Configure Camera Settings - /etc/raspap/camera_options_ZWO.json							
Davtima sattings							
Daytime settings							
Auto-Exposure Brightness	50×	50 - 160. Changes the amount of light in the image. Low value = dark; high value = bright. Only works with auto-exposure.					
Delay	30000×	Delay between daytime images in milliseconds. 1000ms = 1 sec.					
Nightime settings							
Auto-Exposure	No Yes	Activate to enable nightime auto-exposure.					
Max Auto- Exposure	30000	Maximum nightime auto-exposure time in ms (1000ms = 1 sec). Only applies if 'Auto-Exposure' is enabled.					
Manual Exposure	10000	Manual nightime exposure time in ms (1000ms = 1 sec).					
Auto-Exposure Brightness	50 - 160. Changes the amount of light in the image. 100 Low value = dark; high value = bright. Only works with auto-exposure.						
Delay	5000	Delay between nighttime images in milliseconds (1000ms = 1 sec).					
Gain	120 ×	Manually set the gain (light sensitivity). Starts at 0. A high value returns a brighter image but more noise too. Not used for daytime (is 0).					
Binning	2x2 ·	1 = binning OFF (1x1), 2 = 2x2 binning, 4 = 4x4 binning. Check available binning modes for your camera.					
	Both dayti	me and nightime settings					
Image Width	0	Image width in pixels. 0 = max width.					
Image Height	0	Image height in pixels. 0 = max height.					
Gamma	50 [°]	0 to 100. Changes the difference between light and dark areas. A high value increases contrast. <i>Not supported on all</i> <i>camera</i> s.					
Auto White Balance	No Yes	Sets Auto White Balance.					
Red Balance	53.	Red component for the white balance. When using auto white balance, this number is a starting point.					
Blue Balance	90	Blue component for the white balance. When using auto white balance, this number is a starting point.					

Quality	9!	Range for a PNG image: 0-9. Range for a JPG image: 0-100.				
		Higher numbers produce larger, clearer files.				
Flip	No flipping	Select a flipping option if you want to reverse the image along an axis.				
Image overlay settings						
Time	No Yes	Activate to display the time on the overlay. Combine with Text X and Text Y for placement of ALL overlay options.				
Time Format	%d.%m.%Y %H	96 Determines the format of the displayed time. Run 'man 3 strftime' to see the options.				
Show Temperature	No Yes	Activate to display the camera sensor temperature on the overlay.				
Temperature Units	Celcius	Unit(s) to display temperature in.				
Show Exposure	No Yes	Activate to display the exposure length on the overlay. If Auto-Exposure is set, '(auto)' will appear after the exposure time.				
Show Gain	No Yes	Activate to display the camera gain on the overlay. If Auto-Gain is set, '(auto)' will appear after the gain value.				
Show Brightness	No Yes	Activate to display the Brightness value on the overlay.				
Text Overlay	MucheIndorf Ob	Text that appears below the optional time with the same color and size.				
Extra Text File		Extra Text File (enter full path to the file). Leave blank if NOT using an extra text file.				
Max Age Of Extra	600	The maximum age of the extra text file in seconds. After this time the contents of the file will no longer be displayed. Set to 0 to always display.				
Line Height	6	The line height of the text in pixels. If increasing the font size causes the text to overlap then increase this value.				
Text X	1	Text placement horizontal from LEFT in pixels.				
Text Y	8	Text placement vertical from TOP in pixels.				
Font Name	Simplex	Font name for the text overlay. Used for both large and small text.				
Font Color	255 255 2	Blue, Green, and Red (BGR) values of text color. 0 to 255 for each channel. NOTE: When using RAW 16 only the first two values are used i.e., 255 128 0.				
Small Font Color	002	BGR value of text color. 0 to 255 for each channel. NOTE: When using RAW 16 only the first two values are used i.e., 255 128 0.				
Font Smoothness	Antialiased	Choose between smooth font lines (antialiased), 8-pixel, or 4 pixel connectivity (harder edges).				
Font Size	1	Text Font Size. The time, if displayed, will use this size; other text displayed will be about 20% smaller.				

Font Weight	1		Text Font Line Thickness.			
Use Outline Font	No	Yes	Adds a black outline to the text overlay to improve contrast.			
Other settings						
Notification Images	No	Yes	Activate to display notification images, e.g., 'Camera is off during the day'.			
Cooling	No	Yes	Activate to use cooling (works only on cooled cameras).			
Target Temp.		0	Sensor's target temperature <i>when cooler is enabled</i> (degrees Celsius).			
Latitude	53.84N		Latitude of the camera. Needs a number (0 to 90) and direction (N or S). Ex: 60.7N.			
Longitude	9.56E		Longitude of the camera. Needs a number (0 to 180) and direction (E or W). Ex: 135.05W.			
Angle	-6		Altitude of the Sun in degrees relative to the horizon at which to switch between day and night.			
Dark Frame	No	Yes	Activate to capture dark frames. This mode hides text and time overlays. Will continually take dark frames until restarted.			
Locale	de_DE.UTF-8		Your locale, used to determine what the thousands and decimal separators are. Type 'locale' at a command prompt to see your choices (use the LC_NUMERIC entry).			
Debug Level	1		Debug level, 0 is lowest level.			
Save changes Reset to default values Show advanced options Restart Allsky after saving changes?						