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Loop quantization of spherically symmetric midi-superspaces JORGE PULLIN, Louisiana State University, RODOLFO GAMBINI, Universidad de la Republica Oriental del Uruguay — We quantize spherically symmetric vacuum space-times using a midi-superspace reduction within the Ashtekar new variables. Through a partial gauge fixing one eliminates the diffeomorphism constraint and is left with a Hamiltonian constraint that is first class. We represent it in the loop representation and complete the quantization of its dynamics using the uniform discretization approach. We discuss similarities and differences with other approaches to the dynamics of loop quantum gravity.

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