

Meeting: 1005, Newark, Delaware, SCHWACHHOE, Invited Address

1005-53-1 **Lorenz Schwachhoefer***, University of Dortmund, Mathematics Institute, Vogelpothsweg 87,
D-44221 Dortmund Germany. *Special symplectic connections.*

By a special symplectic connection we mean a torsion free connection which is either the Levi-Civita connection of a Bochner-Kähler metric of arbitrary signature, a Bochner-bi-Lagrangian connection, a connection of Ricci type or a connection with special symplectic holonomy. A manifold or orbifold with such a connection is called special symplectic.

We show that the symplectic reduction of (an open cell of) a parabolic contact manifold by a symmetry vector field is special symplectic in a canonical way. Moreover, we show that any special symplectic manifold or orbifold is locally equivalent to one of these symplectic reductions.

As a consequence, we are able to prove a number of global properties, including a classification in the compact simply connected case. (Received May 13, 2004)