Lemur Config Manager – User Guide

Contents:

1. Launch	1
2. Telescope parameters	3
3. OLDAS	3
4. List of TLE	4
5. Prompts and search	5

Lemur Config Manager – User Guide

Lemur Config Manager is a tool in scope of the Lemur package for a useful editing of the user's configuration files.

1. Launch

After Lemur Config Manager launching the initial window appears for starting creation a configuration file for the astronomical frames processing.

X	Lemur Config Manager		_		×
<u>F</u> ile	<u>H</u> elp				
	Search				
	Telescope parameters				
	OLDAS				
- I ~	Intraframe processing				
	Brightness alignment				
	Abnormal pixel				
	Image Detection				
~	dentification				
	Star catalogs				
	Astrometry				
~	Report/Email settings				
	Satellite report				
	Sender settings				
~	' Header settings				
	Header Keys				
	Filter Keys				
		New O	en <u>S</u> ave	S <u>a</u> ve	As
_					

Use "New" or "Open" buttons to create new configuration file or open and edit the already existed one.

lpha Service select	×
Please select a service type:	
○ asteroids	
 satellites 	
<u>O</u> k <u>C</u> ancel	

Select a service type during the new configuration file creation. Selected service type will be used for the further frames processing.

Type «asteroids» means that the purpose of processing is to detect asteroids and comets as objects, which have the visible apparent motion against the background of star images. It is assumed that the frames for processing are received in the diurnal tracking mode and that the frames correspond to (approximately) the same area of the sky.

© INSTALF Limited Liability Company (<u>https://instalf.space</u>)

Type «satellites» means that the purpose of processing is to detect satellites. It is assumed that the frames for processing are received with small or long exposure time, so the star image can be both in the form of strokes as well as dots.

O Search	Telescope parameters		
Telescope parameters		 	-
OLDAS	2 Z00.000 mm Escal length		
Intraframe processing	Pocal length		
Brightness alignment			
Abnormal pixel	? 32.000 deg 🖨 Longitude		
Image Detection			
Chan antala an	2 50 000 deg 🚔 Latitude		
Star catalogs			
Detecting minor planets			
Auto frame stacking	? 101.000 m 🖨 Altitude		
Report/Email settings			
MPC report	Observatory		
Satellite report	? MvObsevatory		
Sender settings			
Recipient MPC settings	Telescope		
Header settings	?		
Header Keys	Myrelescope		
Filter Keys			
	Pilter		
	R		
	? 9.000 micrometer 🜩 Pixel width		
	2 9 000 micrometer Pixel height		
	· · · · · · · · · · · · · · · · · · ·		
	? 1.500 arcsec		
	? Binning from a frame header		

2. Telescope parameters

All available parameters can be easily edited using the appropriate intuitive widgets of the Manager.

If the parameters and location of the optical system are set in the frame's header it is reduce a processing time during the frames identification.

3. OLDAS

Section with OLDAS parameters defines how the processing core groups the frames by series and when to complete the processing. «Series» means the «uniform» group of frames (received with the same filter, at the same night, by the same instrument), on which the moving objects should be detected. In general, a folder that can be specified as a source of frames for processing may contain frames received on different dates, in different filters, from different telescopes - therefore, to sort frames by series, check the appropriate boxes. The ideal option is when the frames are already sorted by subfolders, so the observer can define the content of series.

🗶 Lemur Config Manager	- 0	×
File Help		
₽ Search	OLDAS	
Telescope parameters OLDAS V Intraframe processing Brightness alignment Abnormal pixel	? 0.200 deg Guidance error ? Distribute by date Distribute by coordinates (ra\dec)	
Image Detection V Identification Star catalogs Astrometry Detection catallites	Distribute by object The parameter sets the indication of the distribution of the found frames by the angular coordinates of the frame center. The deviation value is set by the "GuidanceError" parameter. The	
Report/Email settings Satellite report Sender settings Recipient satellite settings	 ? Distribute by filter ? Distribute by coordinates (ra\dec) 	
 Header settings Header Keys Filter Keys List of TLE 	P Distribute by instrument The series is formed	
	Waiting for the last frame Ok ByTime ByCount	
	 3.000 Time waiting coefficient 3 Number of frames 	
Config version: 4.0.0.0 Service: satellites	New Open Save Save As	

4. List of TLE

This section of settings allows saving a satellite catalog in 3le format to a configuration file. Here you can save the entire NORAD catalog (25000+) of objects, but at the same time, the processing core will take a significant amount of time (minutes) to select those satellites that «fall» into the field of view of the frames. In case of working with TLE data, it allows displaying the catalog of satellites in frames.



When a particular service is selected, a part of the settings individual for this service will be available (or not available). For example, if "**satellites**" service is selected the Manager will display the "**List of TLE**" menu, where the appropriate data can be set. Do not forget to press "**Apply**" button before saving the configuration file ()

5. Prompts and search

The quick access to the appropriate parameter is available using the quick search field, which immediately provides the search results ready for editing.

光 Lemur Config Manager File Help		-		×
Eile Help → astro Telescope parameters OLDAS → Intraframe processing Brightness alignment Abnormal pixel Image Detection → Identification Star catalogs Astrometry Detecting satellites	Search results Astrometric catalog TYCHO2 UCAC5 G GAIA2 Astrometry Model			
 Report/Email settings Satellite report Sender settings Recipient satellite settings Header settings Header Keys Filter Keys List of TLE 	?	e	S <u>a</u> ve As	

Use "?" button near each parameter to investigate how this parameter affects during processing. More information is available online at the web site by pressing the appropriate hyperlink.

