

Brief Article

The Author

October 20, 2017

Contents

1	Introduction	2
1.1	Fourier Transform	2
1.2	Justification	3

1 Introduction

This is the first section

1.1 Fourier Transform

This is the first subsection. It contains the Fourier transform[1].

$$\hat{f}(\xi) = \int_{-\infty}^{\infty} f(x) e^{-2\pi i x \xi} dx \tag{1}$$

You can see this in Figure 1 on page 4.

1.2 Justification

Some beautifully justified text[3]:

In the 1820s Fourier calculated[2] that an object the size of the Earth, and at its distance from the Sun, should be considerably colder than the planet actually is if warmed by only the effects of incoming solar radiation. He examined various possible sources of the additional observed heat in articles published in 1824 and 1827. While he ultimately suggested that interstellar radiation might be responsible for a large portion of the additional warmth, Fourier's consideration of the possibility that the Earth's atmosphere might act as an insulator of some kind is widely recognized as the first proposal of what is now known as the greenhouse effect.

References

- [1] Ronald Newbold Bracewell and RN Bracewell. *The Fourier transform and its applications*, volume 31999. McGraw-Hill New York, 1986.
- [2] Jack K Hale. Functional differential equations. In *Analytic theory of differential equations*, pages 9–22. Springer, 1971.
- [3] Pierre-Simon Laplace. *Pierre-Simon Laplace Philosophical Essay on Probabilities*, volume 13. Springer, 1995.



Figure 1: A picture of Joseph Fourier