1116-11-436 **Lisa Joy Mueller*** (exceedinglyhappy@csu.fullerton.edu), 1981 Berkshire Drive, Fullerton, CA 92833, and **Oliver Sawin**, **WonHyuk "Harry" Choi** and **Abdollah Khodkar**. *Study on Oddly Bipancyclic Graphs and Other N-Pancyclic Graphs.*

A graph of n vertices with a Hamiltonian cycle of length n is called a uniquely pancyclic cycle if it contains exactly one cycle of length $m \forall 3 \leq m \leq n$. Similarly, a uniquely bipancylic cycle is one with cycle lengths of all even cycles of length $2m \forall 2 \leq m \leq n/2$ where $n = 2k$. In this paper, we expand on these definitions to find a new type of uniquely pancyclic graphs, an uniquely oddly bipancyclic graph, which has n vertices with a Hamiltonian cycle of length $n-1$ where $n = 2k + 1$; additionally, it contains exactly cycles of length $2m \forall 2 \leq m \leq (n-1)/2$. We provide the 6 non-isomorphic uniquely oddly bipancyclic graphs with 5 or less chords. We also present additional information on k-panyclic graphs, which contain exactly k cycles of length 3 through degree n. (Received September 01, 2015)