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## **NEG Coating for PETRA IV: Resistivity and Sticking Probability Measurements**

*Thursday, 11 May 2023 16:30 (2 hours)*

Non-Evaporable Getter (NEG) development at DESY has been ongoing to accommodate PETRA IV machine requirements. While most of the PETRA IV beam vacuum chambers will be manufactured from oxygen-free silver-bearing (OFS) copper and coated with NEG, getter film performance on these substrates has not been tested as extensively as on the stainless-steel. In order to investigate pumping and impedance properties of the columnar NEG films, TiZrV and Zr layers with varying thicknesses were sputtered on four Cu-OFS tubes. The 1  $\mu\text{m}$  films were activated repeatedly at 180 °C to determine how the sticking probability as well as CO pumping capacity develops over time after multiple saturations prior to increasing the activation temperature. By measuring the attenuation of the RF signal along the four tubes, resistivity of both NEG materials was calculated. The results were then compared to previously reported findings for columnar NEG films.

### **Funding Agency**

### **Footnotes**

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Yes

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