



Contribution ID: 18

Type: **Talk**

Neutron coating development applied to non-depolarizing CuTi supermirrors

Tuesday 7 December 2021 09:55 (25 minutes)

In the last two years we improved our understanding of sputtering process parameters leading to (Ni,Ti) supermirror coatings with reduced mechanical stress and higher reflectivity. This knowledge has been applied to the case of non-depolarizing $m=2$ (Cu,Ti) supermirrors, which have been successfully prepared with the standard DC magnetron sputtering facility of the FRM II neutron optics group. Control on the roughness grow and interdiffusion allowed us to get a very good maximum angle of total reflection (ca. $0.21^\circ/\lambda$) and neutron reflectivity (ca. 87%), with pure diamagnetic properties. Those characteristics make them suitable for experiments where a high non-depolarization factor is needed.

Author: Dr GOMEZ GUZMAN, Jose Manuel (Technische Universität München Heinz Maier-Leibnitz Zentrum (MLZ))

Co-author: LINK, Peter

Presenter: Dr GOMEZ GUZMAN, Jose Manuel (Technische Universität München Heinz Maier-Leibnitz Zentrum (MLZ))

Session Classification: Neutron Methods

Track Classification: Neutron Methods