1116-VM-1590   **David S Torain, II*** (`david.torain@hamptonu.edu`). *A Deeper Study of a Mathematical Model Using Torain's Equations.*

Torain's mathematical model is mainly used as an analytical tool while computer software, like Mathematica or MatLab, is used to crosscheck the predictions given by the analytical tool. This analytical tool, which also represents a mathematical model, offers a global view that computer calculations cannot provide. The mathematical model reduces to a set of parametric coupled non-linear differential equations. The equations depend on sixteen parameters and all the parameters must be fixed in order to arrive at a computer solution. A different and new point of view consists of letting all of the parameters be free and getting a panoramic view of all possible solutions. It is possible to achieve this goal by using "Dimensional Analysis". (Received September 20, 2015)