

Seestar Application Update Guide ver.2.1.0



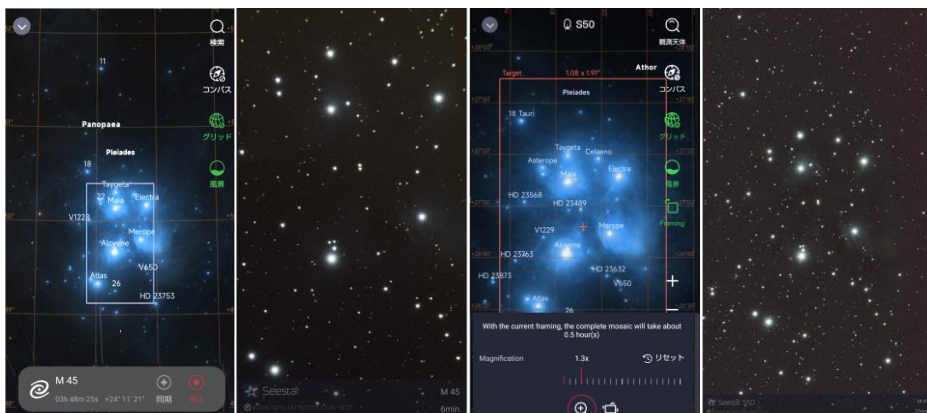
Starry Guide
Kouda, Masaki

A. New feature of ver.2.1.0

1. Mosaic mode added to Stargazing mode

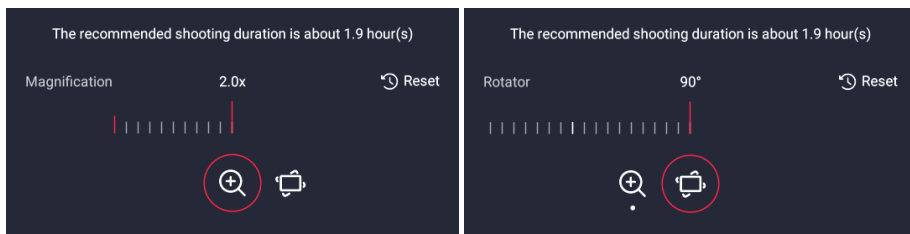
Seestar captures an area ($0.7^\circ \times 1.3^\circ$) where the Sun and Moon just fit. However, some popular celestial objects are larger than this range.

Now, Seestar has a **mosaic mode** that allows you to capture a wide area around the object by combining images taken while changing the telescope's orientation.

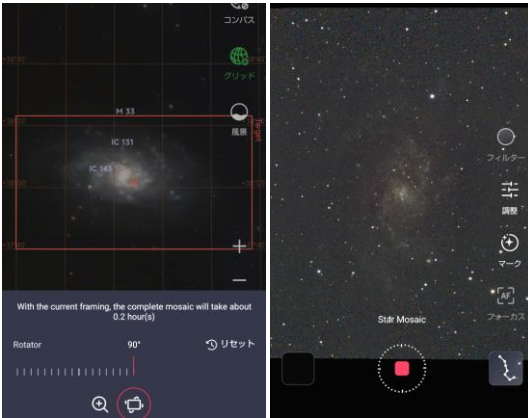


1-1 Flaming added to SkyAtlas to compose your shot

First, center the object you want to photograph on SkyAtlas. Then, tap **Flaming** to specify the composition of the mosaic image. The composition is specified by **Magnification** and **Rotator**.



The estimated time to complete the mosaic shooting composition will be displayed, so you can use this as a reference to consider the shooting object and composition.

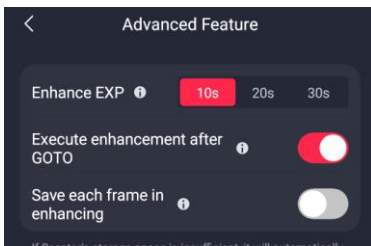


The mosaic mode can also be used to capture celestial objects that would otherwise be in a horizontal composition at the time of shooting.

The ratio of height to width (aspect ratio) dose not change.

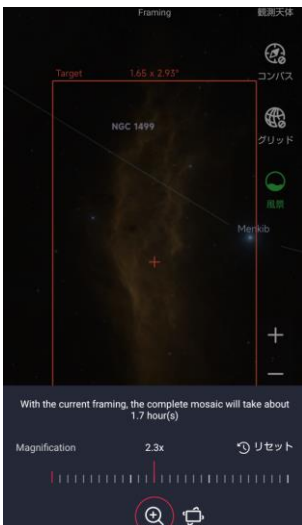
1-2 Change the exposure time.

The **mosaic mode** takes 3 to 5 shots about one location, stacks them, then points the telescope at the next location and repeats the process.

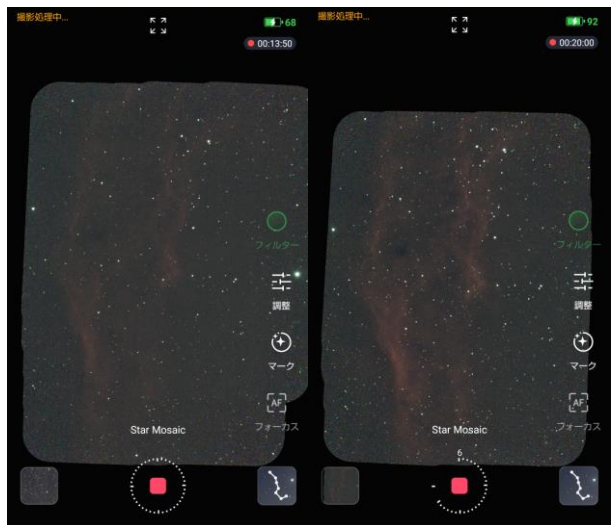


The exposure time for a single shot can be selected from 10, 20, or 30 seconds in the **Advanced Settings** window.

However, the total shooting time will be longer.



Shooting the California Nebula



Each picture is in 10s.

Each picture is in 20s.

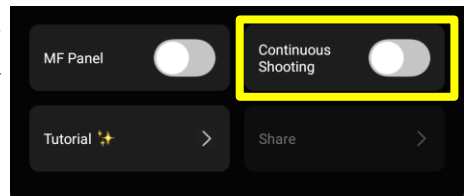
2. Addition of Continuous shooting

In Stargazing Mode, the app checks the images of stars in the captured images and performs stacking processing using the successfully captured images that can be used for stacking, or saves the files depending on the settings.

However, depending on the object to be photographed and the intended use, there are cases where you do not need to stack images, but just want to save the images you have taken. For this purpose, a new **Continuous shooting** function has been added.

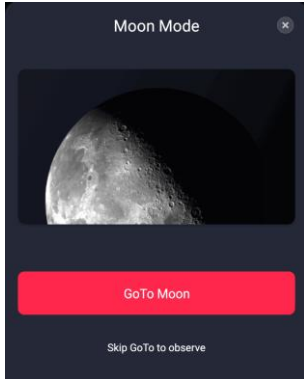
To use the **Continuous Shooting** function, simply point the telescope in the direction of the target object or targets, tap the “...” button in the upper right corner of the preview screen to open the menu, turn on the **Continuous Shooting** function, and start shooting.

The images you have taken will be saved in Seestar, not in your smartphone.



Comet Tsuchinshan-ATLAS in dawn taken with the “continuous shooting”. Even if there is an error in tracking or only the tail is captured, it will be saved.

3. Skip function to sun mode and moon mode



When you select the Sun or Moon in the “Solar System”, Seetstar move to point the telescope in the direction of the Sun or Moon.

Now it has the ability to **skip moving**, assuming the telescope is already facing them.

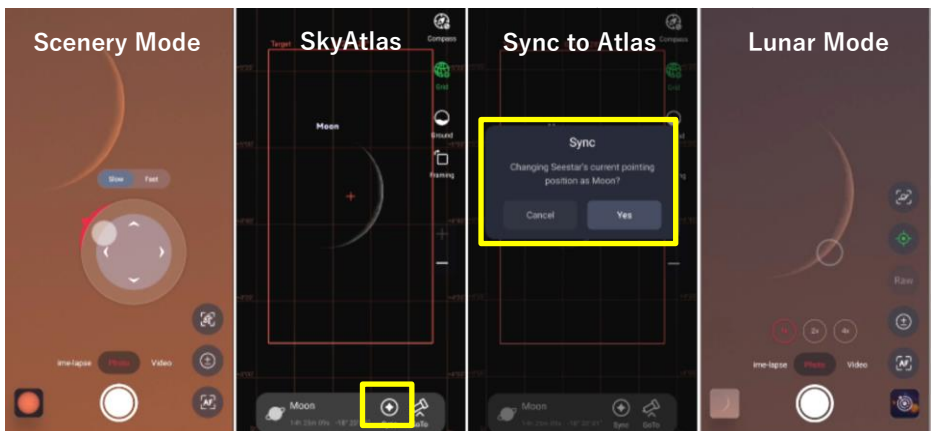
Using this feature in “Moon Mode,” you can take pictures the objects other than the moon, as well as magnify them and adjust brightness using “Gain” and “Exposure Time.”

Note that **Skyatlas Sync** should be turned on in the **Advanced Feature** for the following operations.

3.1 Photographing the Moon in Bright Sky

When you want to photograph the moon in daylight or the crescent moon in low evening sky, it is often difficult to point the telescope using the auto-alignment of Seetstar's “Lunar Mode”.

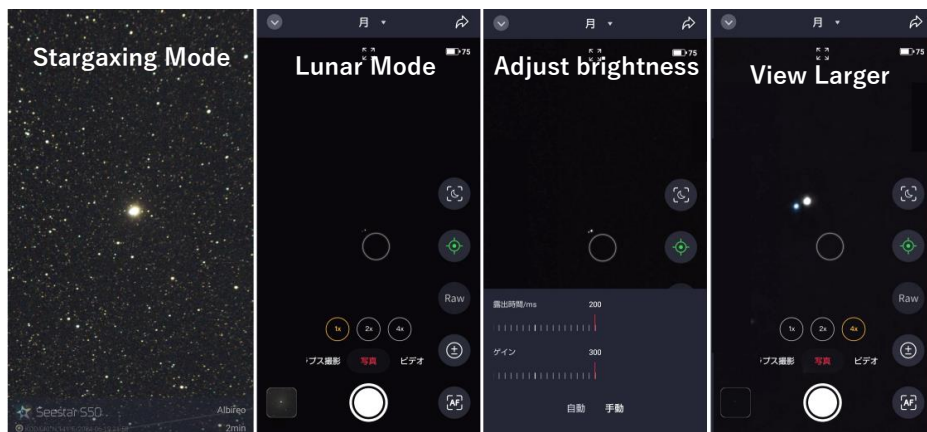
So, put the moon in the telescope by using “Scenery Mode” or other means. Next, display SkyStlas, center the moon on the screen, and tap Synchronize to have the telescope perform diurnal motion tracking, assuming it is now facing the moon. This way you can take pictures using “Lunar Mode”.



3.2 Shooting a Double Star

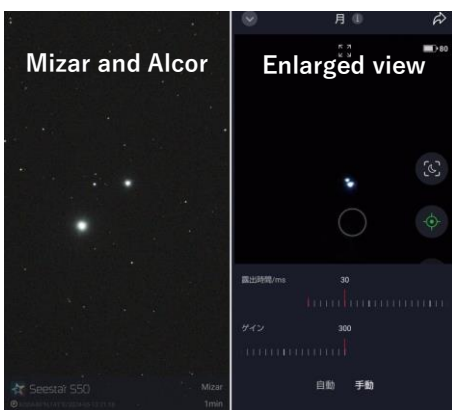
When photographing the double star Albireo in “Stargazing Mode,” you can see that it is a double star in the preview, but with a 10-second exposure you cannot see. By setting the camera to “Lunar Mode” and adjusting the gain and exposure time, you can see that it is a double star at the appropriate brightness. Also, if you zoom in at “x4” you can see that it has beautiful colors like sapphire and topaz.

To operate, first align the target star using SkyAtlas, then exit the mode after it is in “Stargazing Mode”, then set it to “Lunar Mode” and “Skip Goto”.



Mizar in the Ursa Major is a famous double star when seen with the naked eye through a telescope. However, when photographed in Seestar's “Stargazing Mode,” it is not.

By zooming in and adjusting the brightness in “Lunar Mode,” you can see that it is also a double star.

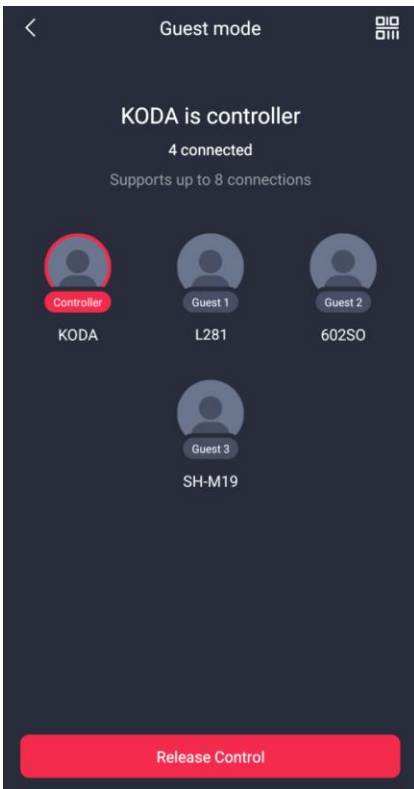


B. Functional changes in ver. 1.2.0

1. Guest mode

In previous versions, **2 smartphones** could be connected to Seestar WiFi at the same time, and each smartphone could also control Seestar.

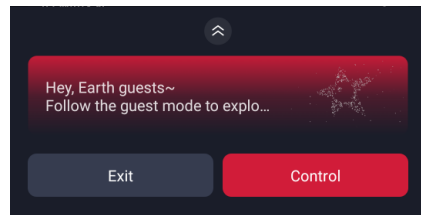
Ver. 1.2 now has a **guest mode**: up to 8 smartphones or tablets can be connected to WiFi at the same time, 1 of which will be the **Controller**.



The first smartphone connected to the WiFi becomes the **Controller** and can operate Seestar, the second and subsequent phones become guests.

The guest phone will display the same screen as the Controller.

To operate Seestar with another smartphone, the Controller **Release Control** on the guest mode screen, and then tap **Control** on the connected smartphone to receive control rights.



Guests receive Control