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**Bryan C White\*** (bcwhite64@gmail.com). *Computational Investigation of Star Operations Using Macaulay 2*. Preliminary report.

We investigate the actions of star operation of the form  $J^\star = (I : (I : J))$  for some fixed fractional ideal  $I$  on numerical semigroup rings using the computer program Macaulay 2. We do this by representing our numerical semigroup ring as a quotient of a polynomial ring in several variables and then applying the colon function in Macaulay 2. We also find limitations on possible actions of arbitrary star operations using the fact that if a fractional ideal  $A$  is  $\star$ -closed, then so is  $(A : B)$  for any fractional ideal  $B$ . (Received February 11, 2014)