PEAK SLIT CONTROL

Optimal settings with remote control

In photoelectron spectroscopy measurements, there is always a trade-off between signal intensity and resolution. Optimising this balance is the key to obtaining smooth and sharp spectra within the shortest time possible. For hemispherical analysers, this trade-off is controlled by the selected entrance slit and pass energy.

PEAK Slit Control replaces manual slit changes at the analyser with a motorised and software-controlled slit. With the control of all analyser settings, easy and quick optimisation of signal intensity versus resolution is possible.

Remote control advantage

In hard x-ray photoelectron spectroscopy (HAXPES), the analyser is often in an experimental hutch. It is not easy to access during measurements, which makes it difficult to change the slit manually.

With PEAK Slit Control, the slit is controlled remotely from outside of the hutch, allowing users to adjust measurement settings at any given time.

Extended automatic sequences

Most experiments require a quick overview of the band structure, or of the elements present in the sample at high intensity. Later, measurements of small signatures and spectral features are made at much higher energy resolution. To do this efficiently, the slit must be changed otherwise the overview measurements would take too long or there would be insufficient energy resolution when studying small spectral features.

For similar sample types, optimal slit settings can be set-up within an extended automated sequence of overview and detailed measurements. With PEAK Slit control, the required slit changes are managed within the sequence and without manual intervention by users.

Reliable metadata

To repeat measurement conditions, or to estimate the analyser contribution to the energy resolution of a spectrum, it is crucial to have reliable information about the selected analyser slit.

PEAK Slit Control automatically detects the current slit using a position encoder. This information is then automatically stored in the metadata of each acquired spectrum. All analyser information is recorded in the metadata, so users do not need to rely on manual annotation of slit settings, which facilitates easier sharing and repeating of experimental conditions.

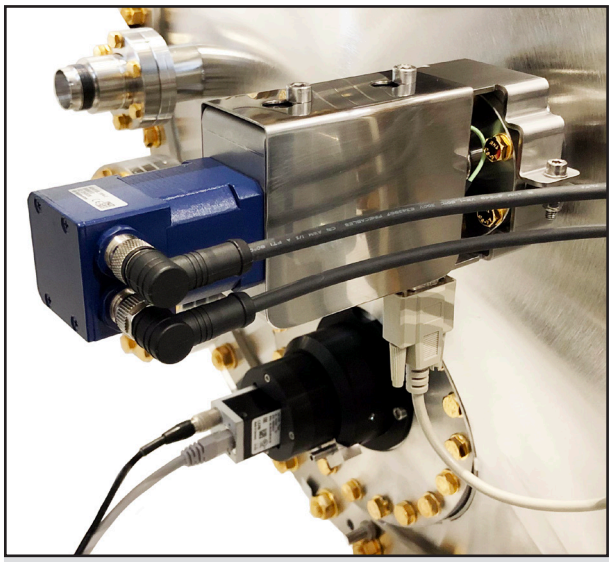

Figure 1: HAXPES Lab with an EW4000 equipped with PEAK Slit Control. The slit is controlled from the analyser control software PEAK enabling remote optimisation of experimental settings.

Upgrades

The manual slit carousel of EW4000, HiPP-2/3, DA30-L, and DFS30 analysers can be upgraded without breaking the vacuum. The analyser must have PEAK, Scienta Omicron´s electron spectroscopy control and acquisition software.

PEAK Slit Control advantages:

- Remote control of analyser´s slit
- Optimum slit selection for each spectrum in extended automatic sequences
- Reliable slit metadata with each spectrum
- Upgrade for EW4000, HiPP-2/3, DA30-L, and DFS30

How to contact us:

Europe and other regions:
services@scientaomicron.com

North America:
services-NA@scientaomicron.com

China:
services-CN@scientaomicron.com

Japan:
services-JP@scientaomicron.com

or please visit
www.ScientaOmicron.com
for more information.