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Siddhi Krishna*, krishna@math.gatech.edu. *Taut foliations and Dehn surgeries along positive braid knots*. Preliminary report.

The L-Space Conjecture is taking the low-dimensional topology community by storm. It aims to relate seemingly distinct Floer homological, algebraic, and geometric properties of a closed 3-manifold Y . In particular, it predicts a 3-manifold Y isn't "simple" from the perspective of Heegaard-Floer homology if and only if Y admits a taut foliation. The reverse implication was proved by Ozsváth and Szabó. In this talk, we'll present some new results supporting the forward implication. Namely, we'll build taut foliations in manifolds obtained by Dehn surgery along positive braid closures. Our construction is concrete and combinatorial in nature. No background in Floer homology or foliation theories will be assumed. (Received September 16, 2020)