Changes of measure for the square-root stochastic volatility process

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From empirical observations, many have come to consider that volatility varies ``randomly''. The square-root process is a well-known model for stochastic volatility. We consider this process and its time integral as they occur in pricing options in stochastic volatility models. An explicit measure change formula for the square- root process is used to price European options. Numerical results show that the measure-change approach and Andersen's quadratic exponential (QE) scheme perform similarly. We also examine the numerical behaviour of the Radon-Nikodym derivative.