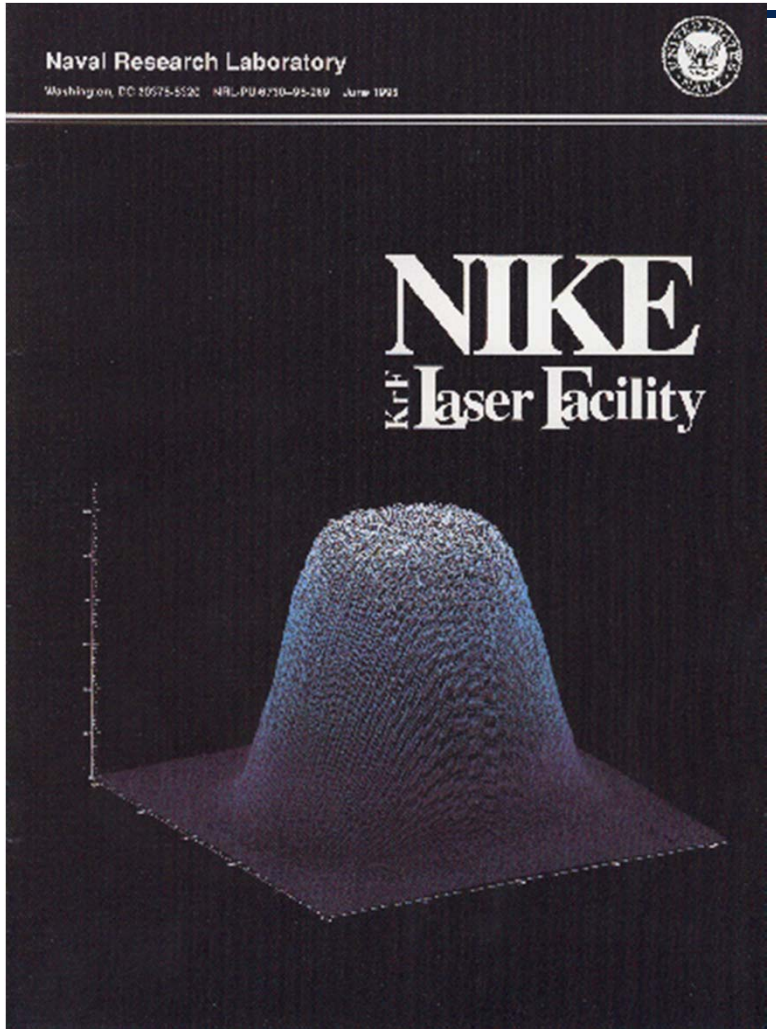
Figure and Figure Caption Basics



Permission from the US Naval Research Laboratory, Plasma Physics Division, and the Nike KrF Laser Program for use of their figures and figure captions is gratefully acknowledged.

Effective Figure Captions for Technical Documents

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with additions from
Lance Cooper

Figure captions are placed ***below*** the figure

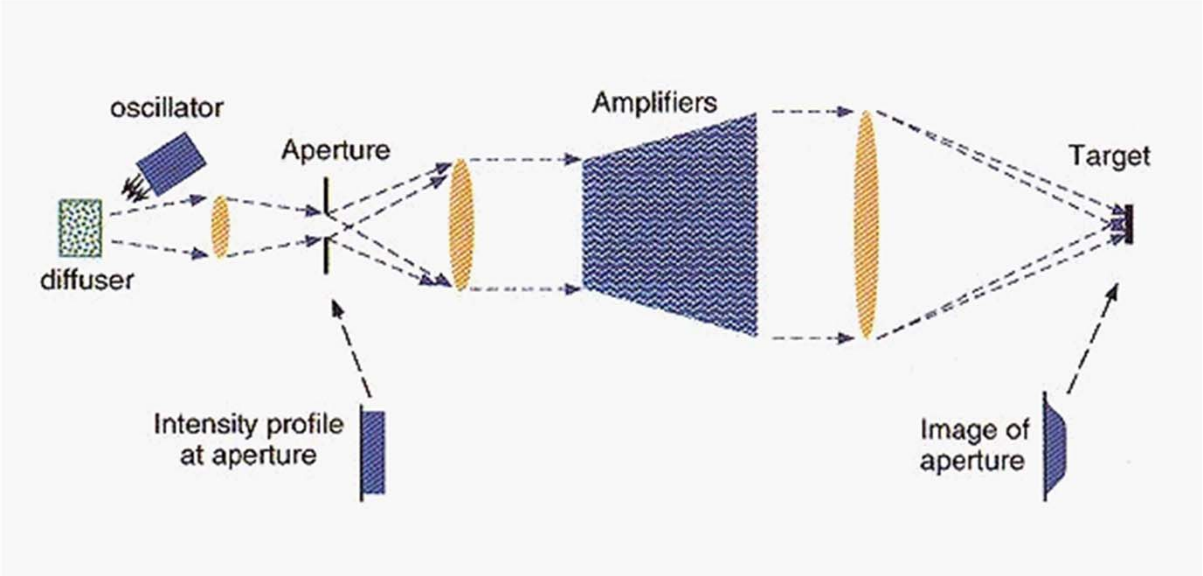

Figure 1. ISI is a fine optical system that images the uniform aperture onto the target. If the optical distortion of the system is small compared to the size of the focal spot image, then the profile shape will be only slightly distorted, when averaged over relevant hydrodynamic time scales. (*Courtesy U.S. Naval Research Laboratory*)

The caption should not be put in the figure

(*Image courtesy U.S. Naval Research Laboratory*)

Provide a clear and complete description of all figure elements without referring to the text

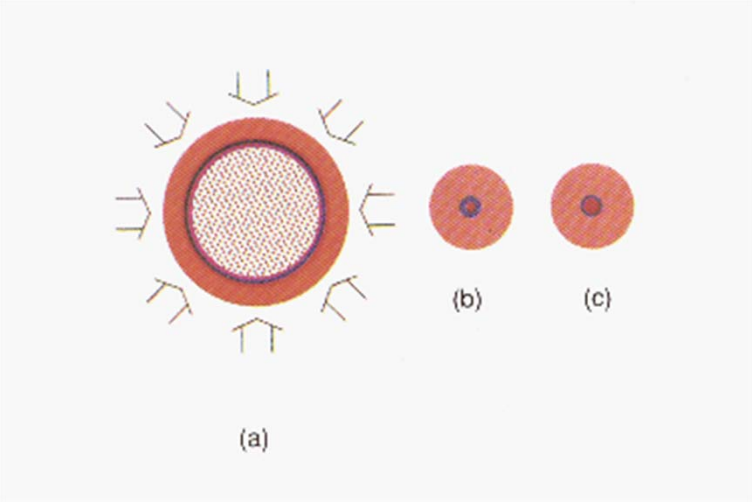

Figure 2. The basic concepts of laser fusion: (a) Laser beams symmetrically heat the outside of a pellet to a temperature ~2 keV, generating pressures of ~50 MBar. The inner part of the pellet shell is kept on a low isentrope at a few eV. The hot corona drives the cold shell inward like a rocket. (b) The cold fuel is compressed into a small, high-density shell of ~500 g/cc surrounding a central hot-spot "ignitor" fuel at ~50 g/cc; the ignitor is self-heated by the alpha particles. (c) A burn wave then propagates through the remaining cold fuel.
(*Courtesy U.S. Naval Research Laboratory*)

Provide references in the caption for figures taken from another source

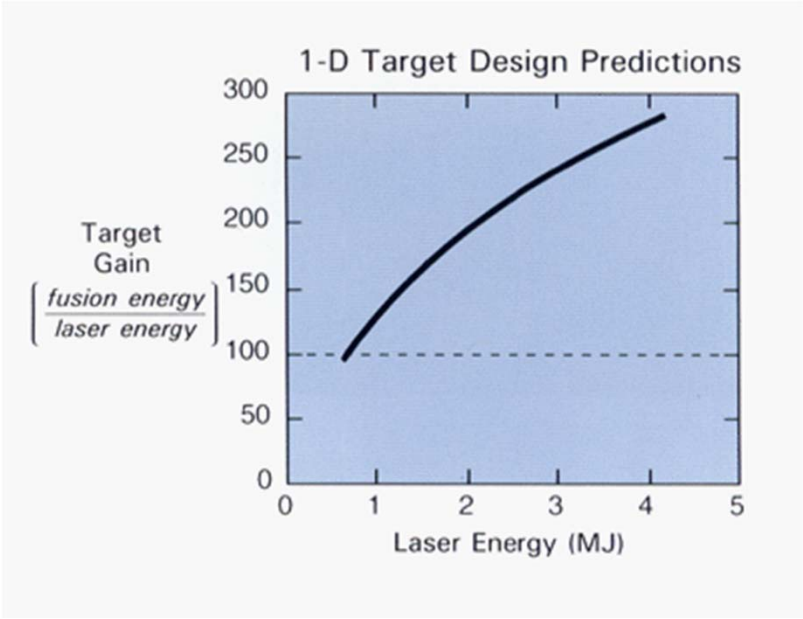

Figure 3. The 1-D spherical target designs at NRL predict target gains of 100–300 for a few-MJ laser. This gain curve is an upper bound on possible target performance. A gain of at least 100 is required for fusion-reactor applications. (*Courtesy U.S. Naval Research Laboratory*)

The caption should draw the reader's attention to all salient features of the figure

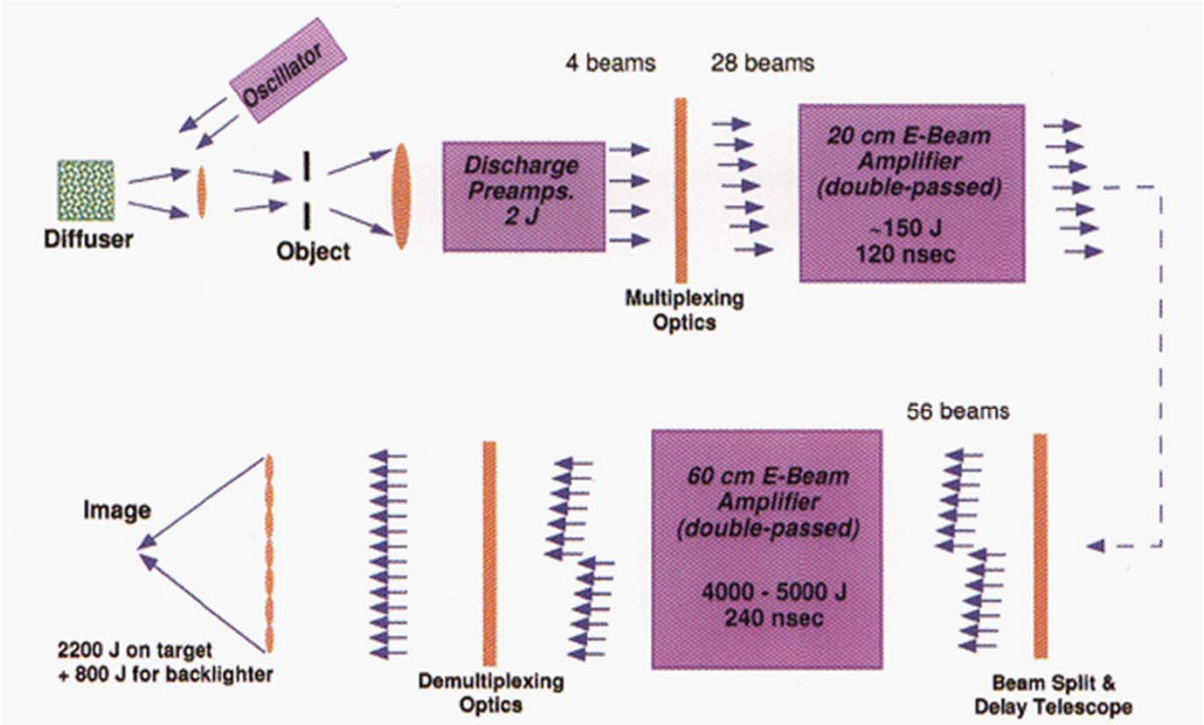

Figure 4. The Nike laser beam amplifier system. The system uses both discharge preamplifiers and E-beam pumped amplifiers. Because the E-beam amplifiers have a long pulse duration, the laser beams are "multiplexed" into 56 separate beams that pass through the amplifier successively and are then recombined onto the target. Forty-four of the beams are used for target acceleration and 12 to produce a backlighter for target diagnostics. (*Courtesy U.S. Naval Research Laboratory*)

Figures should be numbered consecutively in the order of their appearance in the text

- Use Arabic numerals and the word “figure” to denote figures and captions, e.g. **Figure 1, Fig. 23**

- “Figure” should be capitalized when combined with a numeral to form the title of a specific figure
  - “Temperature variation is shown in Fig. 3.”
  - “The figure clearly shows the temperature variation with elapsed time.”

Make sure you describe what the figure is showing before describing what it means

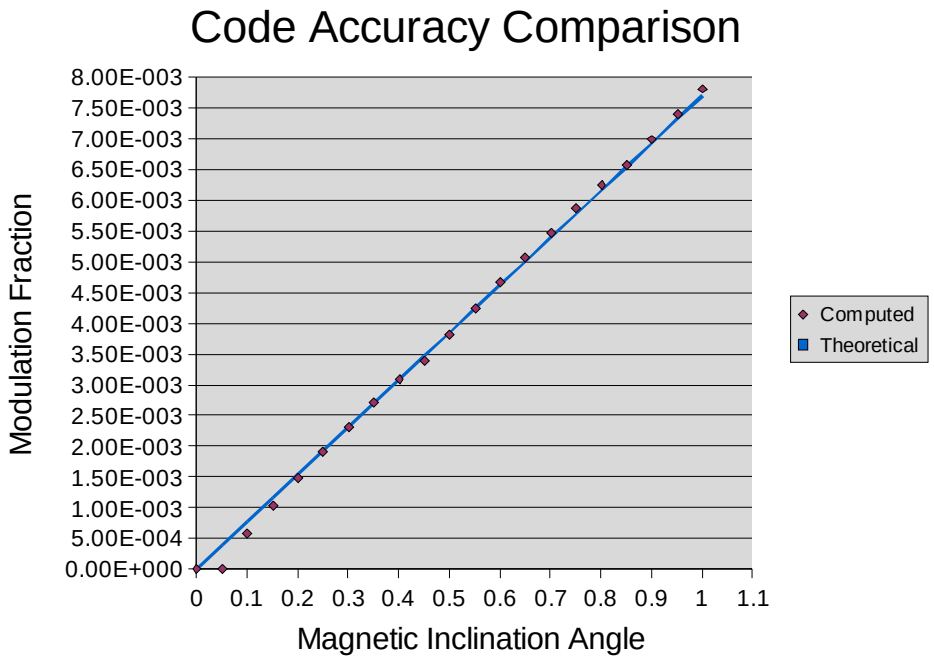

Figure 1: This graph displays the accuracy of the code at low magnetic inclination angles for a spot size of 90 degrees, where the error will be largest. As our analysis only uses magnetic inclination angles of 0.2 degrees and above, our code is sufficiently accurate to study the millisecond pulsars. Our results fit the theoretical values with an $R^2 = 0.9997$.

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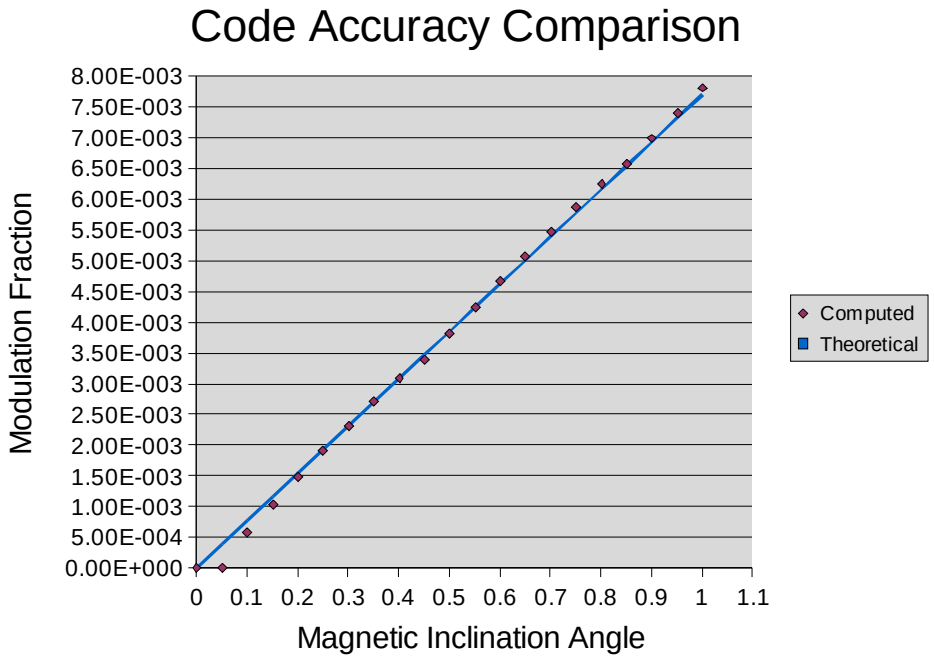

Figure 1: Plot of modulation fraction vs magnetic inclination angle determined from both computer simulations (diamonds) and theoretical calculations (solid line). This graph displays the accuracy of the code at low magnetic inclination angles for a spot size of 90 degrees, where the error will be largest. As our analysis only uses magnetic inclination angles of 0.2 degrees and above, our code is sufficiently accurate to study the millisecond pulsars. Our results fit the theoretical values with an $R^2 = 0.9997$.

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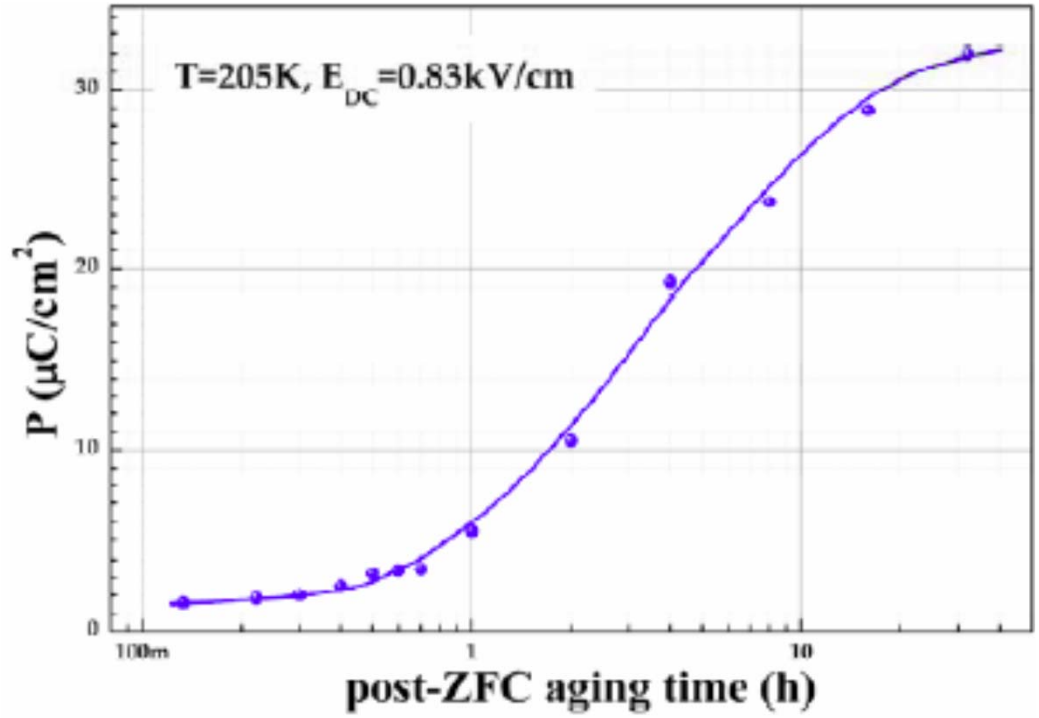

Figure 1. The relaxor PMN-PT 8% develops partial polarization when aged at T = 205 K in a dc bias field E = 830V/cm. The magnitude of the net polarization formed in the sample during this type of aging process is plotted above as a function of the total aging time.

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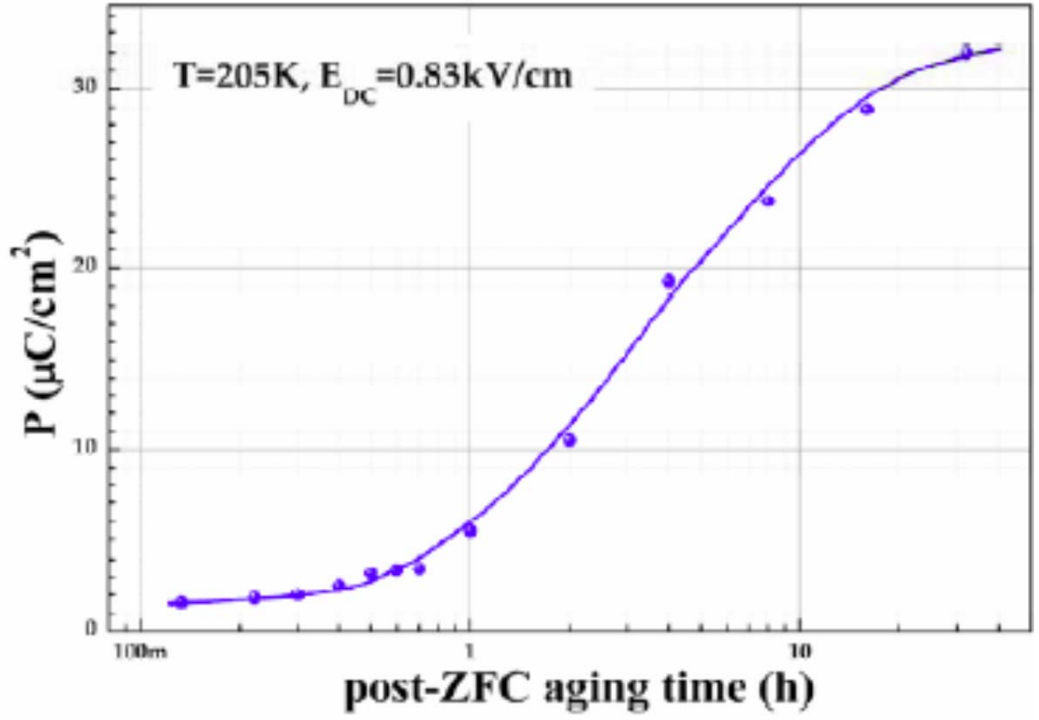


Figure 1. Plot of polarization vs aging time for the relaxor ferroelectric PMN-PT 8%. The relaxor PMN-PT 8% develops partial polarization when aged at T = 205 K in a dc bias field E = 830V/cm.

Make sure to describe all the key elements in the figure

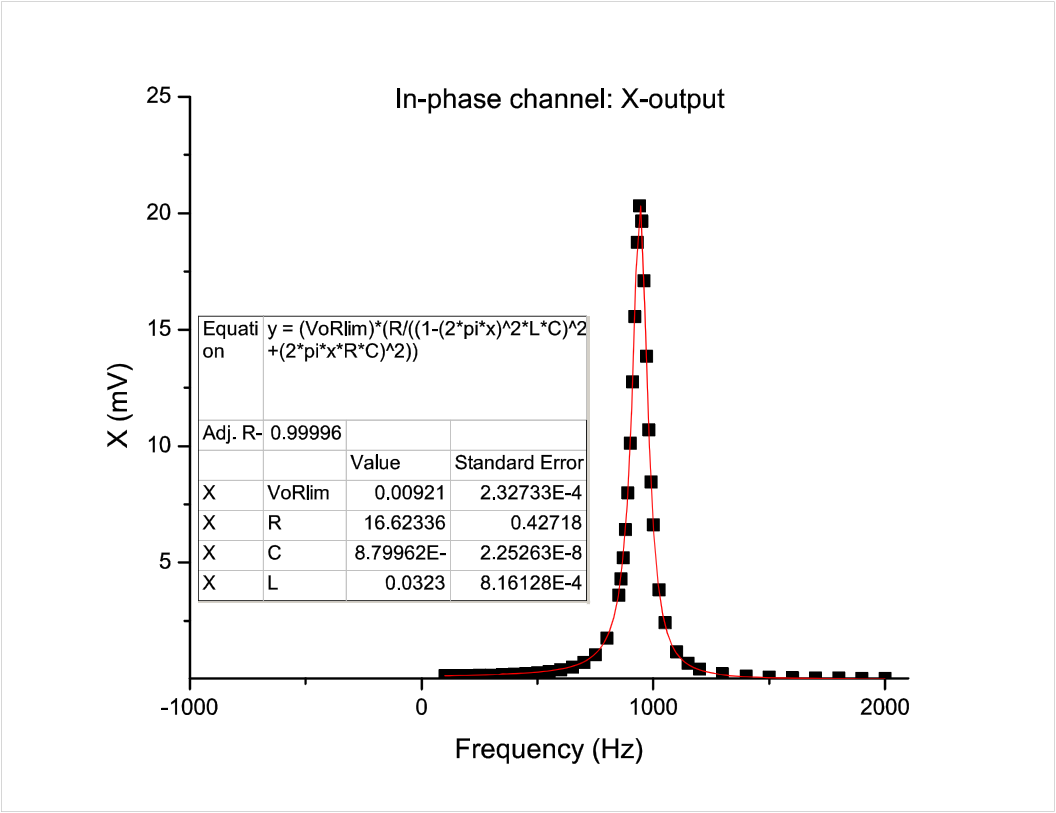


Figure 1. The in-phase output voltage amplitude of an RLC circuit shows a clear resonant response frequency at the peak around 980 Hz.

Make sure to describe all the key elements in the figure

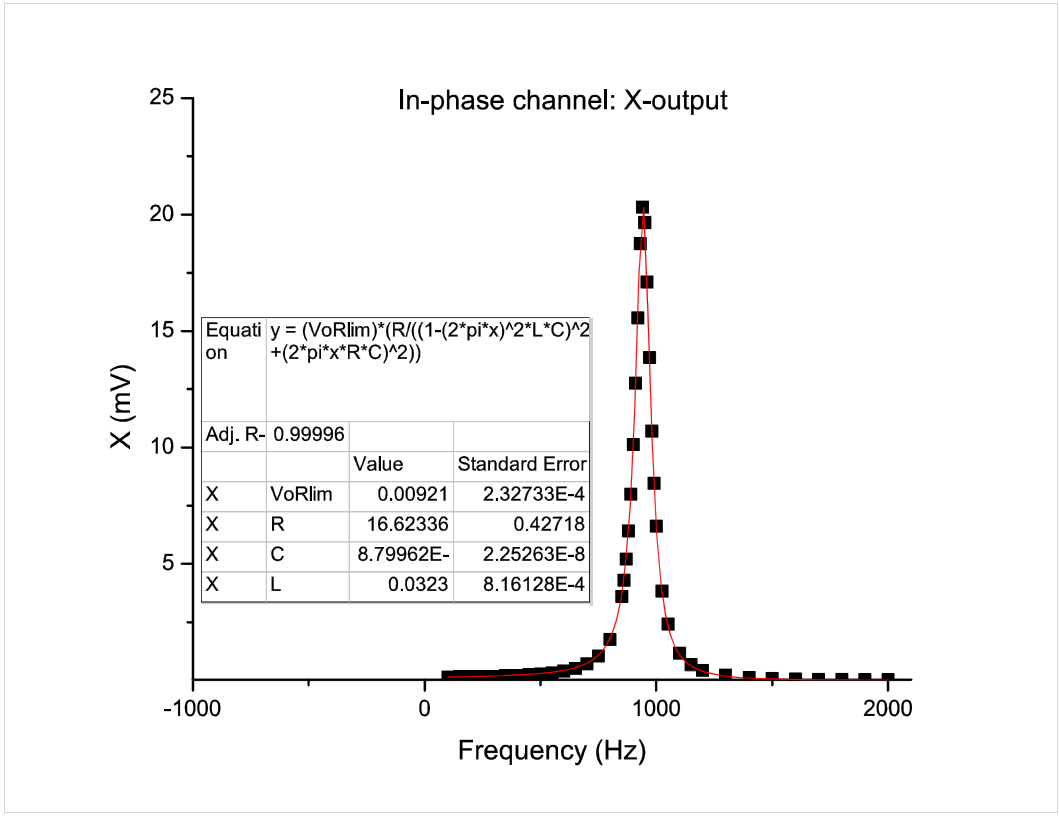


Figure 1. Plot of the in-phase output voltage X vs frequency. The in-phase output voltage amplitude of an RLC circuit shows a clear resonant response frequency at the peak around 980 Hz.

Make sure to describe all the key elements in the figure

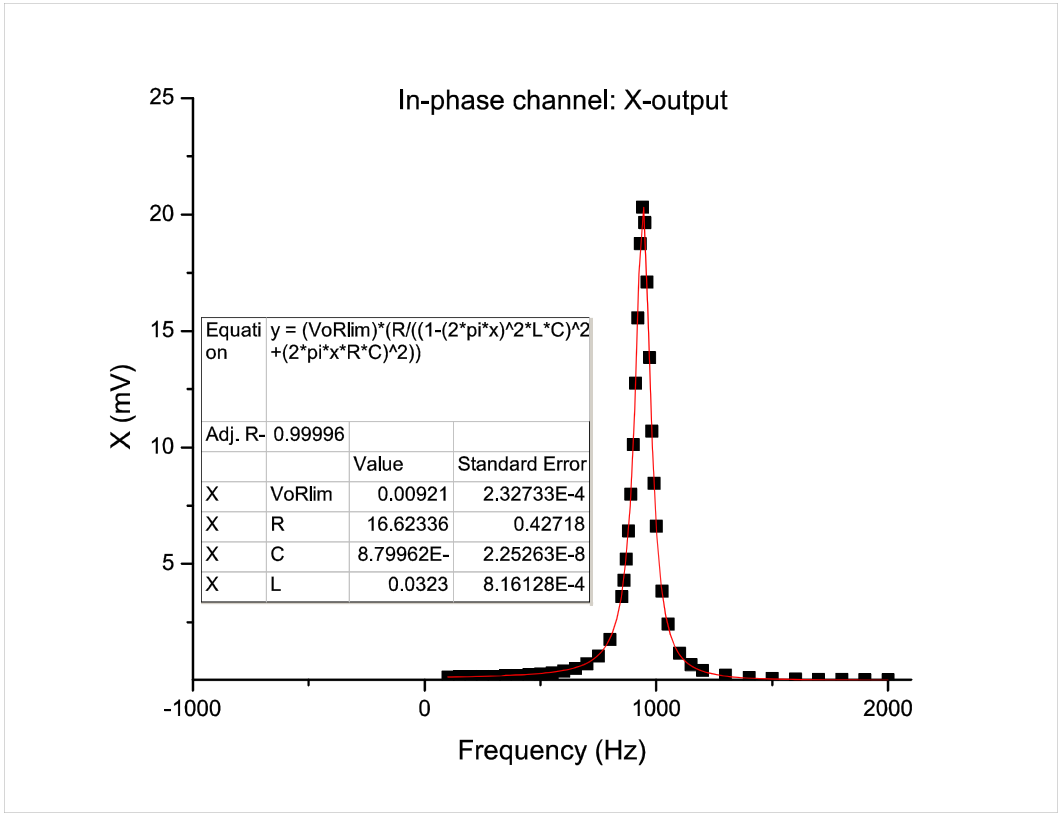
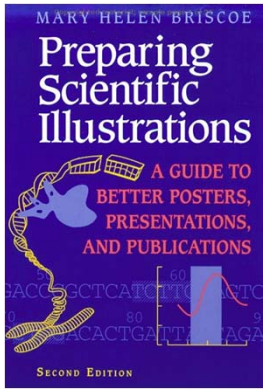
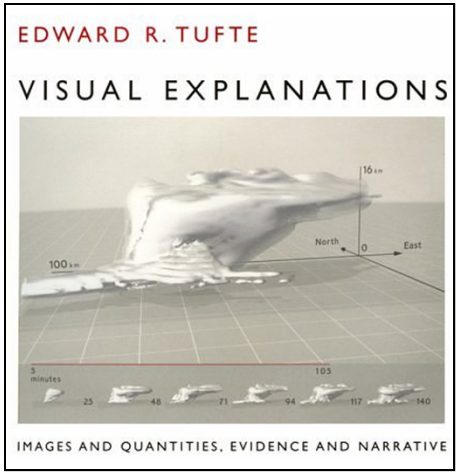


Figure 1. Plot of the in-phase output voltage X vs frequency. Filled squares represent measured points, and the red line is a fit to the data using a Lorentzian lineshape. The table inset gives the fit parameters associated with the Lorentzian fit. The in-phase output voltage amplitude of an RLC circuit shows a clear resonant response frequency at the peak around 980 Hz.

Recommended Reading



Mary Helen Briscoe, *Preparing Scientific Illustrations*, 2nd ed. (New York, Springer, 1996).



Edward R. Tufte, *Visual Explanations: Images and Quantities, Evidence and Narrative* (Cheshire, CT, Graphics Press, 1997).