Dynamical correlations of the Quantum Dimer Model on the triangular lattice ARNAUD RALKO, ITP, Ecole Polytechnique Fédérale de Lausanne, Switzerland, MICHEL FERRERO, FEDERICO BECCA, INFM-Democritos, SISSA, Trieste, Italy, DMITRI IVANOV, FRÉDÉRIC MILA, ITP, Ecole Polytechnique Fédérale de Lausanne, Switzerland — Using Green’s function Monte Carlo simulations, we have studied the zero-temperature properties of the quantum dimer model (QDM) on the triangular lattice [1] on clusters with up to 588 sites. A detailed comparison of the static properties in different topological sectors as a function of the cluster size and for different cluster shapes has allowed us to identify different phases, and to show explicitly the presence of topological degeneracy in a phase close to the Rokhsar-Kivelson point, in agreement with an earlier suggestion [2]. We have also extended the Green’s function Monte Carlo algorithm to calculate dynamical correlation functions. Preliminary results on the dimer-dimer correlations confirm the extension of the RVB phase and bring new insight on the nature of the transition to the $\sqrt{12} \times \sqrt{12}$ phase and on the type of long-range order realized in that phase.