

1056-01-1116      **Janet L Beery\*** ([janet\\_beery@redlands.edu](mailto:janet_beery@redlands.edu)). *“Ad Calculum Sinuum”*: *Thomas Harriot’s Sine Table Interpolation Formulas*.

In about two dozen scattered, undated manuscript sheets, each headed “Ad Calculum Sinuum,” Thomas Harriot (1560-1621) developed finite difference interpolation methods specifically for sine tables. Harriot shared these methods with his friend, William Lower, sometime before Lower’s untimely death in 1615. Although Harriot would present more general interpolation formulas in 1618 or later in his unpublished manuscript treatise, “De numeris triangularibus et inde de progressionibus arithmetis: Magisteria magna”, his work on sine table interpolation was an important part of his interpolation project. In particular, it illustrates very clearly how he generalized from interpolating three values to interpolating  $n$  values between successive table entries. In this presentation, we show how Harriot developed and used finite difference interpolation formulas for sine tables. (Received September 21, 2009)