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Improved Downward wave-field with application to reverse time migration

We introduced a new technique in the Reverse Time Migration, it aims to decrease the negative effect of the multiples that generated during the forward wave-field propagation. Based on the approach of absorbing boundary conditions, we produced reflections free forward wave-field (RFFW) and used it in the imaging conditions (IC). The resulting images show a good agreement with the structure image of the true reflectivity model. We tested two types of velocity models, elastic and viscoelastic velocity model using two different numerical approximation techniques: finite difference method and finite element method.