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Dapeng Zhan* (zhan@math.msu.edu), Department of Mathematics, Wells Hall, Michigan State University, East Lansing, MI 48824. *Decomposition of Schramm-Loewner evolution along its curve.*

We show that, for $\kappa \in (0, 8)$, the integral of the laws of two-sided radial SLE_κ curves through different interior points against a measure with SLE_κ Green function density is the law of a chordal SLE_κ curve, biased by the path's natural length. We also show that, for $\kappa > 0$, the integral of the laws of extended $\text{SLE}_\kappa(-8)$ curves through different interior points against a measure with a closed formula density restricted in a bounded set is the law of a chordal SLE_κ curve, biased by the path's capacity length restricted in that set. Another result is that, for $\kappa \in (4, 8)$, if one integrates the laws of two-sided chordal SLE_κ curves through different force points on \mathbb{R} against a measure with density on \mathbb{R} , then one also gets a law that is absolutely continuous w.r.t. that of a chordal SLE_κ curve. To obtain these results, we develop a framework to study stochastic processes with random lifetime, and improve the traditional Girsanov's Theorem. (Received February 17, 2016)