

AstroImage Structure Enhancement PRO

Advanced Structural Depth Enhancement for Astrophotography

Overview

AstroImage Structure Enhancement PRO (AISE PRO) is a dedicated astrophotography enhancement tool designed to improve the perception of spatial structure, local depth, and fine detail in astronomical images.

Unlike traditional sharpening tools, AISE PRO uses a multi-directional structural enhancement engine optimized specifically for astrophotography objects such as:

- Nebulae
- Galaxies
- Star Clusters

The goal is not aggressive sharpening, but improved structural separation and dimensional rendering while preserving a natural astrophotography appearance.

Main Features



Structural Depth Enhancement Engine

AISE PRO uses a directional structure extraction workflow to enhance:

- Filamentary nebula structures
 - Dust lanes
 - Fine local contrast
 - Spatial separation of structures
 - Dimensional appearance of astrophotography details
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Three Enhancement Modes

Nebula Mode

Optimized for:

- Emission nebulae
- Dark nebulae
- Molecular clouds
- Filamentary structures

Produces stronger structural depth and spatial enhancement.

Galaxy Mode

Optimized for:

- Spiral galaxies
- Dust lanes
- Fine galactic structures
- More natural enhancement rendering

Produces softer and more controlled structural enhancement.

Cluster Mode

Optimized for:

- Star clusters
- Dense stellar fields
- High-frequency star detail

Uses stabilized enhancement to reduce harsh artifacts and preserve star appearance.

Workflow

Recommended Processing Order

For best results:

1. Stretch image first
2. Perform noise reduction if needed
3. Apply AISE PRO
4. Fine tune saturation and contrast afterwards AISE PRO generally works best on:

- Final or near-final processed images
 - Starless images
 - Masked nebula processing
 - Selective ROI enhancement
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User Interface

Detail Scale

Controls the structural extraction scale.

Lower values:

- finer detail
- softer enhancement

Higher values:

- larger structures
 - stronger depth rendering
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Strength

Controls enhancement intensity.

Recommended starting values:

- 0.30 – 0.50 for galaxies
 - 0.40 – 0.70 for nebulae
 - 0.20 – 0.40 for clusters
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ROI (Region Of Interest)

AISE PRO supports selective enhancement using ROI processing.

This allows enhancement only on selected image regions.

ROI Creation

Rectangle ROI

1. Select "Rect"
 2. Hold SHIFT
 3. Drag with LEFT MOUSE BUTTON
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Ellipse ROI

1. Select "Ellipse"
 2. Hold SHIFT
 3. Drag with LEFT MOUSE BUTTON
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ROI Movement

Click and drag inside the ROI to reposition it.

Remove ROI

Press:

ESC

Zoom & Navigation

Keyboard Shortcuts

Key	Action
+	Zoom In
-	Zoom Out
0	Reset / Fit View
O	Toggle Original View
A	Apply Processing
S	Save Image
ESC	Remove ROI

Mouse Controls

Action	Function
Mouse Drag	Pan View
SHIFT + Drag	Create ROI
Mouse Wheel	Zoom

Applying Processing

Preview

Processing is shown in real time in preview mode.

This allows fast experimentation before applying the enhancement permanently.

Apply Button

The APPLY button permanently applies the current settings to the image.

Original View Toggle

Press:

☐

or use the TOGGLE button to compare:

- Original image
 - Enhanced image in real time.
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Save System

AISE PRO supports:

- PNG
- JPG

Processed images are automatically proposed with:

`_originalname_AISET`

for easier workflow integration.

Recommended Usage Tips

Nebulae

Best results are often achieved by:

- Processing only the nebula using ROI
 - Combining with starless workflows
 - Using moderate Strength values
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Galaxies

Lower Detail Scale values generally produce more natural galaxy rendering.

Clusters

Use conservative Strength settings to preserve natural stellar appearance.

Performance Notes

AISE PRO is optimized for:

- Fast preview rendering
 - Responsive workflow
 - Large image handling
 - Interactive experimentation
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Licensed Version


The licensed version enables:

- Image saving
- Personalized licensing
- Unified license system across the AstrolImage Suite Licensed version:

24€

Licensing

If you enjoy AISE PRO and would like to support development:

 Contact: astro@mdci.ro

Please include:

- Your preferred license name
- PayPal donation confirmation to dvuescu@gmail.com or ldvuescu@gmail.com

You will receive a personalized licensed version.

About

AstroImage Structure Enhancement PRO Part of the AstroImage Suite

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