Dielectronic and trielectronic recombination in sulfur ions

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With use of collisional spectroscopy at the electron cooler and with a ions from **local ion source** we would like to investigate DR and intrashell TR processes.

Mainly:

Be-like $S^{12+} + e^- \rightarrow S^{11+}$

Here, resonances:

DR $2s^2 \rightarrow 2s^1 2p^2$ and TR $2s^2 \rightarrow 2p^3$ ($\Delta n=0$, collisional energy <1.2eV)

DR $1s^2 2s^2 \rightarrow 1s^1 2p^2$ and TR $1s^2 2s^2 \rightarrow 1s^1 2p^3$ ($\Delta n=1$, collisional energy ~2000eV)

Beam energy ~14 MeV/u, intensity: ~10^7 ions, count rate ~0.7kHz, Number of shits ~25