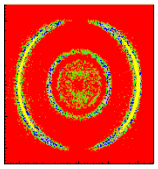
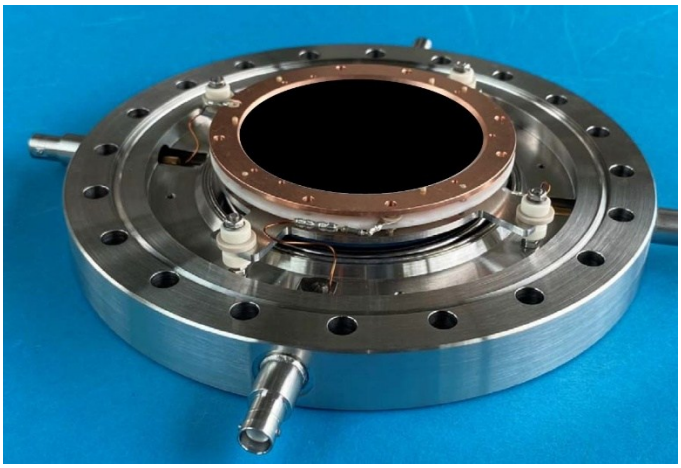
The *DET40/70P* and *DET25P* detectors with *phosphor screen*



RoentDek
Handels GmbH

Supersonic Gas Jets
Detection Techniques
Data Acquisition Systems
Multifragment Imaging Systems

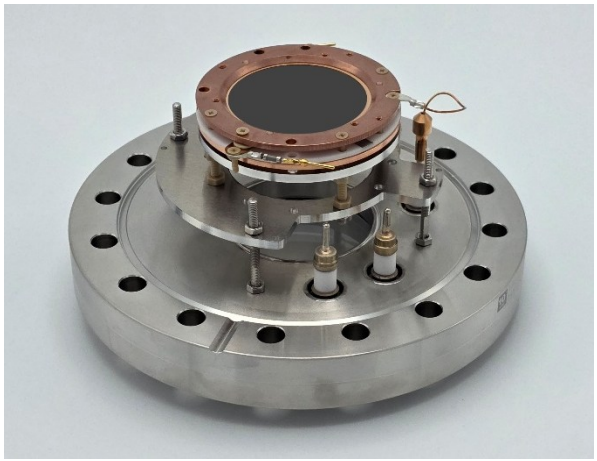
RoentDek offers a variety of particle counting and imaging detectors, among those are assemblies with phosphor screens, allowing for optical control and imaging of weak particle currents down to single particle counting level. Timing information for particle pulses can independently be retrieved, with < 0.1 ns precision for single particle impact. Common phosphor types include *P43* and *P47* (others on demand). Active detector diameters range from 25 mm to 72 mm (larger on demand).



***DET70P* on "radial-type" window flange**

The detectors can come with a choice of different window flanges and feedthroughs and/or can be flexibly mounted at any given position inside the vacuum environment of an experimental assembly. The **DET40P** and **DET70P** detectors are especially designed to comply with high spatial resolution demands and maximum quantum efficiency for detection of single particles including ions, electrons and high-energy photons (VUV to X-ray) or fast neutrals (keV and higher).

The electric connections are designed for timing signal pickup and can optionally be complemented by adequate electronic pickup circuits, followed by precise timing electronic modules (**RoentDek FEE1**) and clocks or counters (**RoentDek TDC4HM** or **RM6**). Protective high voltages supplies, e.g. the **RoentDek HV3**, are available for fail-safe and flexible biasing of the MCP stack and the phosphor screen anode.



The standard DET40P

The compact *DET25P* is especially designed to monitor beam positions