

# SolStretchPro - Quick User Guide

## SolStretchPro - Quick User Guide

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This application enhances rock art and sediment stratigraphy images using decorrelation stretch and advanced color processing.

Below you'll find a brief explanation of each control and recommended usage.

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### Main Controls

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#### Open Image

Load a JPG or TIFF image to process.

#### Save Image

Save the processed image as JPG or TIFF.

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### Background Subtraction

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#### Blur Sigma

Controls the amount of Gaussian blur applied for background subtraction.

- Higher values smooth the background more aggressively.
- Typical values: 15-25.

#### Reset Background

Resets the Blur Sigma slider to its default value.

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### PCA Stretch (CIELAB)

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#### Low Percentile (%)

Sets the lower percentile for PCA contrast stretching.

- Lower values increase the amount of dark pixels enhanced.

#### High Percentile (%)

Sets the upper percentile for PCA contrast stretching.

- Higher values reduce saturation in the brightest pixels.

#### Reset Percentiles

Resets both percentile sliders to their default values.

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### CLAHE Settings

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### CLAHE Clip 0.1

Sets the clip limit for the CLAHE algorithm (Contrast Limited Adaptive Histogram Equalization).

- Higher values enhance local contrast more strongly.

### Tile Grid Size

Selects the grid size for CLAHE.

- Smaller grids enhance finer details.
- Options: 44, 88 (recommended), 1616.

### Reset CLAHE

Restores CLAHE settings to their defaults.

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## Gamma Correction

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### Gamma 0.01

Adjusts the gamma correction factor.

- Values <1 brighten shadows, >1 darken shadows.
- Default: 1.0

### Reset Gamma

Resets gamma to the default value.

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## Brightness / Contrast

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### Brightness

Shifts the overall image brightness.

- Positive values brighten, negative values darken.

### Contrast 0.01

Changes the difference between light and dark tones.

- Higher values increase contrast.
- Default: 1.0 (100).

### Reset B/C

Resets brightness and contrast to default values.

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## RGB Channel Gains

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Red 0.01, Green 0.01, Blue 0.01

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Individual multipliers for each RGB channel.

- Increase or decrease each color component.
- Useful to correct color casts or highlight specific pigment tones.

Reset RGB

Restores all RGB gains to their default values.

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### Image Previews

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Original Image

Shows the loaded image with no processing.

Processed Image

Shows the real-time enhanced image as you adjust controls.

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### Recommended Workflow

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- 1. Open an image (JPG or TIFF).**
- 2. Adjust Blur Sigma for background subtraction.**
- 3. Set PCA percentiles to balance contrast.**
- 4. Fine-tune local contrast using CLAHE controls.**
- 5. Optionally adjust gamma, brightness, or contrast.**
- 6. Tweak individual color channels if needed.**
- 7. Save your enhanced image.**

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If you need further help, consult the online documentation or contact the developer.

### ### Opening SolStretch Pro on macOS

If you see a warning like “SolStretch Pro 1.0.app can't be opened because it is from an unidentified developer”:

1. Right-click (secondary click) the app and choose **\*\*Open\*\***.
2. On the warning dialog, choose **\*\*Open\*\*** again.
3. The app will now be trusted on your system.

Alternatively, after the warning, go to **\*\*System Preferences > Security & Privacy\*\*** and click **\*\*Open Anyway\*\***.

This is required for all apps not signed with an official Apple Developer ID.