14. Intetnational cosmic ray conference
Garching, near Munich (F.R. Germany), 15-29 Aug 1975

OG 9.1.2

INIS-mf--2035

COSMIC RAYS FROM PRE-MAIN SEQUENCE STARS ?

H. Reeves and C.J. Cesarsky

Centre d'Etudes Nucléaires de Saclay, France

Abstract

The set of all new stars approaching the Main Sequence dissipate rotational energy at a rate comparable to the rate of energy input in galactic cosmic rays. The interaction of the rotating proto stellar clouds with the interstellar magnetic lines of forces may induce acceleration of particles to high energies.

After discussing the problems associated with the supernova origin of the galactic cosmic rays we consider the deceleration of Pre-Main sequence stars as an alternative origin to the galactic cosmic rays. Strong and weak points of this model will be discussed and possible observational tests will be presented.