1014-05-1080   **Ron Gould** and **Brian Charles Wagner*** (`bcwagne@emory.edu`). *Ascending Subgraph Decompositions of Digraphs.* Preliminary report.

A graph G with $\binom{n+1}{2}$ edges is said to have an ascending subgraph decomposition (ASD) if there exists a partition of the edge set of G into graphs $G_1, G_2, \ldots, G_n$ with G_i isomorphic to a subgraph of G_{i+1} for all $1 \leq i \leq n-1$ and $|E(G_i)| = i$ for all i. It is conjectured that every graph with $\binom{n+1}{2}$ edges has an ASD. We will look at the analogous problem for digraphs. Specifically, we will look at examples of classes of graphs where all directed versions of the graph have an ASD. (Received September 27, 2005)