

Getting started with SSI Sentinel

Your astronomical weather watch: a **GO / NO-GO** verdict every evening for your targets, computed from the weather, the Moon, your horizon and your equipment.

Product: **StellarSkyImager · Sentinel** Audience: **end users** Language: **English** Type: **user manual**

About this guide

This document describes how Sentinel works as it appears on screen (website and Android app). It does not cover the internal calculations — those are handled in the separate technical documentation. To get it as a PDF: “Print / Export to PDF” button above, then “Save as PDF”.

CONTENTS

1. What is Sentinel?
2. Account & sign-in
3. Setting up your watch: site, horizon, equipment
4. Tracking a target: creating a project
5. Tonight's report
6. Multi-night projects & hall of fame
7. The 14-night calendar
8. Alerts
9. Free, Premium & subscription
10. Frequently asked questions

1. What is Sentinel?

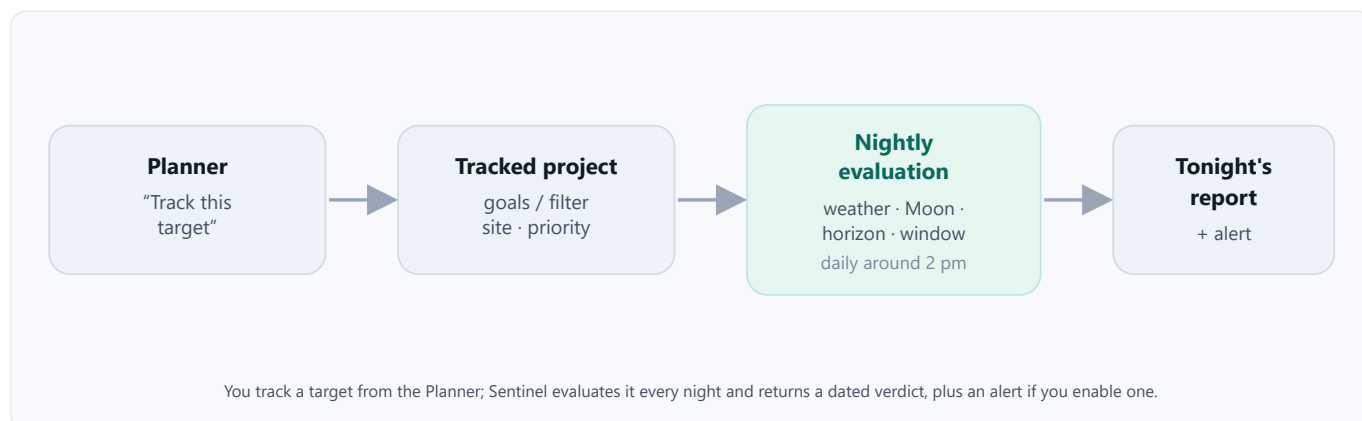
SSI Sentinel is a service that **monitors every night** the observing conditions for your targets and tells you, at a glance, whether the night is worth it. Instead of checking several weather apps every evening, you get a **clear verdict** per project:

● **GO** ● **MARGINAL** ● **NO-GO**

● GO	At least one project is observable tonight.
● MARGINAL	Borderline conditions: few usable hours or uncertain weather.
● NO-GO	No favourable window tonight.

This verdict is **personalised**: it combines the weather, the Moon, the height of the object in the sky, *your* horizon and *your* equipment. It is not a generic forecast, but an answer to the question “can I image *this* target, from *my* place, with *my* setup, tonight?”.

The workflow in one diagram



2. Account & sign-in

Sentinel requires a StellarSkyImager account. **A single account is enough** for the website and the Android app: your sites, your equipment and your projects are synchronised across devices.

- 1 **Create an account** — e-mail address + password (at least 12 characters; a passphrase is ideal). A verification e-mail is sent to you; its link is valid for 30 minutes.
- 2 **Verify the address** — click the link you received, then sign in.
- 3 **(Optional) Enable two-factor authentication (2FA)** — from *My account*, using an authenticator app (Google Authenticator, Aegis...). Single-use recovery codes are provided: keep them somewhere safe.

Your data stays yours

The account is hosted in the European Union. At any time you can **export your data** (JSON format) or **delete your account** from the “My data (GDPR)” section of the account page. No banking data is stored by StellarSkyImager (see §9).

3. Setting up your watch: site, horizon, equipment

For a verdict to be reliable, Sentinel needs to know *where* and *with what* you observe. These three settings are managed from *My account*.

The observing site

A site groups together the location (coordinates and time zone), and optionally:

- **the Bortle index** — the light pollution level of the location;
- **the altitude threshold** — the minimum height above the horizon below which a target is not considered usable. It is this threshold (carried by the site) that is used by the Sentinel evaluations;
- **a custom horizon profile** — the real skyline around you (trees, buildings, mountains), imported from the Planner.

↪ **See the Planner guide.** The custom horizon profile and the equipment are *prepared first in the Planner*, then synchronised to your account. See “Horizon editor” and “Setting up your equipment” in the Planner guide.

Synchronised equipment

From *My account*, you can **save the setup configured in the Planner** to your account, then reload it on any signed-in device (web or Android). It is this equipment that is taken into account when your targets are evaluated.

Free vs Premium

With a **free** account you can save **1 observing site**. The **Premium** plan lifts that limit (unlimited sites). See the details in §9.

4. Tracking a target: creating a project

Everything starts in the **Planner**. When you find an interesting object, the “**Track this target**” button (on the target card and in its detail sheet) opens the window for creating a **multi-night tracking project**.

↪ **See the Planner guide.** The “Track this target” entry point is on the Planner target cards. See “The target cards” in the Planner guide.

In this window you define:

SETTING	WHAT YOU CHOOSE
Acquisition mode	<i>With filters</i> (monochrome imaging, one goal per filter) or <i>Without filter</i> (colour camera / DSLR).
Integration goals	The target exposure time, adjustable in 30-minute steps. In “with filters” mode, one goal per filter (e.g. Ha, OIII, SII...); you add or remove filters freely.
Priority	P1 (high), P2 (normal, default) or P3 (low).
Observing site	The site from which you intend to image this target. You can create a site directly from the current Planner settings (location + horizon + threshold).
Project note	A free-form memo for your acquisition plan: sub-exposure length, gain, dithering, framing... Purely informative — it plays no part in the verdict. Editable at any time via “Edit project”, and shown on the project page.

No Moon setting to configure

The constraint related to the Moon does not have to be entered: it is **derived automatically** from the object type (a narrowband nebula tolerates the Moon better than a galaxy, for example).

Once created, the project appears in **“My projects”** and becomes eligible for the nightly evaluation. If you are not signed in when you use “Track this target”, you are offered an account, and the tracking then resumes automatically where you left off.

5. Tonight's report

The **evening report** (menu *Sentinel* → *Tonight*) is the heart of the service. Every day, Sentinel computes around **2 pm (local time of your site)** the conditions for the coming night, then displays the result. The report is always **explicitly dated** — “Night of D to D+1” — to remove any ambiguity about which night is concerned.

What the report contains

- **The overall verdict** for the night ( **GO** /  **MARGINAL** /  **NO-GO**), with a one-line summary;
- **The context of the night**: astronomical night range (or *nautical night* when the night does not become fully dark), **Moon** illumination percentage, and the **weather source** used — **Open-Meteo**, with automatic fallback to **7Timer** if Open-Meteo is unavailable. The source actually used is always displayed (marked “fallback data” where applicable);
- **The per-project detail**: for each tracked target, its verdict, the **best filter(s)**, the usable **time window** and the number of **usable hours**.

Rapport du soir

 Nuit du 15 sept. au 16 sept.

 **GO**

Au moins un projet est observable cette nuit.

Nuit astro : **21:40-05:40** Lune : **24%** Météo : **Open-Meteo**

PAR PROJET



M39

 **GO**  **B**  **G**  **L**  **R**

02:00 → 05:40 · 3h40

FILTRE		STATUT
	B	GO
	G	GO
	L	GO
	R	GO

> Pourquoi ce verdict ?



M15

 **GO**  **B**  **G**  **L**  **R**

02:00 → 04:00 · 2h

FILTRE		STATUT
	B	GO
	G	GO
	L	GO
	R	GO

> Pourquoi ce verdict ?

Tonight's report: the verdict for the night at the top, then each project with its filters, its usable hours and the "Why this verdict?" disclosure.

Limiting factors

When a project is not green, Sentinel shows **why**, as labels. The possible factors are:

- Clouds unfavourable cloud cover
- Moon too close the Moon is too near the object
- No astronomical night the sky does not get dark enough
- Below horizon the target does not rise above your horizon/threshold
- Moon too bright lunar glow too strong for the target
- Weather unavailable no usable weather data
- Nautical night only partial darkness only
- No site no site attached to the project

If the report is not there yet

Before the daily computation (around 2 pm local time), or if something is missing, Sentinel shows an honest message rather than invented data — for example: “Add an observing site to a project to enable the evening evaluation”, or “Track a target from the Planner”.

Why this verdict?

Under every decision, a “**Why this verdict?**” disclosure details the calculation. It is present on the three screens that display a verdict: tonight's report, the project page and the calendar detail panel. It stays **closed by default** and opens with a single click.

It reads in two steps: the **conditions of the night** first — the sky and the Moon, stated once for the whole project — then **the impact filter by filter**, quantified in lost minutes and sorted by dominant cause.

The decision thresholds

GO	2 h or more of usable time.
MARGINAL	Between 1 h and 2 h, or degraded weather.
NO-GO	Less than 1 h usable.

A MARGINAL night always comes with an explicit warning, in the report as well as in the e-mail: the margin is thin, and the forecast may still tip over.

Why two filters differ on the same night

The same sky does not penalise every filter in the same way. Sentinel tolerates a maximum opacity that depends on the bandwidth:

- Broadband opacity tolerated up to 25 %
- Tri-band opacity tolerated up to 35 %
- Narrowband opacity tolerated up to 45 %

Cloud **height** comes on top of that. Cirrus, in the high layer, mostly hampers broadband and is therefore weighted before being compared with the threshold: **×1.0** for broadband, **×0.6** for tri-band, **×0.4** for narrowband. **Low and mid-level** clouds, on the other hand, get no tolerance at all: they penalise every filter identically.

A real example

A sky veiled with **97 %** cirrus. In narrowband: $97 \% \times 0.4 = \mathbf{38.8 \%}$, below the 45 % threshold — the night remains usable. In broadband: $97 \% \times 1.0$ stays far above 25 % — the night is lost. Same sky, two opposite verdicts, and no contradiction.

Three useful clarifications

Below 10 %	A layer is treated as forecast noise, not as a cloudy sky.
Above 60 % in the high layer	The verdict does not change, but the sky is announced as fully veiled by cirrus.
Moon and tri-band	Tolerance up to 60 % illumination; beyond that, the project’s Moon setting takes over again.

Finally, if the **target’s visibility window** covers less than 80 % of the night, it is flagged explicitly: it is what caps the usable duration, before any question of weather or Moon. A target low in the sky at this time of year can therefore yield a MARGINAL under a perfect sky.

6. Multi-night projects & hall of fame

The “**My projects**” screen (menu *Sentinel* → *My projects*) gathers all your tracking, split into two tabs: **Active** and **Completed**.

SSI SENTINEL

Mes projets

PROJETS ACTIFS

2

RÉALISÉS

2



M39

Amas

P2

ACTIF

33%

B

0h13/0h40

33%

G

0h13/0h40

55%

L

0h44/1h20

35%

Suivi depuis le 15 sept. 2026

Ajouter une se



Suivre une nouvelle cible

depuis le Planner

The "My projects" screen: one **active** project, one **paused** project, and for each of them the progress filter by filter.

Per-filter progress

Each project displays **progress rings**, one per targeted filter. The ring fills up as you log your sessions, until the integration goal you set is reached.

The session log

After a night of acquisition, open the project and add a session: the **time actually acquired** (per filter), a **quality rating** for the night, and a free comment (seeing, Moon, incidents...). It is this log that feeds the rings and, in time, your hall of fame.

Durations are entered **to the minute**: the / buttons step by 30 minutes for speed, while the *h* and *min* fields can be typed directly for the exact duration (e.g. 2 h 46 in SII).

The states of a project

STATE	MEANING
Active	Tracking in progress, evaluated every night.
Paused	Temporarily set aside.
Completed	Goal reached: the project joins the hall of fame (frozen summary).
Abandoned	Stopped; kept in the history.

The “Completed” hall of fame

Completed or abandoned projects make up your **hall of fame**. Each frozen summary shows the number of nights, the hours acquired, an average rating, and lets you attach **the final image** (an AstroBin or gallery link). You can also start a **“New project on this target”**: the new project keeps its lineage with the previous one (“follows on from...”).

Free vs Premium — the “soft freeze”

A free account can track **1 active project**. If you have more, the surplus projects are **frozen** (blue “Frozen” badge): they are no longer evaluated and their log is suspended, **but nothing is lost**. At any time you can *activate a frozen project instead of the current one*, or go Premium to reactivate everything (unlimited projects).

7. The 14-night calendar Premium

The **14-night calendar** (menu *Sentinel* → *Calendar*) extends the evening view to the coming two weeks, to plan your sessions ahead. It is laid out as a **filters × nights** matrix, one block per project.

The 14 nights are split into **two zones of 7 nights**:

← 14 nights →

first 7 nights

Weather + astronomy
confirmed verdict (filled cells)

next 7 nights

Astronomical potential only
no weather (hollow cells)

Today

Weather is modelled over the **first 7 nights** (confirmed verdict, filled cells); over the **next 7 nights**, only astronomy is taken into account (Moon, altitude, window) — potential without weather, hollow cells.

Calendrier 14 nuits



Prochaine grande fenêtre : **mar. 15/09** (ce soir)

📘 Cliquez une date pour le détail par filtre (décision, temps, facteurs).

> **M39**

CE SOIR

15/09



3h40

MER.

16/09



1h40

JEU.

17/09



.

VEN.

18/09



8h20

SAM.

19/09



1h50

DIM.

20/09



.

> **M15**

CE SOIR

15/09



2h

MER.

16/09



1h

JEU.

17/09



.

VEN.

18/09



6h20

SAM.

19/09



.

DIM.

20/09



.

● GO

● MARGINAL

● NO-GO



Exploitable — confirmé (météo + astro)

Au-delà de 7 nuits, la météo n'est pas modélisée : seul le potentiel astronomique (Lune, ha
Données météo récupérées chaque jour vers 14 h (heure locale du site).

Généré le 15 sept. 2026, 02:14 · Météo : Open-Meteo

The 14-night calendar: solid frames for nights with a confirmed verdict, dashed beyond seven nights — astronomical potential only, without weather.

The top banner highlights the **next big window** and the date of the **new Moon**. Clicking (or tapping) a date opens the **detail of the night**: decision, usable time and limiting factors, filter by filter. Filter colours (narrowband / broadband) remain displayed, but in the "potential" zone they are marked as estimates, not confirmed weather verdicts.

Premium feature

The 14-night calendar is part of the Premium plan. A free account sees an invitation screen to go Premium instead of the matrix.

8. Alerts Premium

Alerts (menu *Sentinel* → *Alerts*) let you know when a night is worth it, without having to open the app. The settings are saved automatically, field by field.

What the notification looks like

It fits in two lines: a title — for example **“GO tonight”** — then a summary of the projects concerned, *“3 projects green: NGC 7000, NGC 6960, M 27”*. Two actions are offered: open tonight's report directly, or dismiss.

Triggering

- **Daily GO alert** — a notification as soon as at least one project turns green.
- **Include MARGINAL nights** — to also be warned about borderline conditions.
- **Usable-hours threshold** — minimum duration (from 0.5 h to 12 h) below which a night does not trigger an alert.

Timing

- **Sending time** — the local time at which the evening alert reaches you.
- **Weekly “7 nights” digest** — a summary of your next 7 nights, sent on **Sunday at 6 pm**.
- **Quiet days** — the days when no alert should be sent (e.g. nights when you never go out).

Channel

Choose how to receive your alerts: **Push**, **E-mail**, or **both**. The first time you enable push, the device asks you for notification permission.

The last-minute check

The report is computed around **2 pm**, and the alert goes out at your **sending time** (5 pm by default). In between, the forecast can change — and that is precisely the window in which an outing is decided.

Just before sending, Sentinel **queries the weather again**, bypassing its cache, then recomputes the verdict. The alert you receive therefore reflects the most recent state of the forecast, not the one from early afternoon.

This check can only **downgrade**: a GO that has become doubtful may drop to MARGINAL or NO-GO, but a night announced as NO-GO will never turn green again at 5 pm. The report you open yourself during the day keeps the verdict from the 2 pm computation.

What this check does not do

It takes place **before** sending. An alert that has already gone out is not corrected afterwards: if the sky degrades later in the evening, no revision notification will follow.

Anti-fatigue safeguard

Sentinel imposes a limit on itself: **1 push per day maximum**, and **never a NO-GO notification** — unless you explicitly enable the “Also alert me on NO-GO nights” option.

Premium feature

Sending alerts (push, e-mail, digest) is part of the Premium plan. You can view and change your settings with a free account, but **no alert will be sent** without a subscription. **Push** notifications in particular are reserved for Premium.

9. Free, Premium & subscription

The **Planner stays 100 % free**. Sentinel adds a **Premium** plan that keeps watch for you.

FREE — €0	PREMIUM
• Full Planner and exports • 1 observing site • 1 tracking project • Evening dashboard	• Unlimited sites and projects • Push & e-mail alerts • 14-night calendar • Weekly digest • Full hall of fame

Pricing & 30-day free trial

Premium is offered at **€2.99/month** or **€24.99/year** (about 30 % saving on the yearly plan). Your **first 30 days are free**.

In practice:

- 1 You choose Premium and **enter a payment method** (on the Stripe pages for the web, via Google Play for Android). **No amount is charged** at that point.
- 2 Your **Premium access is active immediately**, for 30 days.
- 3 At the end of the 30 days, the subscription starts and the **first payment is charged automatically** — unless you cancelled beforehand.
- 4 You can **cancel at any time** during the trial (from *My account* for Stripe, or from Google Play): in that case, **nothing is charged**.

The date of the first payment is shown on your account

During the trial, the *My account* page clearly states how long the trial runs and **the date on which the first payment will be taken** if you have not cancelled by then.

How to subscribe

PLATFORM	PAYMENT METHOD
Website	Secure payment via Stripe (hosted checkout pages). The subscription is then managed from the Stripe customer portal.
Android app	Payment via Google Play . Management and purchase restoration (new phone, reinstall) go through Google Play.

No banking data at StellarSkyImager

Payment is handled entirely by Stripe or Google Play. **No banking details are stored** on StellarSkyImager's servers. Premium access is unlocked only after confirmation by the payment provider.

10. Frequently asked questions

What time is the evening report ready?

The computation happens once a day, around **2 pm local time at your site**. Before that, Sentinel indicates that the evaluation is not yet available.

Why does my project show “No site”?

The project has no observing site attached, so Sentinel cannot compute visibility. Open the project and associate a site with it (§3).

What does “Nautical night only” mean?

At certain times of year (around the summer solstice, at high latitudes), the sky never becomes fully dark. Sentinel then reports a *nautical night* — partial darkness — instead of a full astronomical night.

The calendar shows green beyond a week: is that reliable?

Beyond the first nights, the weather is **not** modelled. The cells show an *astronomical potential* (Moon, altitude, window) and are marked as such — this is not a confirmed weather verdict.

Why is Sentinel paid?

The Planner stays completely free. Sentinel, on the other hand, keeps watch every night in your place, and this relies on paid subscriptions and services needed to run it — professional weather data, servers running around the clock, delivery of alerts by e-mail and push notifications. The Premium subscription covers these running costs and keeps the service alive over time (see §9).

I go from Premium back to Free: what happens to my projects?

Nothing is deleted. Beyond the free limit (1 active project), the surplus projects are **frozen** and stop being evaluated, but remain viewable and can be reactivated (\$6).

Can I use Sentinel on the web and on Android?

Yes. One account, with automatic synchronisation of your sites, equipment and projects between the two.

SSI Sentinel user guide — English. Screenshots and screens may change with updates to the service. For using the Planner (finding targets, framing, horizon, equipment, exports), refer to the [Planner guide](#).