# RadExPro 2023.4 release notes

Happy Holidays and All the Best in the New Year 2024!

Welcome to the last **RadExPro** release of the year -- **RadExPro 2023.4** !

The main improvements are as follows:

- We have enhanced the ***diffraction imaging*** capabilities of RadExPro. Diffractions in seismic data often indicate local subsurface heterogeneities, including boulders, small gas pockets, and faults, which are potential risk factors for offshore construction, such as windfarm installation. The imaging of the diffracted wavefield proves valuable in risk assessment scenarios.

   To address this, we have refined the functionality of the **Structural Smoothing** module, optimizing it for the initial separation of reflection-diffraction wavefields—a crucial first step in diffraction imaging. Our enhancements include the addition of a **sinc interpolation** algorithm, improving the accuracy of reflection recovery and consequently enhancing the separation of diffractions. Additionally, we've introduced a new output type, **'Difference**,' enabling the direct output of the diffracted wavefield into the flow for a more streamlined analysis.
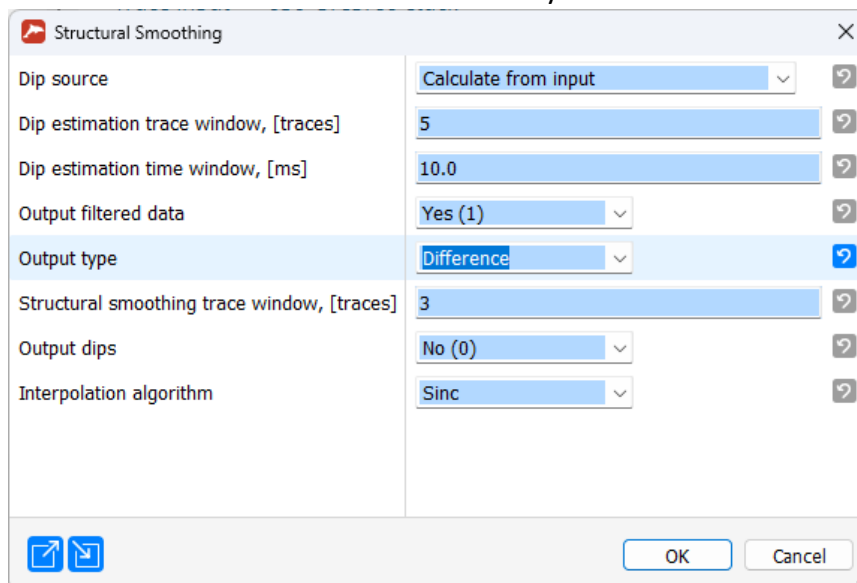
You can learn more about diffraction imaging in RadExPro by visiting our dedicated web page: https://radexpro.com/scope/diffraction-imaging/

For a more in-depth understanding, consider delving into our newly added Tutorial on Diffraction Imaging in RadExPro, accessible here: https://radexpro.com/tutorials/#diffraction

- We have enhanced the **VSP Geometry** module by introducing the support for multiple source points and the ability to load their positioning information from an ASCII file. This improvement facilitates the assignment of geometry and processing of VSP data acquired with multiple source positions, such as *walk-above*, *walkaway*, and *3D VSP*.
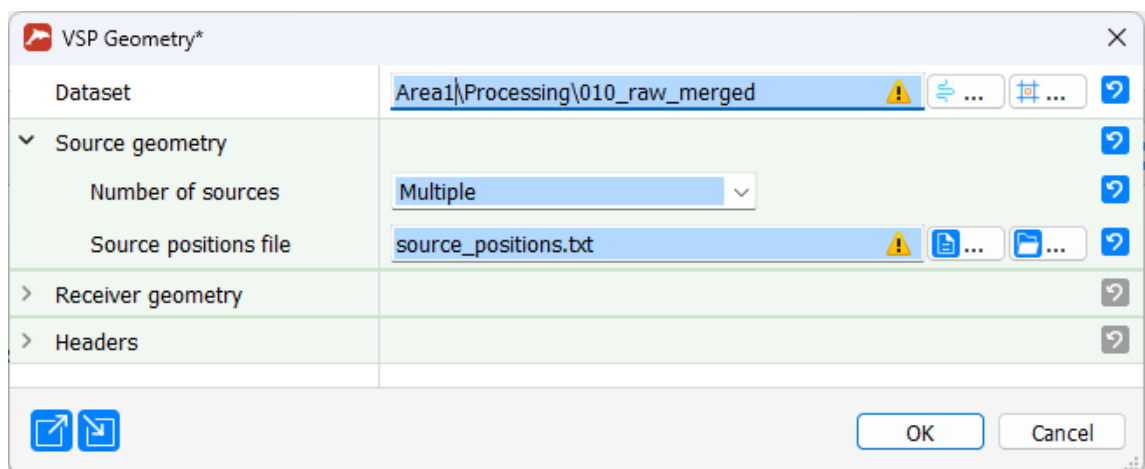
- We have added *Median* and *Alpha Trimmed Mean* computations to the **Ensemble Header Statistics** module.

- We have migrated **VSP Geometry**, **Ensemble Header Statistics** and **SSAA** to the universal parameter style, providing comprehensive support for replicas and incorporating standard export/import functionality.

- We have incorporated replica support for certain parameters in the Tides Import module. Now, the input dataset, ASCII tide file, and date can be retrieved from a replica table.

- Now, in the **Geometry Spreadsheet** you can *unassign* previously assigned header fields.

- The **Python Proxy** module no longer confuses Python decorators "@" with RadExPro replicas. You can still utilize replicas in the Python Proxy scripts, employing the full syntax, such as {@variable}.

The following issues were fixed:

o   SRME Prediction crashes if not enough memory -- **FIXED!**
o   OGP P1-11 Import does not read source coordinates if the depths are not available --
    FIXED!

As always, if your licenses are under maintenance, feel free to contact us at
support@radexpro.com to receive your complimentary update.

Season Greetings from Georgia!

We wish you a peaceful and prosperous New Year 2024!

Yours,

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