1067-05-704　　　　　**Amariah D. Becker*** (`beckera@carleton.edu`), **Hannah Alpert**, **James Hilbert** and **Jenny Iglesias**. *"Graphic" Degree Sequences for Edge-Colored Graphs.*

The degree sequence for an edge-colored graph on m vertices using n colors is a list of m n-tuples, in which each n-tuple corresponds to a vertex and specifies the degree of each color at that vertex. We explore under what conditions there exists a simple graph that satisfies a given such degree sequence. When such a graph exists we say that the degree sequence is 'graphic.' In particular, we examine graphs in which the maximum degree, Δ, is small, and we also show that for a fixed maximum degree and number of edge colors, we can decide in polynomial time whether a degree sequence is 'graphic.' (Received September 13, 2010)