

Review of the Experimental Results with a Cryogenic Current Comparator, A. PETERS, GSI Darmstadt, W. VODEL, FSU Jena - A new type of beam transformer (using the principle of a Cryogenic Current Comparator) was built to measure extracted ion beams from the SIS, the heavy ion synchrotron at GSI. A current resolution of $0.24 \text{ nA}/\sqrt{\text{Hz}}$ could be achieved thus ion beams with intensities greater than 10^9 particles per second can be measured in the near future with high accuracy. Numerous investigations were carried out to study the zero drift of the system which shows a strong exponential slope with two time constants. Furthermore the microphonic sensitivity of the system was studied by taking noise spectra of the detector output signal. Additional measurements were made with a vibration sensor to separate the horizontal and vertical components of the mechanical influences from the disturbing electrical interferences. The latest results will be presented and discussed.