

mediante el método del potencial modelo. Nuestros resultados son consistentes con las observaciones astrofísicas de la emisión de 5592 Å de OIII en nebulosas planetarias y se comparan también con resultados de Dalgarno, Heil y Butler (1981, *Astrophys. J.* 245 ,793) obtenidos con técnicas usuales de química cuántica.

ABSTRACT. Calculations are presented of reaction rates for the charge transfer reaction between OIV ions and atomic hydrogen that populate the $1P, 2D, 3P, 3S$ states of the $(2p3p)$ configuration and the $1P^o, 3P^o$ states of the $(2p3s)$ configuration of OIII. The temperatures considered range between 1000 and 50000 °K. By approximating the system by a quasimolecule, the theoretical study of the collision was made with the method of Grice and Herschbach (1974, *Mol. Phys.* 27, 159) where the orbitals were generated by the model potential method. Our results are consistent with the astrophysical observations of the 5592 Å emission line of OIII in planetary nebulae and are also compared with the computed values of Dalgarno, Heil and Butler (1981, *Astrophys. J.* 245 ,793) obtained with the usual techniques of quantum chemistry.

ALGUNAS CONSIDERACIONES FISICAS SOBRE NGC 1313

SOME PHYSICAL CONSIDERATIONS ABOUT NGC 1313

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RESUMEN. El gas ionizado en NGC 1313 fue estudiado por medios espectrofotométricos. Se analiza el comportamiento radial de las relaciones $I(H\alpha)/I(6584)$, $I(6717)/I(6731)$, $N(NII)/N(HII)$ y $N(NII)/N(SII)$ y de las densidades electrónicas obtenidas. Las relaciones de abundancias $N(N)/N(H)$ y $N(N)/N(S)$ para el núcleo y dos regiones de emisión también son obtenidas y comparadas con datos previos.

ABSTRACT. The ionized gas in NGC 1313 was studied by spectrophotometric means. The radial behaviour of the $I(H\alpha)/I(6584)$, $I(6717)/I(6731)$, $N(NII)/N(HII)$ and $N(NII)/N(SII)$ ratios and the deduced electron densities are discussed. The abundance ratios $N(N)/N(H)$ and $N(N)/N(S)$ for the nucleus and two emission regions were also derived and compared with previous data.