962-05-838 **Jonathan J Wiens*** (`ffjjw@uaf.edu`), Box 756660, Fairbanks, AK 99775-6660. *The Poincare Polynomial of a Graph.*

This paper discusses the Poincaré Polynomial of a Graph, defined as the Poincaré polynomial on the partially ordered set of connected induced subgraphs of a graph G. The result of various graph operations on the polynomial are discussed, as are several interesting sub-posets of this poset of connected induced subgraphs. We also present a conjecture that the vertex connectivity of the graph G is related to the multiplicity of $1 - t$ as a factor in the Poincaré polynomial and discuss the special cases for which the conjecture has been verified (Received September 27, 2000)