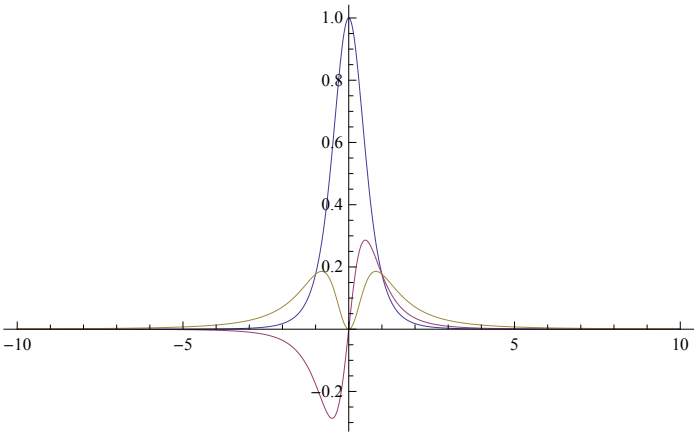
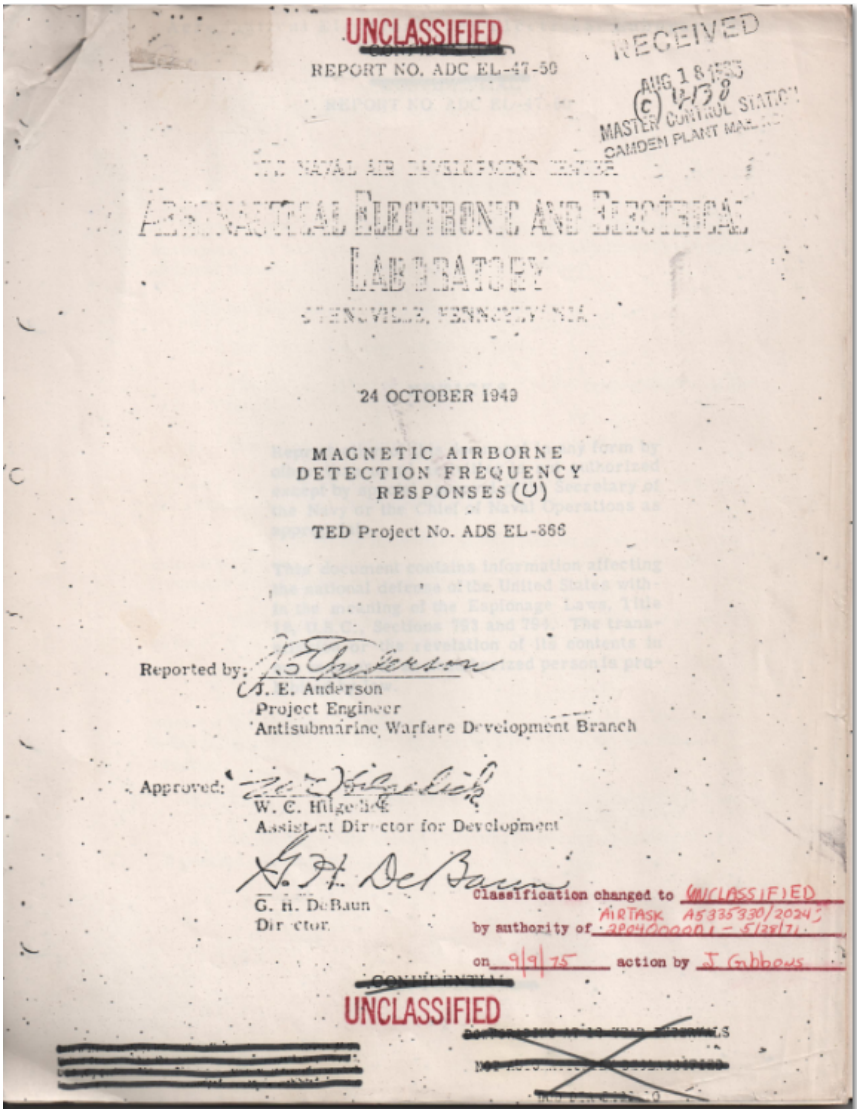
The following is a plot of "Anderson Functions" which are used to simulate the magnetic signature of a submerged submarine. Anderson Functions were developed by J. E. Anderson for airborne magnetometers in the 40's and further below is a copy of the title page of Anderson's report containing his three functions. Ref: Magnetic Airborne Detection Frequency Responses, by J. E. Anderson, Naval Air Development Center, Aeronautical Electronic and Electrical Laboratory, Johnsville, PA, dated 24 Oct 1949, Report Number ADC EL-47-50.

$$\text{Plot}\left[\left\{\frac{1}{\left(1+\theta^2\right)^{5/2}},\ \frac{\theta}{\left(1+\theta^2\right)^{5/2}},\ \frac{\theta^2}{\left(1+\theta^2\right)^{5/2}}\right\},\ \{\theta,\ -10,\ 10\},\ \text{PlotRange}\to\text{All}\right]$$





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...STENSVILLE, PENNSYLVANIA

24 OCTOBER 1949

MAGNETIC AIRBORNE DETECTION FREQUENCY RESPONSES (U)

TED Project No. ADS EL-868

Reported by: J. E. Anderson
Project Engineer
Antisubmarine Warfare Development Branch

Approved: W. C. Hilgeford
Assistant Director for Development

G. H. DeBaun
Director

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