

1083-57-162

Samuel Lisi, , Belgium, **Jeremy Van Horn-Morris*** (jvanhorn@math.stanford.edu),
Department of Mathematics, SCEN 301, 1 University of Arkansas, Fayetteville, CA 72701, and
Chris Wendl. *Spinal open books and symplectic fillings*.

A spinal open book decomposition on a contact manifold is a generalization of a supporting open book, which, for example, exists naturally on the boundary of a symplectic filling with a Lefschetz fibration over any compact oriented surface with boundary. We show that whenever a contact 3-manifold admits such a decomposition with a planarity assumption, its symplectic fillings can be classified in terms of diffeomorphism classes of Lefschetz fibrations. As an example, we characterize precisely which circle bundles with S^1 -invariant contact structures are strongly fillable, and show that the fillable ones always have a unique filling. (Received August 27, 2012)