998-83-119   **Didier A Solis*** (`dsolis1@umsis.miami.edu`), Department of Mathematics, 1365 Memorial Dr. Room 515, Coral Gables, FL 33146. *A uniqueness result for asymptotically simple spacetimes of de Sitter type.* Preliminary report.

We present a rigidity result for asymptotically simple spacetimes of de Sitter type obeying the Einstein field equations

$$R_{ij} - \frac{R}{2}g_{ij} + \Lambda g_{ij} = Tij.$$

The rigidity of such spacetimes in the vacuum case (i.e. $T \equiv 0$) was previously established by G. Galloway. The result discussed here guarantees uniqueness under fairly mild conditions on the energy-momentum tensor T; namely the Dominant Energy Condition and a suitable fall-off behaviour in a neighborhood of the conformal boundary. The proof is based on energy estimates as well as in a careful analysis of the delicate geodesic structure of null surfaces, whose existence is predicted by the Null Splitting Theorem. (Received February 19, 2004)