

THE ATMOSPHERE OF A PROBABLY VERY YOUNG BY Dra-TYPE FLARE STAR

R. de la Reza¹, C.J. Butler², C.A.O. Torres¹, C.C. Batalha¹

¹National Observatory-CNPq Rio de Janeiro , Brazil

²Armagh Observatory - N. Ireland, U.K.

ABSTRACT

The flare star Gliese 182 (dM0.5e) seems to be only known single BY Dra type that presents Li in its atmosphere. This characteristic and others, principally activity, and high rotation, indicate that probably this is a very young object. We analyse in this work the possibility to interpret with a single typical model for a dMe atmosphere, some observed lines of Gliese 182 and to predict others. The lines belong to the following atoms; Li I, H I, He I, He II, C I, C II. A relatively good agreement exists only for neutral lines but not for ionized lines. The upper chromosphere and transition region must be studied in more detail. Some comparison are made with the UV observations of the double star BY Dra. Empirical relatively high X-ray fluxes are predicted for both stars. The Li abundance of Gliese 182 is confirmed to be similar to that of the interstellar medium.

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