# MAGNETIC STRUCTURE OF THE FERRO/ANTIFERROMAGNET INTERFACE AND SPIN WAVE LOCALIZATION NEAR IT

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9.7 cm

The multilayers of alternated ferro- and antiferromagnets are interesting and very promising objects in the area of technology. We consider theoretically a plane perfect interface between simple cubic ferromagnetic and antiferromagnetic halfspaces with an easy-axis anisotropy in the framework of a discrete classical Heisenberg model without taking into account magnetic dipole-dipole interactions. The classification of all possible collinear and canted magnetic structures of the interface is developed for both layered antiferromagnets and compensated interfaces. A phase diagram is presented for some possible collinear and noncollinear magnetic phases and the behavior of magnetization transformation under this collinear-canted transition is investigated. It is shown that the surface spin wave mode can exist at the ferro/antiferromagnetic interface and localized spin wave dispersion law has been calculated numerically.

13.4 cm

**Subject category :**

2. Magnetic Films, Surfaces and Multilayers

**Presentation mode :**
poster

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