

How to create a Target List

Optional and required columns:

- **User** (Highly recommended)
- **Target** (Highly recommended)
- **RA0** (Mandatory, either in degrees or HMS (*Format: X.XX or XX:XX:XX*))
- **Decl0** (Mandatory, either in degrees or DMS (*Format: X.XX or XX:XX:XX*))
- **Nights** (Optional)
- **Cycles** (Optional, will take precedence over default setting of 1 in Nina)
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- **Airmass** (Optional, maximum airmass to image at (*Unit: air masses*))
- **MinAltitude** (Optional, entered value takes precedence over default setting of 50 (degrees altitude) in Nina (*Unit: degrees*))
- **GetRef** (Optional, will not use a reference star for a target if "0" is specified in this column (*Unit: 1 or 0*))
- **ExposureTime** (Optional. See [How to use the speckle exposure time calculation](#) (*Unit: seconds*))
- **NoCalculation** (Optional, if a 1 is entered in this column, the calculation will not be used. If this column doesn't exist, the calculation will be used. See [How to use the speckle exposure time calculation](#) (*Unit: 1 or 0*))
- **Exposures** (Highly recommended, takes precedence over default setting of 500 exposures in Nina)
- **Magnitude ('PMag' or 'Gmag0')** (Highly recommended, used for exposure time calculation and filtering in NINA. (*Unit: mag*))
- **Secondary magnitude ('SMag' or 'Gmag1')** (Highly recommended, used for exposure time calculation and filtering in NINA (*Unit: mag*))
- **Separation** (Highly recommended, used for filtering when loading targets in Nina, (*Unit: arcseconds*))
- **Template** (Optional, will use a non-default template in NINA if one was created for specific requirements).
- **Filter** (Recommended, will take precedence over default setting of Sloan R / R in Nina. Set to "-" to make sure not to change filters in the template. Useful when using a template with multiple filters. See [Telescope Information - PW1000](#) or [Telescope Information - CDK24](#))

Basically, you can export the GDS targets preferably with WDS data and there's a couple of extra columns at the start:

User Target Priority Nights Cycles Filter Exposures ExposureTime

More columns can always be included and would be ignored by NINA (though please don't include special characters). The "highly recommended" columns are still technically optional and can be left out if you'd like.

As for exposure times, any provided value will be used over the calculation and the default. If there's no provided value, the calculation will be used based on the magnitude (in Jan2023),

and if there's neither magnitude or provided value, a default of 0.1s will be used.

Information on the telescopes and filters/filter names is available under ChileTelescopes -> Documentation -> Telescope Documentation

Various Examples:

| User | Target | Filter | ExposureTime | Exposures | Cycles | Nights | RA0 | Decl0 | Gaia Sep | Gmag0 |
|------|------------------|---------|--------------|-----------|--------|--------|----------|------------|----------|-------|
| Leon | Pluto and Charon | Sloan R | 0.2 | 5000 | 1 | 1 | 19:59:40 | - 22:44:49 | 0.3 | 14.3 |
| Leon | Pluto and Charon | Sloan R | 0.4 | 5000 | 1 | 1 | 19:59:41 | - 22:44:50 | 0.3 | 14.3 |

(<https://docs.google.com/spreadsheets/d/13ig3SVtlujr5rN8TIm7EqjTSs2tScPr5RLA4vXFnSw/edit?usp=sharing>)

[illegible]

| User | Target | Ra | Dec | RA0 | Decl0 | Nights | Cycles | Priority | Rotation | Airmass | MinAltitude | GetRef | ExposureTime | Exposures | Magnitude | Separation | Template | Filter | Completed_cycles | Completed_ref_cycles | Completed_nights | Note |
|------|--------------------|-------------|-------------|-------------|-------------|--------|--------|----------|----------|---------|-------------|--------|--------------|-----------|-----------|------------|------------------|--------|------------------|----------------------|------------------|----------------------------------|
| Nick | 14460-2527_SOZ14 | 14:45:59.91 | -25:26:37.1 | 14:45:59.91 | -25:26:37.1 | 2 | 1 | 0 | 0 | 0 | 10 | 1 | 1 | 10 | 5.005 | 8.116 | Speckle Target 1 | | 0 | 0 | 0 | Target cannot be imaged tonight. |
| Nick | 14234+0827_STF1835 | 14:23:22.62 | 08:26:47.7 | 14:23:22.62 | 08:26:47.7 | 2 | 1 | 0 | 0 | 0 | 10 | 1 | 1 | 10 | 5.017 | 6.285 | Speckle Target 1 | | 0 | 0 | 0 | Target cannot be imaged tonight. |
| Nick | 19299- | 19:29: | - | 19:29: | - | 2 | 1 | 0 | 0 | 0 | 10 | 1 | 1 | 10 | 5.164 | 7.438 | Speckl | | 0 | 0 | 0 | Target |

| | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------|-------|----------------|-------|----------------|--|--|--|--|--|--|--|--|--|--|--|------------------|--|--|--|--|--|
| | 2659_ HN119 | 52.21 | 26:59: 08.9 | 52.21 | 26:59: 08.9 | | | | | | | | | | | | e Target 1 | | | | | cannot be image d tonight . |
|--|----------------|-------|----------------|-------|----------------|--|--|--|--|--|--|--|--|--|--|--|------------------|--|--|--|--|--|

(Both at https://docs.google.com/spreadsheets/d/1jc2t3KRA1SI_3gvCIHrvJIUXjYgJ_AX29uENVVv_0/edit?usp=sharing)