

# SpiSOP update 2.3.8.3

New standalone SpiSOP version 2.3.8.3 is now online

- Improved browser for sleep scoring:
    - Quickstart to load EDF or Brainvision files immediately without setup of SpiSOP
    - Automated sleep scoring service (beta support) from Z3Score (based on EEG and EOG activity), also see their introduction video or contact them on [testdrive@z3score.com](mailto:testdrive@z3score.com)
    - ...and “skip high confidence epochs” while (re-)scoring the hypnogram.
    - Comparison of up to 4 hypnograms that were (automatically) scored
    - Supporting >100 channels to be viewed better
    - etc.
  - Added new Rapid Eye-movement (REM) detection (function name `remsMaAd`) with great help from Marek Adamczyk in using his code and methodology. be aware, it is not extensively tested in SpiSOP yet.
  - Output is now created automatically in respectively named subfolders ordered per analysis/run name and function name.
  - Many other small feature additions and bug fixes, e.g fixing of reading EDF that have inversed physical maximum and minimum (formerly this created errors or wrong values/analyses).
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# SpiSOP update 2.3.4

New standalone SpiSOP version 2.3.4 is now online

It has improved Browser for sleep scoring now with power spectrum and time frequency plot, as well as slow oscillation filter aid (for noisy signals), minor bug fixes.

Co-occurrence analysis can now exclude duplicates and duplicate pair matches (according to columns identifying identity of the events) as a first step in delay/phase relationship/traveling analysis of events.

A release of standalone mac version will follow soon.

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## **SpiSOP update 2.3.3**

You can now download the latest version of **SpiSOP beta 2.3.3** and get started.

New version includes:

inclusion of new thresholding features for spindles (mean or standard deviation of filtered signal or envelope is now choosable), This allows for replication of more spindle algorithms (e.g. Ferrarelli et al. 2007); dummy eeg for browser when opening, minor bugfixes

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## **SpiSOP update 2.3.2**

You can now download the latest version of **SpiSOP beta 2.3.2** and get started.

New version includes:

More bugfixes with the Browser function for scoring (event mapping to channels, zoom vs marking function, marking resetting), ...

as well as new features in the Browser with displaying of read in events in the Hypnogram and an adjustable Autosave function for exported or imported hypnograms (so in a crash not too much is lost).

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## **SpiSOP update 2.3.1**

You can now download the latest version of **SpiSOP beta 2.3.1** and get started.

New version includes:

Bugfixes with the Browser function for scoring, export messages and help for shortcuts.

Additional result export for slow oscillation detection (negative up-to-downstate slope added, distinct from former down-to-upstate slope)

Improvement power(-density) estimation, the window function can now be adjusted to be broader (0 to 100%) and thus can take higher spectral resolution by discarding less data.

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# **SpiSOP beta 2.3 standalone now available for download**

You can now download the latest version of SpiSOP beta 2.3 and get started.

SpiSOP is available for 64bit machines running Windows, Mac and Linux.