Table 1: Table of the parameters that can be controlled in the **Rassine_config.py** file.

Parameters	Description	Automatic	Value
spectrum_name	Name of the spectrum file to reduce. The file can be either a pickle, csv, or txt. For pickle and csv the default column name must be 'wave' and 'flux' but this name can be changed by the column_wave and column_flux parameters. For fits file, use the Rassine_trigger.py file with preprocessing button.	No	string
output_dir	Output directory where RASSINE products are saved. Note that is if the spectrum name is entered in sys mode, the ourput file is by default at the same location than the input file except if an output directory is also specified in sys mode.	Yes	string
synthetic_spectrum	To allow the reduction of synthetic spectrum.	No	True/False
anchor_file	Name of the RASSINE output file that can be used to fix the parameters value. Anchor file will bypass the parameters value entered in sys mode and from the config file.	No	string
column_wave	Name of the column containing the wavelength grid.	No	string
column_flux	Name of the column containing the flux values.	No	string
float_precision	Float precision of the wavelength grid.	No	string
par_stretching	Shrinking of the flux axis compared to the wavelength axis. The format of the automatic mode is **'auto_x'** with x a 1 decimal positive float number. x = 0.0 means high tension, whereas x = 1.0 mean low tension. You can also enter a float value by yourself (usually between 2 and 30).	Yes	string or float
par_vicinity	Size of the window in wavelength indices used to define a local maxima.	No	integer
par_smoothing_box	Size of the window in wavelength indiced used to smooth the spectrum. Put **'auto'** to use the Fourier filtering.	Yes	string or integer
par_smoothing_kernel	To use the automatic mode which apply a Fourier filtering use **'erf' or 'hat_exp'** kernel and 'auto' in par_smoothing_box. Else, use 'rectangular', 'gaussian', 'savgol'. Developers advise the **'savgol'** kernel except if the user is dealing with spectra spanning low and high SNR range.	Yes	string
par_fwhm	FWHM of the CCF of the spectrum. The user can let **'auto'** to let RASSINE determine this value by itself.	Yes	string or float
CCF_mask	CCF mask used to determine the FWHM. RASSINE construct its own mask by default. The user can specify its own mask which should be placed in the CCF_MASK directory.	Yes	string
RV_sys	RV systemic of the star in km/s used to shift the CCF mask. Since RASSINE construct directly the mask with the spectrum, the default value is 0.	Yes	float
mask_telluric	A list of borders region to exclude of the CCF. By default the region where determine for spectrograph in the visible.	No	list of list
par_R	Minimum radius of the alpha shape scaled to the bluest part of the spectrum in $\AA$. Put **'auto'** to let RASSINE fix the value.	Yes	string or float
par_Rmax	Maximum radius of the alpha shape scaled to the bluest part of the spectrum[1]in $\AA$. Put **'auto'** to let RASSINE fix the value.	Yes	string or float

Table 2: Table of the parameters that can be controlled in the **Rassine_config.py** file.

Parameters	Description	Automatic	Value
par_reg_nu	Penalty law of the alpha shape. Enter **'poly_nu'** with nu a positive 1 decimal float number for the polynomial law, or **'sigmoid_nu_mu'** with nu, mu a positive 1 decimal float number.	No	string
denoising_dist	Window in wavelength indices used to determine the anchor flux value by averaging around the local maximum. Only necessary for low SNR spectra.	No	integer
count_cut_lim	Number of times borders continuum are flatten (2 or 3 give usually good values).	No	integer
count_out_lim	Number of times outliers rejection algorithm is performed by derivative criterion. One iteration rejected the 0.5% of the anchor points with highest derivative.	No	integer
interpol	'linear' or 'cubic', the shape of the interpolation used in the graphical interface.	No	string
feedback	Trigger the interaction with the Sphinx ans the graphical feedback interface.	No	True/False
only_print_end	Suppress the informations printed except the last line when RASSINE has finished.	No	True/False
plot_end	Display the last plot	No	True/False
save_last_plot	Save the last plot	No	True/False
outputs_interpolation_saved	Either 'linear', 'cubic' or 'all' to save some specific continuum.	No	string
outputs_denoising_saved	Either 'undenoised','denoised','all' to save some specific continuum	No	string
light_version	Only save the primary output to produce a lighter output file.	No	True/False
speedup	Let 1 for the moment since need investigations.	No	integer

Table 3: Table of the parameters that can be controlled in the **Rassine_trigger.py** file.

Parameters	Description	Value
instrument	The instrument from which spectra are taken. Either 'HARPS','HARPN','CORALIE' or 'ESPRESSO' for the moment. Will be used during the preprocessing to format the fits file.	string
dir_spec_timeseries	Directory path of the spectra timeseries	string
nthreads_preprocess	Number of multiprocessed in preprocessing	integer
nthreads_matching	Number of multiprocessed in matching	integer
nthreads_rassine	Number of multiprocessed in rassine	integer
rv_timeseries	give the systemic RV of the star	float
dlambda	Value of the dlambda grid. If all the spectra come from the same instrument and s1d are already on a equidistant grid, RASSINE will determine automatically the dlambda. In the opposite case fix by yourself the dlambda step in $\mathring{A}$ of the wavelength grid.	float
bin_length_stack	Length in days of the window used to stack spectra (nightly stacking = 1). Spectra are stacked based on their jdb value obtained during the preprocessing.	float
dbin	Offset in days for the binning of the stacking (0.5 for daily stack, 0 for nightly stack).	
counter_stack	Define the first index used in tthe Stacked spectra name.	integer
make_master	To produce a master spectrum by stacking all spectra together. Should be True except if your directory contains spectra obtained with different instrument, or contains different stars.	True/False

Table 4: Table of the parameters that can be controlled in the **Rassine_functions.py** file.

Parameters	Description	Automatic	Value
protocol_pickle	Fix the protocol version of the pickle output file. By default in 'auto' the protocol is the same than the python version on which you are launching RASSINE.	Yes	string of float
name_voice	Choose the gender voice of RASSINE. Victoria or Daniel are available.	No	int