

## GI-MS48-P02 | THE HyPIX-ARC 150°

White, Fraser (Rigaku Europe, Neu-Isenberg, GER); Kucharczyk, Damian (Rigaku Polska, Wroclaw, POL); Meyer, Mathias (Rigaku Polska, Wroclaw, POL); Wojciechowski, Jakub (Rigaku Europe, Neu-Isenberg, GER)

The HyPix Arc 150° detector takes the latest, direct X-ray detection, hybrid photon counting technology and forms it into a curved detector for unparalleled data collection efficiency and quality.

As the geometry of a single crystal experiment involves diffraction from a point source, the crystal, the ideal detector would be spherical, encapsulating the sample. Through this simple fact, the advantages of a curved detector, an approximation of the ideal spherical detector have been widely accepted since X-ray crystallography was conducted with photographic film.

The HyPix-Arc 150° applies this approach to the highest performing, currently available detector technology, direct X-ray hybrid photon counting (HPC), for an ultra-high performance detector which provides high data quality, the most consistent measurement conditions for every peak in a dataset and counting of X-ray photons without readout noise or dark noise.

With the recent advances in instrumentation, and now with the HyPix-Arc 150°, a new modern era of interactive crystallography is now possible with ultra short experiments allowing on the fly results and decision making.

The merits of both HPC technology, curved architecture and ultra-fast experiments are discussed, and some results from the HyPix-Arc 150° presented herein.