Normal Trajectories in Stationary Spacetimes under the Action of an External Field with Quadratic Asymptotic Behavior*

Rossella Bartolo, Anna Maria Candela

Dipartimento di Matematica, Politecnico di Bari, Via E. Orabona 4, 70125 Bari, Italy, rossella@poliba.it
Dipartimento di Matematica, Università degli Studi di Bari, Via E. Orabona 4, 70125 Bari, Italy, candela@dm.uniba.it

Presented by Antonio M. Cegarra Received December 12, 2008

Abstract: The aim of this note is to study the existence of normal trajectories joining two given submanifolds under the action of an external field in a standard stationary spacetime. Here, it is assumed that both the growth of the potential and that one of the coefficients of the metric are critical in a suitable sense.

Key words: Standard stationary spacetime, normal trajectory, external field, quadratic growth, variational approach.

AMS Subject Class. (2000): 53C50, 53C22, 58E10.

References


*Work supported by M.I.U.R. Research project PRIN07 “Metodi Variazionali e Topologici nello Studio di Fenomeni Nonlineari”.

243


