L134N revisited

L. Pagani

DEMIRM & CNRS UMR 8540, Observatoire de Paris, 61, Av. de l'Observatoire,
F-75014 Paris, France

laurent.pagani@obspm.fr

J.-R. Pardo-Carrion

CSIC, Madrid, Spain, & Caltech, Pasadena, CA, USA

L134N is a very cold, starless and nearby dark cloud which has attracted much attention from the astrochemists in the past. They have been using it as an oxygen-rich reference to test their models in parallel with TMC-1, the other, but carbon-rich, reference. However, our knowledge of the cloud temperature, structure, and various species abundances relies largely on the work by Swade (1987, ApJS 71, 219 & ApJ 345, 828) which suffers from low signal-to-noise $C^{18}O$ and CS maps and limited excitation analysis. While FIRST will probably find many new species in this cloud, it is time to revisit completely this source in order to interpret correctly the FIRST results to come. We have thus made a complete survey of CO, ^{13}CO, $C^{18}O$, $C^{17}O$, CS, $C^{34}S$, SO and ^{34}SO species with the NRAO 12 m and CSO 10 m to assess the fundamental properties of this cloud. Preliminary results are reported here.