

Abstract Submitted  
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**Near field and diffraction of an electromagnetic wave at a metallic grating with slits**<sup>1</sup> RAUL GARCIA-LLAMAS, Universidad de Sonora, RAMON MUNGUÍA-ARVAYO, Posgrado en Física, Universidad de Sonora, JORGE GASPAR-ARMENTA, Universidad de Sonora — The interference of surface Plasmons between two slits is studied by using the near-field intensity. The problem of diffraction of an electromagnetic wave at a metallic grating with slits is treated. A rigorous solution of diffraction based on the method of multimodal expansion by Burckhardt<sup>1</sup> is presented.

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Raul Garcia-Llamas  
Universidad de Sonora

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