the sky relative to the horizon.

In the diagram above you can see the different types of daylight depending on the elevation of the Sun:

- **Day.** Elevation higher than 6°.
- **Golden hour.** Elevation between 6° and -4°.
- **Blue hour.** Elevation between -4° and -6°.
- **Civil twilight.** Elevation between 0° and -6°.
- **Nautical twilight.** Elevation between -6° and -12°.
- **Astronomical twilight and night.** Elevation between -12° and -18°.

In the following video Rafael (aka the PhotoPills Bard) explains in depth how natural light behaves and the type of photos you can take at each moment of the day:



But if you want to read more on the subject, I suggest you check our **super guide on natural light**.

When planning a Sunrise photo, you should make sure you have the best light conditions. And the **golden hour** and the **blue hour** are the most suitable ones.

During the golden hour, the Sun produces a pleasant and warm light. And during the blue hour the atmosphere has a deep dark blue color.

Therefore, it's essential that you know precisely when both the golden and the blue hour will occur. And it's also very important that you know the light direction and how it's going to illuminate the scene.

In **section 2** you learnt how to find out the light and Sunrise directions with the **PhotoPills** app.

PhotoPills helps you to know in less than 30 seconds when the golden time and the blue time occur in a certain location on a certain date.

Would you like to know how?

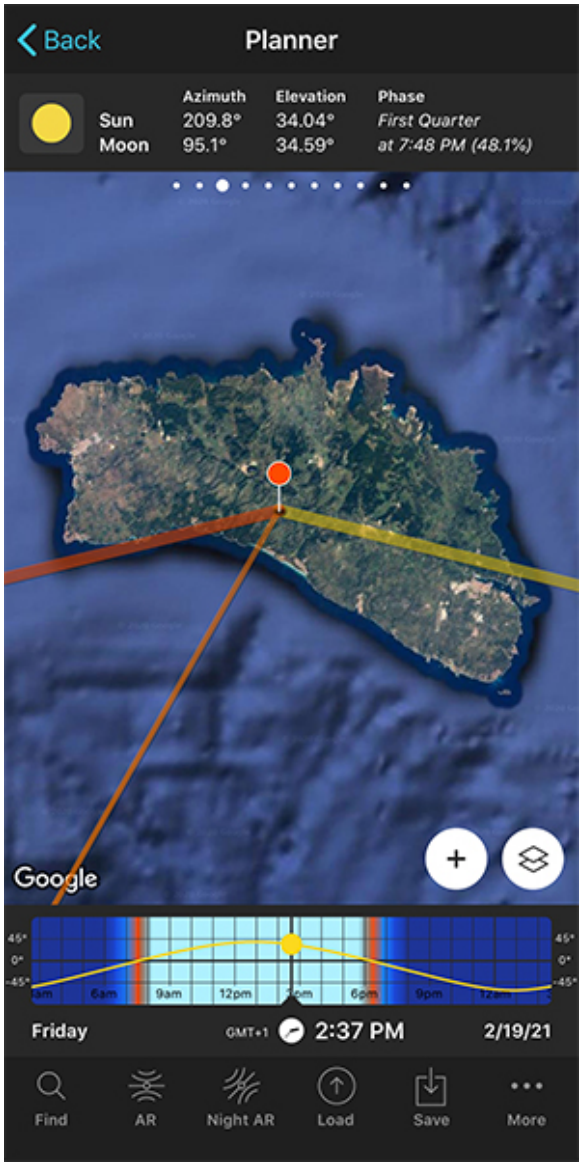
How to find out when the golden hour and blue hour happen with PhotoPills

Open **PhotoPills** and tap *Planner* (*Pills* Menu). Place the Red Pin on the potential location. And then swipe the top panels until you find **Panel 3**. There you can see the elevation of the Sun.

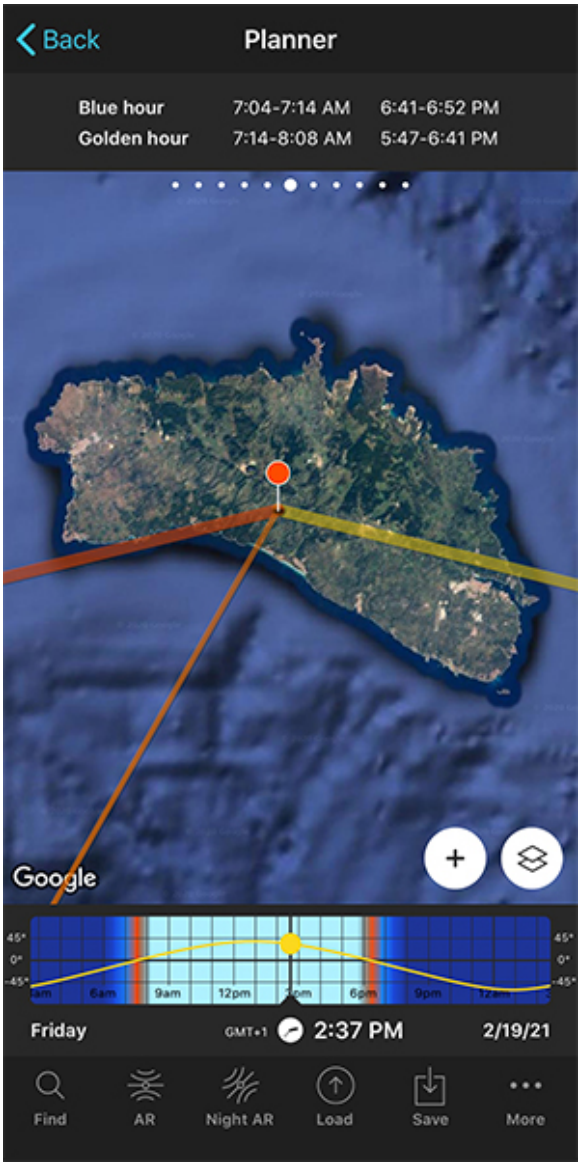
Remember that:

- The **golden hour** occurs when the Sun elevation is between 6° and -4°.
- The **blue hour** occurs when the Sun elevation is between -4° and -6°.

Now swipe the top panels to **Panel 6**. This panel tells you the exact start and end times of the golden hour and the blue hour for the selected date and the Red Pin position.



PhotoPills Planner - Panel 3 shows the Sun elevation for the selected date, time and Red Pin position.



PhotoPills Planner - Panel 6 indicates the start and end times of the golden hour and the blue hour for the selected date, time and Red Pin position.

How to find out when the twilights happen with PhotoPills

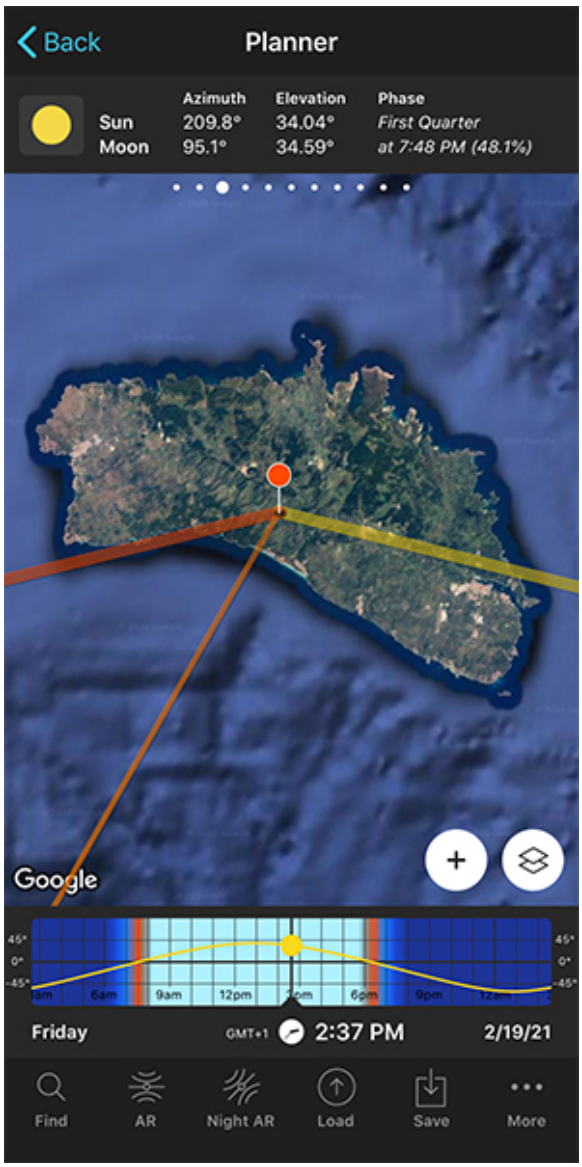
Again, open **PhotoPills** and tap *Planner* (*Pills* Menu). Place the Red Pin on the potential location. And swipe the top panels to **Panel 3**. One of the data this panel gives you is the elevation of the Sun.

Remember that:

- The civil twilight occurs when the Sun elevation is between 0° and -6°.
- The nautical twilight occurs when the Sun elevation is between -6° and -12°.

- The astronomical twilight occurs when the Sun elevation is between -12° and -18°.

Now, swipe the top panels until you get to **Panel 5**. This panel tells you precisely the start and end times of the twilights (civil, nautical and astronomical) according to the selected date and the Red Pin position.



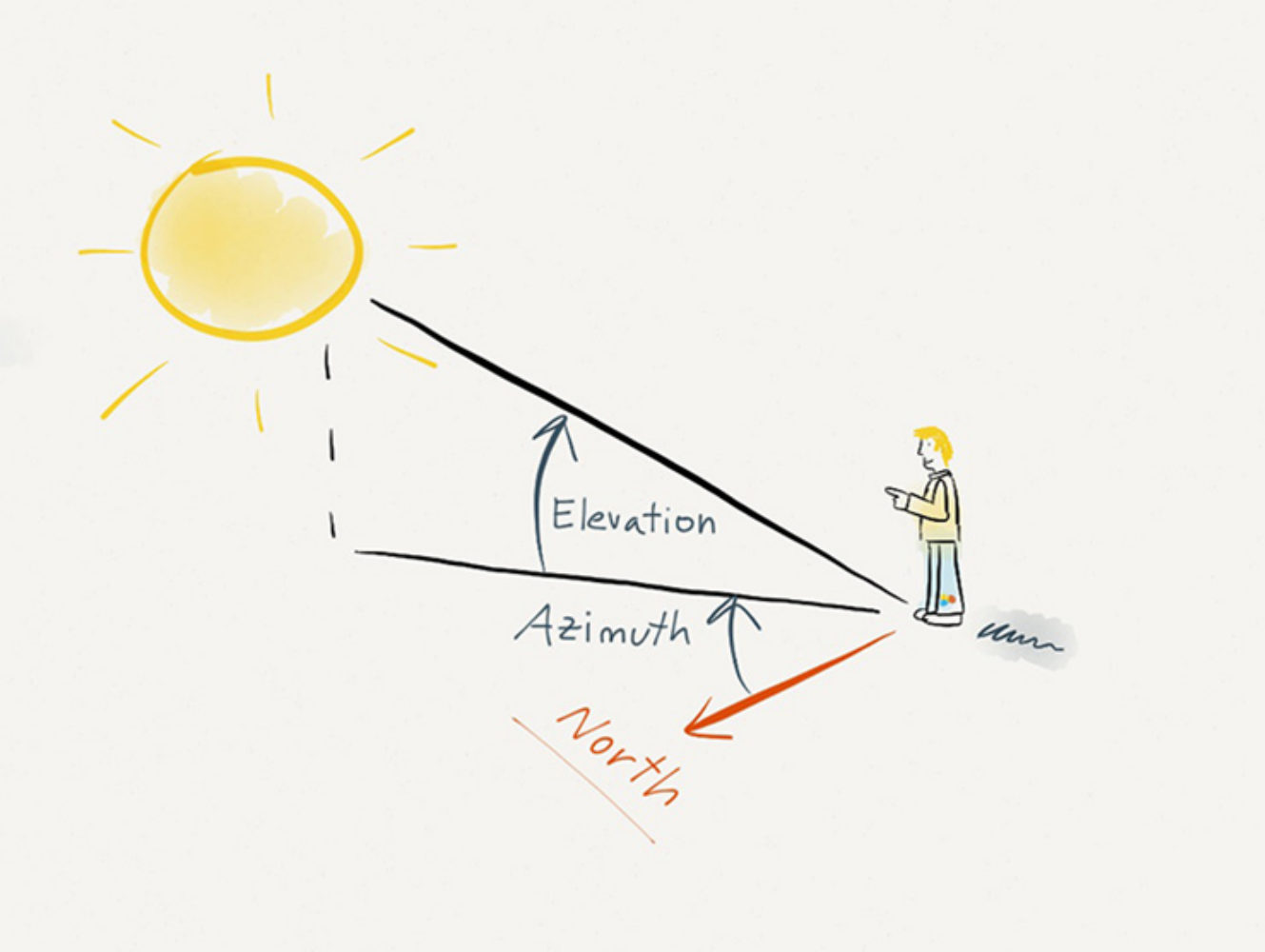
PhotoPills Planner - Panel 3 shows the Sun elevation for the selected date, time and Red Pin position.

PhotoPills Planner - Panel 5 indicates the start and end times of civil, nautical and astronomical twilight for the selected date, time and Red Pin position.

Do you want to learn how to find out the position of the Sun in the sky?

Let's do it!

The Sun position: azimuth and elevation (4)



All this planning work makes sense because your idea is to photograph the Sun in a certain position in the sky and with respect to the subject. Or you want the Sunlight to illuminate the scene from a certain direction.

Of course, if you know the position of the Sun in advance, you can choose the best shooting spot and the best shooting date and time to capture the best possible picture.

And what defines the position of the Sun?

Let's look at it.

How the Sun position is defined

To find out the Sun position, you first need 3 starting points:

- A specific location on Earth. The position from where you'll take the photo.
- A date.
- And an exact time in hours and minutes.

From there, **PhotoPills** helps you to determine the Sun position. I'll show you how to do it in a minute.

But first, you should know that the Sun position is defined by two coordinates:

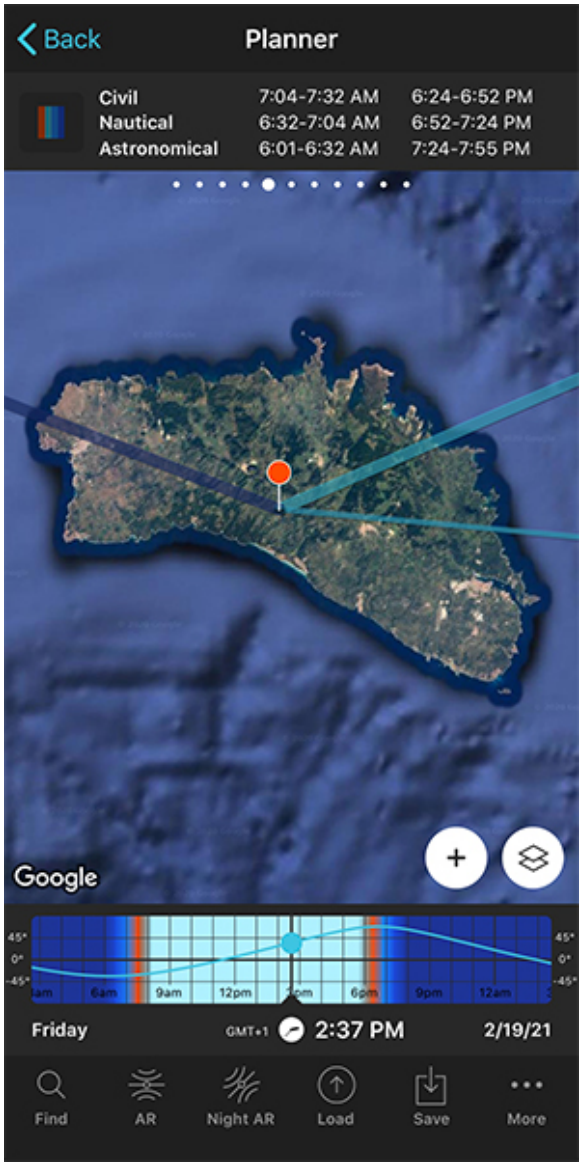
- **The azimuth.** It's the angle formed by a celestial body (the Sun, in this case) and the North, measured in a clockwise direction around the observer's horizon (you, the photographer). It determines the direction of a celestial body.
- **The elevation.** It's the vertical angular distance between a celestial body and the observer's local horizon, also called the local plane of the observer. It determines the altitude in the sky of a celestial body.

Note: *Both coordinates point out the position of the center of the Sun.*

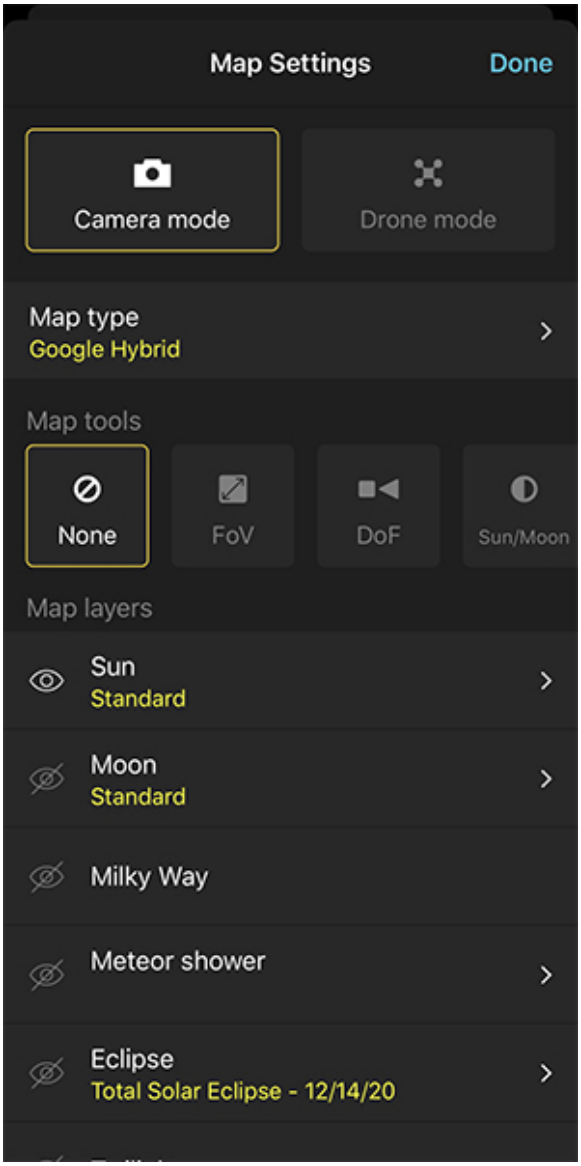
How to find out the Sun position with PhotoPills

Open **PhotoPills** and tap *Planner* (*Pills* Menu).

Then, tap the **Map Settings** button and activate the **Sun layer**. To do this, make sure the eye-shaped icon is not crossed out. If it is, tap it.



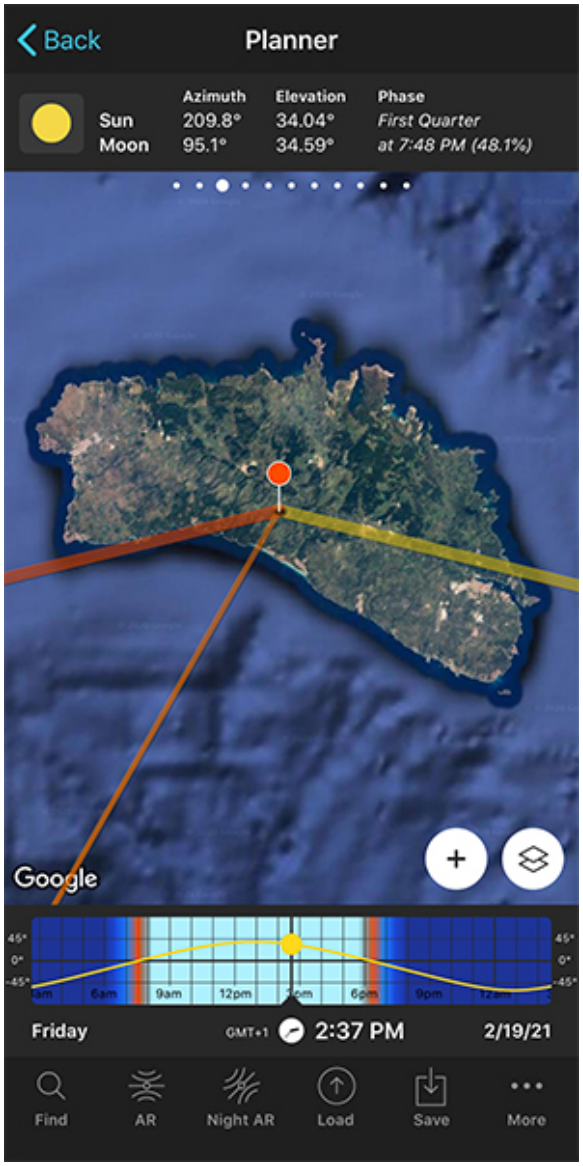
PhotoPills Planner - The information about the Sun is not shown on the map.



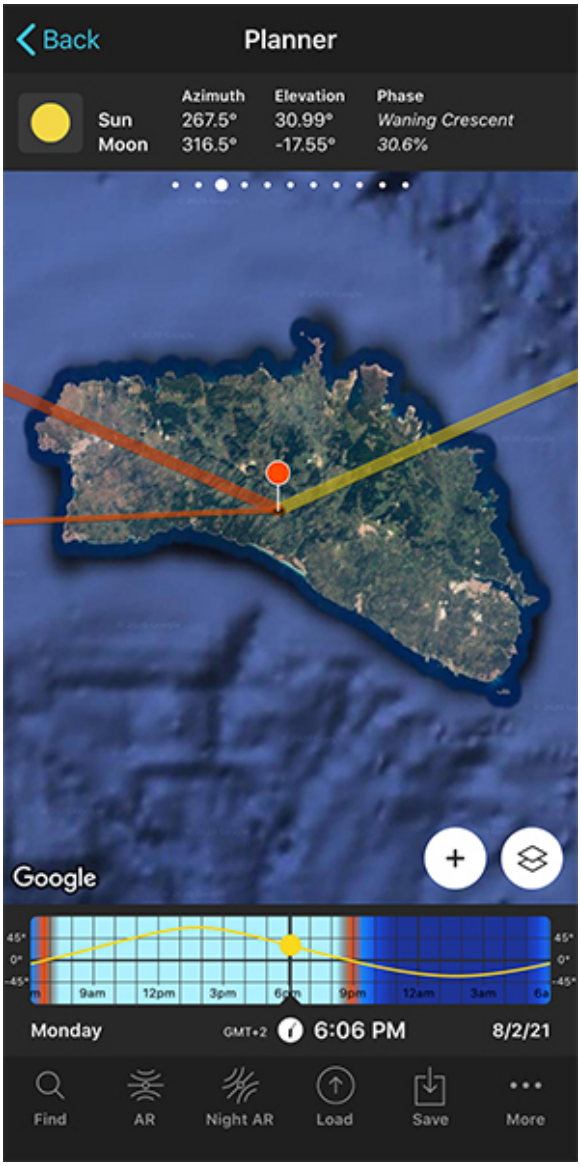
PhotoPills Planner - On the Map Settings screen, make sure the eye-shaped icon is not crossed out.

Finally, swipe the top panels to **Panel 3** as you can see in the screenshots below.

On the map, the thin orange line indicates the direction where the Sun is (its azimuth). And **Panel 3** shows the azimuth and elevation of the Sun and Moon for the Red Pin position and the selected date and time.



PhotoPills Planner - On 02/19/2021 at 02:37 pm, the Sun azimuth (thin orange line) is 209.8°, and the Sun elevation is 34.04°.



PhotoPills Planner - On 08/02/2021 at 06:06 pm, the Sun azimuth (thin orange line) is 267.5°, and Sun elevation is 30.99°.

Once on location, make sure you're at the Red Pin position. Tap the *AR* button (bottom of the screen) to visualize the Sun position with the **Augmented Reality view (AR)** ;)

Study our **guide to azimuth and elevation** thoroughly and you'll master Sunrise photography.

The Sun position in relation to the subject position (5)

Nikon D700 | 24mm | f/11 | 1/125s | ISO 200 | 4600K | Soft GND 0.9 (3 stops) filter

You know the exact position (the azimuth and elevation) where you want the Sun to be in the sky, and which matches the photo (the composition) you've imagined.

And the Sun position in relation to the subject position?

What about it?

Well, you'll have to figure that out too...

Sun azimuth relative to the subject

You have all the information you need in the **PhotoPills** Planner.

The thin yellow line indicates on the map the Sun direction at a given date and time. So it's very easy to align the Sun with your subject.

Swipe your finger on the Time Bar and adjust the thin yellow line until it's over or very close to your subject.

Another option for aligning the Sun with your subject is to move the Red Pin.

Sun elevation relative to the subject

Once again, the **PhotoPills** Planner is your best friend ;)

Swipe the top panels to **Panel 2**. Tap the button on the panel and the **Black Pin** will appear on the map.

Now place the Black Pin over your subject and move the time to align the Sun with the Black Pin.

On **Panel 2** you can check:

- The altitude of the center of the Sun above the Black Pin (ground level).
- The Sun size (apparent diameter).

Therefore, you know:

- How high the Sun is going to be compared to the subject.
- How big the Sun is going to be compared to the subject.

PhotoPills Planner - Panel 2 is activated and the Black Pin has just appeared on the map.

PhotoPills Planner - The Black Pin is over the subject. The Red Pin, Black Pin and Sun are aligned. Panel 2 indicates the center of the Sun altitude above the ground level of the Black Pin, as well as the Sun diameter.

Once you're at the Red Pin position, tap the *AR* button (bottom of the screen) to visualize the Sun position with the **Augmented Reality view (AR)** ;)

So... These are the 5 essentials that help you accurately plan any Sunrise photo.

In the next section we're going to use them to plan 2 real cases – 2 amazing Sunrise pictures!

Are you in?

Section 4:

How to simply plan a Sunrise photo

When you plan your Sunrise photo you get:

- A shooting spot, from where to take the picture,
- A shooting direction (framing) and
- A date and time of shooting...

That will help you capture the Sunrise shot you've imagined.

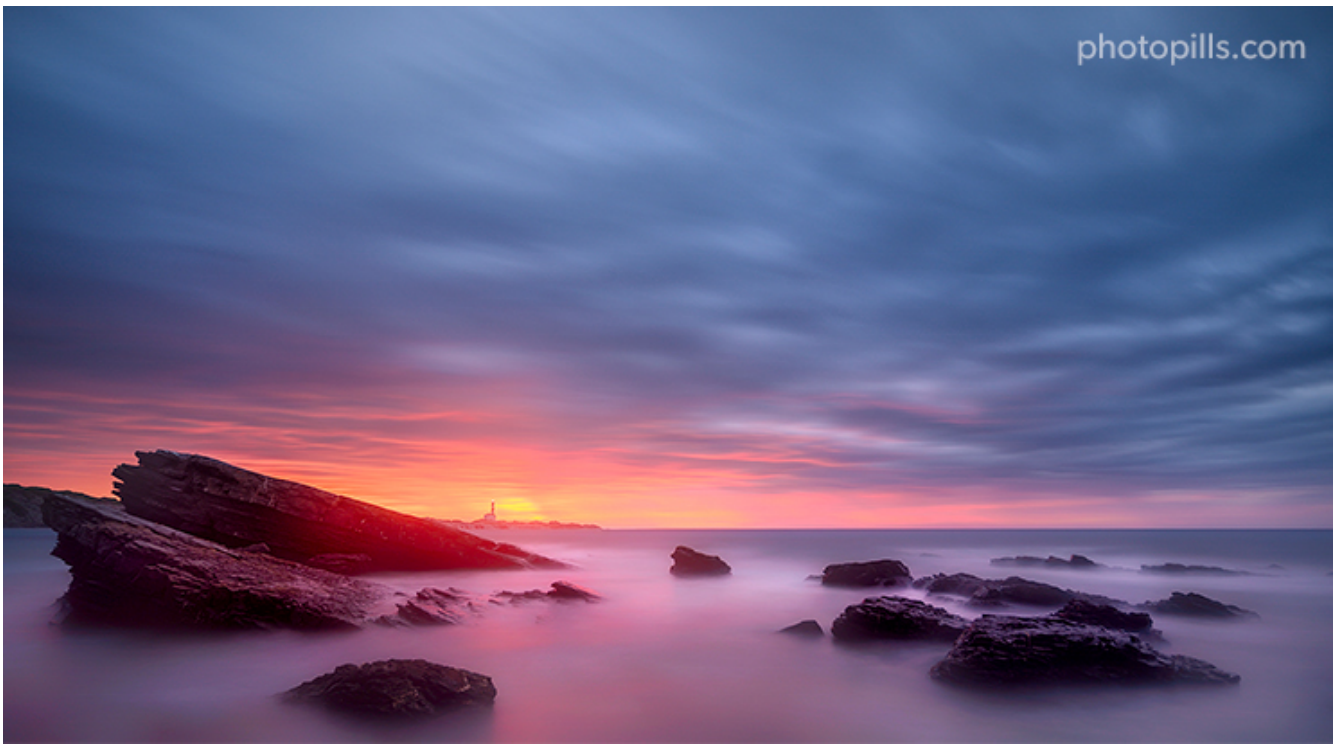
Besides, planning a photo is much simpler and faster than it seems. With the **PhotoPills** app it's a matter of minutes.

And to prove it, here's a detailed explanation of the two most common cases:

- A Sunrise plan for a certain date.
- A Sunrise plan with the Sun in a certain position. In this case, you know the shooting spot and the photo you want, and you want to find out when it happens.

Let's dive into it!

How to plan a Sunrise for a certain date (1)



Nikon Z6 | 18mm | f/8 | 54s | ISO 200 | 6500K | Soft GND 0.9 (3 stops) filter

The photograph above at the head of this section reflects one of the most special moments I have ever lived. And I was lucky enough to share it with a lot of PhotoPillers during the 2019 **PhotoPills Camp**.

Many cried when they saw it. And I did too; I'm not ashamed to admit it.

I was in Cala Presili, one of the wonderful coves on the island of Menorca (Spain). I took this photo during **golden hour**, just when the Sun was rising behind the Favàritx lighthouse. I included some rocks in the foreground to create leading lines to the lighthouse and to the light...

That morning I was lucky enough to experience a spectacular Sunrise. But don't be fooled: without the planning I would never have got the picture.

Planning involves finding out:

- A shooting spot, from where to take the picture,
- A shooting direction (framing) and
- A date and time of shooting...

Only you have them, you'll you know where you have to go, the exact day you have to go and at what time you have to shoot.

And best of all, the **PhotoPills** app helps you plan any Sunrise photo you can imagine in a few minutes.

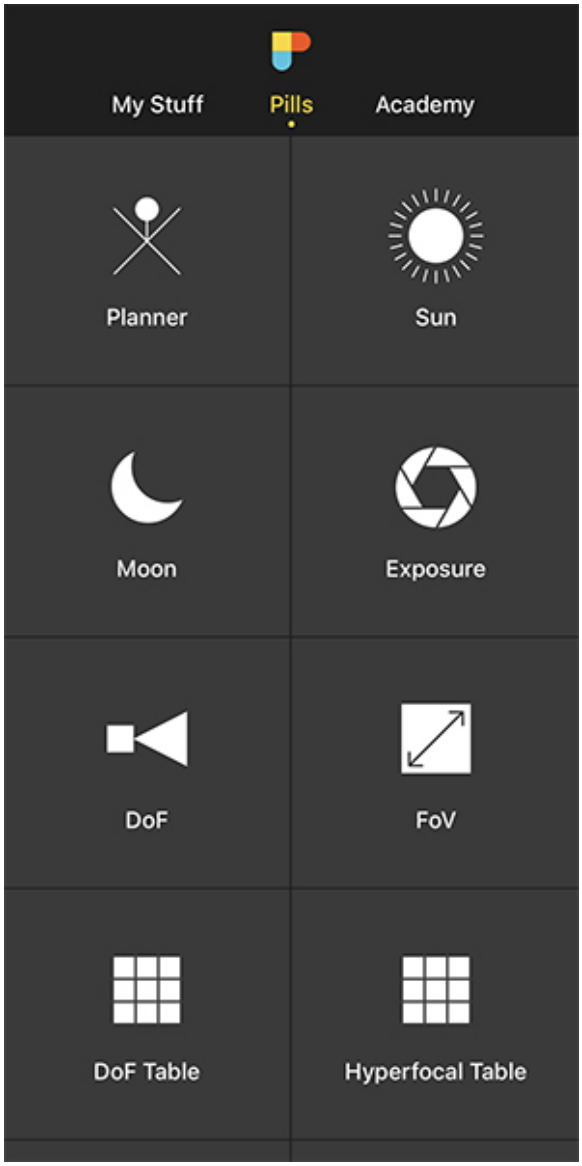
Take your smartphone and if you haven't already done so, install the app.

I'll show you exactly how I planned the photo of Cala Presili with the Favàritx lighthouse in the background! :)

Place the Red Pin in a potential location

Start from the beginning: placing the Red Pin in a potential location that is photographically attractive during the Sunrise. It can be a beach, a town... You choose.

Don't be obsessed with precision either. Pick an approximate area, you'll have time later to determine the exact shooting spot.



PhotoPills - Pills Menu where you can find the Planner.

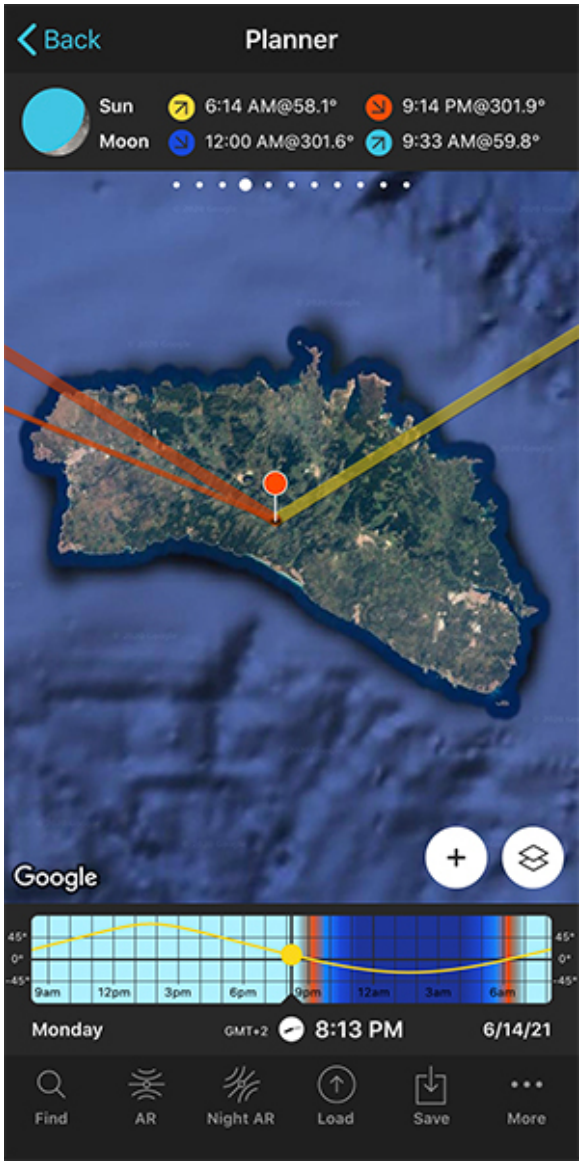
PhotoPills Planner - The Red Pin is in Menorca (Spain).

Open **PhotoPills**, tap *Planner* (*Pills* Menu).

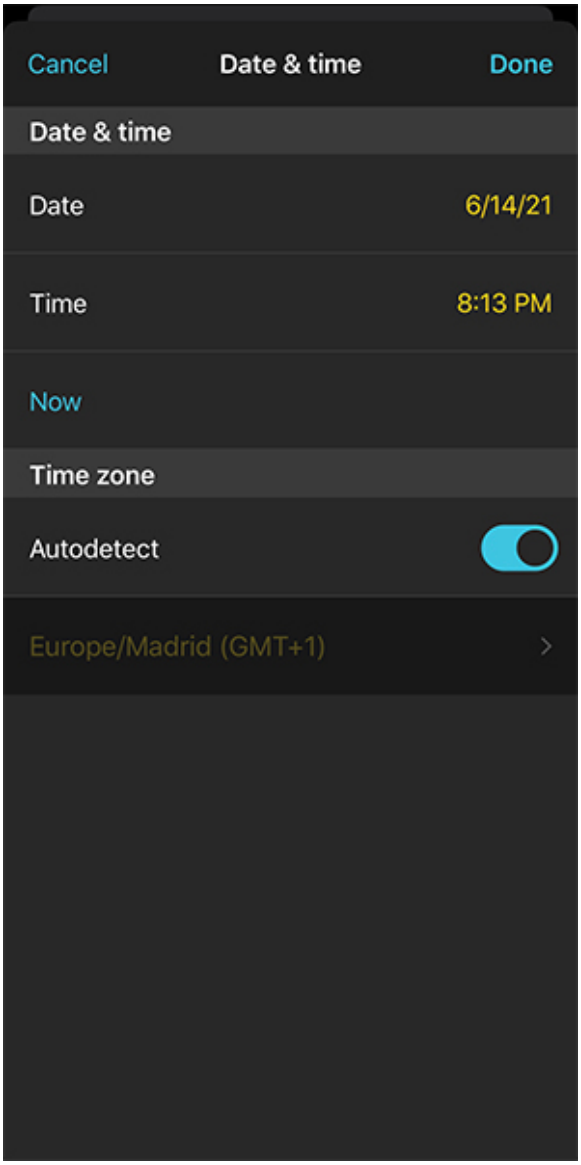
Then, place the **Red Pin** somewhere on the planet interesting where you could potentially shoot a cool Sunrise.

Using the photo at the beginning of the section as an example, place it on Menorca, a pearl of the Mediterranean. If you don't know how to do it, **this video shows you how to move the Red Pin**.

Set the date you're planning to photograph the Sunrise



PhotoPills Planner - On the Time Bar, the date is set to 06/14/2021 and the time to 08:13 pm.



PhotoPills Planner - On the Date & time screen you can manually set the date and time.

Set your current date and time double tapping the **Time Bar** below the map. Go forward in time by swiping it to the left to get to the date you want to take the photo.

You can also set the date using the calendar. To do this, tap the center of the Time Bar. On the Date & time screen, tap *Date* to manually change the shooting date.

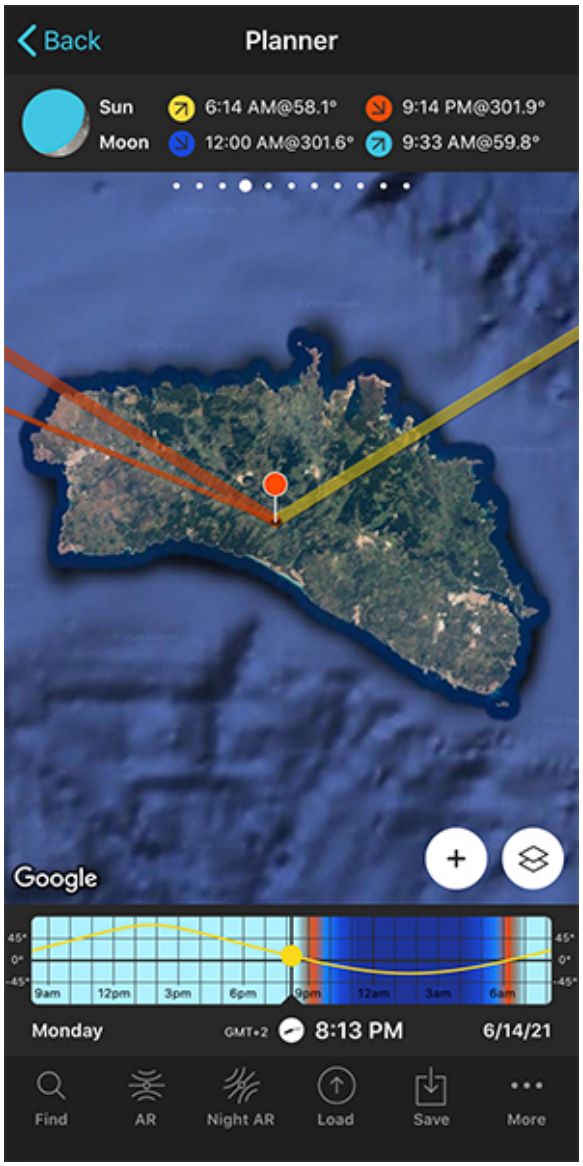
Although you don't need to do it for this particular photo, you can also tap *Time* to manually change the shooting time.

Now, suppose you want to take the Sunrise photo on June 14, 2021.

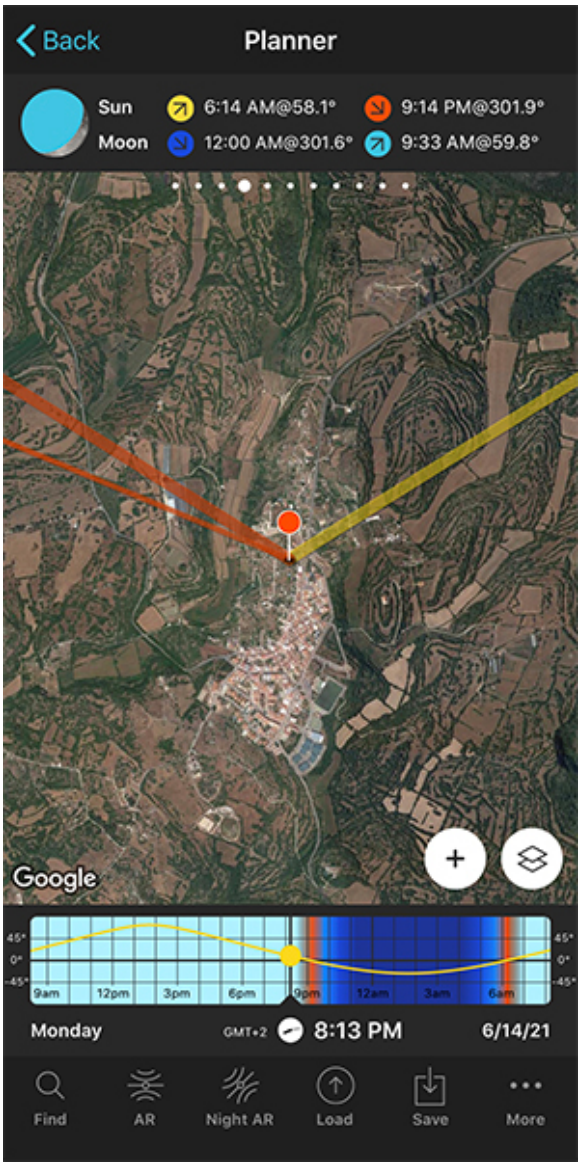
Use the Time Bar to set it in the Planner.

Find out the Sunrise direction and time

Remember I took the picture at dawn. Therefore, you should focus on the direction and time of Sunrise.



PhotoPills Planner - According to Panel 4, on 06/14/2021 the Sun rises at 06:14 am.



PhotoPills Planner - Detail of the map where you can see the current Sun direction at 08:13 pm and the Sunrise direction at 06:14 am (58.1°).

Now swipe the top panels above the map to **Panel 4**. This panel is telling you that on June 14, 2021 the Sun rises at 06:14 am according to the Red Pin position.

You can see on the map the Sun and the Sunrise directions:

- The Sun direction is the thin orange line.
- And the Sunrise direction is the thick yellow line.

If you don't see these lines, activate the **Sun layer**. You can do this by tapping the **Map Settings** button. You will find it next to the **(+) button** on the map.

Let's keep on working.

The Sunrise direction line (thick yellow line) is crucial to determine the perfect shooting spot.

Check different locations until you find a photo you like

Now you know where the Sun will rise. It's time to **move the Red Pin** to several cool locations you know. Do it one by one until you find the one where your Sunrise photo fits your idea.

Obviously, even if it takes longer, the more locations you can think of that might work, the better.

If you don't have any location in mind, follow the methodology I explained in **section 2**.

In this case, I wanted to photograph a Sunrise so I focused on the eastern coast of Menorca, the island where I live. I checked some interesting locations until I finally found what I was looking for.

It's a fantastic little beach called Cala Presili. To get there you have to walk about 25 minutes from a parking lot not far away from the Favàritx lighthouse. The photo was taken from the eastern end of the cove, from Punta Presili.

Cala Presili has three characteristics that make it a perfect location for taking photos at dawn:

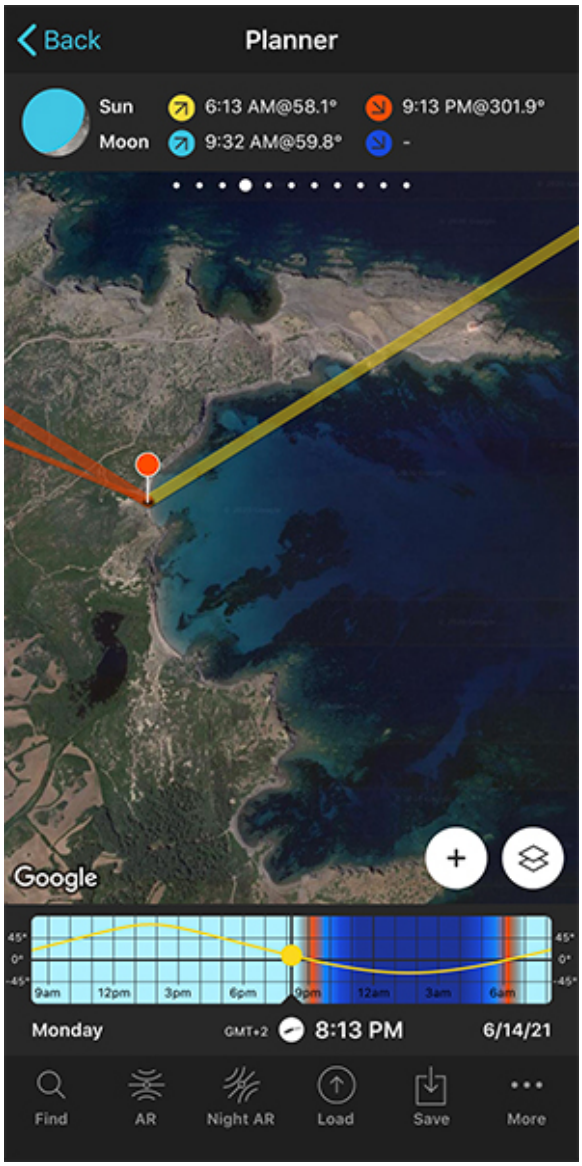
- Because it's a cove you can move freely and play with several shooting directions.
- The rocks and the lighthouse can be photographed by shooting to the east, in the Sunrise direction.
- The rocks are the main element in the foreground and are the spectator's entrance gate to the image, although the main subject and real visual anchor point is the Favàritx lighthouse located in the background.

Let's go back to PhotoPills...

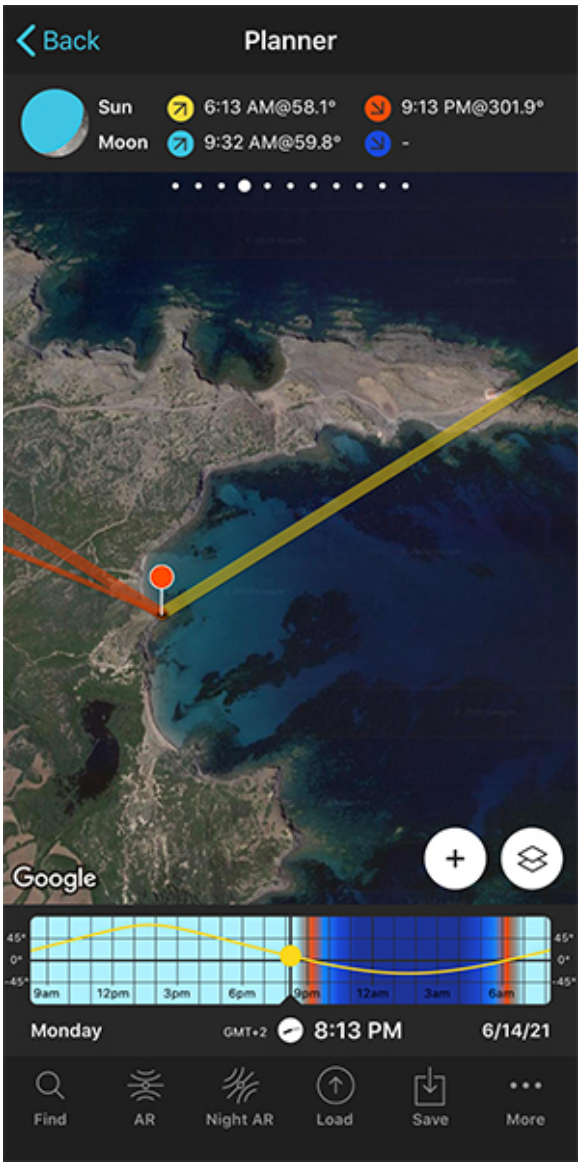
It's time to place the Red Pin in the location, in this case in Cala Presili, and then place it at the shooting spot: at the end of Punta Presili, on the seashore.

Again, there are many ways to move the Red Pin, and you will find them all in **this video**.

Since I know the place, I zoomed in on the map and placed the Red Pin in a very precise area that could be a good shooting spot.



PhotoPills Planner - Pin Rojo placed in Cala Presili, the beach from which you can see the Favàritx lighthouse.



PhotoPills Planner - Change the Red Pin position to align the Sunrise direction (thick yellow line) with the rocks and the Favàritx lighthouse.

Now it's your turn.

Once you have the Red Pin in Cala Presili, zoom in and move the Red Pin between the rocks. Make sure you find a shooting spot where the rocks are aligned with the Favàritx lighthouse to create a leading line. The easiest way to do this is by dragging and dropping the Red Pin.

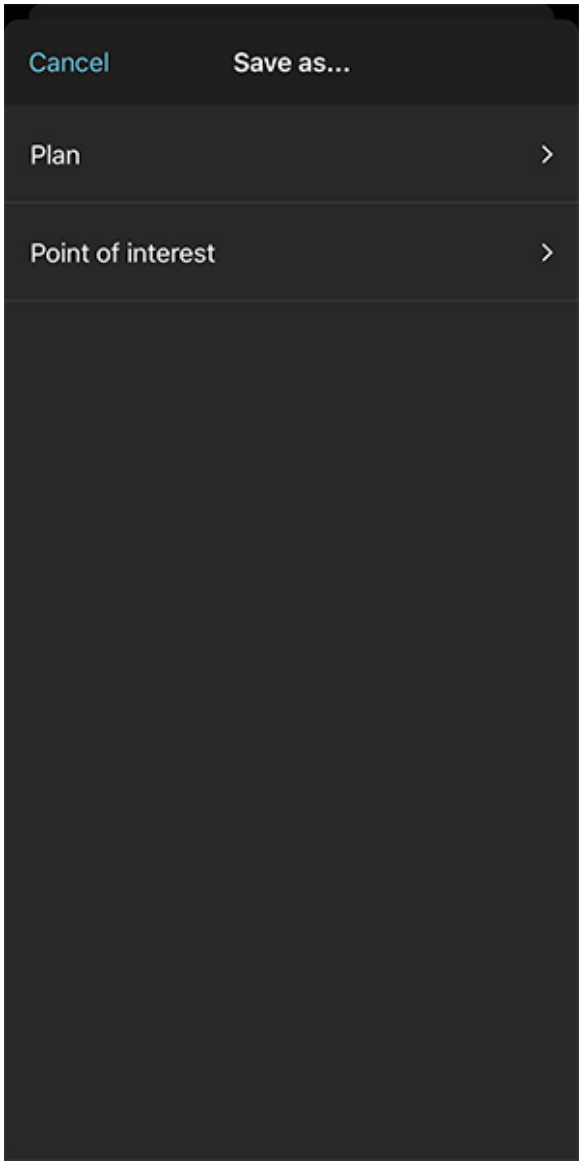
As you can see, from the Red Pin position, the Sunrise is perfectly aligned with the rocks and the Favàritx lighthouse.

Do you want to know how I found out when the Sun was aligned with the lighthouse?

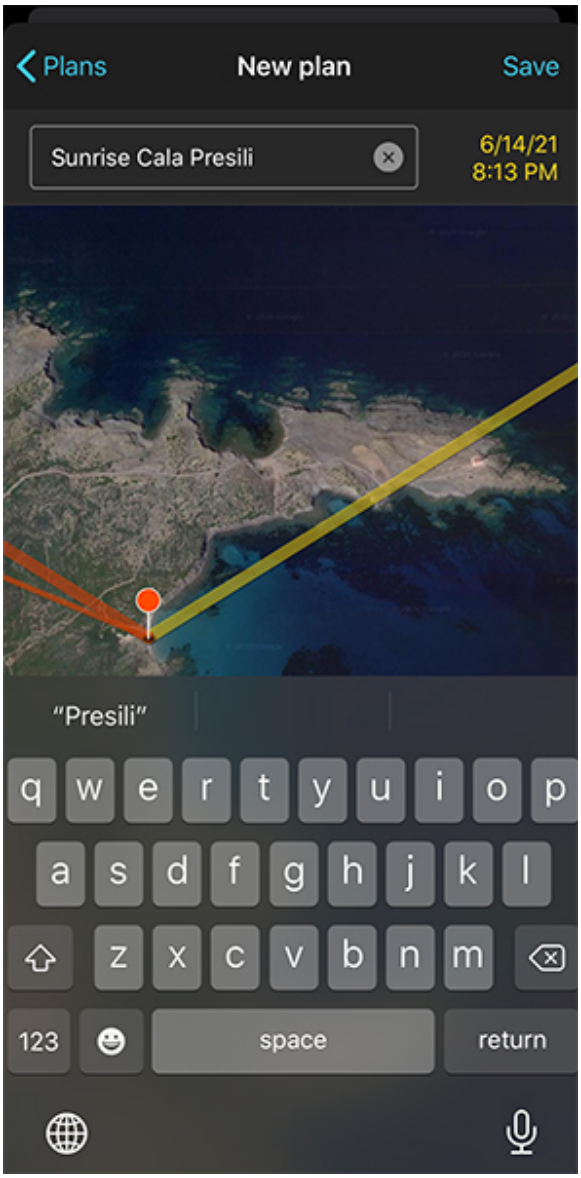
Very easy, I followed the same steps that Rafa shows you in **this planning video**.

Save the Plan

And now after this research work, don't forget to save your Sunrise plan!



PhotoPills Planner - You can save your plan (or a Point of interest) with the Save button.



PhotoPills Planner - Type the name of the new plan and save it so you can come back to it anytime you want.

On the Planner, tap *Save*. On the Save as... screen, choose to save a Plan.

On the Plans screen, tap *New plan*. Type a name in the Plan name box, and tap *Save*.

Now, every time you want to look at it, you can do so by tapping the *Load* button. Then, tap *Plan* and scroll down through the results until you find it.

If you tap it, **PhotoPills** automatically loads it to the Planner.

How to plan a Sunrise with the Sun in a certain position (2)

Nikon Z6 | 700mm | f/11 | 1/6400s | ISO 100 | 5600K | 1.4x teleconverter

To sum it up quickly...

You want the Sun to rise in a certain position in the picture but you don't know the shooting date ;)

That is, you know the exact shooting spot from which you'll take the picture, the framing and the position of the Sun in relation to the subject you want, but you need to find out:

- If that particular photo is possible.

- And if so, when exactly.

To find out, use the the *Find* tool in the **PhotoPills** Planner.

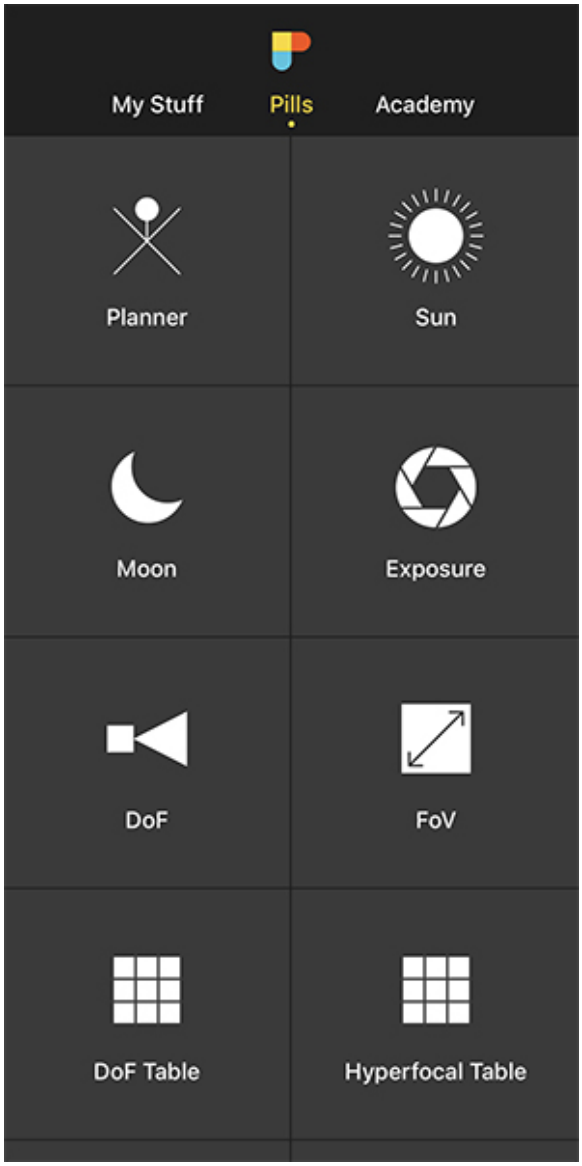
In this video Rafael explains in depth how to plan a photo of the Sun rising between Risin og Kellingin (the Giant and the Witch), two rock formations that are in the Faroe Islands.

But if you prefer to read, that's how you should plan the picture.

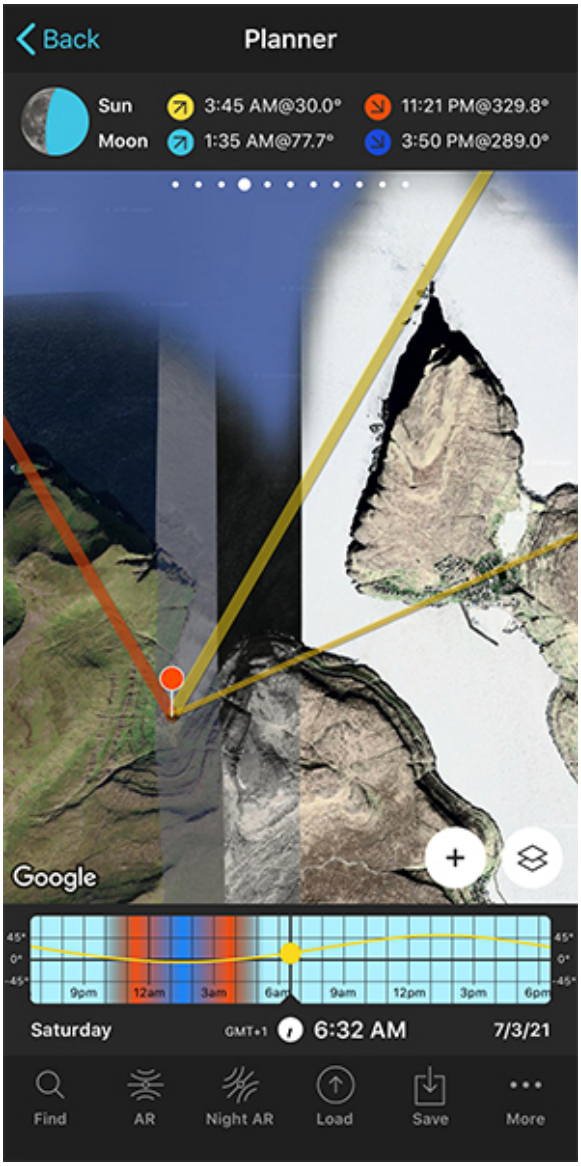
Again, pick up your phone, make sure you have the **PhotoPills** app installed, and follow these steps.

Place the Red Pin on the shooting spot

The first step is to place the Red Pin on the shooting spot you want.



PhotoPills - Pills Menu where you can find the Planner.



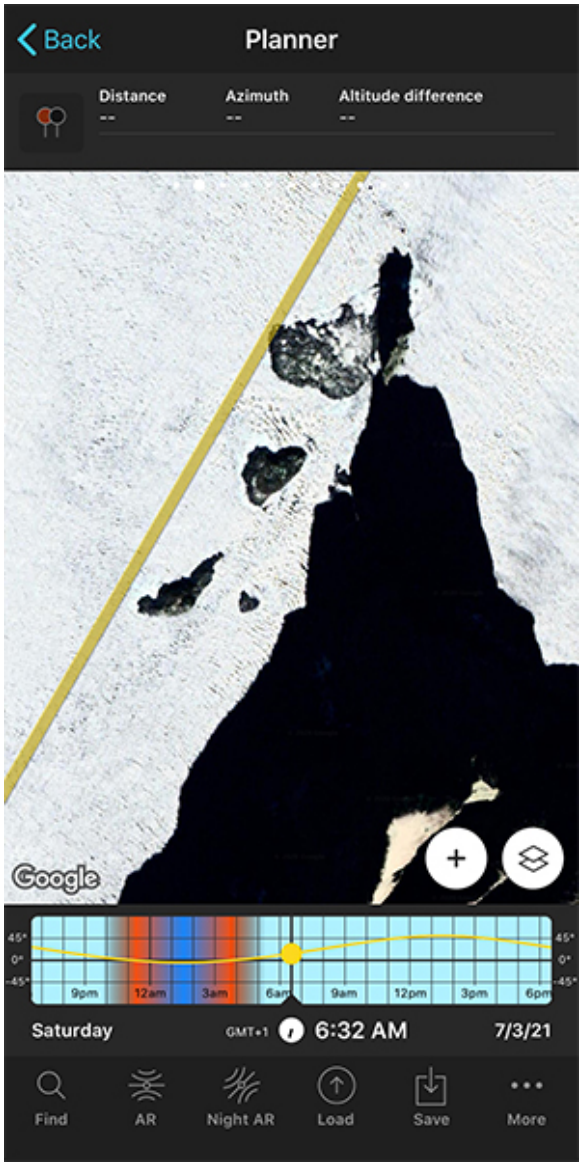
PhotoPills Planner - The Red Pin is in front of (the Giant and the Witch), in the Faroe Islands.

Open **PhotoPills**, tap *Planner* (*Pills* Menu) and then place the **Red Pin** on the shooting spot.

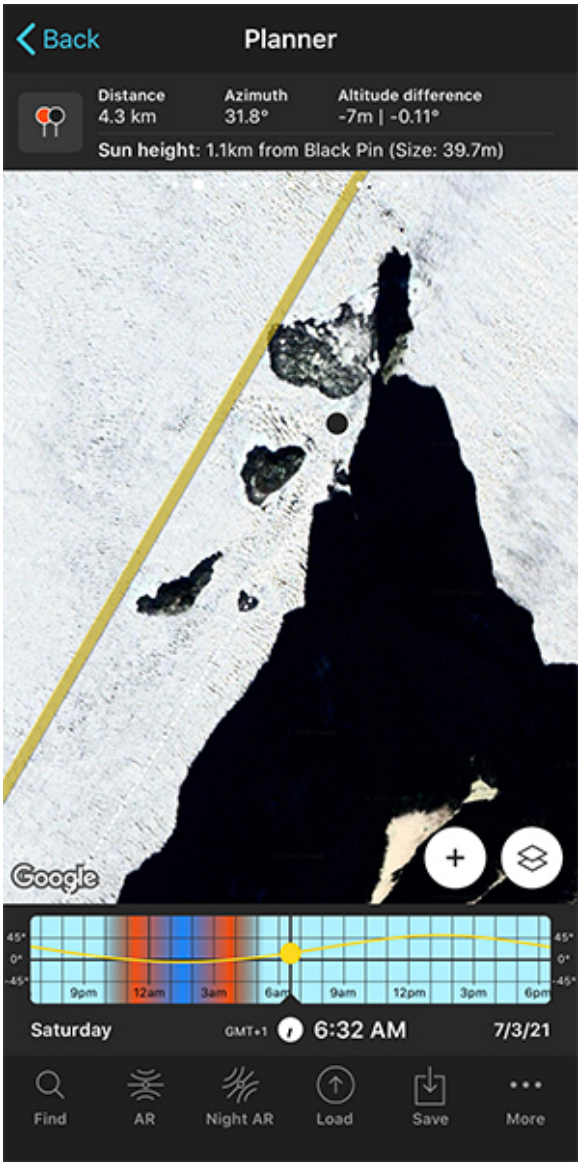
For example, on the road along Tjørnuvík's black beach. This road is right in front of Risin og Kellingin (the Giant and the Witch), in the Faroe Islands. If you don't know how to do it, **this video shows you how to move the Red Pin**.

Place the Black Pin where you want the Sun to be

You want the Sun to rise right between the Giant and the Witch.



PhotoPills Planner - Zoom in on the map to get a clear view of the Giant and the Witch.



PhotoPills Planner - Panel 2 is now activated and the Black Pin is located between the Giant and the Witch, exactly where you want the Sun to be.

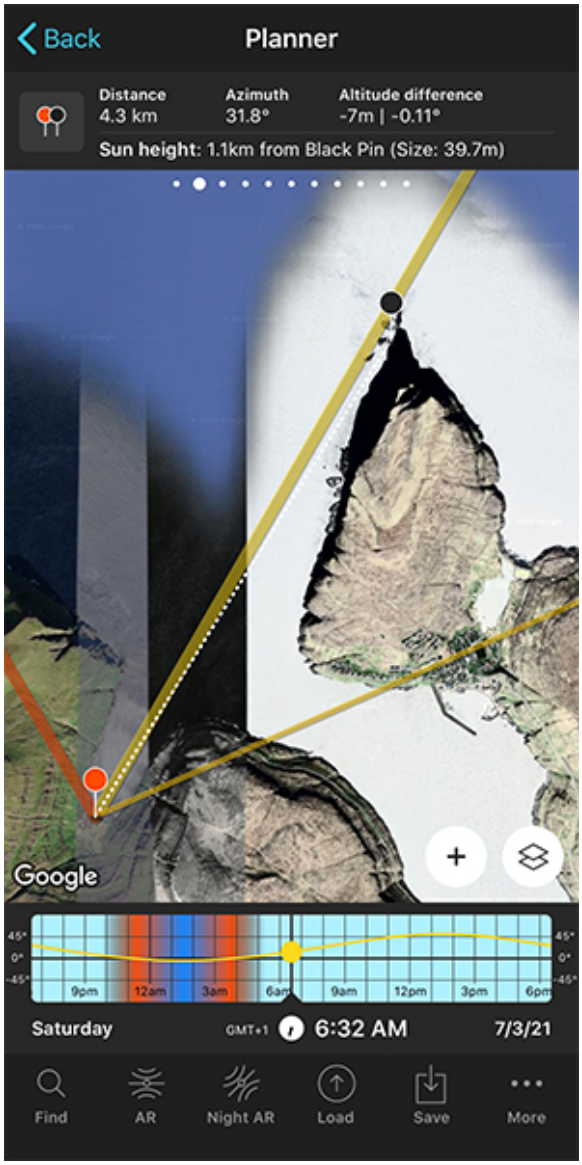
Zoom in on the map, until you can clearly see the Giant and the Witch.

Swipe the top panels on the map until you find the Black Pin information panel (**Panel 2**). Tap the icon showing the Red Pin and the Black Pin to activate the Black Pin on the map.

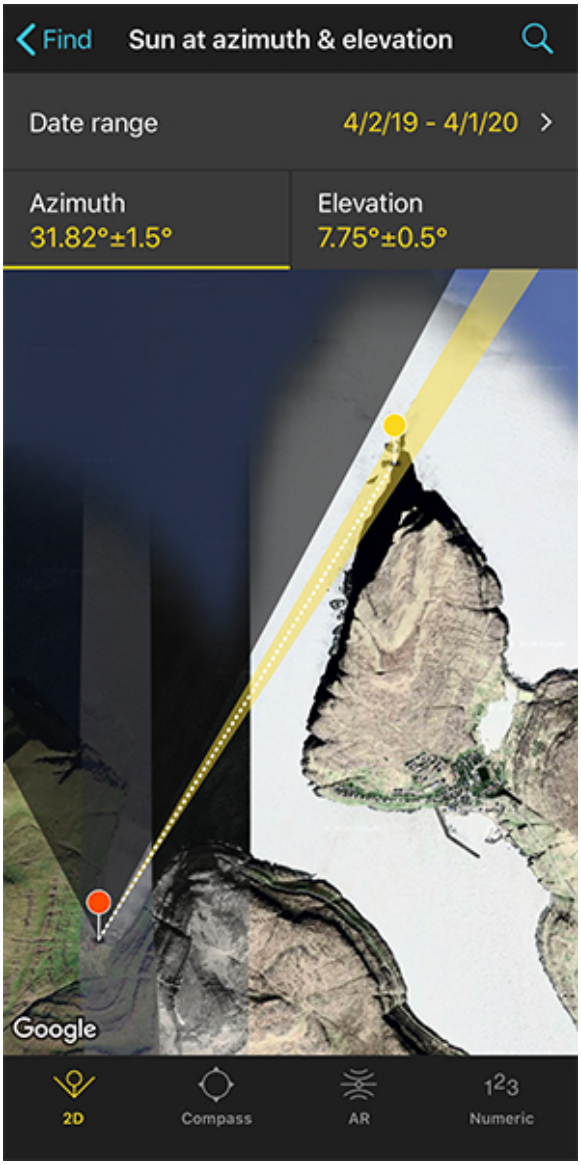
Drag and drop the Black Pin in the center of the rock formations, right where you want the Sun to be.

It's time to do is check if the photo is possible.

Find the dates when the photo is possible



PhotoPills Planner - A general view of the Giant and the Witch with the Black Pin right where you want the Sun to rise.



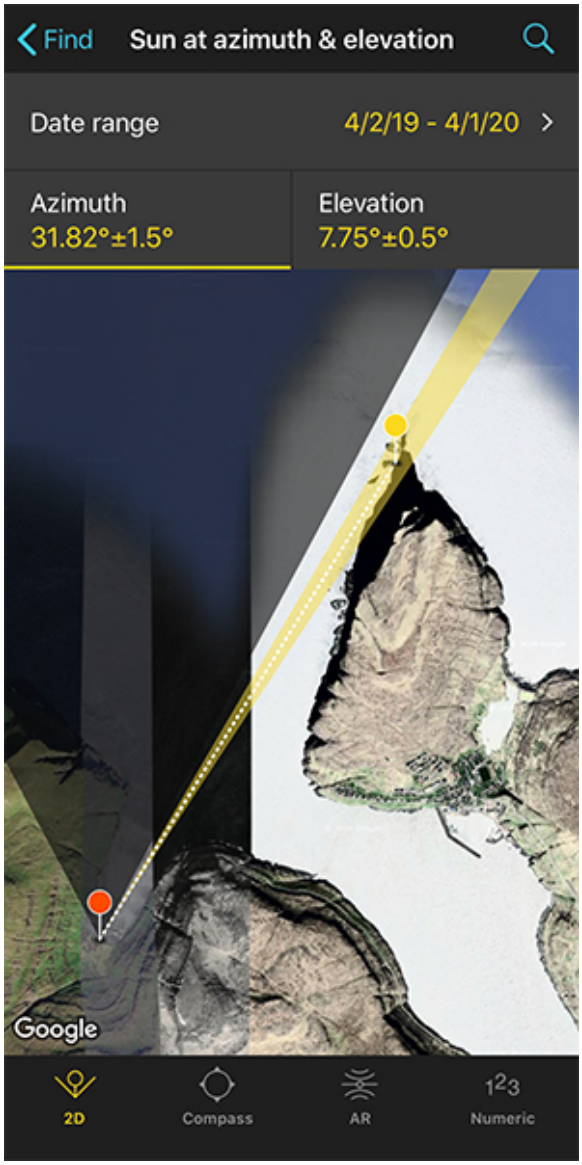
PhotoPills Planner - With the tool Find > Sun at azimuth and elevation you'll find out the dates in which the Sun is just between the Giant and the Witch.

To do this, tap the **Find** button. It's located on the bottom left corner of the Planner. And then, select *Sun at azimuth and elevation* (*Sun* in Android).

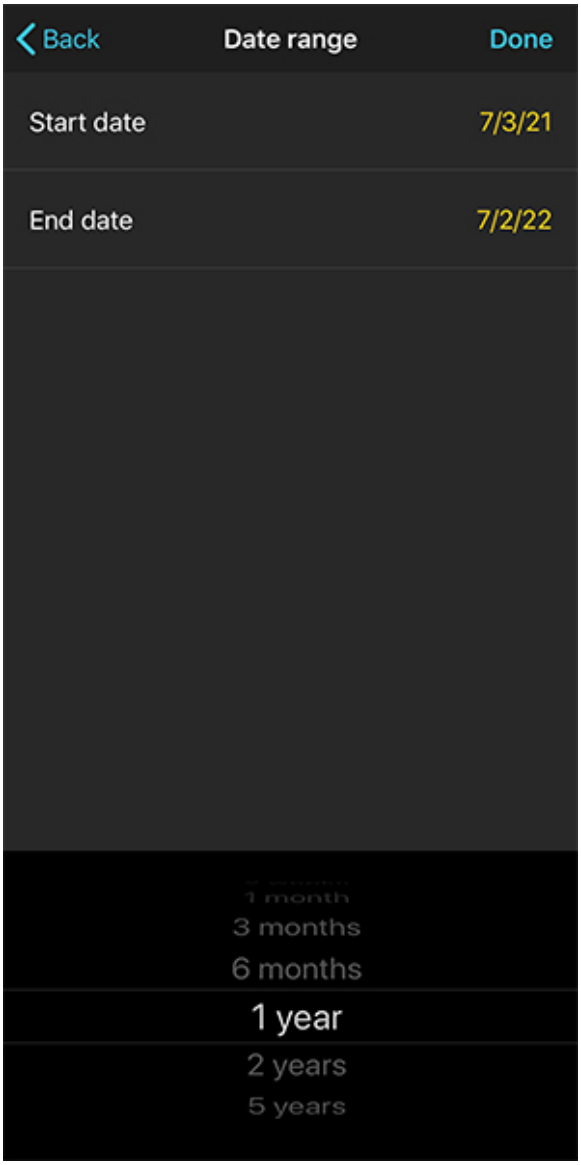
On the new screen, you have to tell 3 things to PhotoPills:

- The date range you want to search for results (for example, 1 year starting from today).
- The Sun azimuth or direction (just between the Giant and the Witch).
- The Sun elevation or altitude (set it to 0° for a Sunrise).

Enter the date range



PhotoPills Planner - On the Sun at azimuth and elevation tool, tap Date range.

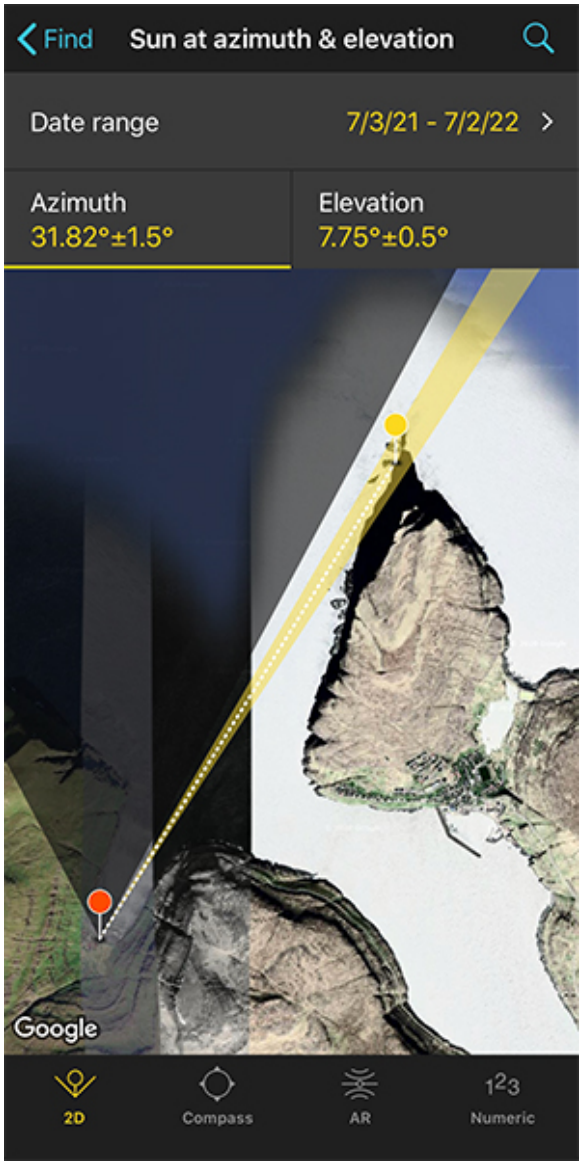


PhotoPills Planner - Search a 1-year date range starting from 03/07/2021.

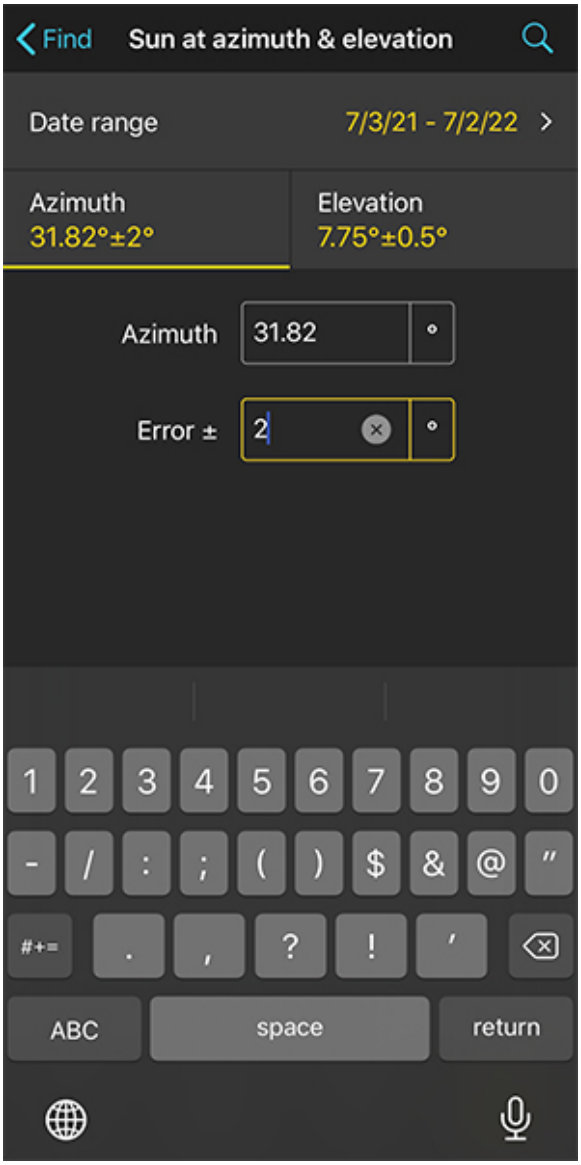
Tap *Date Range*, tap *Start date*, then *Today* and *OK* (back arrow on Android).

Next, tap *End date*. Now you can enter a certain date or range. To enter a range, tap the black area of the screen and the date options will change. Select *1 year*, for example, and tap *OK* (back arrow on Android).

Enter the Sun azimuth



PhotoPills Planner - On the Sun at azimuth and elevation screen you can define the Sun azimuth error (the direction error).



PhotoPills Planner - You can do this accurately using the Numeric button at the bottom. For example, set the error to 2°.

The Yellow Pin you see on the map is linked to the Black Pin. And it's located exactly where you put the Black Pin so now you know the azimuth of the Sun :P

A quick reminder...

The **azimuth** is the angle formed by a celestial body (the Sun, in this case) and the North, measured in a clockwise direction around the observer's horizon (you, the photographer). It determines the direction of a celestial body. For example, the Sun is at azimuth 31.82° when it is situated at 31.82° measured clockwise from North.

The **elevation** is the vertical angular distance between a celestial body and the observer's local horizon, also called the local plane of the observer. It determines the altitude in the sky of a celestial body. For example, the Sun is at 7.5° of elevation when it is situated at 7.5° above your ideal horizon.

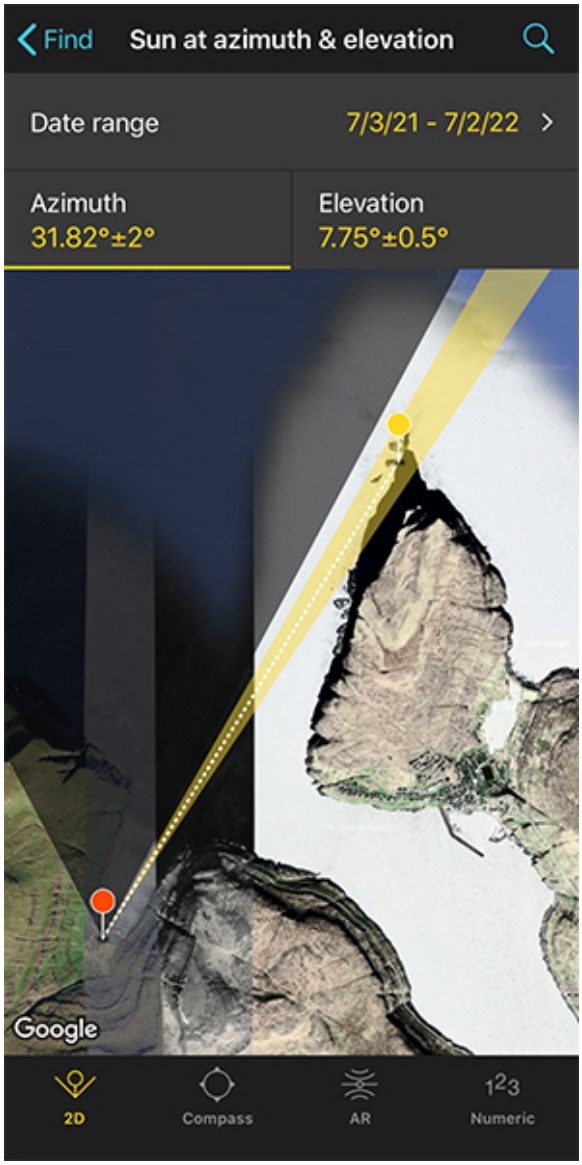
Well, the Sunrise direction (the azimuth) changes every day by 0.5° approximately. So you'll have to adjust the shooting spot depending on the date and time at which the moment you have imagined occurs.

End of the side note. Let's get back to our example.

Take a look at the top of the screen: the azimuth is 31.82° with a ±2° error represented by the yellow area on the map.

You will see that the yellow area adjusts to the width of the space between the Giant and the Witch.

Enter the Sun elevation



PhotoPills Planner - On the Sun at azimuth and elevation screen you can set the Sun elevation (the altitude).

PhotoPills Planner - Since you want to photograph the Sunrise, you have to select an elevation of 0°. That is, very close to the horizon.

Tap *Elevation* to set the elevation of the Sun.

In this case, you're looking for a Sunrise. So you have to set an elevation of 0°.

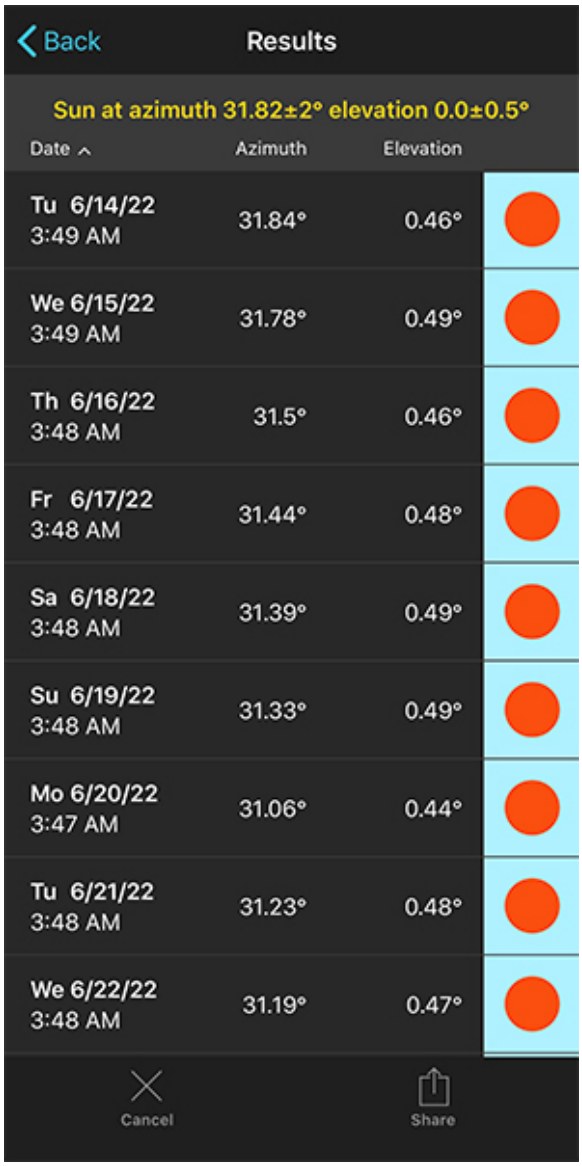
You can do this by dragging the yellow dot in the diagram until it touches the horizon. You can also do this by tapping *Numeric* and typing "0°" in the Elevation field of the new screen.

Moreover, you should change the error (or tolerance) and be more precise with the elevation from which you'll see the Sun. To do this, tap *Numeric*. In the new screen, select Error ±, type "0.5°" and tap the screen to accept.

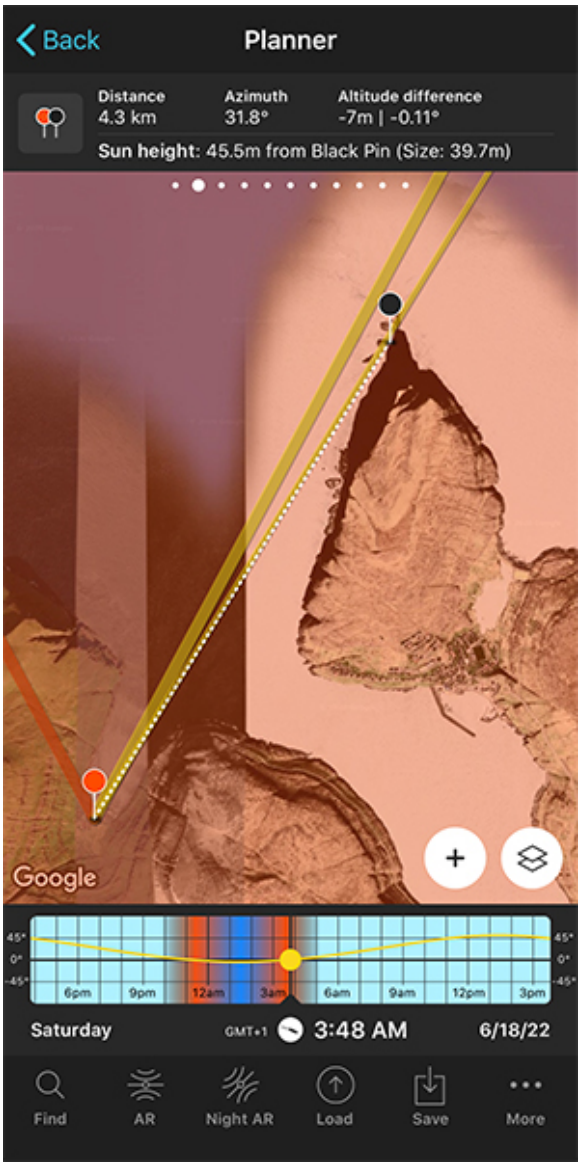
Get the results table for the Sun

Great, you've just entered the date range and the Sun position you want (azimuth and elevation).

Tap *Search* (magnifying glass icon at the top right corner) to see the potential dates.



PhotoPills Planner - By tapping the magnifying glass icon, PhotoPills shows you all the results in which you can take the photo (the event occurs).



PhotoPills Planner - After selecting it, you can see in the Planner the closest result to what you're looking for (06/18/2022).

Pick one of the dates in the table. For example, June 18, 2022. Tap that result to return to the Planner map.

As you can see

- The thick yellow line indicates the Sunrise direction for the selected date (06/18/2022).

- And the thin yellow line shows you where the Sun will be at the time you have to take the photo, at 03:48 am.

Take a look at **Panel 2**. It shows you that the size of the Sun is 39.7 meters. Considering that the Giant is 71 meters high and the Witch is 68 meters, the Sun will appear relatively large compared to both rock formations.

In addition to this, this same panel tells you that the Sun will be 45.5 meters above the Black Pin. That is, above sea level. So the whole Sun will be above the horizon.

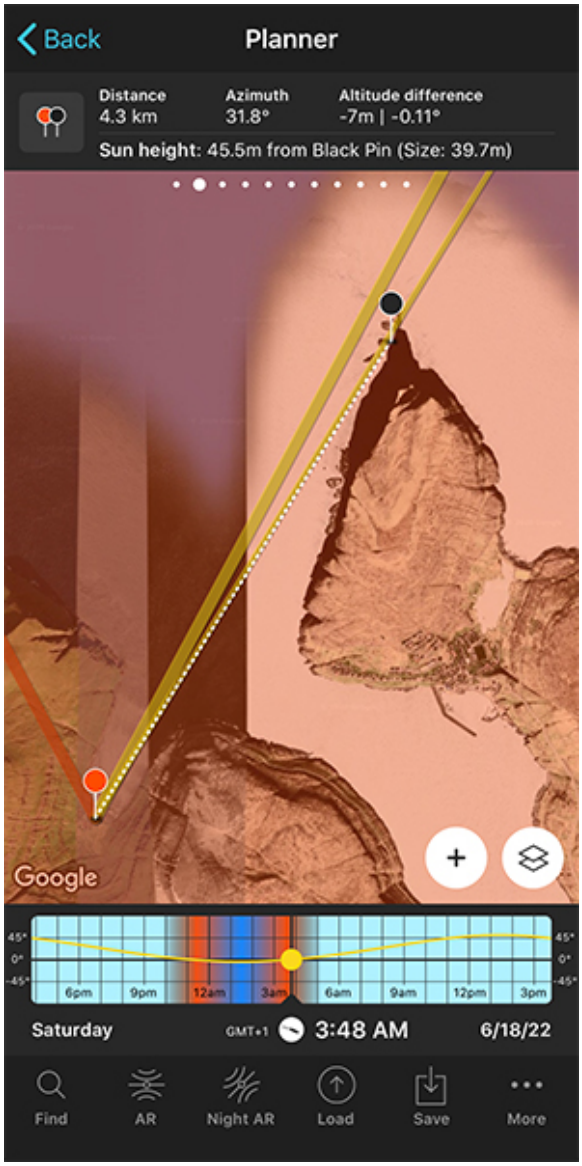
And since the Sun's position doesn't change that much from one day to the next, the photo is also possible on June 19, 20, 21... This allows you to choose the day with the best weather forecast ;)

Simply swipe the Time Bar to change the day and adjust the shooting spot according to the new Sunrise direction.

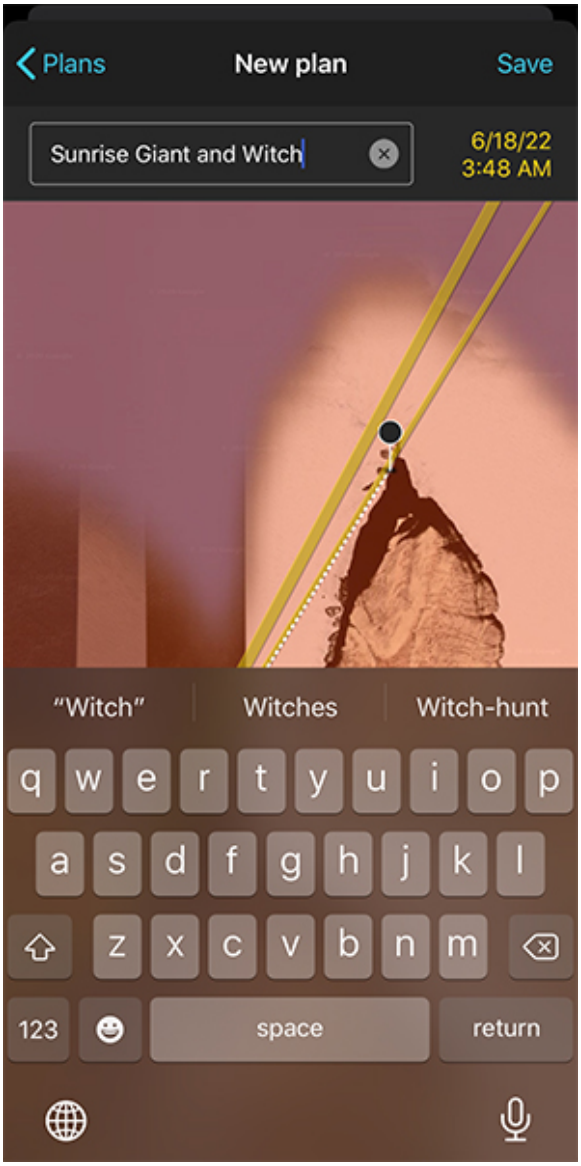
In addition to this, use the **Augmented Reality view (AR)** on the Planner to check the Sun's elevation and set a frame as well.

Save the Plan

You know where you have to go to capture a unique photo of the Sunrise. It's time to save the plan.



PhotoPills Planner - Tap Save to save the plan and retrieve it on a future occasion.



PhotoPills Planner - Type the name of the plan and add it to your to-do list.

On the Planner, tap *Save*. On the Save as... screen, choose to save a Plan.

On the Plans screen, tap *New plan*. Type a name in the Plan name box, and tap *Save*.

Now, every time you want to look at it, you can do so by tapping the *Load* button. Then, tap *Plan* and scroll down through the results until you find it.

If you tap it, **PhotoPills** automatically loads it to the Planner.

Great, now you have your plan and you've saved it so you can refer to it at any time.

It's time to wait for the perfect weather conditions for the shooting!

In the next section I'll explain how you can analyze the weather forecast and use it to your advantage to predict the Sunrise quality.

Keep reading!

Section 5:

Anticipating the Sunrise quality

Nikon D4s | 18mm | f/16 | 30s | ISO 100 | 6000K

There is nothing more disappointing than making the effort to get up early, get to the location and find that the sky is completely clear...

What happened to the clouds? Where are they?

Because without them, forget about having a super dramatic sky in your Sunrise photos.

The key is obviously to check when you'll find the best light and the clouds so the sky lights up...

And even if you can't predict the future, you can at least try to get close to what might happen, right?

If you can predict the quality of the Sunrise, the chances of getting a supershot will be higher ;)

I leave you some tips about the workflow I use in case you find them useful.

Find out the 7-day weather forecast

"Toni... Why 7 days?"

Because during that period of time the Sun is in approximately the same position in the sky and with respect to your subject. So you can photograph the same (or a very similar) Sunrise for a week or so.

The good news is that, even if you've planned your Sunrise photo for a specific date (**section 4**), you don't have to go to the location on that exact day.

By having a 7-day window, you can choose the day when the weather is most suitable. That is, when the weather conditions are right for you to get an amazing light and some spectacular clouds.

The first thing you should do is check the weather forecast using different sources. My favorites are **Windy** and **Ventusky** . I'll tell you more about them in **section 10**.

Then, study the weather conditions you might have.

For example, if it's going to be windy, if it will be very humid, or if the clouds will be where you want them. Ideally, you should have clouds in the sky but not on the horizon. I'll give you more details about the type of clouds you need in a second.

This information should be enough to decide the best day for a great Sunrise.

Remember that you have a margin of a week or so.

If you're not sure and you can go to the location several times, take the same picture several days in a row. You can take it with different weather conditions and even different compositions. Once you have all the photos, keep the one you like best.

Pay attention to certain clouds

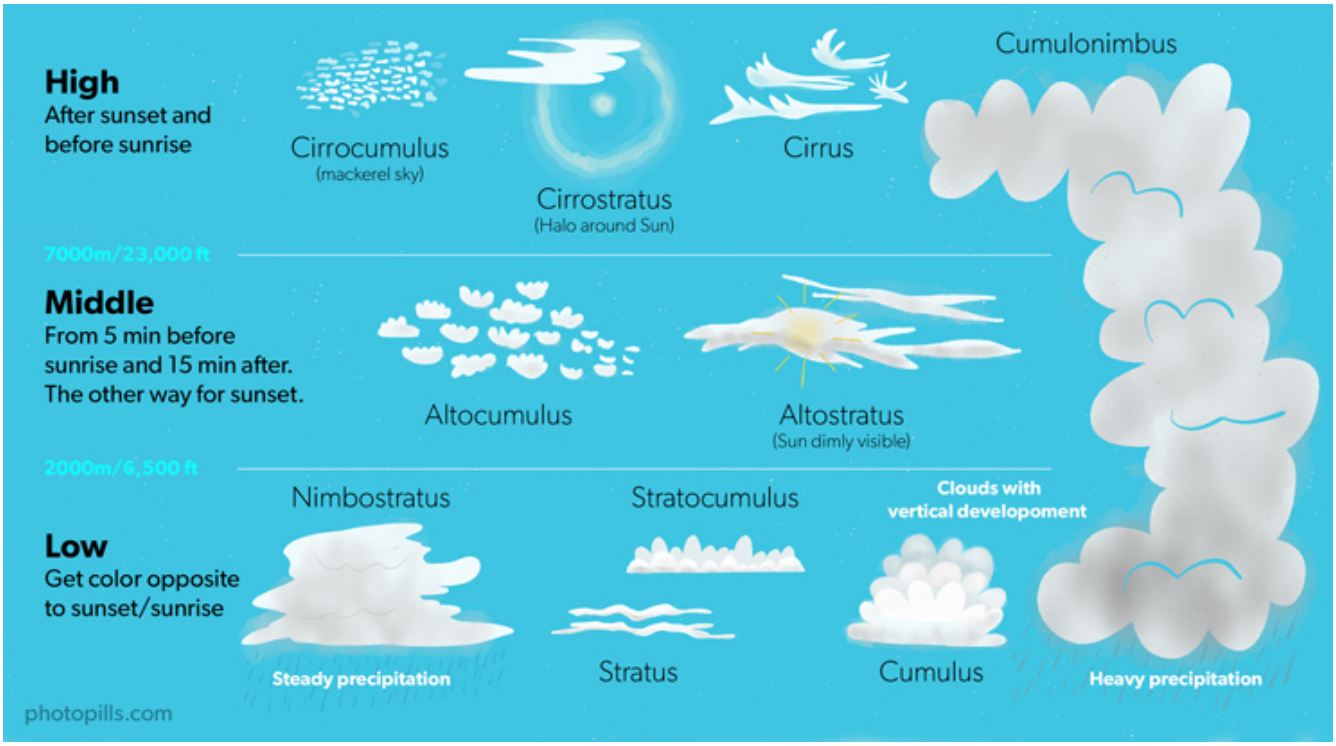
Clouds, yes. The last thing you want is a clear sky.

But you don't want just any kind of cloud, and you don't want a completely overcast sky.

When the sky is full of thick clouds, they block out the Sunlight and you won't have anything to photograph at dawn.

You have to look at the clouds' volume and opacity as well. Are the clouds big or small? Are they dense or almost transparent?

Here's a summary of the types of clouds you can find and when the Sunlight is going to color them.



There are 3 types of clouds and each of them is colored at a different time of Sunrise:

- **High clouds.** They are colored before Sunrise.
- **Middle clouds.** They can get color 5 minutes before Sunrise and 15 minutes after.
- **Low clouds.** They are colored during Sunrise. But only those that are in the opposite direction to the Sun.

Therefore, you should look for a type of cloud that get some color from the Sunlight and that it does it when it suits you better.

For example, altocumulus clouds that are scattered in the sky are very fun to photograph and you can get original compositions with.

Actually, the ones I like the most are the high cirrus or the low cumulus clouds. The explosion of colors as the Sun rises is usually spectacular.

One last thing.

Depending on the time of the year you're going to photograph the Sunrise, there will be more or less clouds. In winter the light is softer and there are more clouds, while in summer the light is harder and there are fewer clouds.

Shall we continue?

Some wind is fine, but not too much

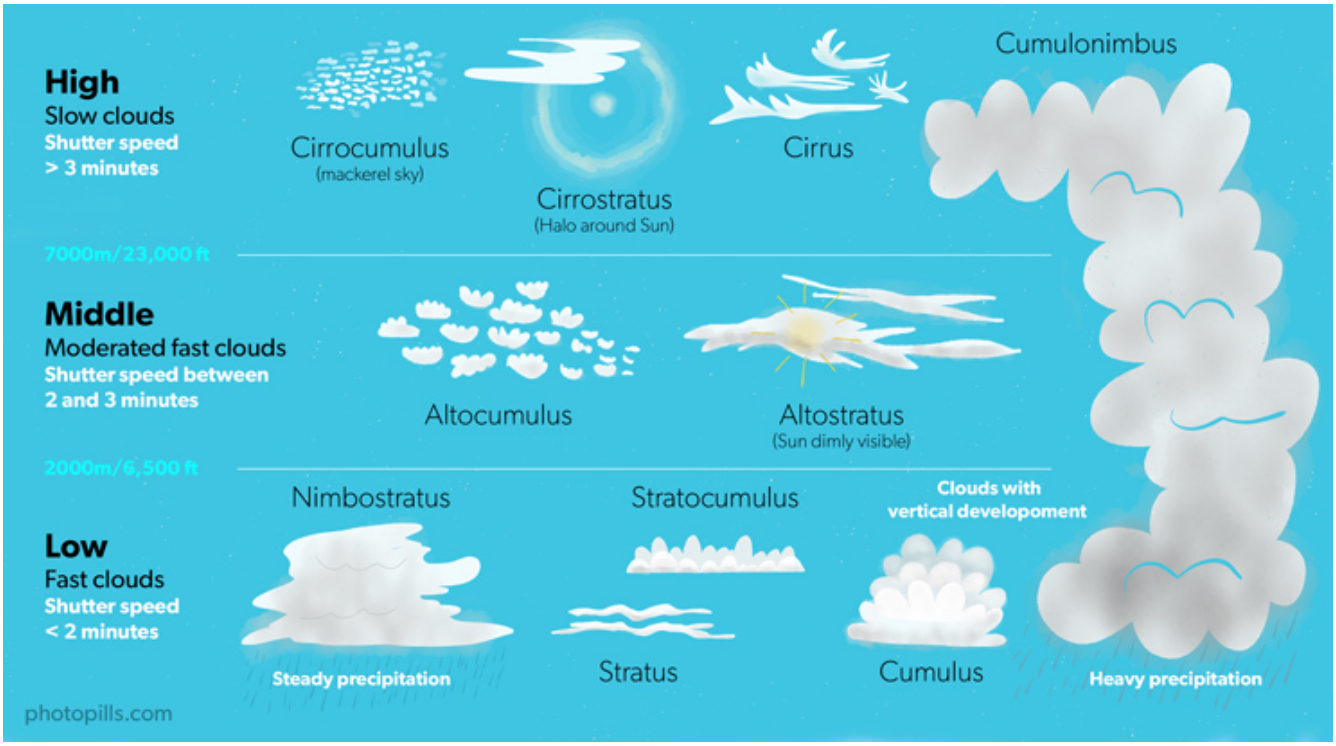
That's basically the summary.

Perhaps, the most important thing is that you avoid areas where there are strong gusts of wind. It might be dangerous for your gear. Your tripod, for example, could fall over...

Besides, the wind blows the clouds away. It takes them away from the scene... And from your frame :(

Imagine that you arrive at the location and there is some wind.

The main question in that case is: how fast do the clouds move?



Well, it depends...

It depends on the strength of the wind and the type of clouds in the sky. But the best way to take advantage of the situation is by making a **long exposure**.

This way, you can take advantage of the clouds' colors and convey a nice sense of motion.

So it's important that you determine the right shutter speed to capture what you're looking for.

The shutter speed depends on the speed of the clouds. And it depends on how high they are in the sky.

Simply put, the clouds move at 3 different speeds depending on their altitude:

- **High clouds.** They move very slowly. Use shutter speeds of **3 minutes or more**.
- **Middle clouds.** Their speed is moderately fast. I recommend using shutter speeds **between 2 and 3 minutes**.
- **Low clouds.** They move very fast. Use shutter speeds of **2 minutes or less**.

As I was saying, it's just an estimate because it all depends on the strength of the wind.

To find out what the wind strength is (and will be) I use an application called **Windy**. I love

its interface because it's very easy to use and it gives me all the information I need: the wind speed and direction (more details in **section 10**).

And that's precisely what you should check when you plan your photo ;)

Check the cleanliness of the air as well. The cleaner it is, the better it distributes the light across the sky.

Be careful with humidity

Rain is your worst enemy.

And the harder it rains, the worse.

The chances of photographing the Sunrise will be very, very low (or none at all).

And if it doesn't rain, watch out for the humidity in the air. Those little particles of water will fade the colors away.

So now you know what to look for when predicting the Sunrise quality.

You have a list with all the applications and websites I use in **section 10**.

Nature is whimsical but if you take enough time to get to study it, you can make the most of it and produce shots that show a beautiful Sunrise.

Section 6:

What gear you need to photograph a Sunrise

In this section you'll find a complete list of the equipment you'll need to photograph a Sunrise.

The list includes a lot of options that can help you choose your equipment no matter what type of photographer you are (beginner, advanced or professional).

Camera

Nowadays, any camera on the market is good for taking Sunrise pictures. Even the camera of a smartphone...

Of course, the difference in price has a reason: as a general rule, the higher the price, the better the performance and quality of the camera. And you'll see it in the photo, obviously.

So if you're taking pictures with a camera that doesn't let you do everything you want, forget about the limitations and try to overcome them with creativity and imagination.

Smartphones

Nowadays, the quality of the cameras is what makes a specific smartphone different from each other. The truth is that they've almost stopped being telephones to become cameras.

However, despite the fact that the software allows more and more functionalities, they are still limited cameras.

On the one hand, in most models, your mobile phone camera uses a short focal length (wide angle). Therefore, the Sun will be very small in the picture, almost like a dot (**section 3**) and you'll have less options when composing.

On the other hand, the sensor is very small and many smartphones don't allow you to change the aperture. So in low light conditions, the smartphone will automatically increase the ISO and **the picture will have a lot of noise**.

Don't give up and use your creativity to get great Sunrise pictures of.

Compact cameras

In recent years the trend has flipped: people have stopped using compact cameras and replaced them with their smartphone camera.

In the end, because of the convenience of smartphone and the better performance of DSLRs and mirrorless cameras, compact cameras are almost out of the market.

In any case, if you plan to photograph a Sunrise with a compact camera you can get amazing results. You just need to be flexible and have imagination.

Low-end cameras

If you want to start practicing with the **Manual shooting mode (M)** these cameras are great. And you'll capture great Sunrises with them.

They are basic cameras, but they allow you a good control of the exposure:

- Cameras with an **APS-C** sensor: Nikon **D3500**, **D5600**; Canon **2000D**, **4000D**, **M50**; Pentax **K-70** and Sony **a6000**.
- Camera with a **Micro 4/3** sensor: Olympus **E-PL9**; Panasonic **GX85**.
- Compact camera (1" sensor): Sony **RX100 IV**.

Mid-range cameras

At the beginning of your photo shooting, as the Sun starts rising, there is less light in the scene. This is particularly true during the **blue hour**, so you'll have to use high ISOs to avoid using a slow shutter speed. So the less noise the camera produces, the better the image quality.

These cameras produce little noise in low light conditions and are good value for money.

- Cameras with an APS-C sensor: Nikon **Z50**, **D7200**, **D7500**; Canon **800D**, **7D Mark II**; Fuji **XT-20**; Pentax **KP** and Sony **a6600**.
- Cameras with a Micro 4/3 sensor: Olympus **OM-D E-M5 Mark II** and **OM-D E-M1 Mark II**; Panasonic **GX9**.
- Full Frame cameras: Nikon **D610**, **D750**; Sony **a7C**, **a7 II** and **a7R II**.

High-end cameras

These professional cameras offer an amazing performance and quality:

- Cameras with an APS-C sensor: Nikon **D500**; Fuji **XH-1**, **XT-4** and **X-Pro2**.
- Cameras with a Micro 4/3 sensor: Olympus **OM-D E-M1X**.
- Full Frame cameras: Nikon **Z6**, **Z7**, **D810**, **D850**, **D4s**, **Df**, **D5**; Canon **R**, **6D**, **6D Mark II**, **5D Mark IV**, **5DS**, **5DS R**, **1D X Mark II**; Panasonic **S1R** and **S1H**; Pentax **K-1 Mark II**; Sony **a7 III**, **a7S III**, **a7R III**, **a7R IV** and **a9**.

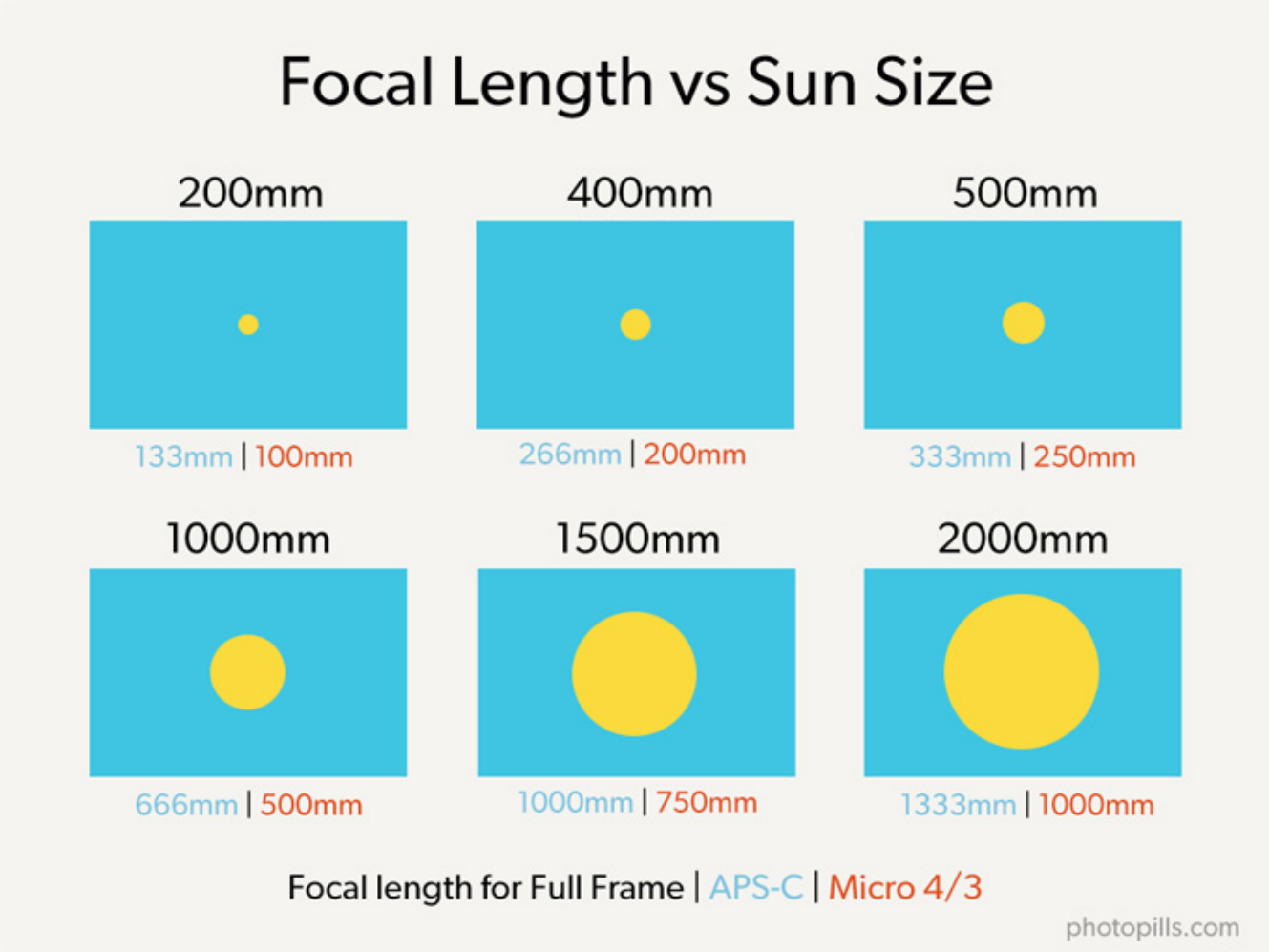
Lens

In **section 4** I talked to you about the importance of the size of the Sun because it determines the lens and focal length you are going to choose.

Do you want to include the landscape in the frame? Use a short focal length.

Do you want to focus the spectator's attention on the Sun and a particular subject? Use a long focal length.

The longer the focal length, the bigger the Sun in the frame.



Let's see what options you have if...

Your idea is to include part of the landscape and you don't care that the Sun looks like a tiny dot.

I recommend using a wide angle lens like the **Nikon 14-24mm f/2.8** or the **Zeiss Milvus 18mm f/2.8**, for example. They're my favorite wide angle lenses.

Your idea is to include part of the landscape and a bigger Sun.

I recommend using a standard telephoto lens like the **Nikon 70-200mm f/2.8** or the **Canon 70-200mm f/2.8**, for example.

Your idea is to capture a huge Sun.

I recommend using a super telephoto lens. There are many good ones on the market.

Here are some recommendations: the **Nikon 200-500mm f/5.6**, the **Canon 100-400mm f/3.5-5.6**, the **Fujifilm 100-400mm f/4.5-5.6**, the **Olympus Zuiko 300mm f/4 PRO**, the

Sony 100-400mm f/4.5-5.6, the **Sony 400mm f/2.8**, the Sigma 120-300mm f/2.8 for **Nikon** and **Canon** or the Sigma 150-600mm f/5-6.3 for **Nikon** and **Canon**.

And if necessary, use a teleconverter (1.4x or 2x) as well to shoot from even further away.

If you have a camera with a Micro 4/3 or APS-C sensor, use the cropping factor to your advantage. The Sun will be huge in the photo.

Filters

Usually a Sunrise is a scene with a high **dynamic range** as the sky is usually much brighter than the foreground.

To get the right **exposure**, you can do a **bracketing** of the scene.

Or you can use a **graduated neutral density filter (GND)** to darken the sky and avoid an overexposed photo. Moreover, you'll add color to the scene.

If you want to make a long exposure, you'll need a **neutral density filter (ND)**. As the Sun rises at dawn, you'll need to use faster and faster shutter speeds. And the only way to extend the exposure time is with an ND filter.

Finally, the **circular polarizing filter (CPL)** is perfect for removing reflections on any glass and water surfaces. It also gives more volume and color to clouds and sky.

I've been using filters for years and they are very important tools in my photos. This is the equipment I use:

- Depending on the lens, I have a 100mm and a 165mm **Lucroit** filter holders.
- A long list of ND and GND filters from **Lucroit**.
- The **B+W Kaesemann Circular MRC 77mm** polarizing filter. I also have the **112mm Slim circular polarizer from Lucroit** and the **165x165mm square polarizer from Lucroit**.

Here's a brief summary of some of the things you can do with the filters. But if you want to become a filter master, I suggest you read our **guide on long exposure with filters**.

Tripod and head

To take an amazing Sunrise photo you need a tripod and a good ballhead. You'll probably need to use a relatively slow shutter speed (**section 7**) and without a tripod, the photo will come out blurred.

The tripod needs to be sturdy and solid. Don't waste your time buying a cheap tripod because it's useless.

"Perfect Toni, and what tripod do you recommend me?"

Take a look at the **Manfrotto 055XPRO3**. It's a sturdy and stable tripod.

I also really like the **Travel** line by **Benro**.

If you have a higher budget, I recommend you to invest in a carbon fiber tripod. They weigh less than the aluminium ones and they bear weights between 5 and 25 kg (11-56 lb) depending on the model.

Brands like **Gitzo**, **Benro**, **Manfrotto**, **Induro** or **Really Right Stuff** offer high quality tripods in both carbon and aluminium.

"OK, and the ballhead?"

You can buy different types of tripod heads. But I suggest you buy a ballhead: it's the most versatile, precise and easy to use. Look for one that can bear at least 5-7 kg (11-16 lb) of weight and that it includes a removable plate.

My **Really Right Stuff BH-55** is my favorite ballhead in the world. I work with it comfortably and with great precision. Mind you, it's a very expensive ballhead.

So here are some very interesting alternatives: the **Gitzo GH1382QD**, the **Kirk Enterprises BH-1** and the **Arca Swiss Monoball Z1 SP**, all of which are very robust and resistant (holding 13.5+ kg or 30+ lb).

And if you're looking for a good gimbal, try the **Benro GH2**.

LED panels and other light sources (optional)

The main feature of **natural light** during **golden hour**, **blue hour** and twilights is that it's less intense.

In those conditions, it may be difficult to do a Sunrise portrait and you may need some extra light gear to add light to the scene.

LED panels, flashlights and flashes are active elements (they produce light) perfect for illuminating the person you're photographing.

The flash produces a hard light. Diffusers, filters and reflectors are passive elements that alter this type of light.

If you want to capture the best possible Sunrise portrait, it's important to control the light conditions of the scene.

Intervalometer

During the Sunrise the light is changing very fast, so the scene you want to photograph has a high **dynamic range**. That means you have to work fast and with precision. You need to choose the right camera settings to get the right Sunrise exposure.

Since the sky will be very bright because of the Sunlight and your foreground will be very dark (underexposed), use a **graduated neutral density filter (GND)** to balance the exposure and capture a **long exposure**.

That means you'll have to use a relatively slow shutter speed and avoid touching your equipment, so that there is no vibration and the picture doesn't end up blurred.

In those cases, an intervalometer is your best friend.

I usually recommend the following intervalometers:

- Brand intervalometers: **Canon TC-80N3** or **Phottix TR90**.
- For cheap intervalometers check the brand **Yongnuo**.

A great alternative is a device called **CamRanger**. Right now it's available for Nikon, Canon, Fuji and Sony cameras.

It's a stand-alone device that you connect to your DSLR or mirrorless camera with a USB cable. It creates an ad hoc WiFi network to which you can connect your smartphone or tablet

(iOS, Android and Windows). Thanks to the CamRanger application you can control your camera without a computer or an Internet connection.

Best of all, this device is independent. Therefore, if your mobile device loses its connection, the CamRanger has an internal memory to keep shooting. Imagine that you are making a timelapse, your sequence would be cut if the camera stops taking pictures in the time frame you've set...

So the CamRanger is great for many types of photos: timelapses (of the **Milky Way**, of **Star Trails**, of **solar eclipses** or **lunar eclipses**...), **bracketing**, focus stacking for macro and landscapes... and many more!

Memory cards

I recommend you to buy the highest quality **SD Cards** (Secure Digital) possible. It's the best way to avoid losing your photos and have the maximum transfer speed. My favorite brands are **SanDisk** or **ProGrade**.

The price of memory cards has plummeted in the last few years. Even the highest capacity cards (64GB, 128GB or even 256GB) are good value for money.

Although there are still cameras that use **CompactFlash** (CF) cards, it's a system that is gradually disappearing.

And to replace it, SanDisk, Nikon and Sony launched a new card format called **XQD** available for several Full Frame (D4, D4s, D5 and D850), APS-C (D500) and mirrorless (Z6 and Z7) models. These cards

- Have a very high storage capacity (from 32GB to 256GB).
- Have a super fast reading and recording speed (400MB/s compared to 160MB/s for a CF card or 250MB/s for an SD card).
- Are very secure, resistant and with an incredible durability.

Their only problem: a high price (for now).

And to complete the list of gear, don't forget...

The PhotoPills Here comes the Sun T-shirt!

You must be ready for what's coming up.

The Sun is going to pamper you performing an incredible show.

And you should definitely dress up for the occasion :P

Get your t-shirt here!

Section 7:

How to photograph a Sunrise step by step

Nikon Z6 | 50mm | f/16 | 0.6s | ISO 100 | 5600K

Don't fall asleep!

The Sun won't wait!

But don't be anxious. There's no need to run out and get your gear.

You should read this section carefully before you go out to shoot. It's important to know and internalize the steps that you have to follow while shooting. They are essential to capture the Sunrise photo that you carefully planned (**section 4**).

In this section you have everything you need to photograph the Sunrise successfully, including how to focus and the camera settings you should use to take the picture :)

Get to the shooting spot in plenty of time

Rushing off to take a Sunrise photo is not a good idea.

If you're in a hurry, you may forget some of your gear at home, you may not get to the location in time, or you may not be able to get to the exact Red Pin position.

Anyway, when you're out in the field taking pictures, a lot of unexpected things can happen. So it's best to arrive in plenty of time to avoid unpleasant surprises.

My recommendation is to

- Go to the location 1 or 2 days before the date you want to take the picture.
- Try to arrive at the location at least 1 or 2 hours before the planned shooting time.

If you go 1 or 2 days before, you can scout the location thoroughly.

The idea is to look for references so that you can find your way on the shooting day (when you arrive it will still be dark). You can also identify potential dangers that you won't see because it's pitch black such as a pit or a fence. Finally, you can calmly work on different compositions with the help of natural light.

Even if it's hard to get up early, those 2 extra hours before dawn give you plenty of time to prepare your equipment at ease and arrange the last details.

You'll also have time to confirm that you're at the exact point of fire. It is essential that you make sure, especially if you want a big Sun next to your subject (**section 1**).

While you're scouting the location the day before, use the **PhotoPills** Planner to confirm that you're in the Red Pin position.

Here's an option to see your position on the map. To activate it tap the **(+) button** on the map. Then tap the eighth button on the toolbar that just showed up (it's the compass icon).

There should be a blue circle on the map now. It shows your current position.

Walk to the Red Pin location. Zoom in on the map and check that the blue dot is actually aligned with the base of the Red Pin (the exact spot where the stick is pinned). That's where you should put the tripod to photograph the Sunrise.

Make sure that the terrain allows you to move a few meters. Remember that the on the

shooting day it will still be dark while you're preparing your gear. So you may need to adjust the composition when the Sun starts to be just where you want it in the sky.

Another thing you should do is use the PhotoPills **Augmented Reality view (AR)** to check that you're in the right place and that the Sun will rise in the right position.

Place the tripod, ballhead, camera, and lens

Open the tripod and mount the ballhead. Then, place the tripod on a solid surface. Press it against the ground and make sure it's stable.

Take the camera and mount the lens with which you're going to take pictures (I explain how to decide in advance what focal length to use in **section 5**).

Now, mount the camera on the ballhead and check once more that everything is stable. It's important to avoid any vibration.

Finally, turn on the intervalometer and make sure everything is working properly.

Remove the UV filter

If you usually put a filter in front of your lens, remove it.

Although some photographers use it to protect the lens, it's a useless filter.

Putting a piece of cheap glass in front of your lens provokes:

- The camera producing a low quality image.
- Reflections, halos, and flares, especially if you have one or more light sources that affect the lens.

Prepare the filter(s)

Depending on the effect you want, you'll need one filter or another. Use the filter or the filters combination you need:

- A **circular polarizing filter (CPL)**: Eliminates non-metallic reflections. Eliminates or enhances fog and rainbows. Increases saturation and contrast.
- A **neutral density filter (ND)**: Reduces evenly the light that reaches the sensor. Increases the exposure time.

- A **graduated neutral density filter (GND)** Gradually reduces the light that reaches the sensor with greater intensity on one of the edges of the filter. Successfully captures scenes with a high dynamic range.

Screw the lens adapter ring onto the lens and adjust the filter holder.

Wait... ;)

Don't insert any ND or GND filters into the filter holder slots yet, even if you know how you want to use them. You will do this later.

In the case of the polarizer you have several options. You can screw it to its corresponding adapter ring (if you use a system like NiSi's, for example) or to the front of the filter holder (if you use a system like Lee's, for example). Or you can mount it later.

Become a filter master with our **long exposure photography with lens filters guide**.

Turn off the lens stabilization system

You've just mounted your camera and lens on the tripod so your equipment is stable. Therefore, it doesn't make sense to keep using your lens' vibration reduction or image stabilization system (VR/IS).

Turn it off to prevent the lens from trying to remove vibrations that are nonexisting. If it does, the photo will be blurry.

Shoot in RAW

No doubt about it: take all your photos in RAW format.

The RAW file contains all the image data captured by the sensor.

That image (or negative) is the best starting point for post-processing and correcting errors that would otherwise be impossible.

And don't forget that the image you see on your LCD is a post-processed JPEG of the RAW file. That is, the **histogram** you're seeing in the camera is not exactly the one corresponding to the RAW file, although it's still the best reference to check the **exposure**.

Select the spot metering mode

The metering mode helps you to determine the exposure in the **key tone**. The key tone is that part of the scene where you want to know what kind of light you have and what settings you need to expose the photo correctly.

If you don't get it right the first time, that's okay. Since you got to the location in advance, you can take several test shots before you get what you want.

If you plan to use the polarizer, mount it if you haven't already done so and rotate it until you polarize the area of the frame where you want to get the polarizing effect.

Once you've done this, meter the key tone without any ND or GND filters in the holder so they don't affect the image exposure.

My favorite mode is the spot metering mode because I can meter very precisely. Meter the brightest area of the scene you want in detail and overexpose by 1 or 2 stops (+1EV or +2EV) or respecting **your camera's overexposure limit**.

Remember that **the light meter usually turns whites into grays**. That's why I recommend that you overexpose the photo slightly. This way you'll capture the natural colors of the scene.

Determine the focal length you're going to use

The composition you've imagined will determine the focal length.

And as I explained in **section 3**, the focal length determines the Sun size in the photo.

So if you want a:

- Sun as a dot, use a wide angle lens (10-35mm)
- Small Sun, use intermediate focal lengths (35-200mm)
- Large (or huge!) Sun, select long focal lengths (>200mm)

Select the Manual shooting mode (M)

The **Manual shooting mode (M)** allows you to control the aperture, shutter speed and ISO as you like. You decide everything.

That way, you get the perfect **exposure** for your photo.

Select the aperture

The aperture you need to photograph a Sunrise depends on two factors:

- The quantity of **natural light** in the scene.
- The **depth of field** you want to show in the image.

Suppose you want to photograph the Sunrise during the **blue hour** and the lack of light forces you to use a large aperture (f/4 for example). Take a test shot to make sure you still have the depth of field you want. If not, close the aperture and use a slower speed or crank the ISO up.

If you're shooting during the **golden hour**, there's more light in the scene and you can use a relatively small aperture (f/8 or f/11 for example). A small aperture implies a greater depth of field and helps you capture detail in both the Sun and the landscape.

Try closing the aperture a little more (f/16 for example). You'll create a starburst effect using any light source present in the scene (**section 8**).

Focus

It's essential to get a sharp picture.

And in order to do that, you need to master the **depth of field** concept.

This is how you should focus depending on the focal length you use.

Wide angle lens

Easy: focus at the **hyperfocal distance**.

Actually, it's better if you focus at a slightly longer distance (1 m, for example). It's the best way to make sure everything is correctly focused from the foreground to the Sun. In this video I show you how to focus to the hyperfocal distance in less than 1 minute:

Intermediate/long focal lengths with foreground

When the hyperfocal distance is shorter than the distance to the subject, focus on the subject. That way, you also make sure the Sun is in focus.

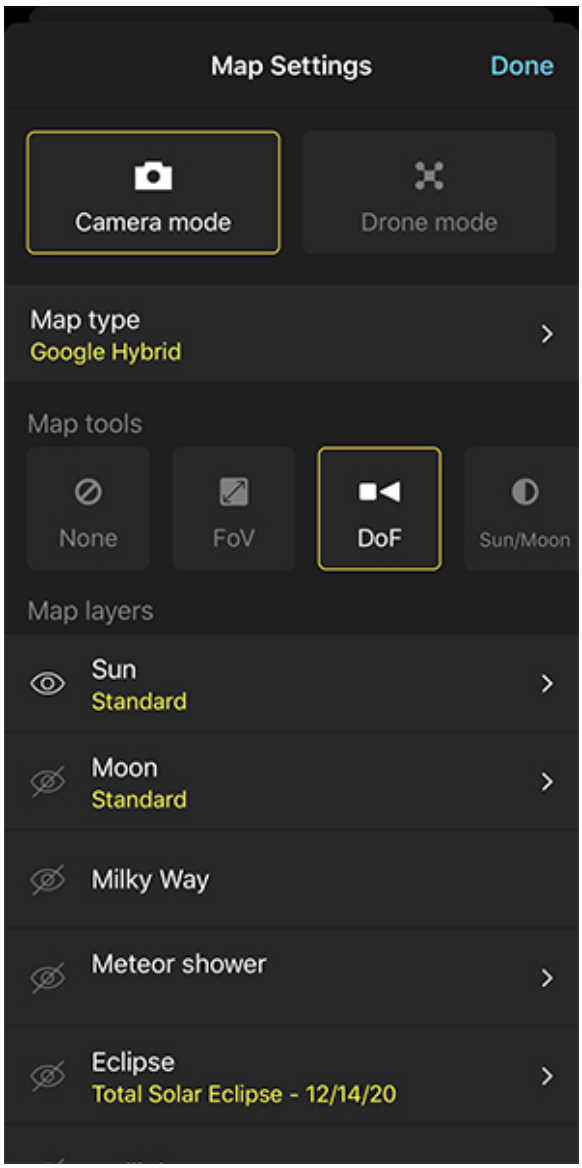
When the hyperfocal distance is greater than the distance to your subject, there are two alternatives.

1. Look for an element to focus on that is further away than the hyperfocal distance

What element? Well, anything (a building, a rock...)

But, when focusing, always make sure that the **depth of field (DoF) near limit** is closer to you than your subject. This way your subject will be within the area that will be acceptably sharp (focused). That is, between the depth of field near limit and infinity.

The **PhotoPills** Planner and the **Depth of Field (DoF) tool** will help you.



PhotoPills Planner - On the Map Settings screen, tap the DoF button to activate the Depth of Field tool.

PhotoPills Planner - To visualize the field of view and depth of field on the map type the camera, focal length, aperture, shooting distance, shooting mode (horizontal/vertical) and shooting direction.

Then, on the Map Settings screen, tap the *DoF* button to activate the Depth of Field tool.

Notice that a black box is now at the top of the map. Tap each of the sections to enter the shooting settings into the tool (camera, focal length, aperture, focus aligned with the Black Pin, etc.)

Then, instead of placing the Black Pin on your subject, place it on an element that is further away than the hyperfocal distance (it's marked on the map) and that you know it will be visible from the Red Pin position. This way you can visualize on the map what will be in focus and what won't (what's left between the depth of field near limit and infinity).

I suggest you do this work at home, before going to the location. This way you'll know in advance where you're going to focus during the shooting session.

2. Focus directly on your subject and leave the Sun slightly out of focus

Unless you have a superhero sight, you'll hardly notice that the Sun is slightly out of focus.

From an artistic point of view it's always better to have your subject tack sharp and the Sun (somewhat) out of focus, than the other way around.

Super long focal lengths with foreground

If you use long focal lengths, you'll find that the hyperfocal distance is quite far from the shooting spot. It may be so far away that it's (almost) impossible to focus at that distance.

Focus at the lower third of the frame (or scene).

You can do this by using either the manual or automatic focus.

Manual focus

First, select manual focus on your camera or lens.

Once you've decided where you want to focus, focus manually by slowly turning the focus ring on your lens.

Turn the Live View function on your camera's LCD screen. It's perfect to focus accurately.

Also, if your camera has the *Focus Peaking* and/or Focus Magnifier (*Focus Magnifier*) features, turn them on too. They'll help you to be even more accurate.

Then, zoom in on the LCD screen until you see the detail of the subject's surface.

And if you have

- The *Focus Peaking* activated, look at the areas that the camera has highlighted with color stripes: these are areas with more contrast and therefore in focus.
- The *Focus Magnifier* turned on, look at the magnified area on your framing and make sure it's in focus.

Finally, turn the focus ring of the lens slowly until the detail of the surface is tack sharp.

If you're not used to focusing manually, turn the focus ring very subtly and when you notice that your subject is focused, keep turning the ring until you go a little out of focus. Then, turn the ring in the opposite direction to get everything in focus again. It's the best way to adjust the focus.

Autofocus

You don't like to focus manually? Fine, use your lens' autofocus.

Start deciding where to focus. Then, press the shutter halfway until it focuses. Most cameras usually "beep" when they've focused correctly.

Then, change the focus mode of your lens from automatic to manual so the camera doesn't refocus when shooting.

Don't forget this step! ;)

Another way to lock the focus is to assign the focusing to a button other than the shutter button. With this option, focus by pressing with your thumb another button on the back of your camera. As soon as you release it, the focus holds on the spot you've chosen.

If you want to know how to set the back button focus, take a look at your camera's user manual.

Set the shutter speed

The **natural light** you have at the time of the shooting is going to determine the shutter speed.

Will you be shooting with lens filters?

They will help you get the right exposure (allowing your camera to capture a high **dynamic range** scene), but also convey a sense of motion (e.g. the clouds leaving trails in the sky).

Here are some examples of shutter speeds according to the effect you want:

- Sea silky water: 1s.
- Slow water motion: 1/2s.
- Fast water motion: 1/8s.
- High clouds: 3 min or more.
- Middle clouds: between 2 and 3 min.
- Low clouds: 2 min or less.

And remember, you can use these shutter speeds as a reference to get the right exposure **before inserting any neutral density filter (ND) or graduated neutral density filter (GND)**.

Fine tune the ISO

It's time to adjust the ISO considering:

- The **exposure triangle**. You already know the aperture and the shutter speed.
- How much noise your camera produces.

Ideally, you should use an ISO as low as possible. Start with ISO 100 and increase it depending on the light conditions and the filters you're using.

And don't forget the noise!

Put the filter(s)

The exposure you need to calculate depends on

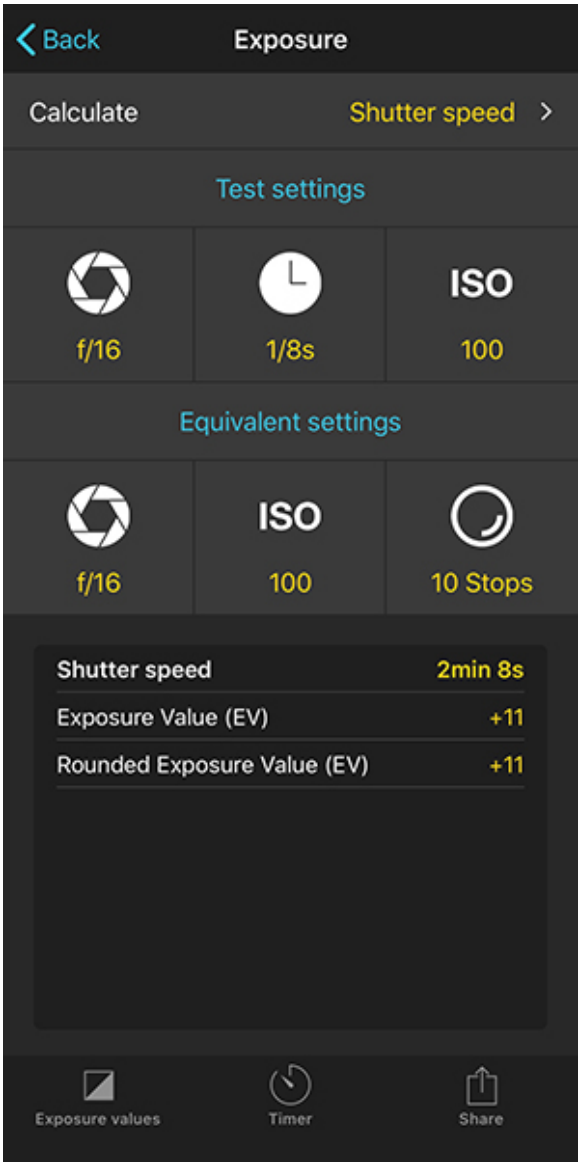
- The scene light you have in front of you
- The photo you want to take.
- The filters you need to use to get it.

So far you've worked on the exposure without using any filter. Now is the time to put the filters on (ND and/or GND) and adjust the exposure accordingly. Obviously, depending on the filters you use you'll have to correct it one way or another.

Take as many test shots as necessary and use the **histogram** as your reference point to recalculate the exposure when putting the filter(s) in front of the lens and when the light changes.

To reduce the "try and fail", you can use the **PhotoPills' Exposure calculator**. Just take a test shot without the filter(s) that gives you the exposure you want. And then use the calculator to figure out the equivalent shutter speed you need to use to get the same exposure when you're using the filter(s).

PhotoPills Exposure Calculator - Type the test shot settings (aperture, shutter speed and ISO).



PhotoPills Exposure Calculator - Type the final shot settings (aperture, ISO and the lens filter) and get the shutter speed you need to use.

You have an extensive explanation about how to recalculate the exposure with your filter(s) on in **section 11 of our guide on long exposure photography with filters**.

And in case you didn't know it, **you can also move the filters while your camera is taking the shot**. Now you know it! ;)

Set the white balance manually

Set it between 6000 and 7500K to boost the golden tones if you're shooting during **golden hour**.

Alternatively, select a white balance between 3400K and 5000K to boost the blues if you plan to shoot during **blue hour**.

You can also leave the white balance on automatic and then correct it later on with **Lightroom** or **Photoshop**.

Take a test photo, check the histogram and adjust the exposure

If you have a DSLR, frame and take a test shot. Check the **histogram**. It's the tool that allows you to analyze the exposure on the camera's LCD.

If you have a mirrorless camera, check the histogram on the electronic viewfinder.

That histogram is the one that helps you make the necessary adjustments to achieve a correct exposure in the field.

If necessary, adjust your Sunrise camera settings to get **the exposure you're looking for**.

For example, if the photo is overexposed (brighter than you want), follow this workflow:

- First, use a narrower aperture (big f number). Check that you keep the depth of field you want.
- If the photo is still overexposed, use a faster shutter speed (shorter exposure time).
- And if the aperture and the shutter speed are not enough, increase the ISO.

Do a bracketing to be sure

As the Sun rises, the light changes a lot and very quickly. You have to adjust the exposure as the light changes.

These changes often create a high **dynamic range** scene that can lead to clipping shadows or blown out highlights.

Make a **bracketing**. When you're back home, choose the photo that has what you consider the best exposure and use it as your post-processing starting point.

My experience tells me that a 1-stop bracketing with 3 photos is enough in most situations. If not, you can change the stops' interval (to 1.5 or 2 for example) and the number of shots (e.g. 5, 7, 9).

Don't stare off into space!

Take into account everything you have to prepare to capture the Sunrise: the equipment, the framing and composition, some adjustments... If you also plan to take a long exposure you have to place the filters, refine certain settings and that involves a longer shooting.

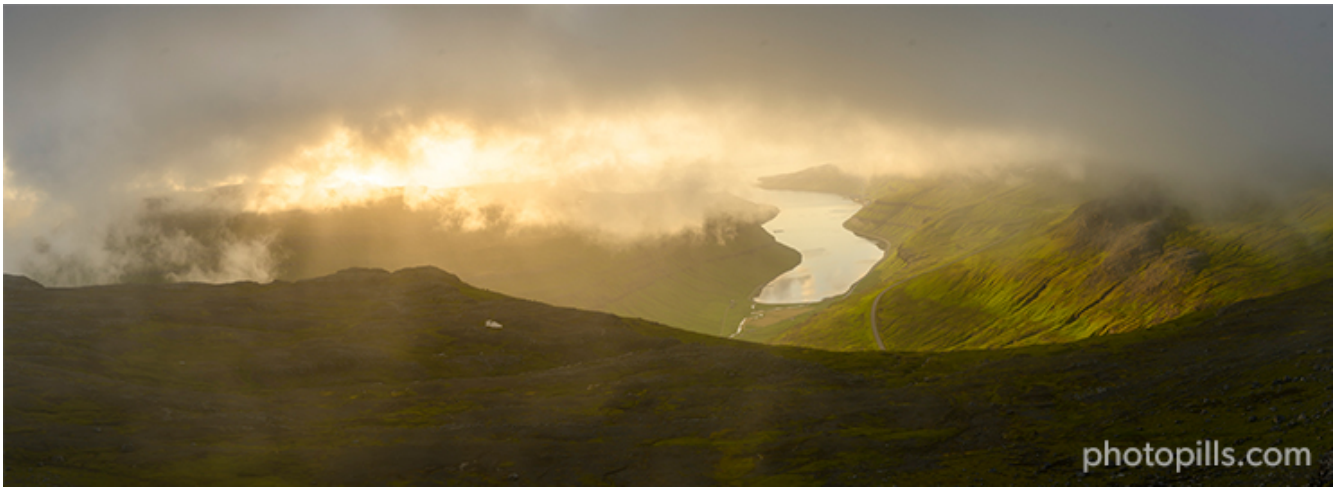
Unfortunately, during a Sunrise the perfect light usually lasts very little time.

So don't be distracted by the show you have in front of your eyes. You can't waste a second!

Focus and make the most out of the brief moments when the light is magical.

Section 8:

10 extra tips to nail your Sunrise photos



Nikon Z6 | 50mm | f/6.3 | 1/320s | ISO 100 | 5600K | 6-shot panorama | Soft GND 0.9 (3 stops) filter

You know the best thing about a Sunrise?

It happens every day. Every day. The Sun doesn't miss its appointment.

So you have plenty of photo opportunities throughout the year. Actually, you just have to choose the day you want to enjoy it and photograph it... And wait for the weather to come along.

We PhotoPillers like to call it **"Plan & Pray"**.

Throughout this article you've learnt all the steps you should follow to successfully capture amazing Sunrises.

And on top of it, I'll give you some more tips about Sunrise photography in just a second.

Don't underestimate the power of planning (1)

The only way to successfully capture a photo you've been dreaming about for a long time is by planning it.

To do this, use **PhotoPills**.

You have all the information you need to learn how to use it easily and quickly in **section 4**. There are 2 real cases in which I explain step by step and with specific video tutorials the workflow to plan your photo.

So don't underestimate the power of planning.

It's the best way to get a supershot!

Scout the location before the photo shooting (2)

You can't imagine how many photographers don't do this before a photo shooting.

And, to be honest, I don't understand why.

Taking reasonable time (2-3 hours) to scout the location the day before the shooting date is crucial.

If you think that's a waste of time, you're wrong.

To get a spectacular Sunrise photo you need to know the location like the back of your hand. Because as you scout it, you'll come up with a better composition. And the shooting will be much easier.

Plus, you'll avoid unnecessary risks like a potential accident if the terrain is dangerous or the shooting spot is on a private estate that you can't have access to.

Be careful with the highlights (3)

When the sensor captures too much light, you risk overexposing the shot or blowing the highlights out. The Sun may be too bright or even completely white, for example.

You can fix this problem:

- Setting a smaller aperture (higher f-number) if you want to control motion. That's because you don't want to change the shutter speed.
- Setting a faster shutter speed if you want to control the depth of field. That's because don't want to change the aperture.
- Reducing the ISO.
- Using the exposure compensation tool (±EV) by moving the bar to the left (negative scale).

Another interesting option to avoid an overexposed sky is to do a **bracketing**, to use **lens filters** or both. I'll give you more details later in this section (points 8 and 9).

Pay attention to the focus (4)

In **section 7** I explained that the focus (where and how to do it) depends on the type of image you want to capture, the focal length you plan to use and the **depth of field** you want.

- **Wide angle lens:** Focus at the **hyperfocal distance**. Or even better, at a slightly longer distance (1 m, for example) to make sure everything is correctly focused from the foreground to the Sun.
- **Intermediate/long focal lengths with foreground:**
  - Focus on the subject as long as the hyperfocal distance is shorter than the distance to the subject. That way, you also make sure that the Sun is also in focus.
  - When the hyperfocal distance is greater than the distance to your subject, there are two alternatives.
    * Look for an element to focus on that is further away than the hyperfocal distance. But when focusing, always make sure that the **depth of field (DoF) near limit** is closer to you than your subject.
    * Focus directly on your subject and leave the Sun slightly out of focus.
- **Long focal lengths with foreground:** Focus at about a third of the frame (or scene) starting from the bottom.

If you intend to use **filters**, focus before placing any **neutral density filter (ND)** or **graduated neutral density filter (GND)** in front of the lens. Considering the opacity of an ND filter, it'll be very difficult for your camera to focus.

Finally, if you use the autofocus, change it to manual to make sure the camera doesn't refocus while you're pressing the shutter button.

If you use the back button focus, don't press it again. That will do it ;)

Look over your shoulder (5)

No. I'm not joking.

As silly as it sounds, you never know what natural light might be up to...

You can't imagine how many times I've been in the dark, freezing, waiting for the Sun to rise. And when the first lights finally appear, it turns out that nothing is happening as I thought it would...

Total disappointment.

I'm about to give it all up. Until, almost by chance, I decide to turn around.

And there it is.

The show I've been waiting for :)

So at dawn, look over your shoulder. You might be surprised.

Start shooting before the Sun is above the horizon (6)

In **section 3** I told you about how natural light behaves. Before photographing a Sunrise, you should think beforehand what you want to capture at each moment.

You've learnt that a Sunrise lasts very little time: you should have a very clear idea of what you want to do so you take advantage of every minute of that light.

The problem is that the **dynamic range** of the scene increases very quickly. You have to adapt to the conditions and change the camera settings to get a correct **exposure** (**section 7**).

During a Sunrise, the Sun starts to light the scene long before it's above the horizon.

Twilight is a time when light is unique and special. Of all of them, **blue hour** is my favorite... It's a magical moment that gives me goosebumps.

Use filters (7)

The 3 filters that we photographers most often use are the **circular polarizing filter (CPL)**, the **graduated neutral density filter (GND)** and the **neutral density filter (ND)**.

The polarizer is a very interesting filter that allows you to do several things during a Sunrise. For example, if you're photographing the sea, you can eliminate the reflections and show more detail in the seabed. You can also increase the saturation of a particular area of the frame.

The best way to counteract the sky hard light (blown out highlights) is to use a GND filter. You do this by subtracting more (or less) light from a particular area of the frame.

With the ND filter you can extend the exposure time. This can be used, for example, to convey motion in the clouds or a nice silk effect in the water.

If you want to become an expert using filters, I recommend you to read our **definitive guide**

on long exposure photography with lens filters.

Do a bracketing (8)

Even if you use filters, the camera may not be able to capture the scene in a single exposure.

In that case, the solution is do a **bracketing**.

When you're on location, take a series of photos of different exposures. Then, at home, merge them with a post-processing software (**Lightroom**, **Photoshop**, etc.) and you'll get a picture with detail in both the shadows and the highlights.

You can take as many photos as you want (3, 5, 7...) but during the shooting you have to check that:

- The gear has not shifted and all the images are identical so that they can be merged later in post-processing.
- The brightest photo doesn't have the highlights blown out.
- The darkest photo doesn't have shadows clipped or noise in the blacks.

In section 23 of our **exposure** article I explain how to successfully capture high contrast images with a bracketing.

Be careful with lens flare (9)

During a Sunrise it's difficult to shoot with the Sun in front of you. But if you're skilled enough you can get very cool images.

The problem is that the Sun can produce flares when the light hits the front of the lens. So you'll have to face this challenge and decide what you want to do.

In some cases, if you see that the effect can look good in your photo, don't do anything. However, as a general rule, a flare will make the photo look ugly and you should try to avoid it.

The lens hood is usually enough to block the Sun's rays from reaching the front of your lens.

But if you don't have your lens hood, you can use a different technique.

Put your camera on the tripod, take the picture you have in mind and check if there is any lens flare. If yes, take a second shot blocking the light source with your thumb, another finger or something else.

Once at home, open **Photoshop** and use a layer mask to merge both shots.

Learn how to remove the lens flare watching **this video of Nick Page**.

Work on the post-processing (10)

Have you've ever wondered how far you can (or should) go when post-processing a Sunrise image.

This is a question I get a lot in my workshops and I always give them the same answer.

The decision is up to you.

You're the one who has to determine what kind of post-processing you want to do and, above all, why you want to do that. Will it allow you to reproduce the scene as you saw it? Will it improve it?

So there's not one solution and not a unique answer.

As far as I'm concerned, I suggest you try several techniques until you find what you like.

Here are a couple of tutorials that can inspire you when post-processing your Sunrise photos.

Here is a video by Serge Ramelli in which he explains how to use **Lightroom** to post-processing your Sunrise photo: **How to Shoot and Retouch an Amazing Sunrise in Lightroom**.

In this video, Jimmy McIntyre shows you how to merge different shots in **Photoshop**: **Edit A Stunning Sunset/Sunrise in Photoshop with Luminosity Masks (Without HDR)**.

Section 9:

20 Sunrise landscape photographers to learn from

Nikon D4s | 14mm | f/16 | 120s | ISO 100 | 7500K | ND 1.8 (6 stops) and soft GND 1.2 (4 stops) filters

Education is essential to improve your photography.

And to educate yourself, you have to make an effort and spend time on it.

As a general rule, you should try to be self-taught. And one of the best ways to learn photography on your own is by seeing (and analyzing) the photos of great photographers.

Their work is the easiest source of inspiration and possibilities you can have access to. And best of all, it's free.

While you're analyzing those images, ask yourself questions. Look at the composition and technique the photographer used to capture the photo. Then, replicate it: try new things, and you'll learn from the experience.

Moreover, this is something I often recommend: I regularly see the work of my favorite photographers and also discover new photographers that I'm excited about — it's amazing how much talent there is out there that I have to learn from!

That's why I thought it might be a good idea to share with you my list of Sunrise photography masters.

I've also been lucky enough to take pictures with some of them during my favorite photo event, the **PhotoPills Camp**.

The list is far from being complete. I hope it will grow in time with your recommendations. You can do so by leaving a comment at the end of this guide.

Albert Dros

Albert Dros has an amazing ability to bring out the best in any landscape during Sunrise. He has a special weakness for urban landscapes, but his pictures of nature landscapes are equally impressive. He's also a lover of foggy dawns...

Elia Locardi

Although **Elia Locardi** loves to capture the light during the blue hour, he enjoys photographing the Sunrise even more. He has a special sensitivity to convey a lot of sensations that only happen during that time of day. His work will amaze you.

Rafa Irusta

Thanks to a very purist style with which he tries to capture truly beautiful images **Rafa Irusta** uses nature as a source of inspiration. This allows him to capture a myriad of fascinating scenes, playing with light and color. His favorite time of day to shoot is at dawn, when loneliness and the Sunrise light help him to work the way he likes.

Ted Gore

Ted Gore has a particular obsession with the dawn light. Being a talented nature landscape photographer, he enjoys capturing fantastic scenes where the Sun fills everything with light. He also loves to find unique compositions that enhance his images.

Julien Grondin

I'm sure you've seen more than once a photo of **Julien Grondin** from the lavender fields of Provence (France) at dawn. Although these are his most famous photos, Julien's work encompasses many other genres within urban and nature landscape photography. He traveled non-stop for 5 years and it was in Asia where he discovered his passion for photographing Sunrises.

Callum Snape

Callum Snape is an adventure and travel photographer whose work reflects his two passions and is full of landscapes and nature. He likes to define himself as a storyteller and he certainly succeeds at it. His landscape images, many of them captured at dawn, are really amazing. You should check it out!

Cuma Çevik

Within travel photography, **Cuma Çevik** focuses on nature landscapes, but he also captures wildlife, urban landscapes and loves aerial photography. In spite of being a self-taught photographer, you can see that Cuma has incorporated his passion for art into his work to compose dramatic and reflective scenes. He has an impressive variety of photos, although his Sunsets and Sunrises stand out.

Fabio Antenore

Fabio Antenore is a landscape photographer focused on hyperrealism, whose goal is to convey a series of emotions with his images. His intention is to convey how the beauty of nature affects him and to inspire with dreamy landscapes. Therefore, one of his favorite moments of the day to shoot is during Sunrise.

Jord Hammond

After living and working as a teacher in southwest China for a year, **Jord Hammond** developed a passion for photography that has taken him to all corners of the earth: from the mountains of Peru to the rivers of Benares in India and everything in between. His usual routine while traveling is to get up a couple of hours before dawn to go and take pictures in some spectacular location.

William Patino

Like many other photographers, **William Patino** started using Instagram out of curiosity and he's gained an amazing visibility thanks to it his images. Since he started taking pictures, nature and Romantic painters (19th century) have been his great source of inspiration. Being Australian and living in New Zealand, the opportunities to capture a jaw-dropping Sunrise are endless.

Bobby Joshi

World traveler and nature lover, **Bobby Joshi** usually makes an extra effort to create a compelling image. For him, it's crucial to take photos very early in the morning or in the last light of the day and to take care of the composition so that it enhances the photo storytelling. So in his galleries you can find pictures of wonderful Sunrises.

Jason Charles Hill

Jason Charles Hill is a photographer with a particular passion for adventure. His willingness to tell stories has led him to explore many unique destinations. From the rugged peaks of southern New Zealand to the remote isolation of the Arctic, his images aim to document the wildest and most unfamiliar areas of our world.

Khalid Al Hammadi

Khalid Al Hammadi dreams of the clouds as he climbs to the top of some of the tallest buildings in the Middle East to photograph iconic landmarks invaded by fog.

Khalid's stunning shots of Abu Dhabi seem almost otherworldly, with the spikes of skyscrapers and the towers of mosques peeking through the eerie fog. And that can only be achieved by getting up very early and taking pictures at dawn.

Ryosuke Kosuge

Ryosuke Kosuge is a well-known photographer based in Tokyo and a pioneer of what he calls "dense photography". This genre mainly captures the intensity and density of Asian urban life. His style focuses on capturing realistic images of the history and traditional cultures of each country.

Mikkel Beiter

Mikkel Beiter is passionate photographer for landscapes and wildlife. To get his pictures and challenge himself, he spends his holidays travelling around the world with his camera. His favorite destinations are the Arctic circle, especially the Lofoten archipelago (Norway) where he captures spectacular Sunrises.

Ading Attamimi

Ading Attamimi understands photography in a very simple way. For him photography is a story that has not yet been told, a beautiful combination of movement, light and shadow. His photos, especially of dawn, are hugely expressive although they convey calm and tranquility at the same time.

Shane Wheel

Shane Wheel believes that photography should capture the essence of a place and magically transport you to the place where the image was shot. Shane finds his inspiration searching for those photos. That's what makes him picking up his camera, traveling the world and sharing images of incredible locations he has been lucky enough to photograph at unique times of the day.

Mont Bahterazar

Mont Bahterazar likes to travel and develop very personal photographic projects. He likes to take photos for himself and focus on what he's passionate about. And this becomes obvious when you have a look at his images. His personal style and a privileged photographic eye allow him to capture the world in a unique and original way.

Alex Noriega

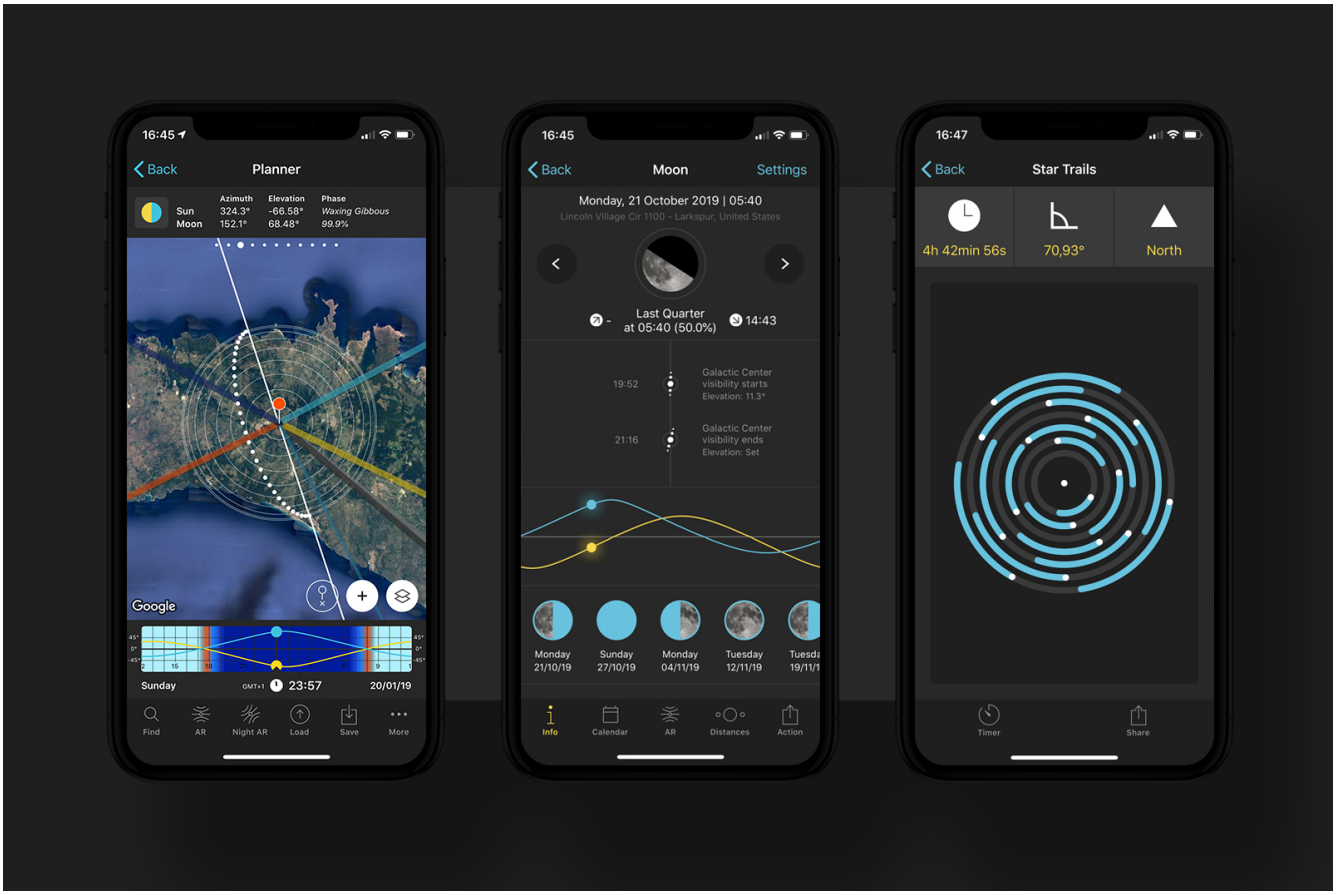
Alex Noriega strives for perfect composition, interesting light and refined technique in its images. He likes to let the light of the moment, especially at Sunrise, help him to create a unique composition and a compelling message. That's why he likes to return again and again to his favorite locations and find something new and different each time.

Matt Donovan

Australian **Matt Donovan** loves to photograph his country, especially Tasmania where he says he finds his greatest inspiration. But that doesn't stop him from travelling to other parts of the world to capture its beauty and its Sunrises. With a simple yet effective style, Matt is able to convey a multitude of sensations through his images.

Section 10:

11 essential Sunrise photography apps and websites



Throughout the guide I've mentioned some of my favorite applications and websites for Sunrise photography.

I use them a lot because they help me with the planning, finding locations and checking weather forecasts.

Do you want to know which applications are useful to improve your Sunrise photos?

I'm sure you do.

Well, don't worry because you have nothing to do. I've already done all the work for you.

Here it is: a list of apps and websites that will help you take better Sunrise photos.

PhotoPills (1)

The truth is, I can't be objective. My life as a photographer wouldn't be the same without PhotoPills.

It's an all-purpose photography application with a lot of tools. My friend Francesco Gola likes to say that it's a **Swiss Army Knife for photographers'**. Good definition... ;)

PhotoPills is your Sunrise app (and also your Sunset app, your Milky Way app, night photography app, Moon app, Meteor Showers app, depth of field app, time lapse app...).

Although I'm sure I'm not telling you anything new...

Thanks to PhotoPills, no more guessing locations and doing mental calculations! You'll have much more time to be outdoors taking pictures :P

Download it and start planning your Sunrise photo ideas.

PhotoPills is available on **iOS** and **Android**.

Google Earth (2)

The main feature of Google Earth is that it allows you to explore potential photographic locations everywhere in the world.

To do this, simply place a pin anywhere on the Earth and you can see virtually what that location looks like and what its surroundings look like (the topography, for example). It's awesome.

Once you have selected a location, explore it. You can change your point of view, move your position, zoom in and out. This way you can determine potential shooting spots, look for compositions and even find the way to get there... :)

You can download Google Earth on your smartphone but also on your tablet, your laptop and desktop computer.

Google Earth is available on **iOS** and **Android**.

Location Scout (3)

Location Scout is a database of cool photographic locations that you can find around the world. Each location has a specific information page that you can check out. There you will find all the practical information you need for your photo shooting and other users' photos that can inspire you.

The content is generated thanks to the contributions of a group of passionate photographers and travelers. Since it's a collaborative project, users add tips, photos and ratings so the information is always up to date.

In addition, the information is totally practical as it is based on the users' experiences in the field.

Be careful because it's addictive.

ShotHotSpot (4)

Similarly to Location Scout, **ShotHotSpot** is a super useful search engine to find photographic locations.

Type a location in the search bar and you'll see the most popular places in the area marked on a map. Each point of interest is part of a classification and has examples of photos captured there.

To get all this information, the website uses location data from services like Flickr, for example, to automatically calculate the locations of the most popular photos. In addition to this, any user can contribute by adding new locations, or additional information and comments to existing ones.

SunsetWx (5)

Don't be fooled: at first glance the **SunsetWx** website looks like a travel in time to the origins of the Internet.

But the truth is that it's the best free tool to predict the Sunrise and **Sunset** quality.

It works in a very simple way. On the home page there is a satellite image of the USA (although, if you prefer, you can change it to a satellite image of Europe or the World with the options on the top menu). And on it, you can see a heat map overlay.

What does the heat map represent?

The probability of a good Sunrise:

- The warmer (closer to red or a higher percentage) the image, the higher the probability that the Sunrise will be amazing.
- The colder (closer to blue or a lower percentage), the greater the probability of a poor Sunrise.

By default, the first maps correspond to Sunset. To see the Sunrise maps, slide the screen down or use the options in the top menu.

Windy (6)

With so many applications, websites and weather services it's almost impossible to choose just one.

After many years of checking different information sources and many applications, I've become a big fan of Windy. So much so that it has become my favorite application.

I really like its interface because it's very easy to find all the options it has and check a lot of information.

The application tells you, for a specific location, the following data: wind (direction and speed), rain, snow, temperatures, clouds (at different altitudes) and waves (water direction, strength and temperature).

Apart from these, there are many more options, data and forecasts. And it's free...

You can download the Windy app on both your smartphone and your tablet. But you can also use it through the website on your laptop and desktop computer.

Windy is available on **iOS** and **Android**.

Ventusky (7)

There are a lot of applications that offer an alternative to the native weather application included in your smartphone's operating system.

However, Ventusky is better than most. The application uses several maps to give you lots of weather data in a simple and easy to interpret interface.

The default interface in Ventusky is a map of your local area that shows the color-coded temperature and wind direction lines moving over the land on the screen. The numbers tell

you the temperature in that area (you can change the units in the app settings). This display allows you to see, at a glance, what the weather is like at your location.

If you zoom out, you will see the weather at a national level and, if you zoom out even more, at an international level.

One of the most interesting features of the application is the option to see an animated weather forecast on the screen. Tap the *Play* button (bottom left corner) and you'll see how the weather will change in the next hours or days. You can see the forecast for the next 7 days or go back in time to see how the weather has evolved.

You can download the Ventusky app on both your smartphone and your tablet. But you can also use it through the website on your laptop and desktop computer.

Ventusky is available on **iOS** and **Android**.

Local weather services (8)

The problem with those gazillions of weather applications and websites is that none of them is 100% reliable. No matter how hard they try to be accurate, they rely on external sources that make them fail when providing the weather forecast.

For some time now, I've taken the habit of checking the official weather service of the location where I plan to take pictures. They are usually owned by the local government and their accuracy is greater than any information that another source may provide.

So I know I can trust them. Of course, they are not foolproof, but they help me to complement the information that Windy and Ventusky give me.

Here are some examples: the US **National Weather Service**, the German **Deutscher Wetterdienst**, the Australian **Bureau of Meteorology**, the British **Met Office**, and the Spanish **Aemet**.

WorldCam (9)

Another source of information I love is webcams. They allow me to check the weather of the location in real time.

I usually use them just before I go to the location where I'm going to take pictures. That way I can see if it's worth going there or not.

And I'm always amazed with the amount of sites where there have one or several webcams. Google them by typing "[location name] webcam".

If you're curious or you need to check a lot of webcams all over the world, you should definitely visit **WorldCam**.

Nautide (10)

Are you going to photograph a Sunrise with a seascape? Do you need to know what time the tide rises or falls in a location?

Have a look at Nautide.

This application gives you a lot of very detailed information: high and low tides times, the water level (how much the water will rise or fall), daily tide charts, the tidal coefficient and the marine life activity among others.

Nautide obtains its data from the **National Ocean Service of the American NOAA** buoys and you can choose from 10,000+ buoys. If you want to plan weeks or months in advance, you'll need to purchase an annual data package.

Fortunately their website **tides4fishing** is completely free ;)

Nautide is available on **iOS** and **Android**.

Tide Charts Near Me (11)

The main feature of Tide Charts Near Me is that it offers tide information without time limitation.

It also incorporates a graph showing the information in a very clear way. It shows how the tide will rise and fall throughout the day and night. It also indicates the exact tide level (meters and centimeters or feet and inches) at that moment. And a small arrow points up or down as the tide rises or falls.

Tide Charts Near Me is available on **iOS** and **Android**.

Section 11:
Ready for action?

Do you remember what I told you at the beginning of the article?

That you have to start with the photo idea, to imagine what Sunrise you want to capture.

So it's time to get down to business.

If you know exactly what you want to photograph, you know what you have to do: plan the photo.

But if you don't know where to start, that's fine.

The important thing is to look for inspiration by looking at pictures of other photographers. For example, from other PhotoPillers.

Where?

In the **PhotoPills Awards** :)

It's the name of a contest we organize at PhotoPills and that helps us to reward the ingenuity and expertise of PhotoPillers like you and me. All you have to do is submit your best photos, including Sunrise pictures, of course.

It's a great source of inspiration to find ideas that will help you imagine, plan and capture jaw-dropping Sunrise photos.

And if you manage to make a supershot, submit it to the PhotoPills Awards!

It will inspire thousands of PhotoPillers and...

Maybe you'll win one of the prizes we give away every month, or even become PhotoPiller of the Year.

Do you have a problem? Do you want to ask me a question? Do you need help?

Leave a comment at the end of this guide and I'll get back to you as soon as possible.

I want to help you get YOUR Sunrise photo ;)

Come on, the Sun doesn't wait for the sleepyheads!

Antoni Cladera is a landscape photographer with commitment to the environment. Artist of the Spanish Confederation of Photography and member of the Spanish Association of Nature Photographers (**AEFONA**). He's part of the PhotoPills Team.

Special thanks to **Sandra Vallaure**, a great photographer and friend, for her tremendous help in making this article possible.

Note: *Some links on this page are affiliate links. What does this mean? If you buy/rent using these links you're helping support us and it costs you nothing extra. Thank you for your support.*

PhotoPills

www.photopills.com