

# Computer Implemented Empirical Mode Decomposition Method Apparatus and Article of Manufacture Utilizing Curvature Extrema

---

Case Number: GSC- 13817-2  
Patent Number: 6,631,325  
Patent Exp. Date: 6/10/2017

## DESCRIPTION

This technology is a geophysical signal analyzing apparatus and computer implemented geophysical signal analyzing methods. A computer usable medium has instructions for recursively sifting input geophysical signals e.g. earthquake signals using empirical mode decomposition (EMD), to extract an intrinsic mode function (IMF) indicative of an intrinsic oscillatory mode in a physical phenomenon. The extracted intrinsic mode function is displayed on a computer interface.

## FEATURES AND BENEFITS

- By utilizing empirical mode decomposition (EMD), a much more detailed representation of the physical process is realized. Since the procedure is independent of orthogonality, the procedure can also be applied to non-linear data.

## APPLICATIONS

- Geophysical Analysis for Earthquakes and Tsunamis
- Ocean Analysis

## FOR MORE INFORMATION

If you are interested in more information or want to pursue transfer of this technology, GSC-13817-1, please contact:

Enidia Santiago- Arce  
Technology Manager  
NASA Goddard Space Flight Center  
Innovative Partnerships Program Office  
enidia.santiago-arce-1@nasa.gov  
(301) 286-8497