

## RadExPro 2022.1 release notes

We are happy to announce our first release of the year -RadExPro 2022.1!
The main novels are as following:

- We have improved Pre-/Post-Stack Kirchhoff Time Migration module:
- Now you can use replicas for input and output datasets as well as for velocities and 3D output bin limits.
- Now you can migrate several input datasets altogether into one output.
- And perhaps the most important improvement - in 3D mode now you can correctly add new data to an existing migrated volume. This, on board a seismic vessel or in the field, would save you a lot of time. Now you can quickly migrate new data by small portions as soon as they arrive, instead of waiting until the end of the acquisition campaign to run time-consuming migration of the whole volume at once.


Note, that in this mode neither backward resampling nor shaping filter are applied to the output result. Instead, you can use ReSample module and the new Shaping filter for migration option of the Trace Math Transforms module in a separate flow.

```
Trace Math Transforms
\(C\) Amplitude spectrum
\(C\) Phase spectrum \(\Gamma\) Unwrap phase spectrum
\(C\) Autocorrelation \(\Gamma\) shift zero to the center of the trace
\(C\) Hilbert transform
\(C\) Reflection strength
\(C\) Instantaneous phase
\(C\) Instantaneous frequency \(\Gamma\) apply median fiter to result \(\begin{aligned} & 3 \\ & \text { samples } \\ & \Gamma\end{aligned}\)
\(C\) Phase rotation (degrees) 0
\(C \log 0\)
\(C \operatorname{Exp} 0\)
\(C \mathrm{~dB}\)
\(C\) Antiderivative
```

C Shaping filter for migration $C 2 \mathrm{D} / \odot \mathrm{BD}$ Apply / C Unapply

| OK |
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- We have added replica support to the following modules:
- Swell Filter (Averaging base, Min/Max rejection)
- Header Averager (Windows lengths, Alpha trimed \%)
- SEG-Y Input (Trace length, Sample interval)
- Trace -> Velocity Table Transfer
- Velovity Table -> Trace Transfer

We remind you that all edit fields supporting replicas have light blue background so you can easily recognize them.

- Now you can import a replica table from an ASCII table file:

- Now, in the SEG-Y Output module, beside replica variables you can also use trace headers when defining output file name. An example of the syntax is below:
\{\$ffid, <format>\} - FFID header value of the first trace;
\{\$iline_no, min, <format>\} - the minimum of the ILINE_NO values among all traces;
\{\$iline_no, max, <format>\}- the maximum of the ILINE_NO values among all traces;
In these examples <format> is optional and is the same as for replica variables.
- We have added more headers read by default by PRODML HDF5 Input module.
- Some issues were fixed:
- Saving AGC coefficients is very slow in the projects with the new DB -- FIXED!
- Interruption of a replicated flow does not work - FIXED!
- Batch mode has stopped working - FIXED!
- Interactive Velocity Analysis saves wrong path of the precomputed dataset FIXED!
- Random numbers appear by default in some parameter edit fields of 3D Regularization - FIXED!
- Amplitude Correction incorrect logging - FIXED!

As always, if you are on maintenance, please contact us at support@radexpro.com and get your free update.

