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FQHE-the solvable limit and beyond MARIA HERMANNS, EMIL J. BERGHOLTZ, THORS HANS HANSSON, ANDERS KARLHEDE, Stockholm University, JUHA SUORSA, Helsinki University of Technology — We consider the quantum Hall system in the torus geometry. In the limit where the torus becomes thin, the problem is exactly solvable and the hierarchy of quantum Hall states is manifest. Explicit wave functions for a large set of them are constructed with help of conformal field theory. This construction provides a continuation from the exactly solvable limit to the experimental regime. Numerical results on 4/11 supports this picture.

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