

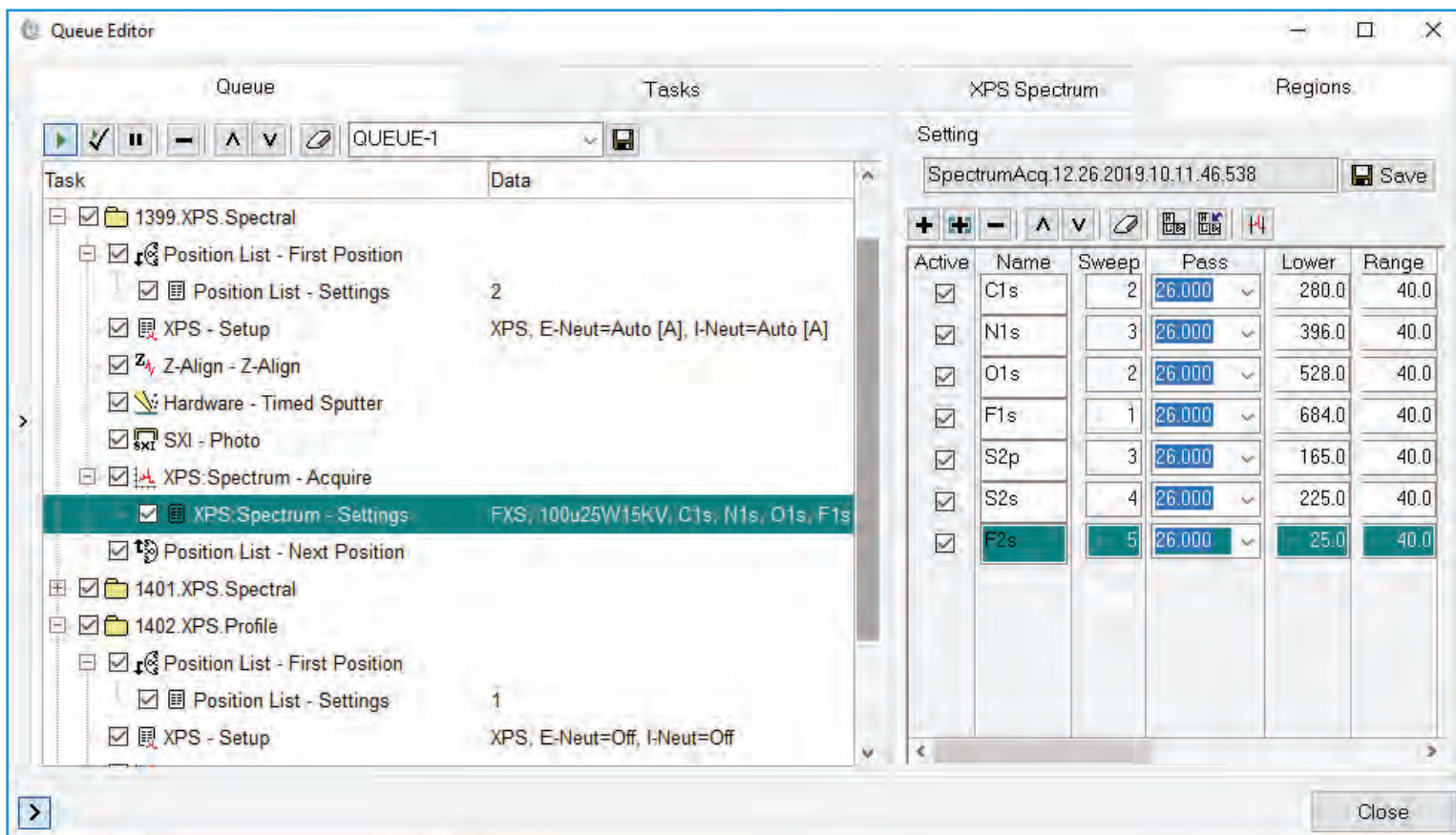
SmartSoft-VP 3.3.0 for Windows 10

Improved Queue and Sidebar Dashboard

SmartSoft-VP 3.3.0 is the latest Windows 10 release of PHI's software for VersaProbe II, III and 4. It includes an improved queue editor for enhanced control and flexibility of automated data acquisition and a new sidebar dashboard supporting all options including LEIPS, UPS, and REELS. New software features include large area mosaic mapping of SXI and photoelectron maps, a faster Z-align, an improved algorithm for detector channel signature removal in the snapshot mode, and dual beam (electrons and ions) charge neutralization for the Auger option. It also includes the ability to enable SEE (System Evaluation Environment), a new service utility built into *SmartSoft* which periodically records all system parameters while *SmartSoft* is running. SEE can be extremely helpful in diagnosing system hardware issues and minimizing instrument downtime.

Advanced Queue

- Create automated analysis queues combining surveys, high-res scans, depth profiles, maps, and more!
- View and modify existing queue items while the queue is running.
- Easily enable features like Z-align, pre-sputter, and use of neutralization in the queue.
- Setup advanced experiments with queue tools such as loops, pauses, system pressure setpoints, and more!
- Use MORE function to continue acquisition of spectra maps for improved signal-to-noise and depth profiles for reaching deeper layers.
- Use and schedule service tasks for outgassing, startup and shutdown sequences.
- Tasks can be copied and pasted, or entire queues can be saved, loaded, and modified for routine repeated analysis.
- Queue validation feature allows user to identify and correct possible errors before starting the queue.



The screenshot displays the **Queue Editor** window, which is divided into several sections:

- Queue:** A list of tasks in a queue, including "1399.XPS.Spectral", "Position List - First Position", "Position List - Settings", "XPS - Setup", "Z₀ Z-Align - Z-Align", "Hardware - Timed Sputter", "SXI - Photo", "XPS-Spectrum - Acquire", "XPS-Spectrum - Settings", "Position List - Next Position", "1401.XPS.Spectral", "1402.XPS.Profile", and another "Position List - First Position".
- Tasks:** A table showing task details, such as "XPS, E-Neut=Auto [A], I-Neut=Auto [A]" and "XPS, E-Neut=Off, I-Neut=Off".
- XPS Spectrum:** A table showing XPS spectrum settings, including "SpectrumAcq.12.26.2019.10.11.46.538".
- Regions:** A table showing XPS spectrum regions, including "C1s", "N1s", "O1s", "F1s", "S2p", "S2s", and "F2s".

The **XPS Spectrum** table is as follows:

Active	Name	Sweep	Pass	Lower	Range
<input checked="" type="checkbox"/>	C1s	2	26.000	280.0	40.0
<input checked="" type="checkbox"/>	N1s	3	26.000	396.0	40.0
<input checked="" type="checkbox"/>	O1s	2	26.000	528.0	40.0
<input checked="" type="checkbox"/>	F1s	1	26.000	684.0	40.0
<input checked="" type="checkbox"/>	S2p	3	26.000	165.0	40.0
<input checked="" type="checkbox"/>	S2s	4	26.000	225.0	40.0
<input checked="" type="checkbox"/>	F2s	5	26.000	25.0	40.0

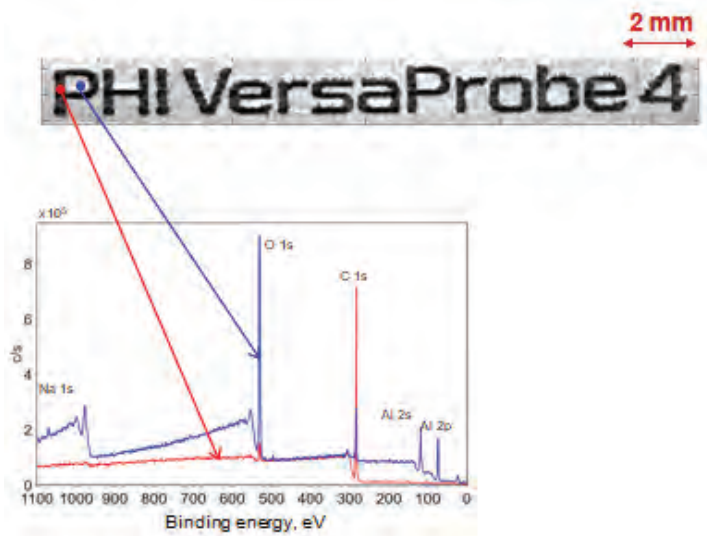


New Sidebar Dashboard

- Easy access to common acquisition control functions and settings.
- Acquisition status can now be viewed in the dashboard to reduce the number of open windows.
- Sputter Tool allows quick access to all ion gun settings.
- Display of chamber pressure.
- Sidebar view can be customized to minimize screen clutter.

Smart Mosaic Imaging

- Fast, easy to use method to extend the capabilities of SXI and photoelectron maps over large areas.
- Easy method to locate features of interest or investigate the homogeneity of the sample across much larger areas than available in a single SXI image.
- Multispectral chemical maps can be acquired from areas of any size and stitched into a single large area chemical map.
- Overlays with a variety of color maps and transparency display options can be used to highlight areas that are spatially and chemically distinct.



Optical image (~30 mm x 12.5 mm) of Print on Glossy Paper



5 mm x 2.5 mm C 1s (red) and Al 2p (blue) photoelectron map overlaid on SXI

Spectroscopic analysis can be performed on areas of interest selected directly from stitched large area X-ray induced secondary electron images

Release 3.3.0-October 2021 (Win 10: 64-bit)

PHI | **PHYSICAL ELECTRONICS**
A DIVISION OF ULVAC-PHI

18725 Lake Drive East
Chanhassen, MN 55317, USA

www.phi.com
www.ulvac-phi.com

2500 Hagisono, Chigasaki
253-8522, Japan