



Universität  
Basel

## Research Project

### F4E-OPE-0851 Tests on RF cleaning technique

#### Third-party funded project

**Project title** F4E-OPE-0851 Tests on RF cleaning technique

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**Organisation / Research unit**

Departement Physik / Nanomechanik (Meyer)

**Department**

**Project start** 01.07.2017

**Probable end** 31.03.2017

**Status** Completed

An ability of cleaning system to remove the contaminants from the mirrors on a regular cyclic basis is of crucial importance for validation of mirror cleaning in ITER. The dedicated investigation was performed at the University of Basel. During this study, the ability of the cleaning system to recover the mirror reflectivity after repetitive “contamination – cleaning” cycles was tested. The impact of repetitive cleaning on mirrors was investigated on several types of mirrors: single crystal, nanocrystalline (NC) and polycrystalline Mo mirrors, SC and PC Rh mirrors [16]. The NC Mo film had a thickness of 2.4  $\mu\text{m}$ . Up to 80 cycles were performed. One cycle consisted of one deposition of a contaminant layer: a 25 nm thick aluminum (Al)/W layer, comprising 90 at.% Al and 10 at.% W on one half of a mirror followed by a removal of contamination by plasma cleaning.

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