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**Matthew E Hedden\*** (mhedden@math.msu.edu), Wells Hall, East Lansing, MI 48824, and **Olga Plamenevskaya** (olga@math.sunysb.edu), Stony Brook, NY 11794. *Contact structures, rational open books, and Dehn surgery.*

I'll talk about rational open book decompositions and their contact invariants, and then use these to prove existence results for tight contact structures on certain manifolds obtained by Dehn surgery along the binding of traditional open books. I'll also discuss how this circle of ideas may be useful to the question of which knots in the 3-sphere admit lens space surgeries. (Received June 21, 2011)