Near field and diffraction of an electromagnetic wave at a metallic grating with slits\textsuperscript{1} RAUL GARCIA-LLAMAS, Universidad de Sonora, RAMON MUNGUIA-ARVAYO, Posgrado en Física, Universidad de Sonora, JORGE GASPAR-ARMENON, 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\textsuperscript{1} is presented.

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