

15th Anniversary!!

Skyline 2024

State of the Project
16 years after inception

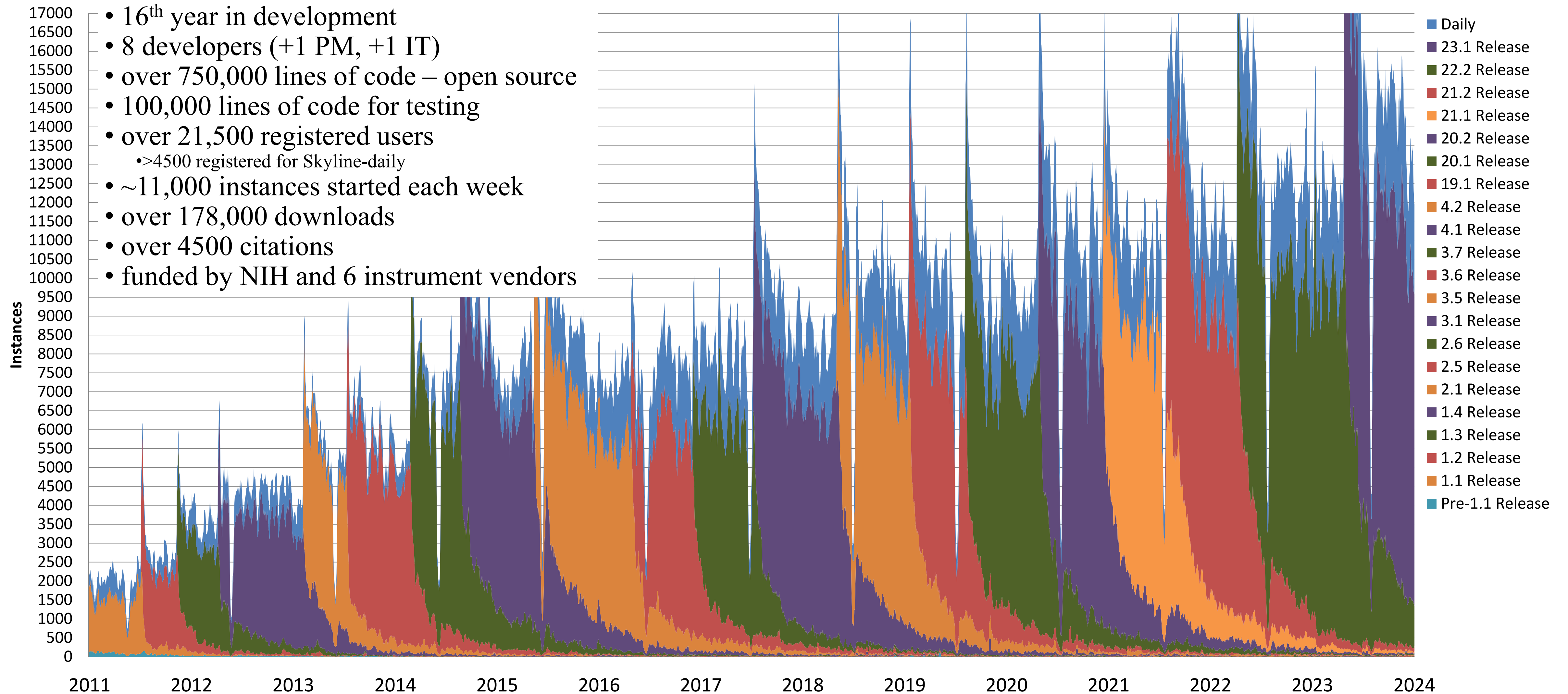
Brendan MacLean



UNIVERSITY *of*
WASHINGTON

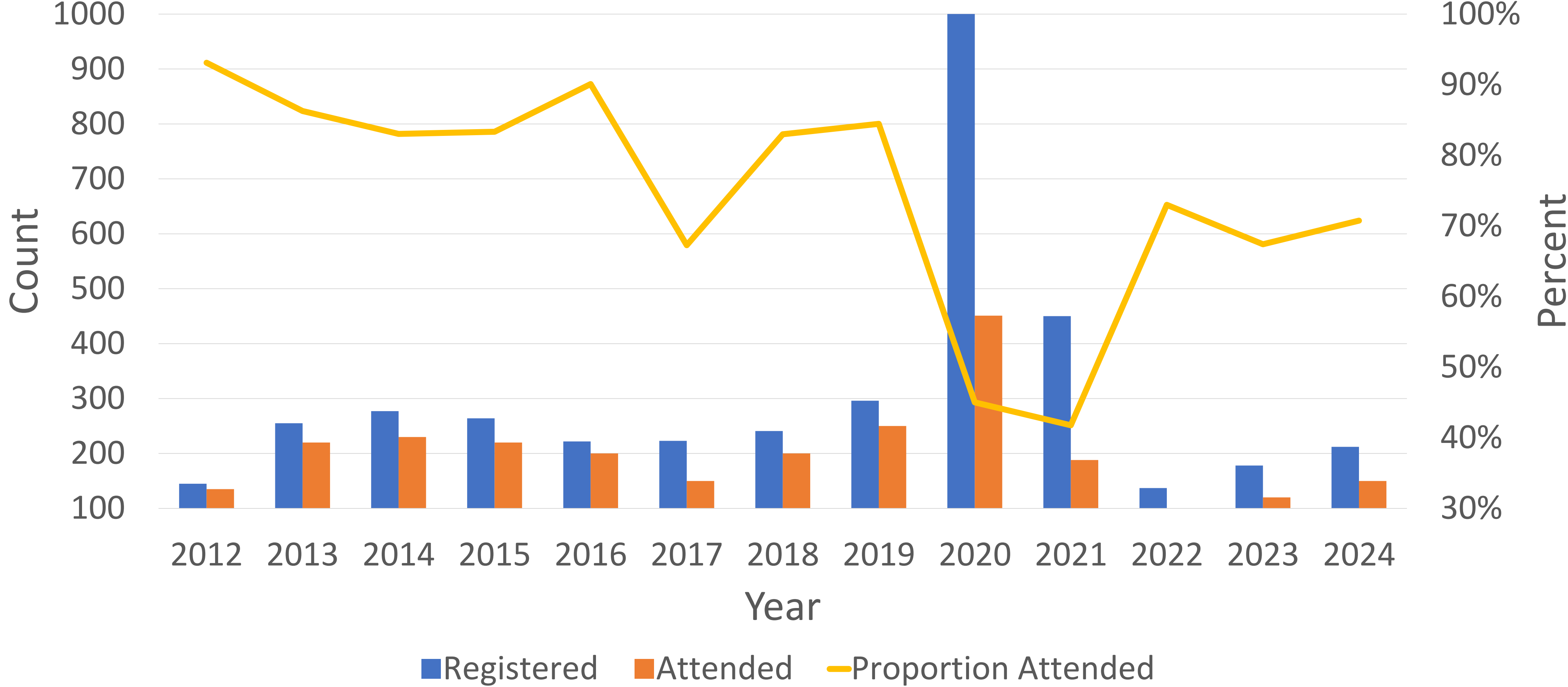


Skyline Project Overview



Meeting Attendance by Year

Skyline UGM Attendees by Year



2023 Teaching Targeted Proteomics In-Person

- 2-ASMS, Minneapolis – June 4&5, 2022 (25)
- 5-U. of Wa., Seattle – June 27, 2022 - July 1 (25)
- 5-PRBB, Barcelona – November 13-18, 2022 (25)
- 4-ISAS, Dortmund – March 20-24, 2023 (35)
- 2-ASMS, Houston – June 3&4, 2023 (43)
- 5-U. of Wa., Seattle – July 10-14, 2023 (35)
- 5-PRBB, Bracelona – November 12-17, 2023 (25)

And Online!!

- 2022 UW Skyline Online – October 10-21
- 2023 UW Skyline Online – October 10-27

2024 Teaching Targeted Proteomics In-Person

- 2-II-Bombay, Mumbai – February 17&18 (30)
- 4-ISAS, Dortmund – March 4-7, 2024 (35)
- 3-May Institute, Boston – April 29 – May 1, 2024 (35)
- 2-ASMS, Anaheim – June 1&2, 2024 (33)
- 5-U. of Wa., Seattle – July 8-12, 2024 (26)
- 1-Warwick, UK – September 4, 2024
- 5-PRBB, Bracelona – November 17-22, 2024 (25)

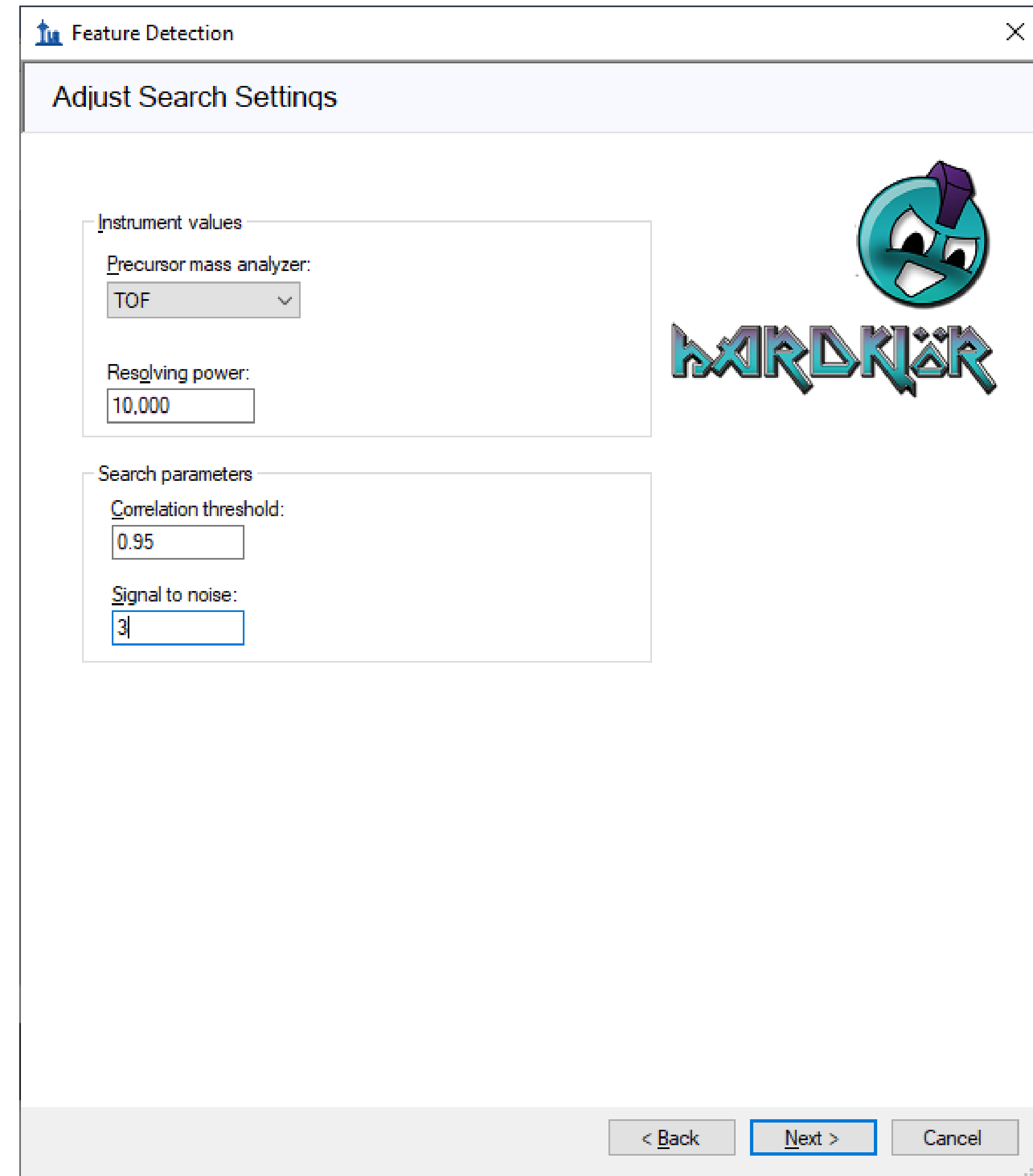
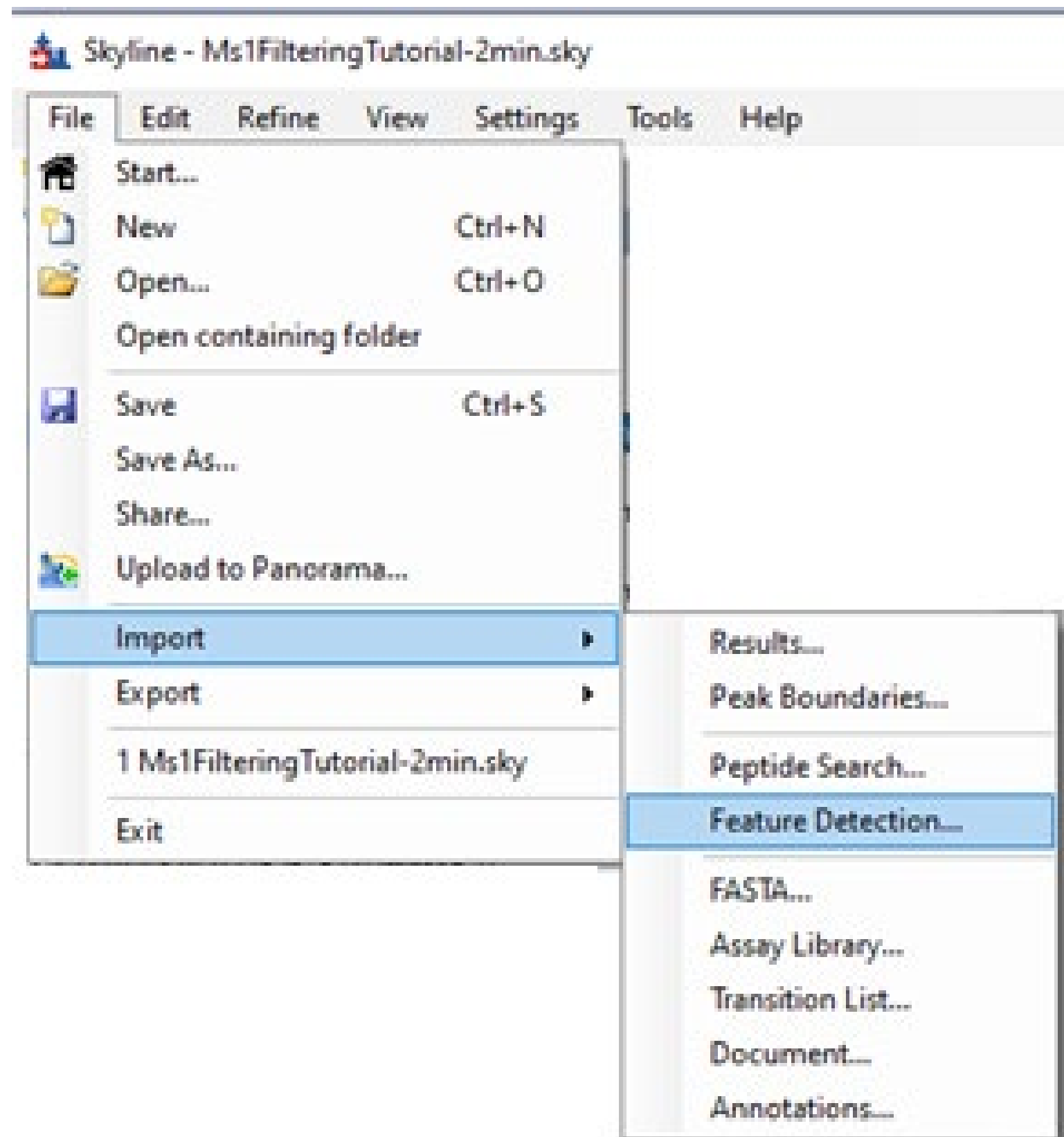
And Online!!

- 2024 UW Skyline Online – October

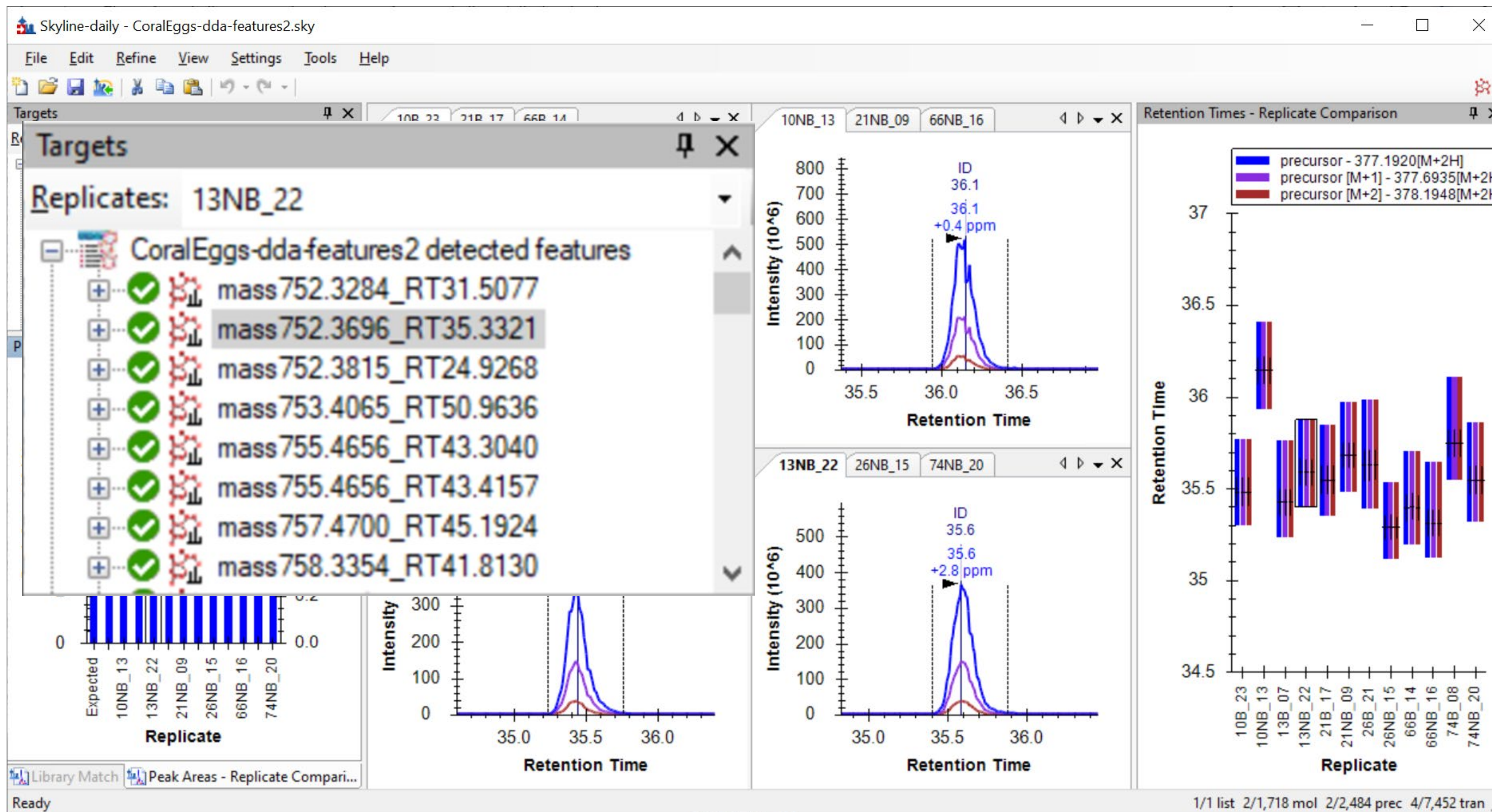
Skyline Achievements

- Integration with FragPipe, DIA-NN, MS Fragger, EncyclopeDIA
- Feature finding in MS1 spectra
- Protein abundance plot
- Gene-level parsimony
- New instrument support for Thermo Stellar and Astral
- Updated support for Agilent, SCIEX, Shimadzu, Waters
- Performance improvements
- LOTS of smaller improvements and fixes

Feature Detection in MS1 Spectra

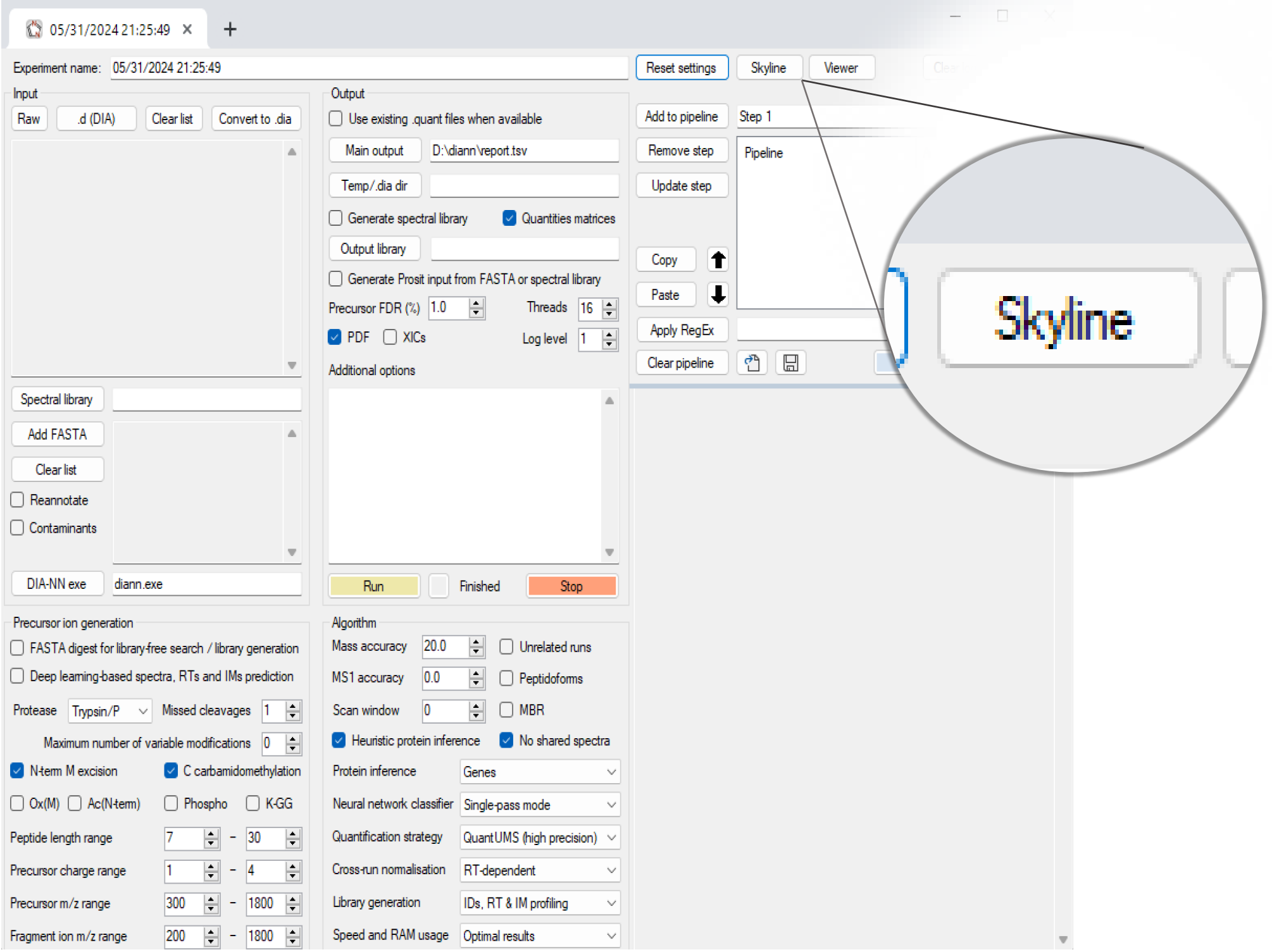


Feature Detection in MS1 Spectra

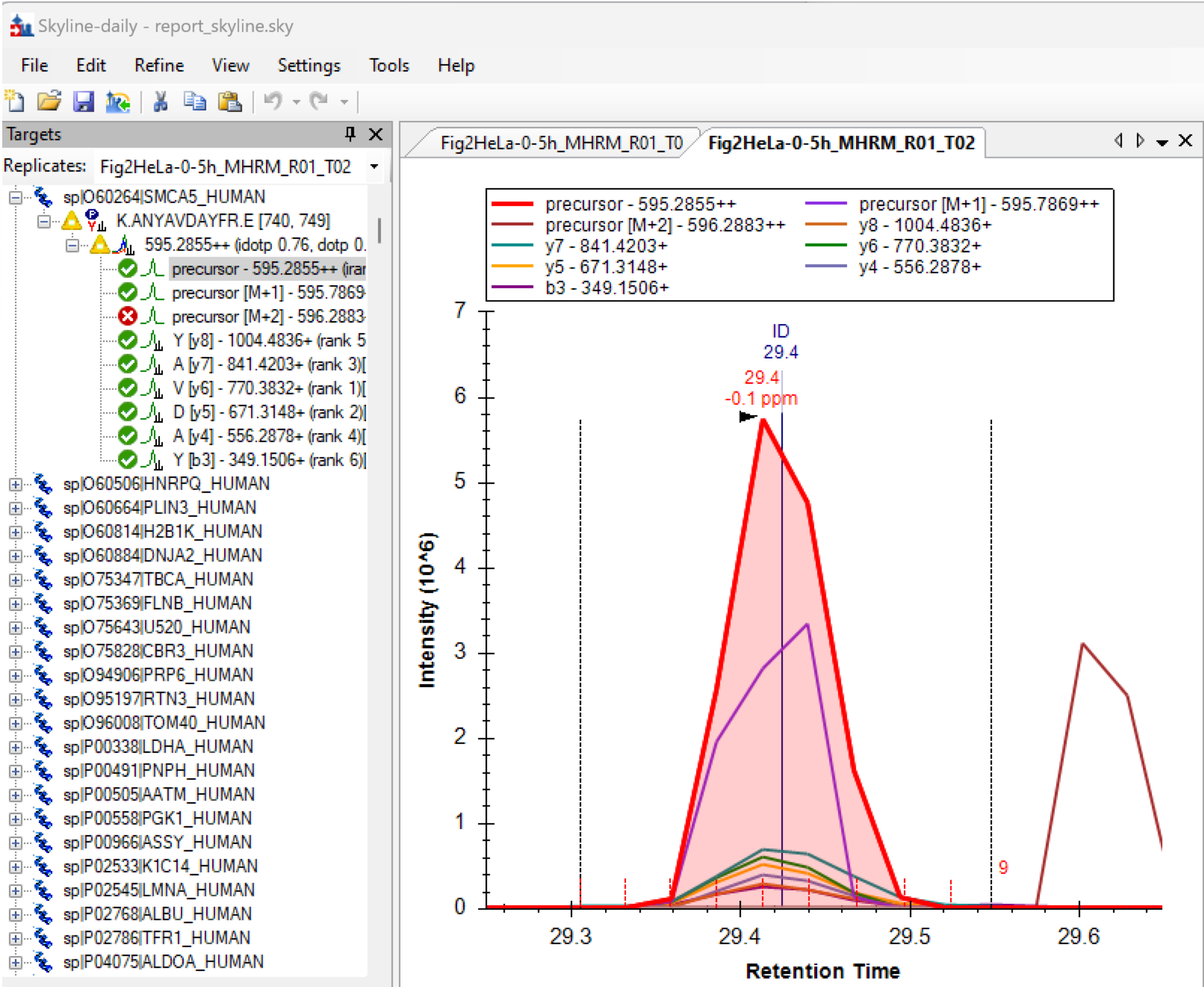


DIA-NN 1.9 (to be released)

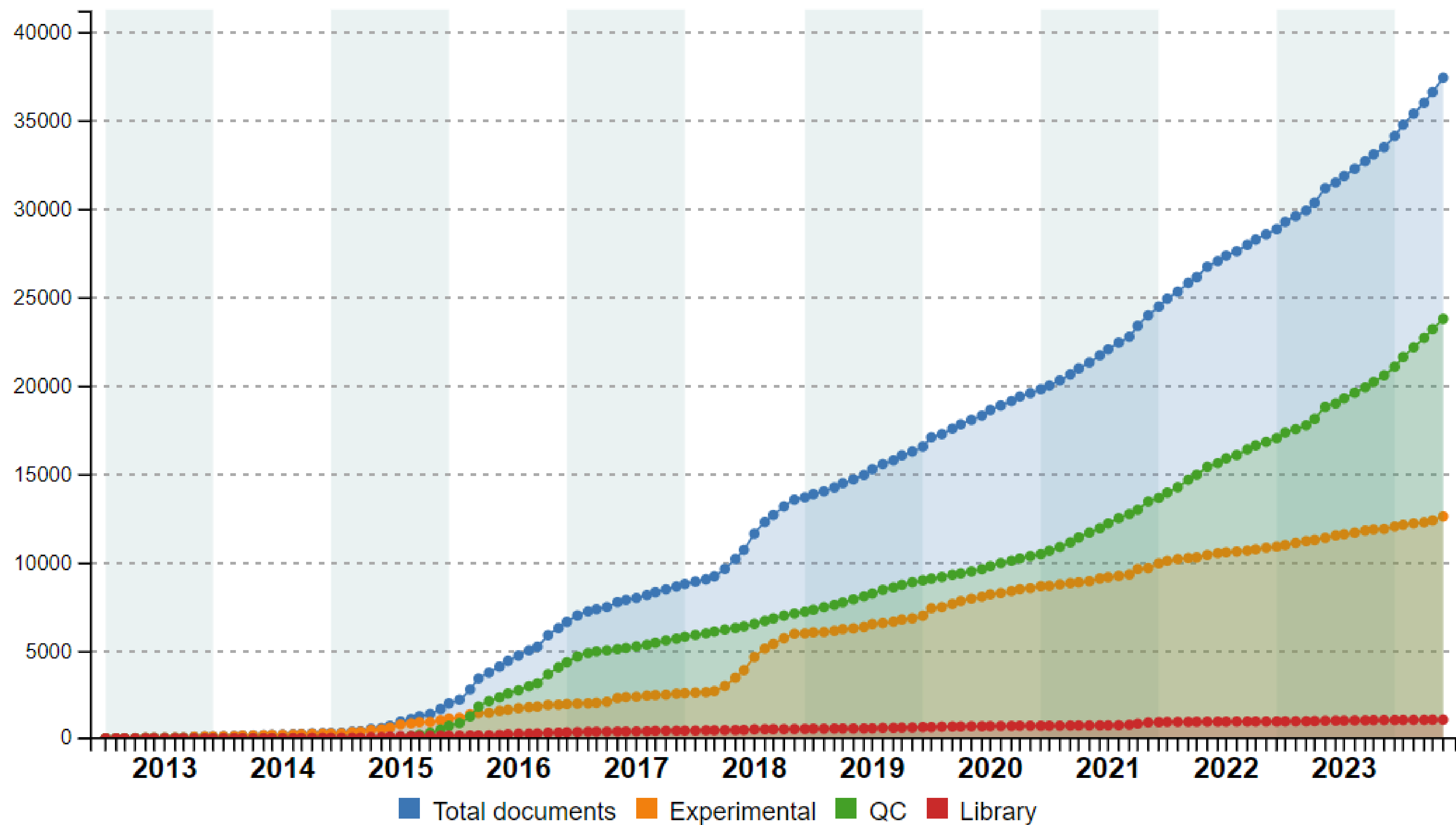
1-click integration with Skyline Daily



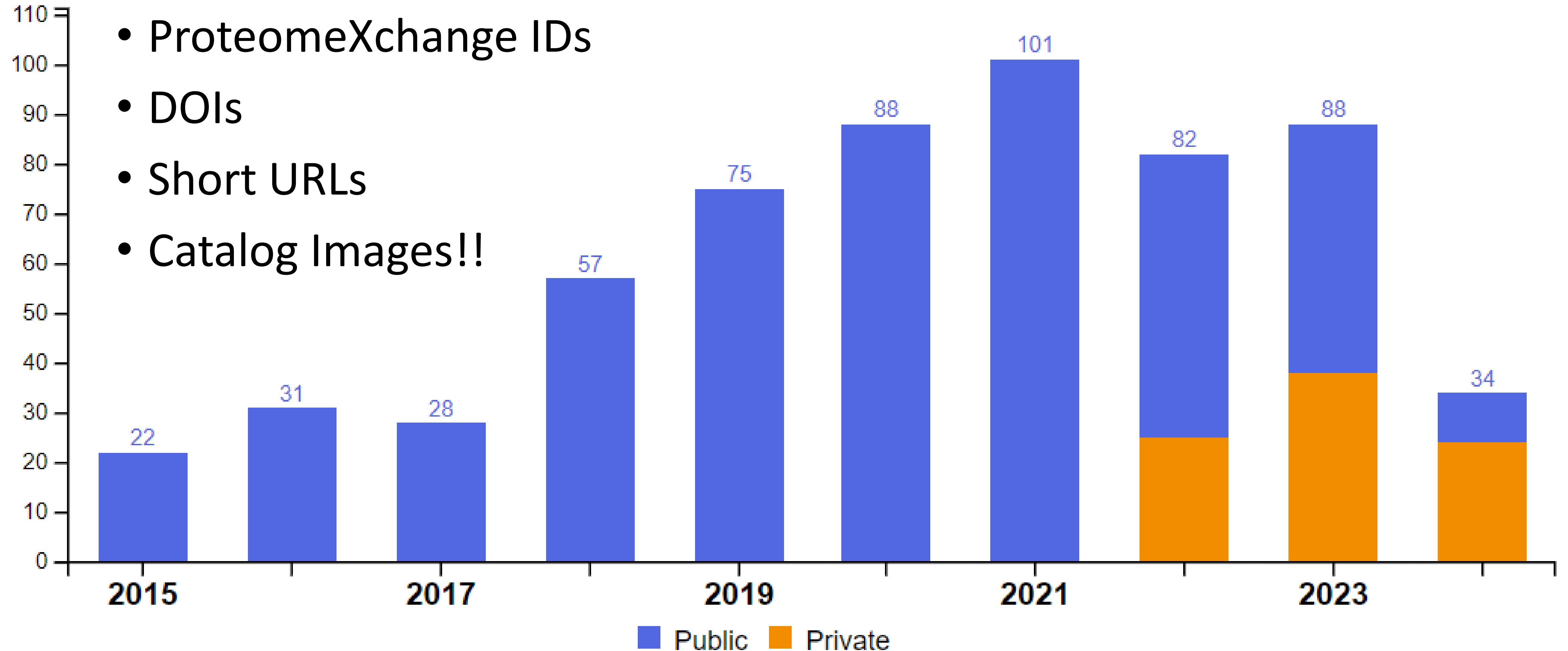
1. Analyze an experiment with MBR
2. Click the 'Skyline' button
3. Skyline document created and opened automatically



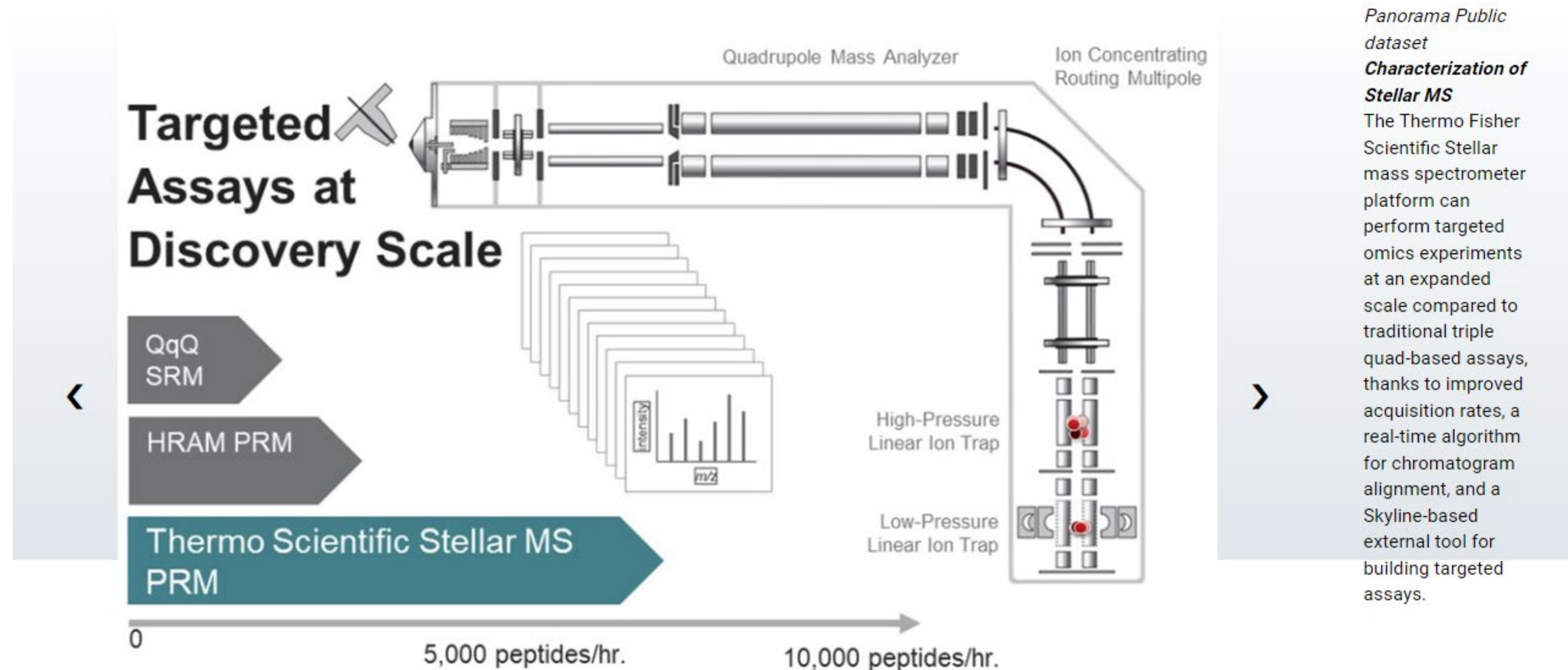
Skyline Documents on



Panorama Public



Skyline Ecosystem Case Study: Thermo



[Panorama Public](#)

Browse the Panorama Public repository

Skyline Ecosystem Case Study: Thermo

External Tools



PRM Conductor

Version: 1.0.4344 | Downloads: 0

Thermo Fisher Scientific

https://panoramaweb.org/prm_conductor.url

The PRM Conductor is designed to help bridge the gap between discovery and targeted MSn experiments by automating several tasks related to choosing and scheduling high-quality precursors. PRM Conductor labels transitions as “good” or “bad” with a set of common-sense metrics like area, signal-to-background, and shape correlation, and then filters precursors by requiring a certain number of “good” precursors. Then PRM Conductor allows to schedule precursors in an assay and visualize the effect of instrumental parameters on the instrument acquisition rate. Finally, PRM Conductor can export precursor and transitions lists, Skyline analysis templates, and directly create method files for the Thermo Fisher Scientific Stellar MS, including

Close

Download

What's Next?

- More great support, instruction, and responding to user feedback
- Support instrument vendor advances
- Improved peak detection:
 - Less truncation, more consistent peaks run-to-run...
- More workflow integration with search tools:
 - FragPipe, DIA-NN, and EncyclopeDIA...
- More deep learning integration:
 - Koina, AlphaPeptDeep, SkylineAI...
- Peptide- and Protein-level detection q values
- Automatic recalibration of RT and mass error

Instrument Vendor Collaborators

▶ Agilent Technologies

- ▶ Marilyn Marx
- ▶ Brian Miller
- ▶ Daniel DeBrod



▶ Bruker

- ▶ Sven Brehmer
- ▶ Jens Decker
- ▶ Gary Kruppa
- ▶ Markus Lubeck
- ▶ Pierre-Olivier Schmit



▶ SCIEX

- ▶ Tim Blacker
- ▶ David Cox
- ▶ Yunyun Zou



▶ Shimadzu

- ▶ Tsuyoshi Nakanishi
- ▶ Norio Mukai
- ▶ Toshiya Matsubara
- ▶ Jun Watanabe



▶ Thermo-Scientific

- ▶ Philip Remes
- ▶ Mick Greer
- ▶ Lilian Heil
- ▶ Karol Nagyeri
- ▶ Vlad Zabrouskov



▶ Waters

- ▶ Ronan O'Malley
- ▶ Keith Richards
- ▶ Hans Vissers



Skyline Team



Brendan MacLean



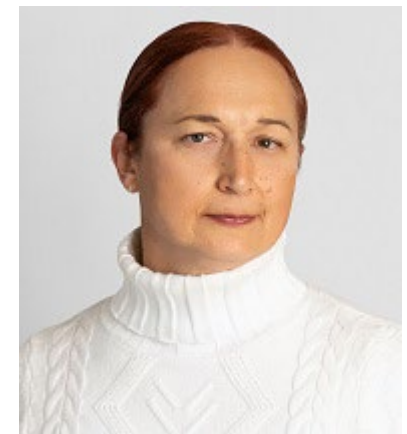
Nick Shulman



Brian Pratt



Vagisha Sharma



Rita Chupalov



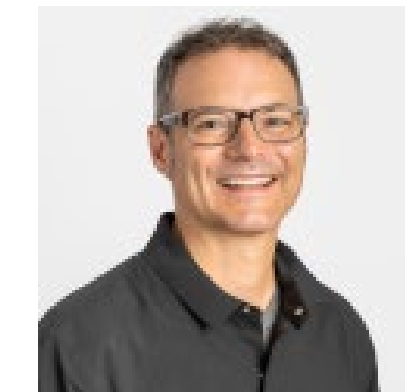
Matt Chambers



Jason Wang



Brian Connolly



Mark Belanger

