1126-13-208 **Scott T Chapman*** (scott.chapman@shsu.edu). *The Catenary Degrees of elements in Numerical Monoids generated by Arithmetic Sequences.* Preliminary report.

We compute the catenary degree of elements contained in numerical monoids generated by arithmetic sequences. We find that this can be done by describing each element in terms of the cardinality of its length set and of its set of factorizations. As a corollary, we find for such monoids that the catenary degree becomes fixed on large elements. This allows us to define and compute the *dissonance number*- the largest element with a catenary degree different from the fixed value. We determine the dissonance number in terms of the arithmetic sequence's starting point and its number of generators. (Received January 13, 2017)