

**A Detection System for Highly Charged Ions  
which have undergone Charge Exchange in the  
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- A detector system has been built for detection of ions that have undergone charge exchange in the CRYRING electron cooler. The charged particle detector is a YAP scintillator equipped with a mirror and lens system that directs the scintillation light towards a photomultiplier outside vacuum. The detector system can be used for experiments where electron-ion recombination processes are studied as well as for detection of stripped ions where  $dq = +1$ .