THE BOREL MAP AND THE ALGEBRA OF SMOOTH SOLUTIONS IN LOCALLY INTEGRABLE STRUCTURES

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ABSTRACT. We shall present recent results concerning the Borel map on locally integrable structures and how they can be used to prove that, under certain geometric assumptions, the maximal ideal of the solutions that vanish at a given point is generated (in the ring of solutions) by a set of basic independent first integrals vanishing at the point. This a work in collaboration with B. Lamel (Texas A&M at Qatar) and Giuseppe Della Sala (American University of Beirut).