Default Models

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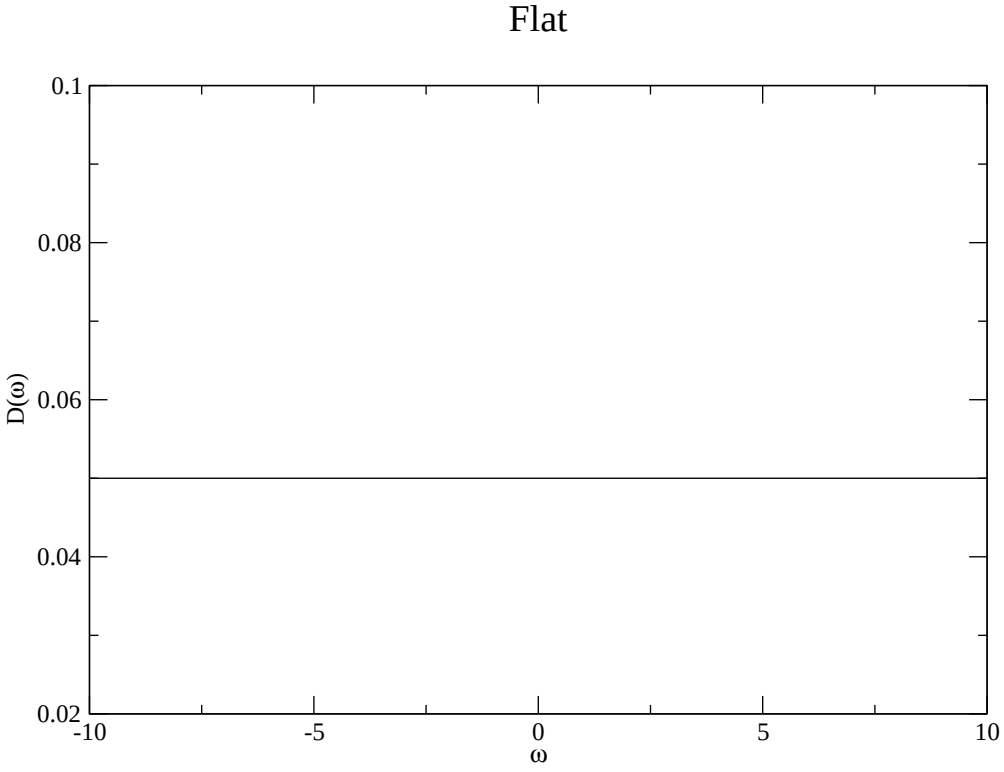
Abstract

The Maxent method uses entropy S of a spectral function $A(\omega)$, defined with respect to an underlying default model $D(\omega)$ such that $S = -\int d\omega A(\omega) \ln \frac{A(\omega)}{D(\omega)}$. This document provides several plots of available default models for use in the Maxent program.

Contents

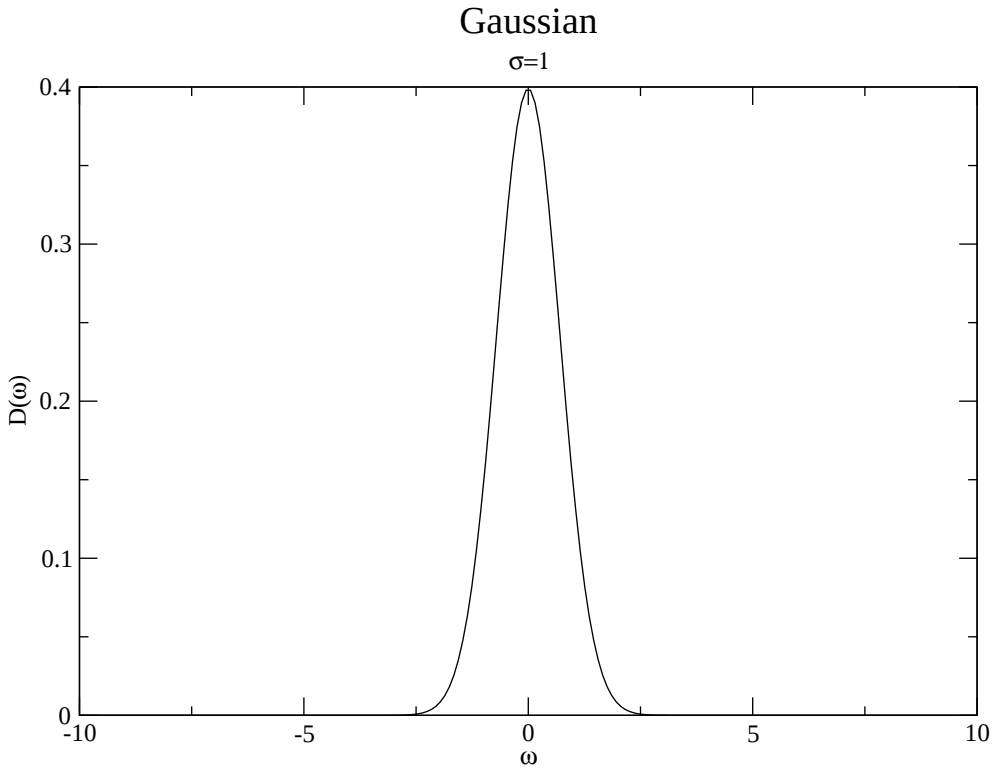
Part I
Flat

```
DEFAULT_MODEL="flat"
```

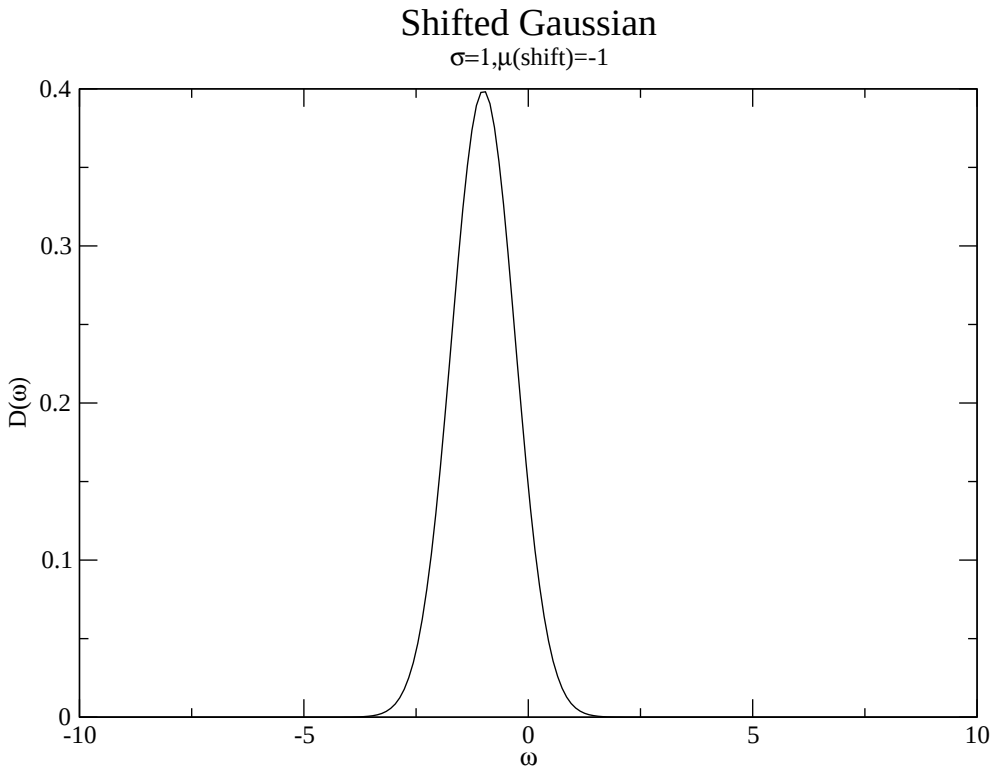


Part II
Gaussian

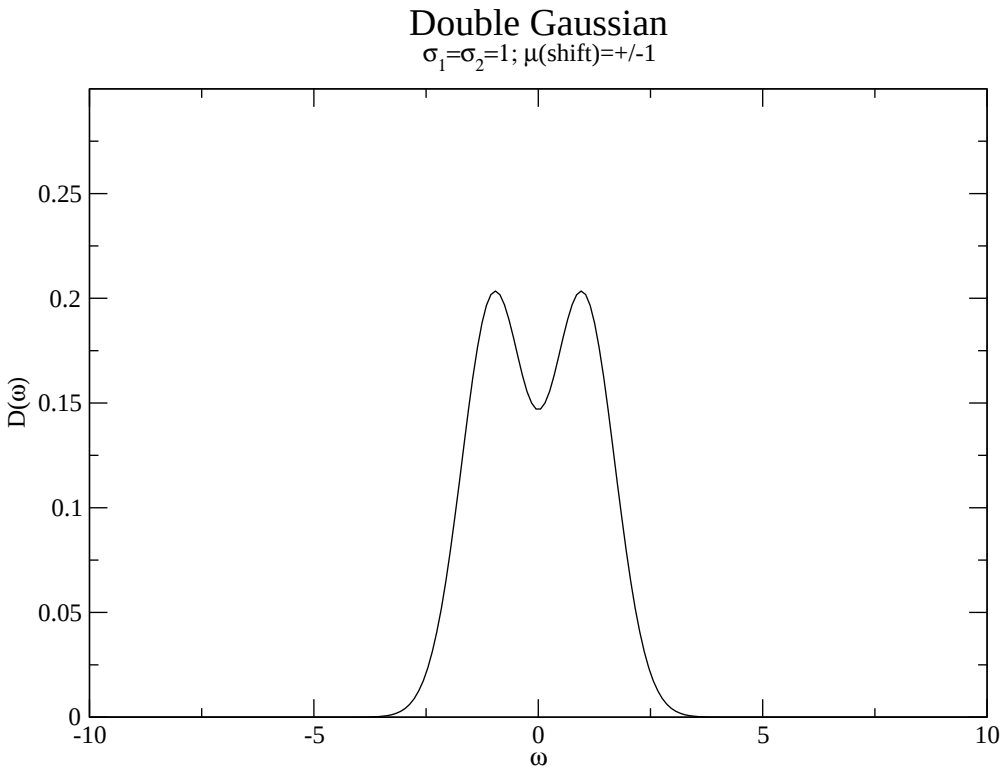
```
DEFAULT_MODEL="gaussian"

SIGMA=__
```



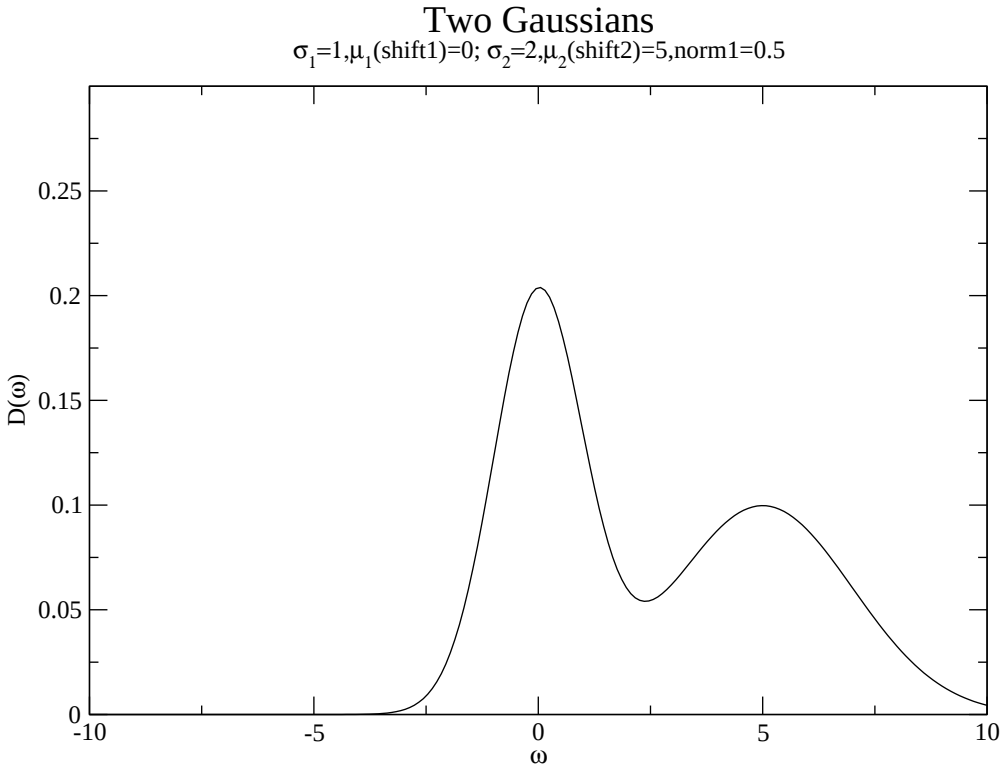
```
DEFAULT_MODEL="shifted gaussian"

SIGMA=__

SHIFT=__
```



```
DEFAULT_MODEL="double gaussian"

SIGMA1=__

SIGMA2=__
```

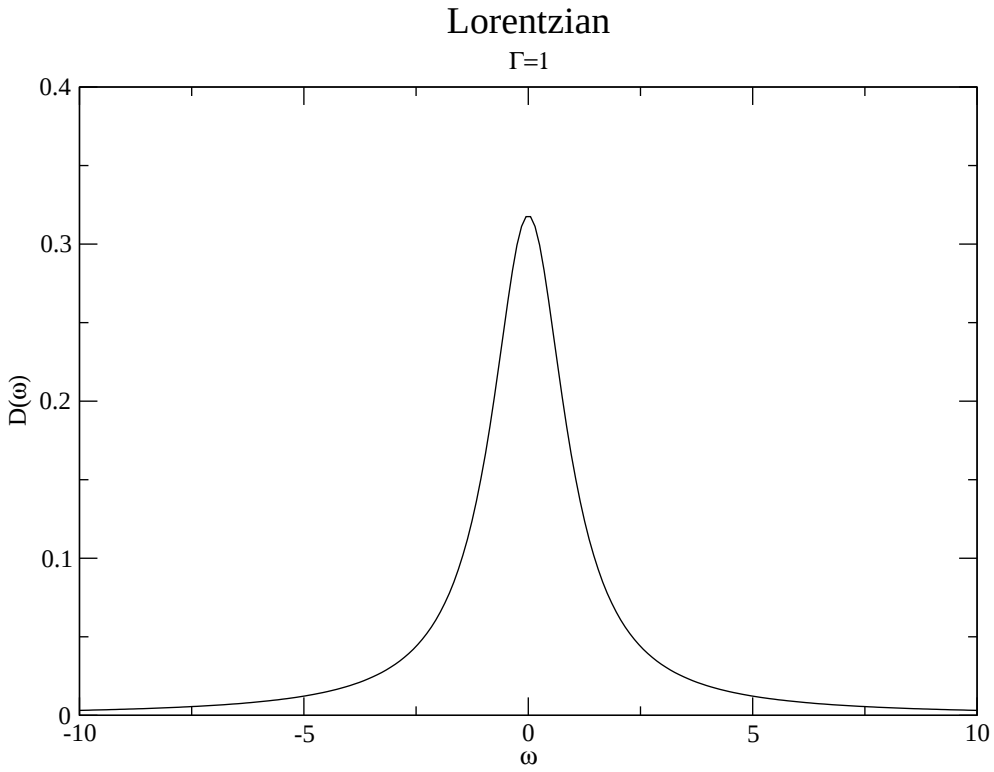


```
DEFAULT_MODEL="Two gaussians"

SIGMA1=__

SIGMA2=__

SHIFT1=__

SHIFT2=__

NORM1=__
```



Part III
Lorentzian

```
DEFAULT_MODEL="Lorentzian"

GAMMA=__
```

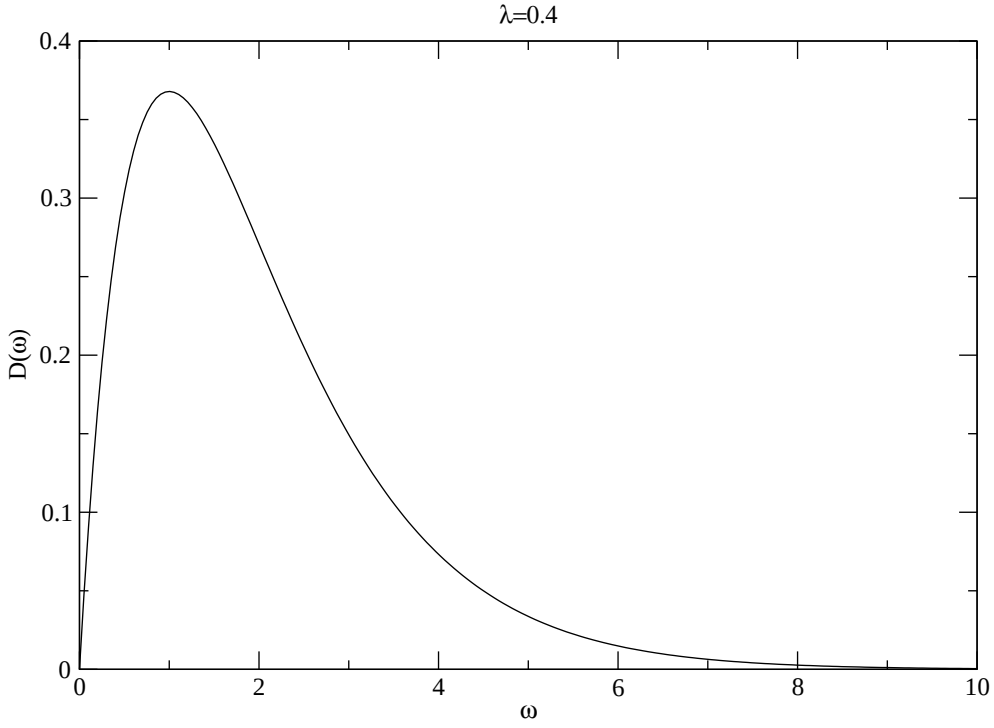


See Gaussian for similar models (replace gaussian with lorentzian)

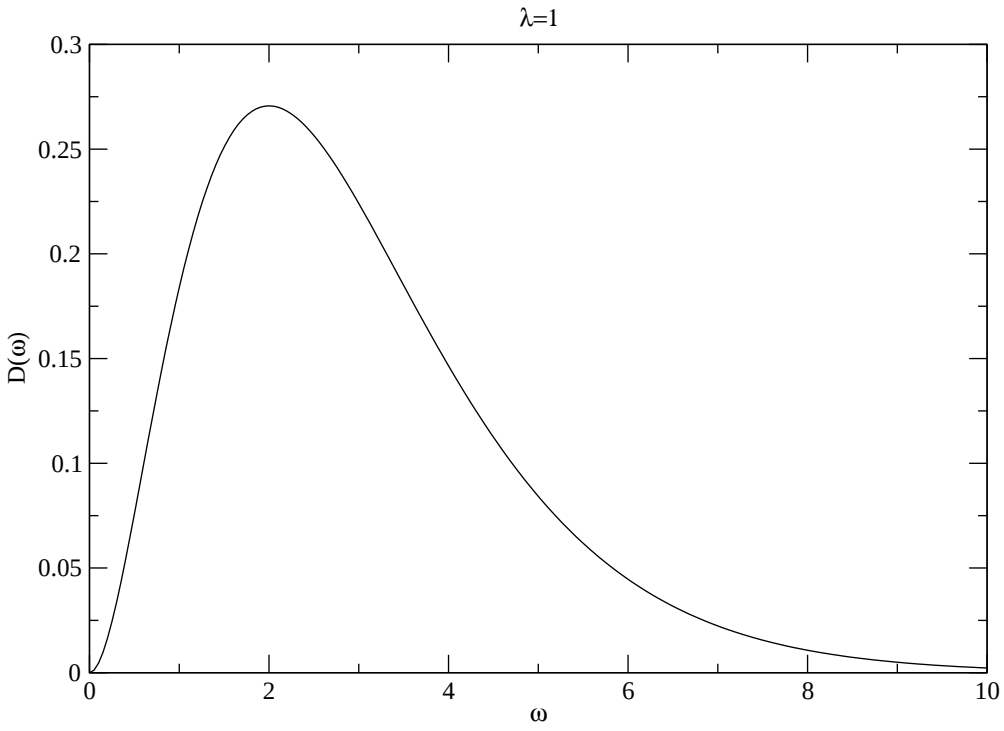
Part IV

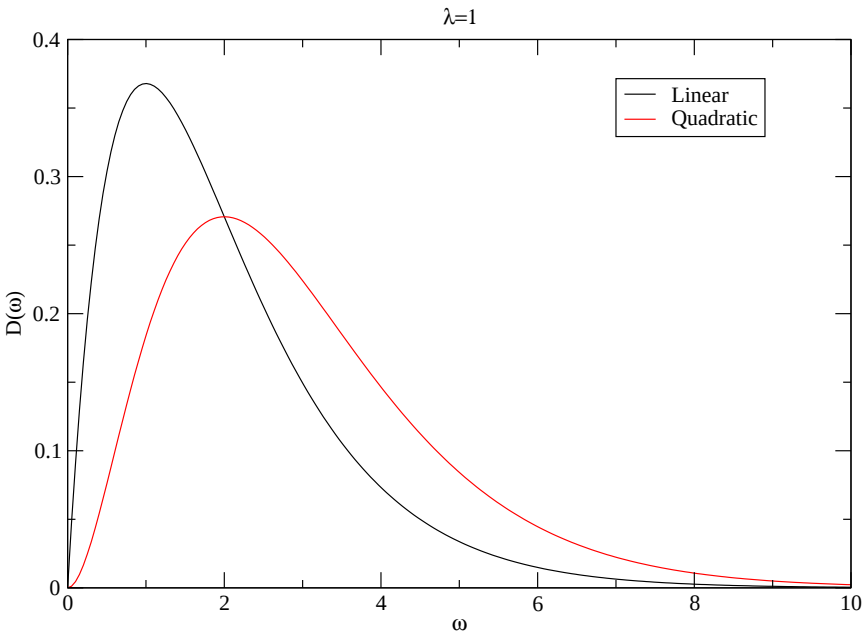
(Linear/Quadratic) Exponential Decay

```
DEFAULT_MODEL="linear rise exp decay"

LAMBDA=__
```



```
DEFAULT_MODEL="quadratic rise exp decay"

LAMBDA=__
```




Comparison of __RiseExpDecay
λ=1
Linear
Quadratic
D(ω)
ω
0
0.1
0.2
0.3
0.4
0
2
4
6
8
10