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J Mealy* (jmealy@austincollege.edu), Austin College, suite 61560, 900 North Grand Avenue, Sherman, TX 75090, and **Kusha Mohammadi**. *Staircase metrics in space-time geometries*.

After a brief introduction to this general category of systems with staircase-function metrics (formerly, ‘Snell geometry’) and its natural methodology (which contrasts considerably with that of differential geometry), we discuss an extension of the scheme to space-time geometries. Focusing on systems where the underlying parameter space is the 2-plane, we establish metrics and derive formulas that lead to straightforward constructions of a large variety of semi-complete (or complete) time-like geodesics. These can be used, for example, to construct fully time-like asymptotic polygons. We demonstrate the construction of such complete geodesics via two sub-cases; the latter sub-case essentially entails ‘staircase versions’ of general (1,1)-FLRW (Robertson-Walker) metrics in general relativity. (Received August 23, 2013)