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**Relational interpretation with Dirac observables and the problem of time in quantum gravity** JORGE PULLIN, Louisiana State University, RODOLFO GAMBINI, Universidad de la Republica Oriental del Uruguay — We show that the use of evolving Dirac observables in conjunction with the conditional probabilities of Page and Wootters correctly predicts the physical propagators in model systems. This eliminates the main objection to that treatment and opens possibilities for correctly handling the problem of time in quantum gravity in terms of observable quantities.

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