1106-65-2341 **Matthew Nabity*** (nabitym@wou.edu) and **David Avery**. *Non-partitioned Recognition Algorithm for 2-tree Probe Interval Graphs.* Preliminary report.

Let G be a simple, undirected, finite graph with vertex set $V(G)$ and edge set $E(G)$. A graph G is a probe interval graph if there is a partition of $V(G)$ into P and N and a collection $\{I_v : v \in V(G)\}$ of closed intervals of $\mathbb{R}$ in a one-to-one correspondence with $V(G)$ such that $uv \in E(G)$ if and only if $I_u \bigcap I_v = \emptyset$ and at least one of u or v belongs to P. The set P is referred to as the probes, and the set N the non-probes. Recognition of probe interval graphs has been studied extensively. Recognizing probe interval graphs can be broken down into two types of problems: partitioned and non-partitioned. A partitioned recognition algorithm includes the probe and non-probe partition as part of the input, where a non-partitioned algorithm does not. Because of the difficulty of the non-partitioned problem, many have turned their attention to the recognition of probe interval graphs from specific families of graphs. We present an efficient non-partitioned recognition algorithm for probe interval 2-trees and provide a complexity analysis. (Received September 16, 2014)