

Off-Diagonal Heat Kernel for $M = 4$
with Klein Bottle Horizontal Glued Identifications

SPUR 2016

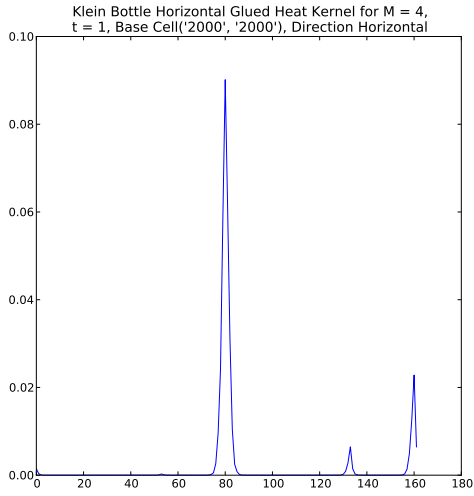
August 2, 2016

Note: All negative values with absolute value $< 1 \times 10^{-10}$ were treated as e^{-35} . No negative values with absolute value $\geq 1 \times 10^{-10}$ were encountered.

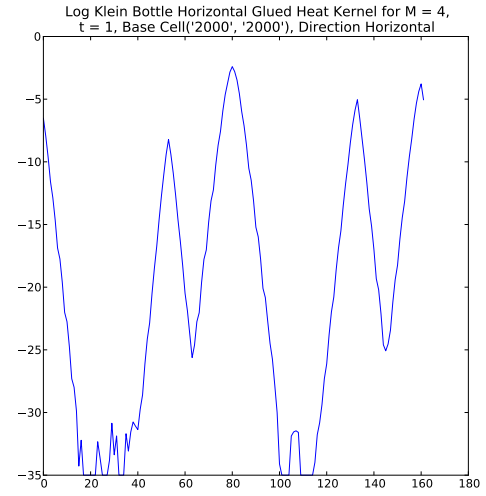
1 Base Cell('2000', '2000')

1.1 $t = 1$ Horizontal

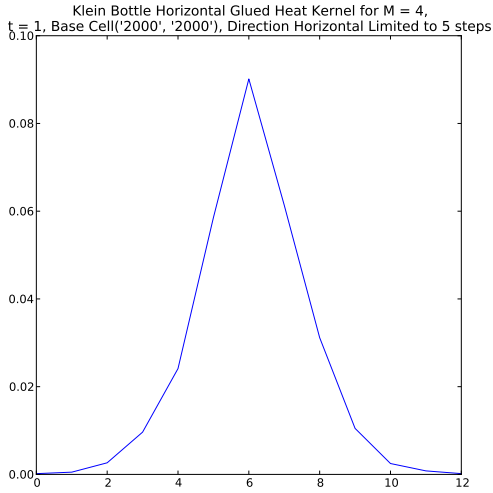
(Regular) Horizontal



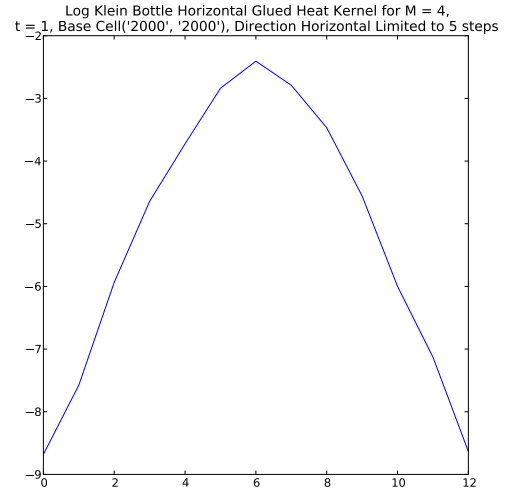
(Log) Horizontal



(Regular — Zoomed) Horizontal

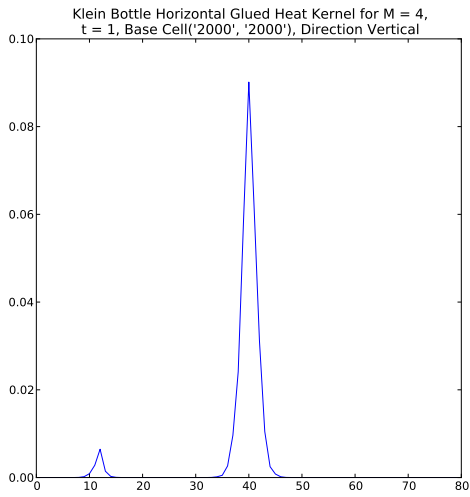


(Log — Zoomed) Horizontal

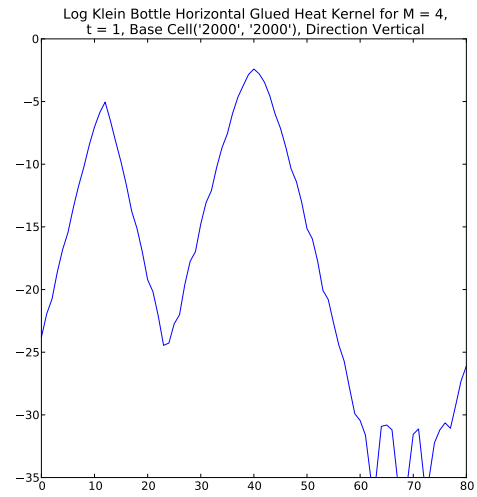


1.2 $t = 1$ Vertical

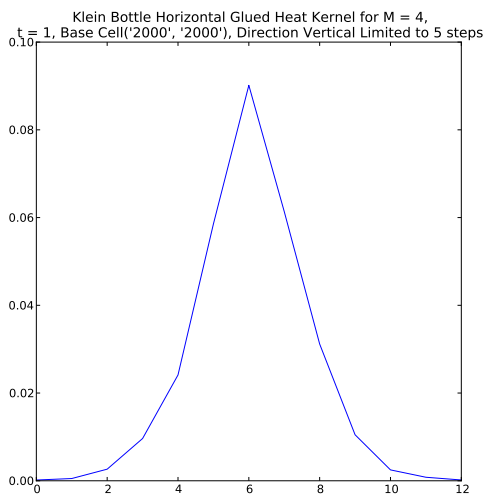
(Regular) Vertical



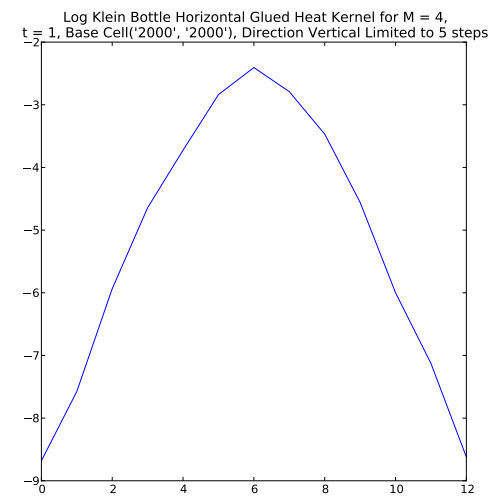
(Log) Vertical



(Regular — Zoomed) Vertical

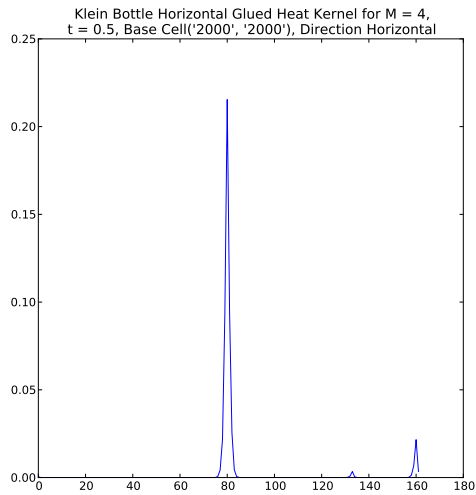


(Log — Zoomed) Vertical

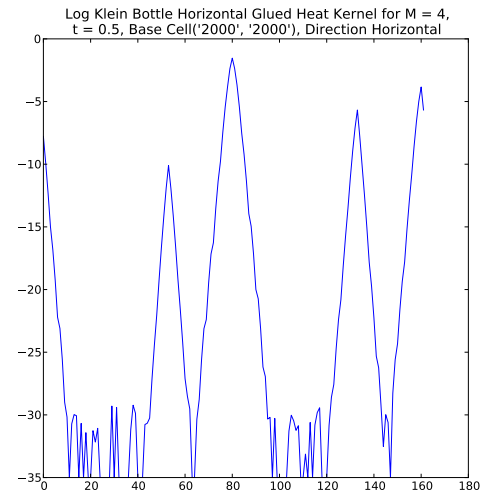


1.3 $t = 0.5$ Horizontal

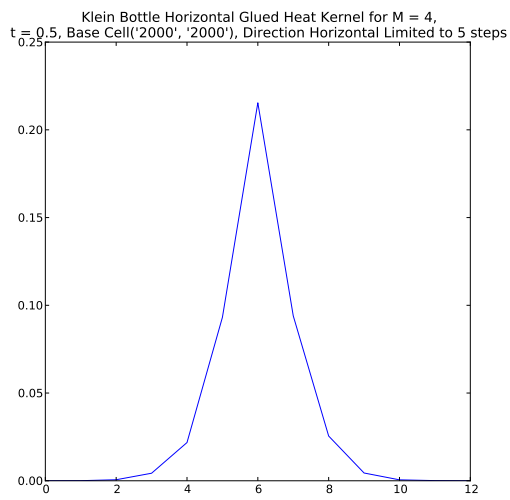
(Regular) Horizontal



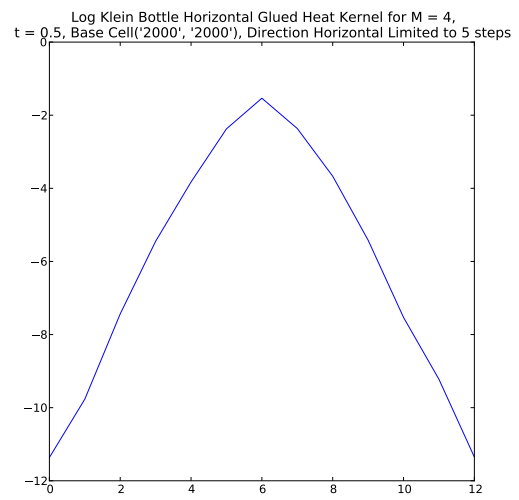
(Log) Horizontal



(Regular — Zoomed) Horizontal

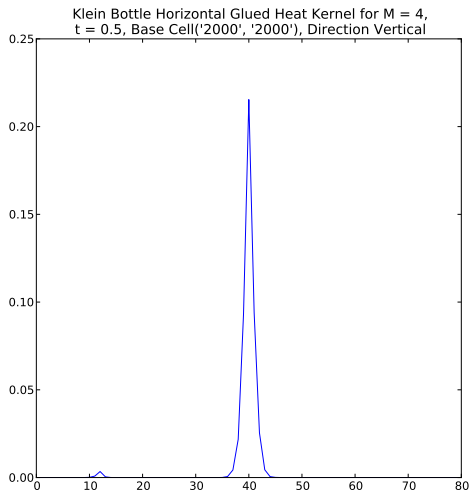


(Log — Zoomed) Horizontal

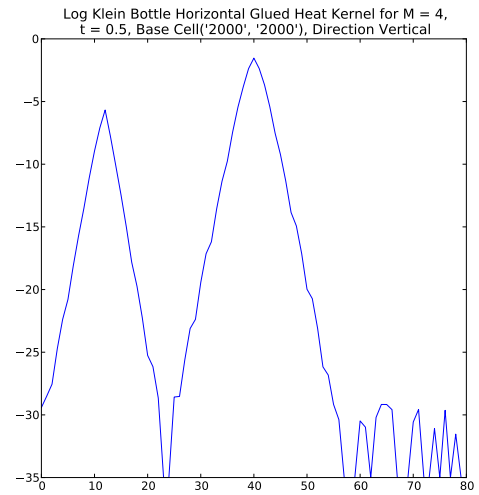


1.4 $t = 0.5$ Vertical

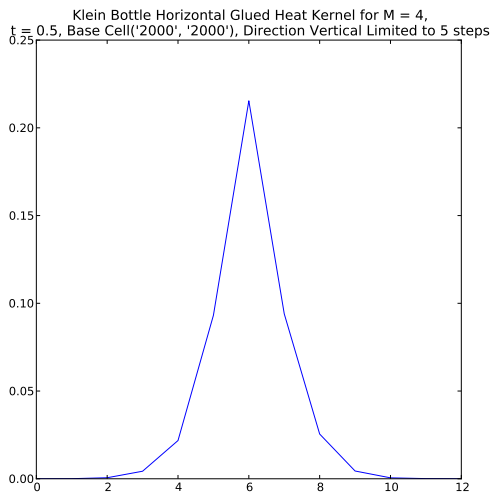
(Regular) Vertical



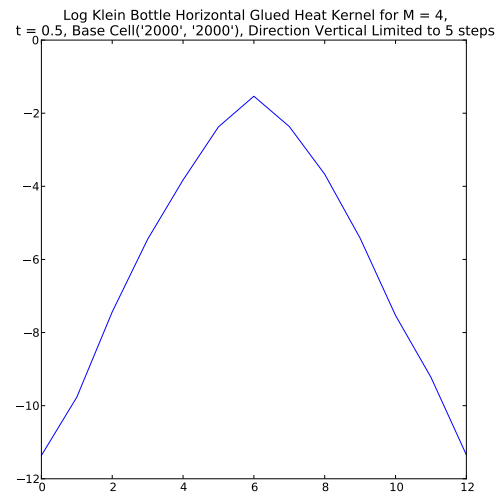
(Log) Vertical



(Regular — Zoomed) Vertical

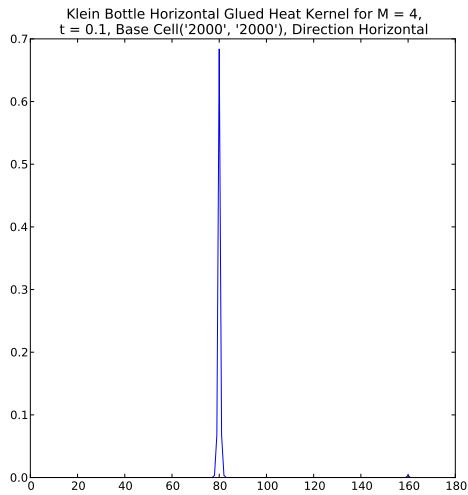


(Log — Zoomed) Vertical

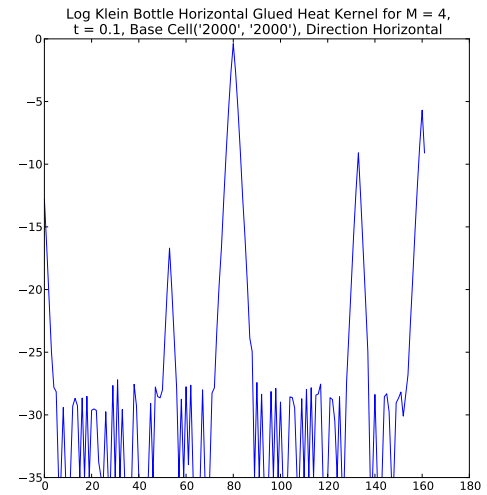


1.5 $t = 0.1$ Horizontal

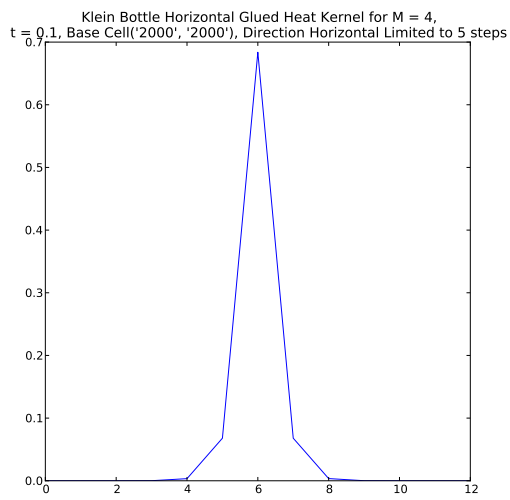
(Regular) Horizontal



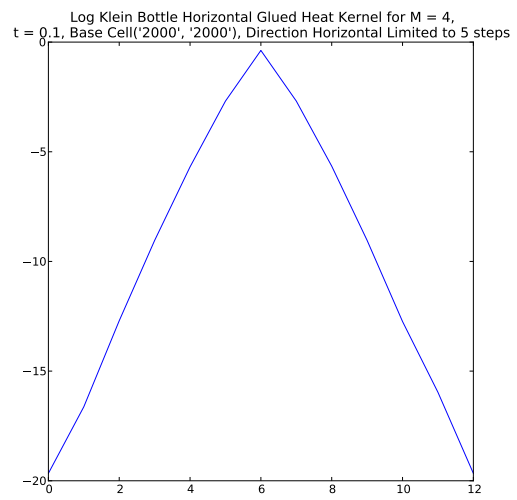
(Log) Horizontal



(Regular — Zoomed) Horizontal

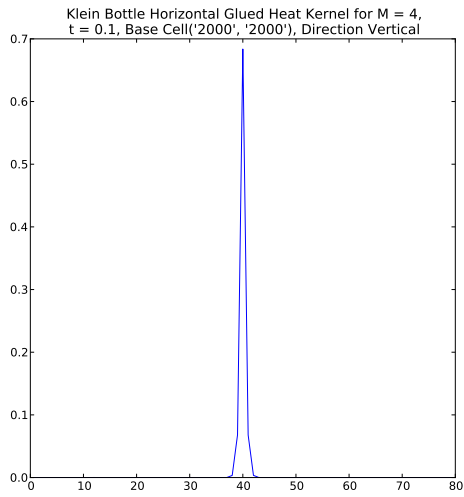


(Log — Zoomed) Horizontal

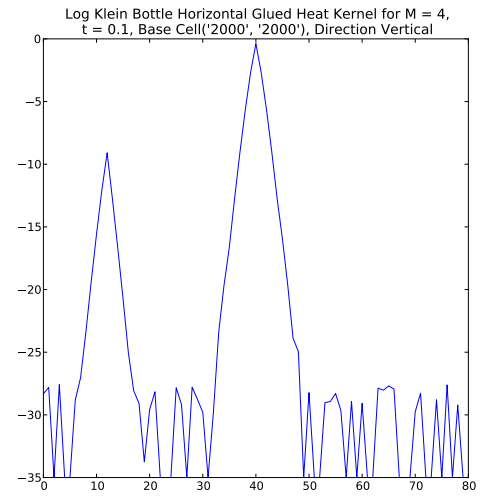


1.6 $t = 0.1$ Vertical

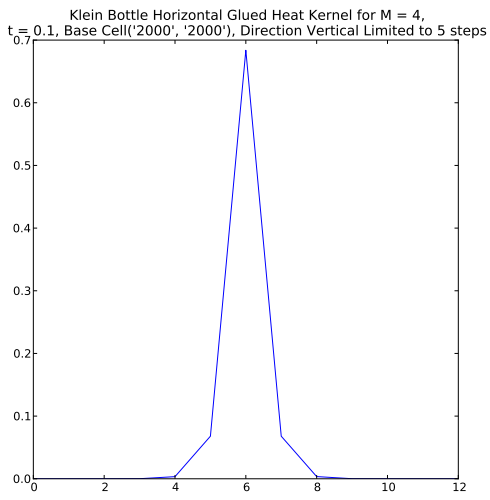
(Regular) Vertical



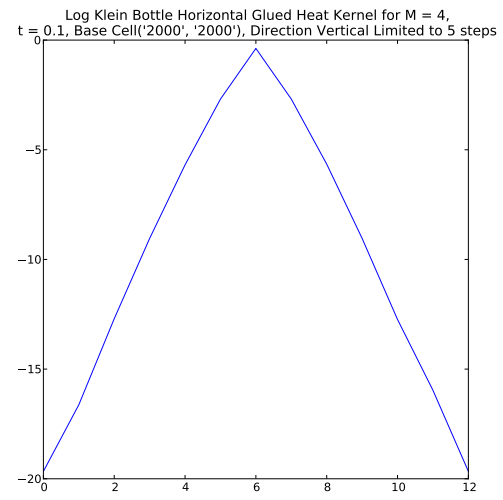
(Log) Vertical



(Regular — Zoomed) Vertical

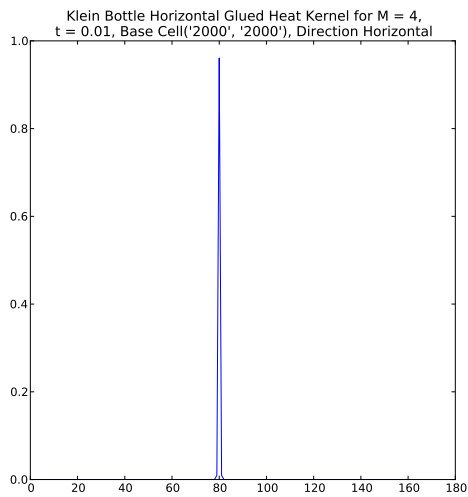


(Log — Zoomed) Vertical

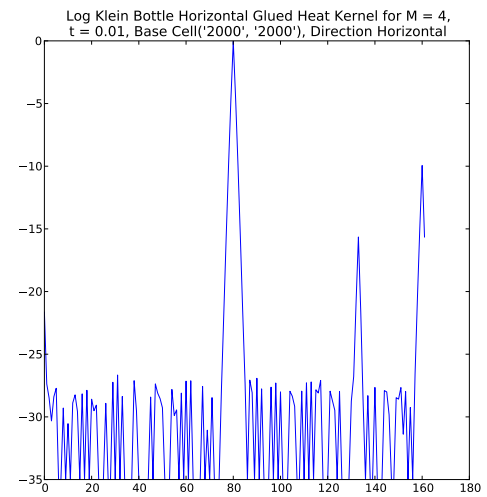


1.7 $t = 0.01$ Horizontal

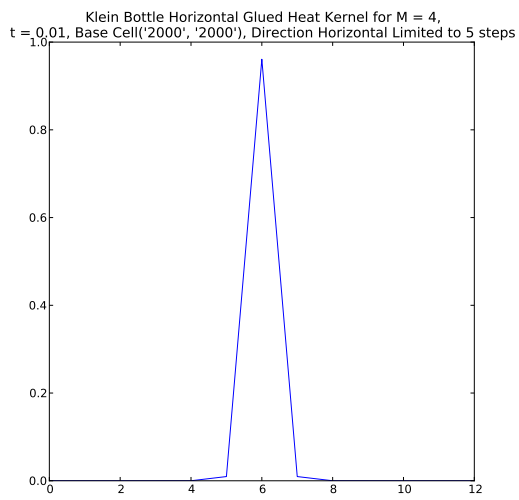
(Regular) Horizontal



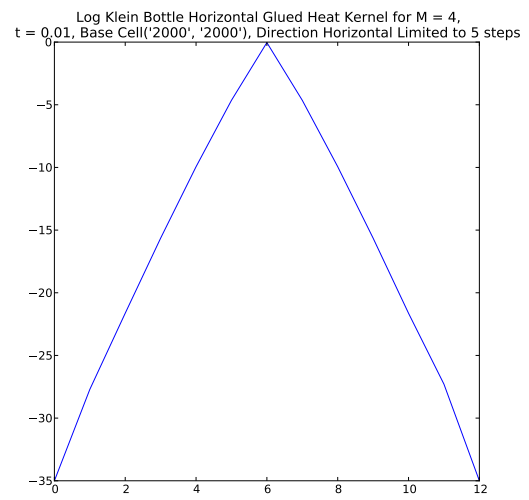
(Log) Horizontal



(Regular — Zoomed) Horizontal

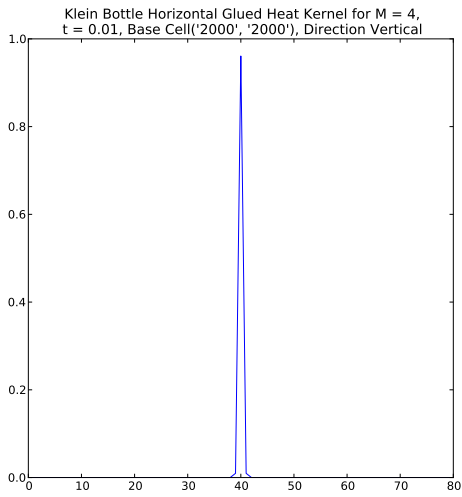


(Log — Zoomed) Horizontal

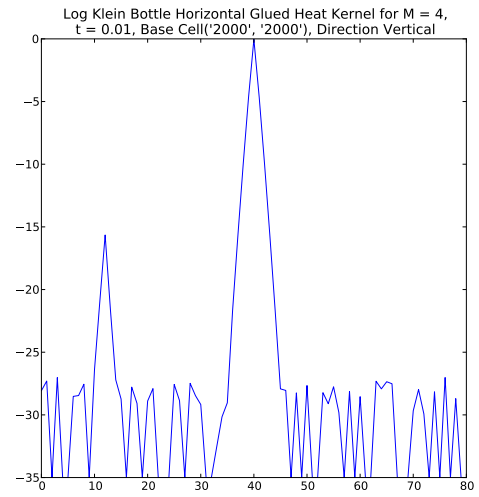


1.8 $t = 0.01$ Vertical

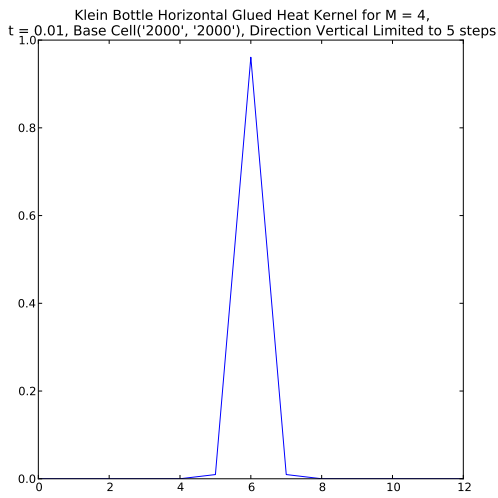
(Regular) Vertical



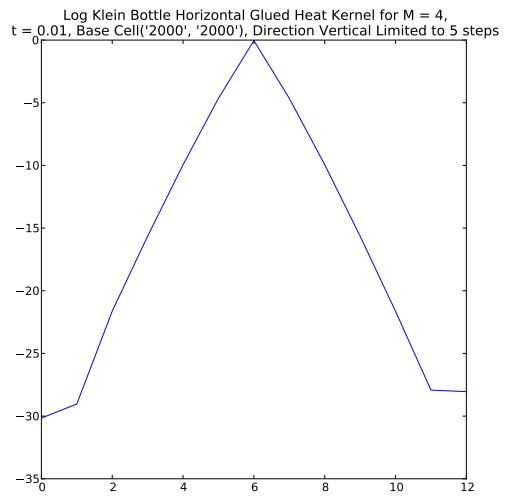
(Log) Vertical



(Regular — Zoomed) Vertical



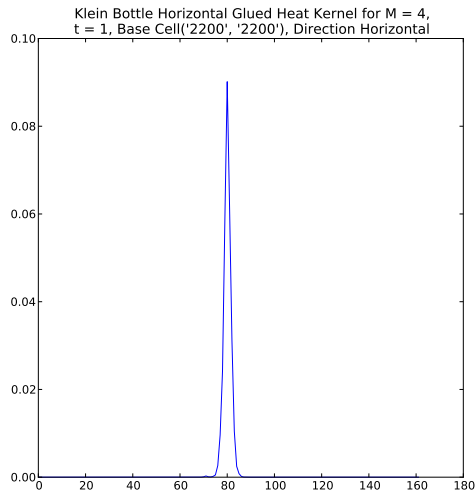
(Log — Zoomed) Vertical



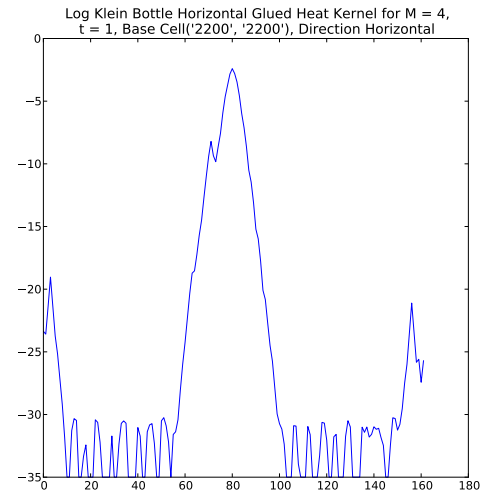
2 Base Cell('2200', '2200')

2.1 $t = 1$ Horizontal

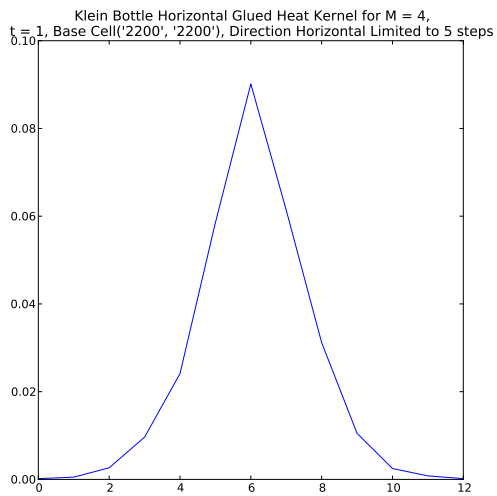
(Regular) Horizontal



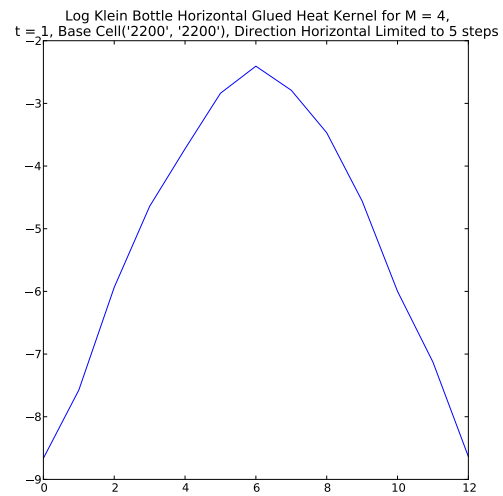
(Log) Horizontal



(Regular — Zoomed) Horizontal

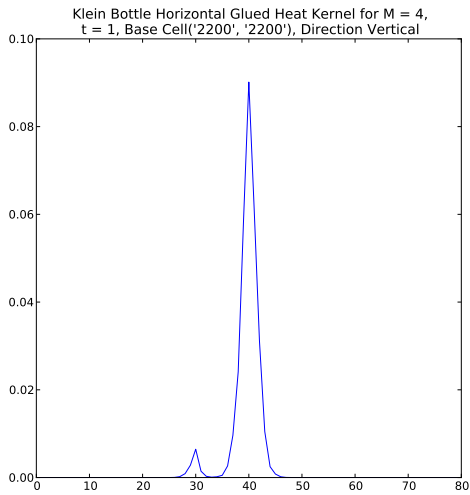


(Log — Zoomed) Horizontal

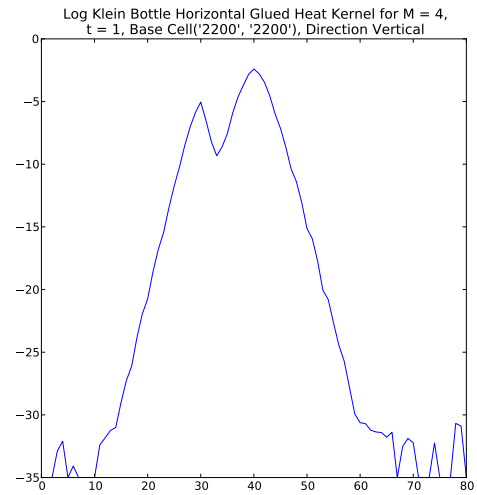


2.2 $t = 1$ Vertical

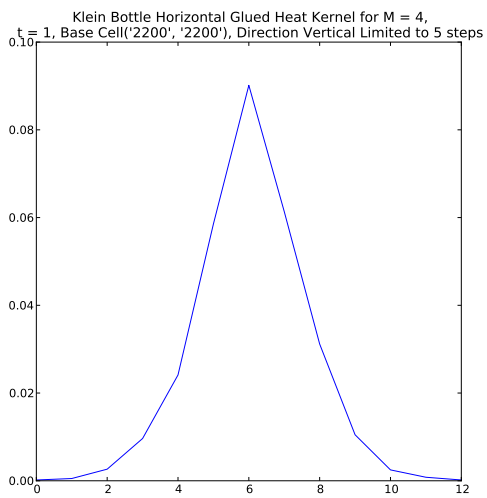
(Regular) Vertical



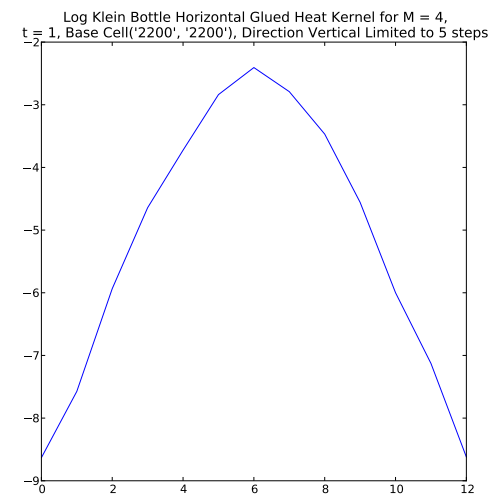
(Log) Vertical



(Regular — Zoomed) Vertical

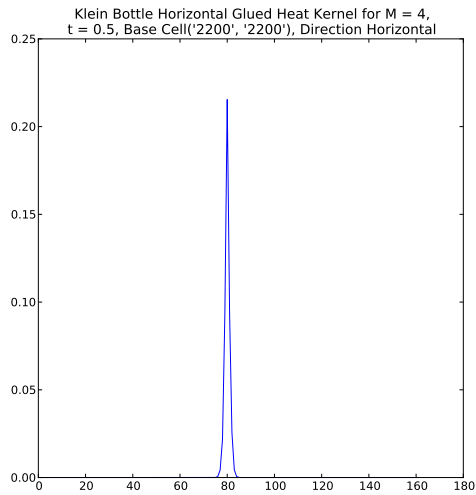


(Log — Zoomed) Vertical

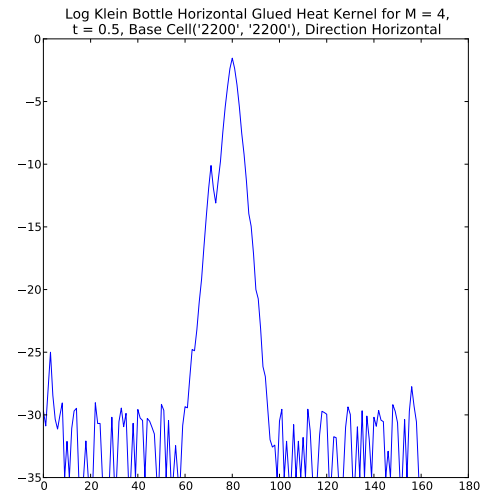


2.3 $t = 0.5$ Horizontal

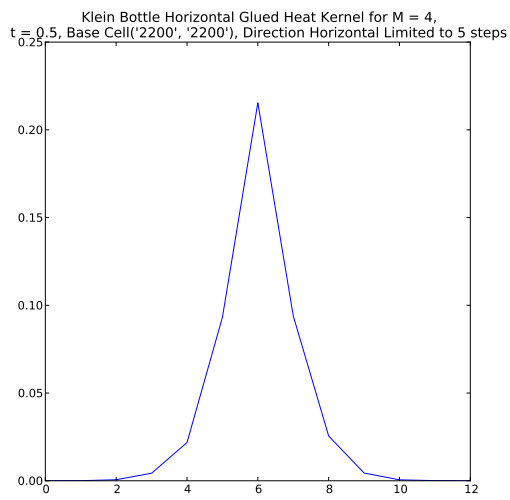
(Regular) Horizontal



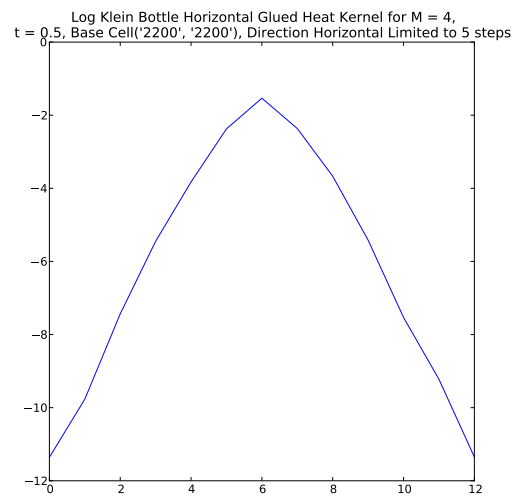
(Log) Horizontal



(Regular — Zoomed) Horizontal

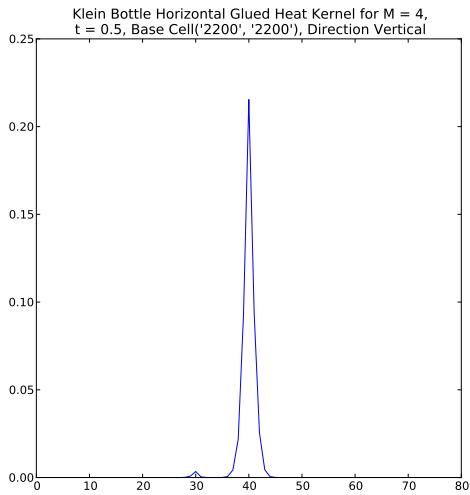


(Log — Zoomed) Horizontal

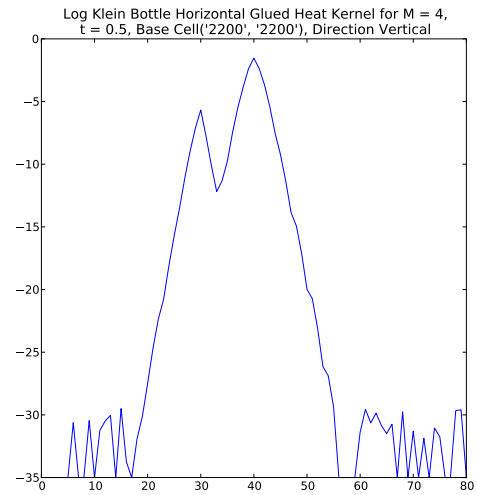


2.4 $t = 0.5$ Vertical

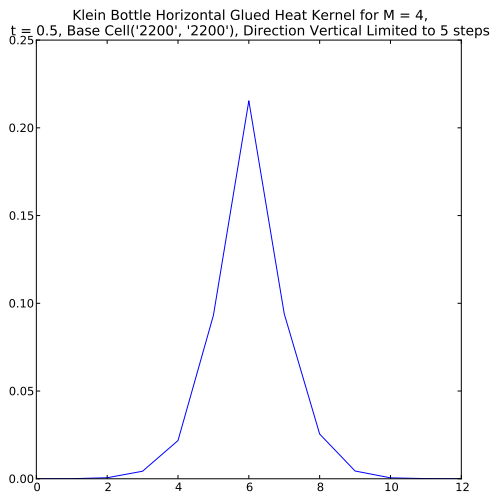
(Regular) Vertical



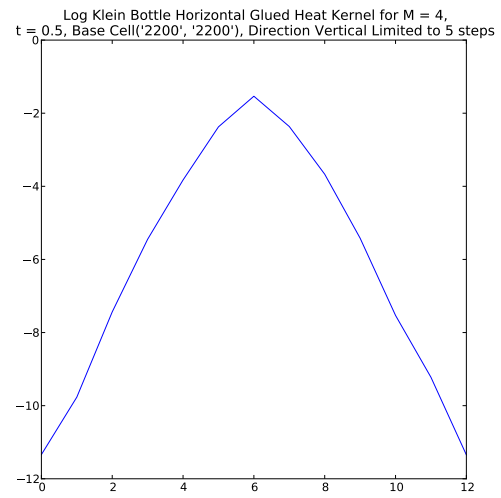
(Log) Vertical



(Regular — Zoomed) Vertical

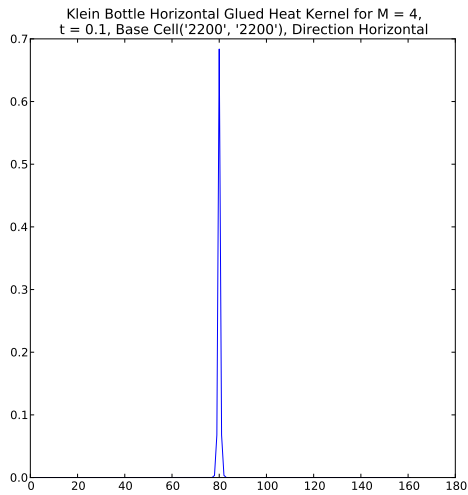


(Log — Zoomed) Vertical

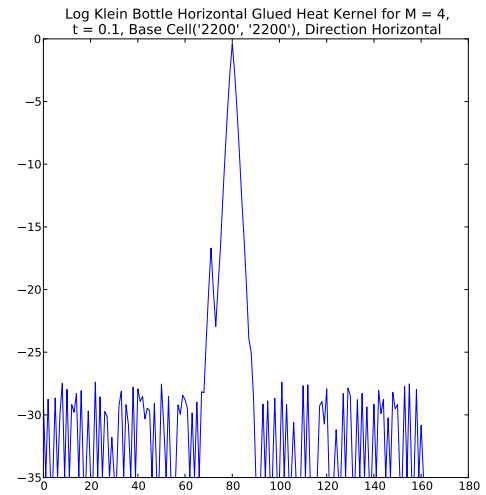


2.5 $t = 0.1$ Horizontal

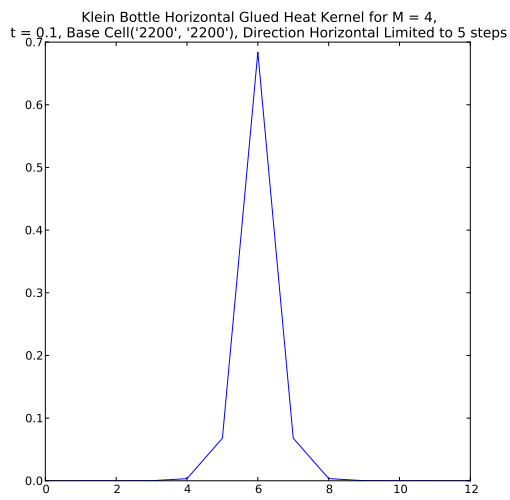
(Regular) Horizontal



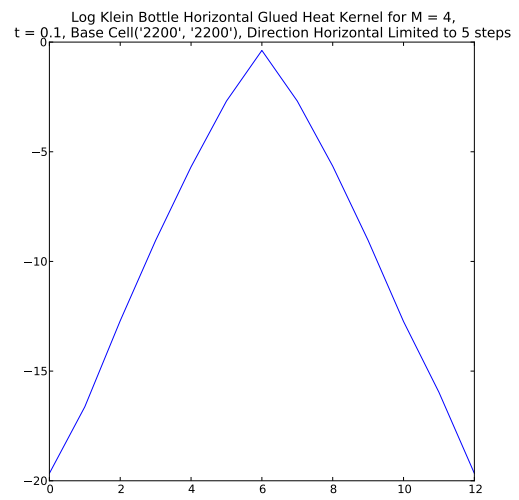
(Log) Horizontal



(Regular — Zoomed) Horizontal

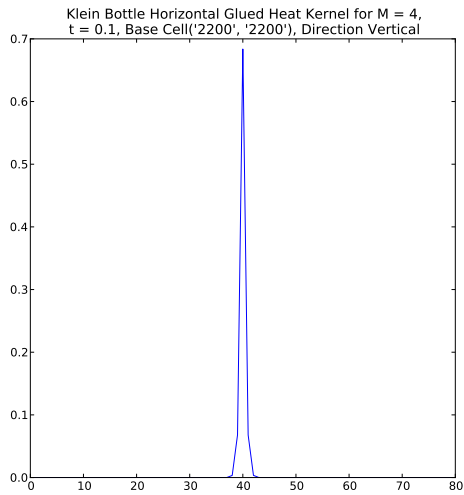


(Log — Zoomed) Horizontal

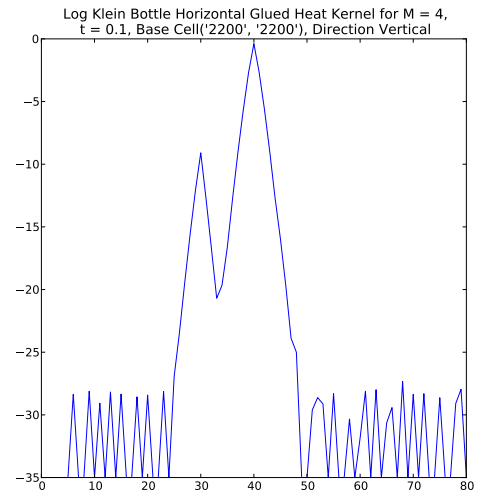


2.6 $t = 0.1$ Vertical

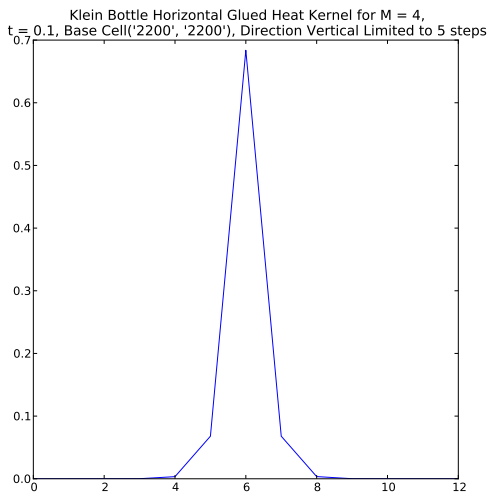
(Regular) Vertical



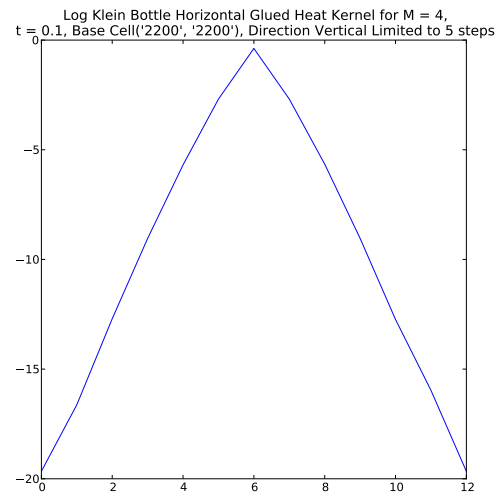
(Log) Vertical



(Regular — Zoomed) Vertical

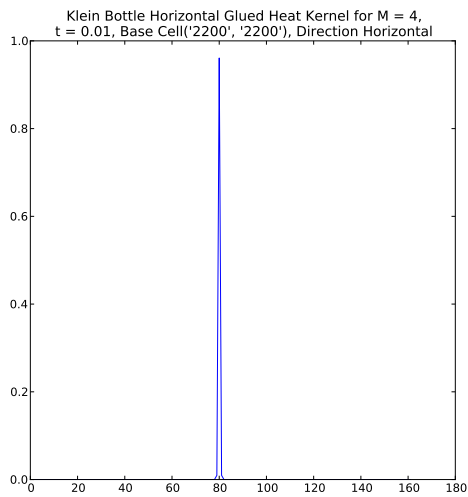


(Log — Zoomed) Vertical

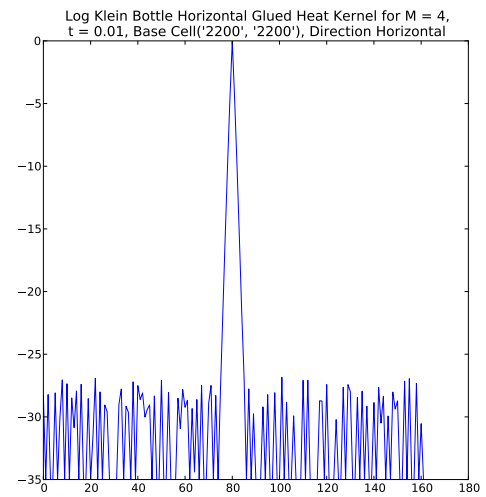


2.7 $t = 0.01$ Horizontal

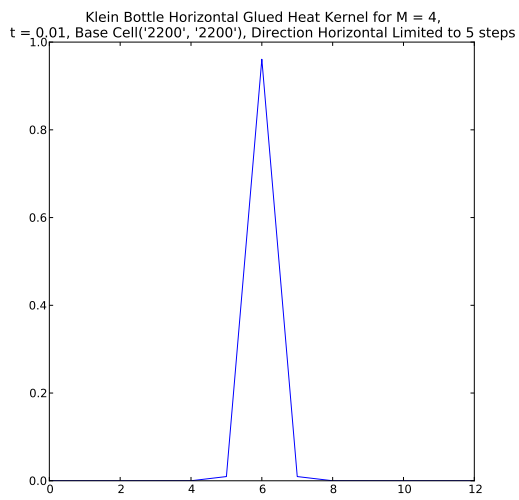
(Regular) Horizontal



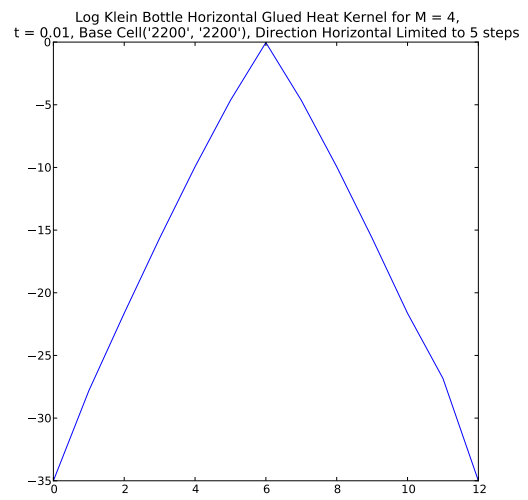
(Log) Horizontal



(Regular — Zoomed) Horizontal

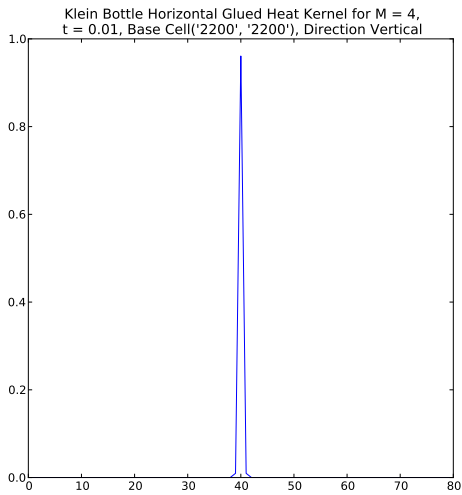


(Log — Zoomed) Horizontal

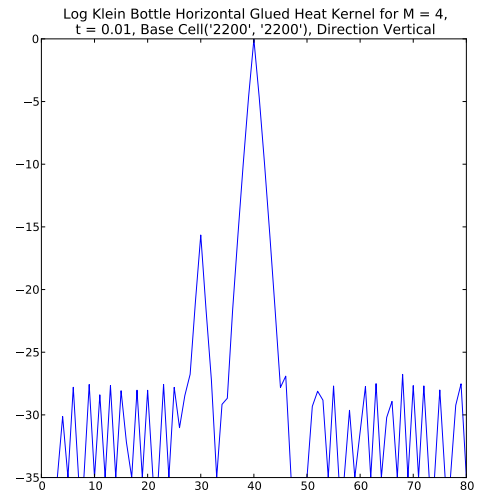


2.8 $t = 0.01$ Vertical

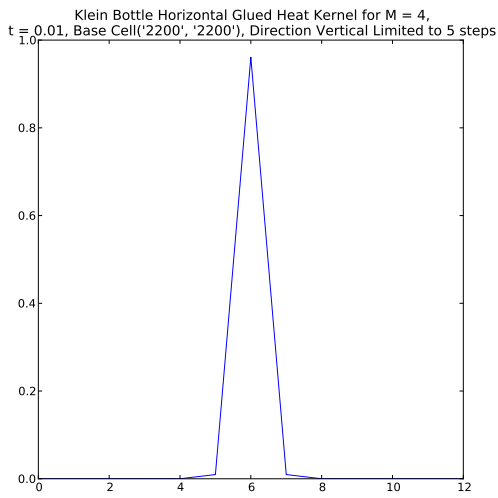
(Regular) Vertical



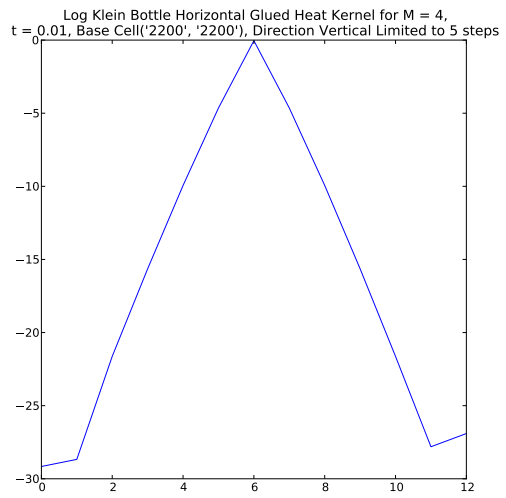
(Log) Vertical



(Regular — Zoomed) Vertical



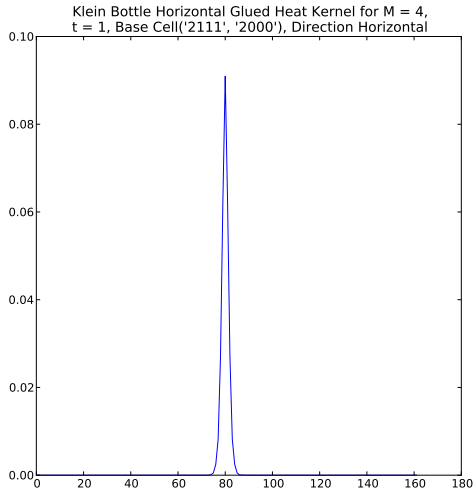
(Log — Zoomed) Vertical



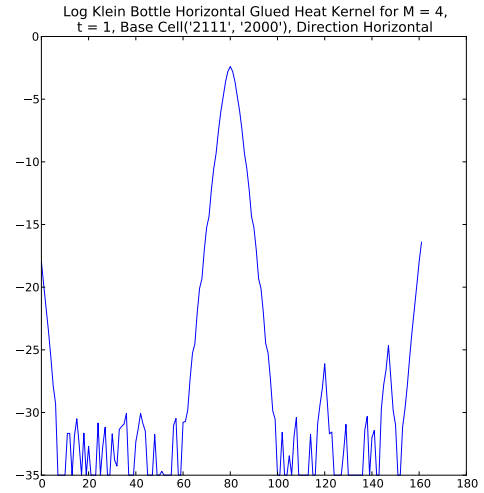
3 Base Cell('2111', '2000')

3.1 $t = 1$ Horizontal

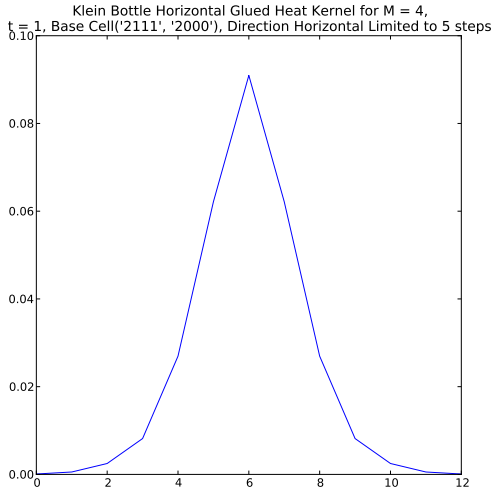
(Regular) Horizontal



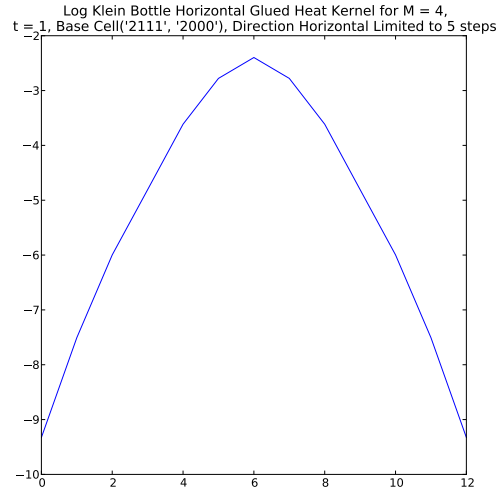
(Log) Horizontal



(Regular — Zoomed) Horizontal

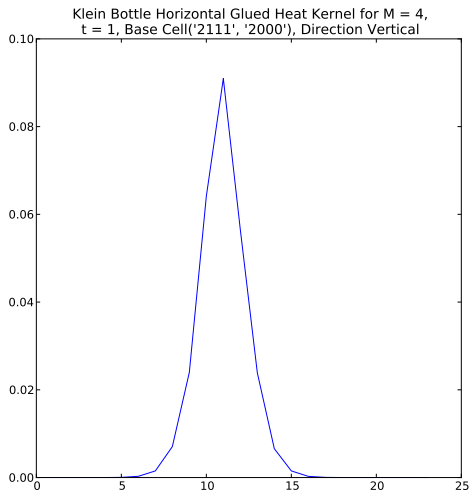


(Log — Zoomed) Horizontal

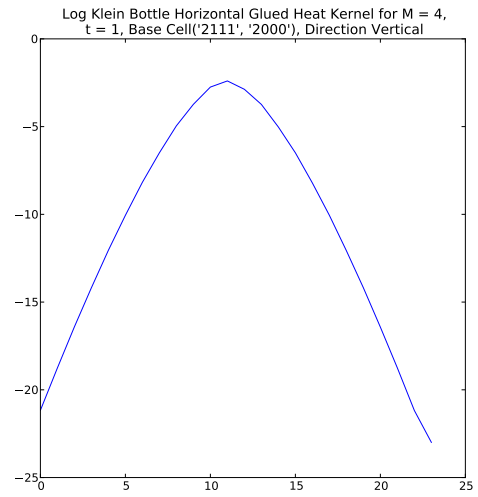


3.2 $t = 1$ Vertical

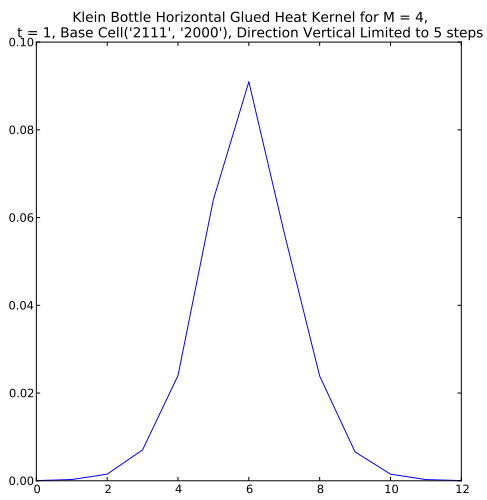
(Regular) Vertical



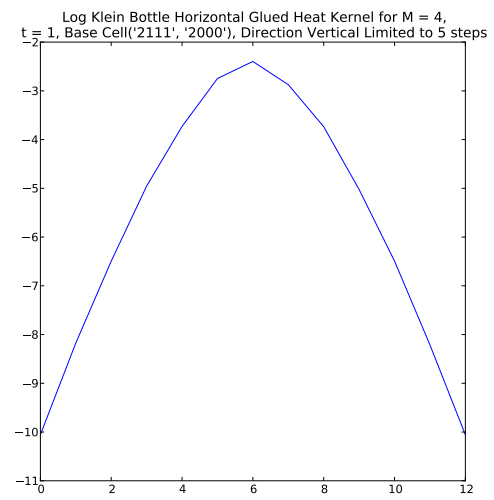
(Log) Vertical



(Regular — Zoomed) Vertical

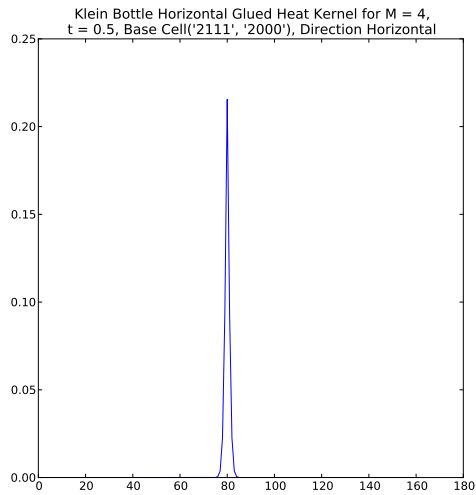


(Log — Zoomed) Vertical

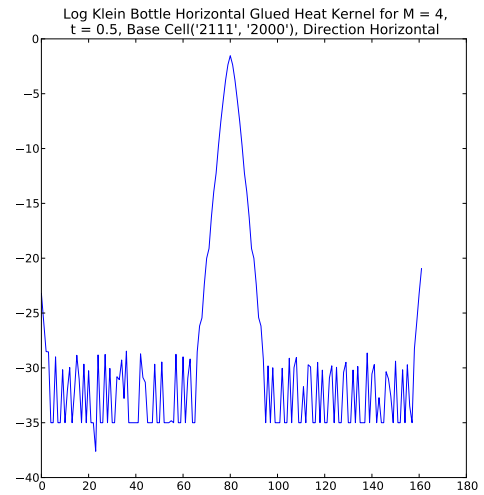


3.3 $t = 0.5$ Horizontal

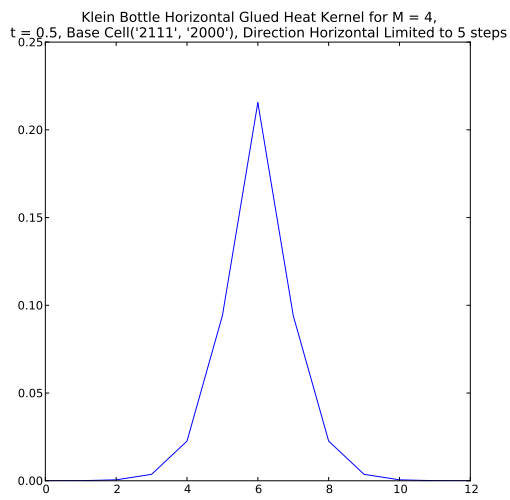
(Regular) Horizontal



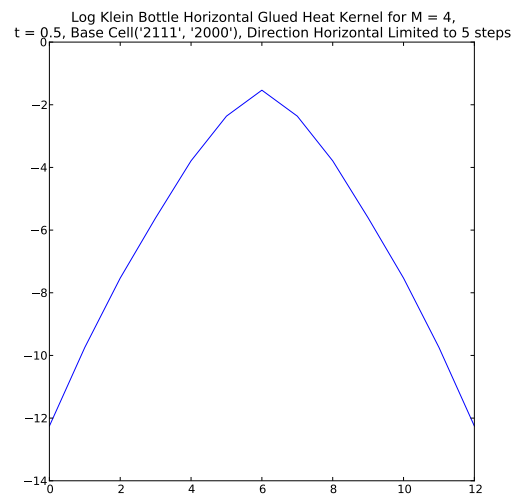
(Log) Horizontal



(Regular — Zoomed) Horizontal

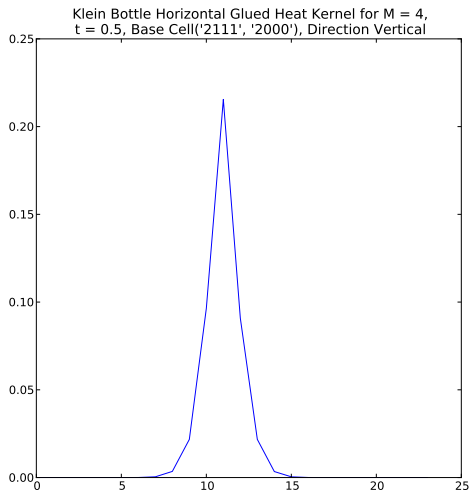


(Log — Zoomed) Horizontal

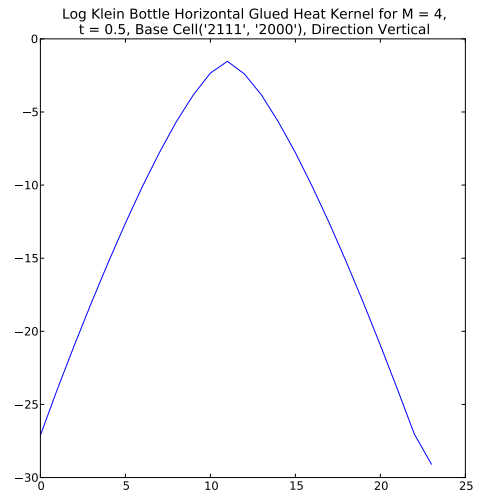


3.4 $t = 0.5$ Vertical

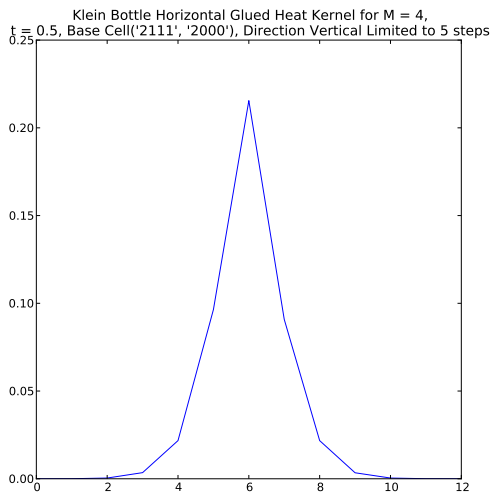
(Regular) Vertical



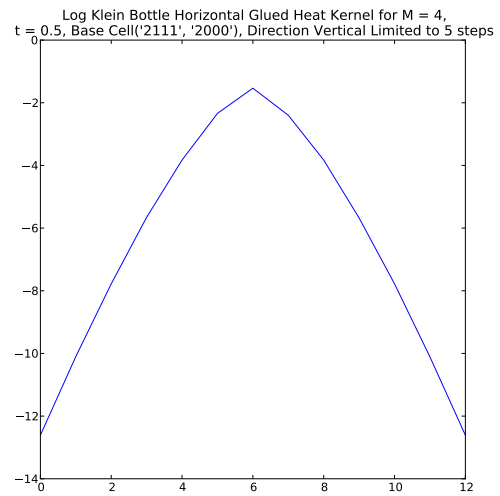
(Log) Vertical



(Regular — Zoomed) Vertical

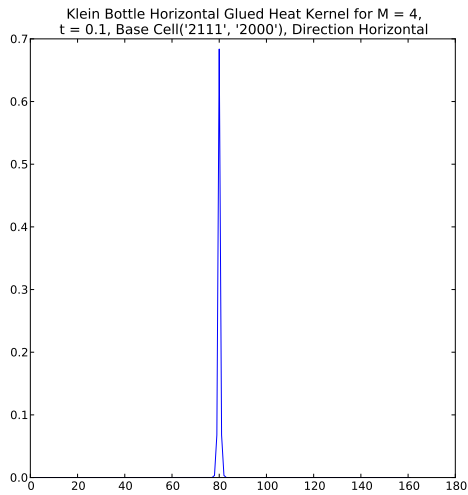


(Log — Zoomed) Vertical

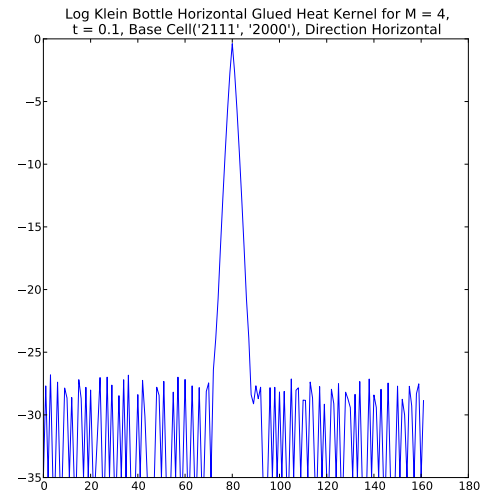


3.5 $t = 0.1$ Horizontal

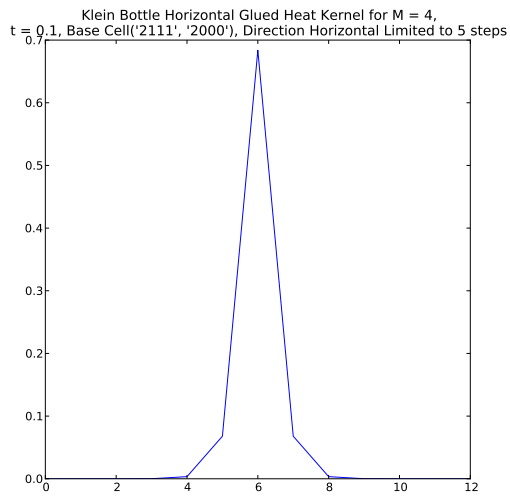
(Regular) Horizontal



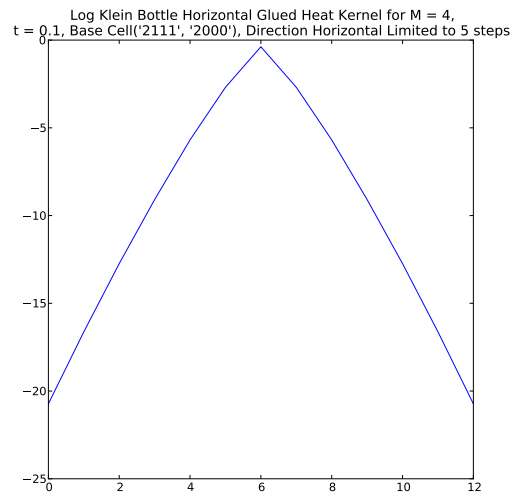
(Log) Horizontal



(Regular — Zoomed) Horizontal

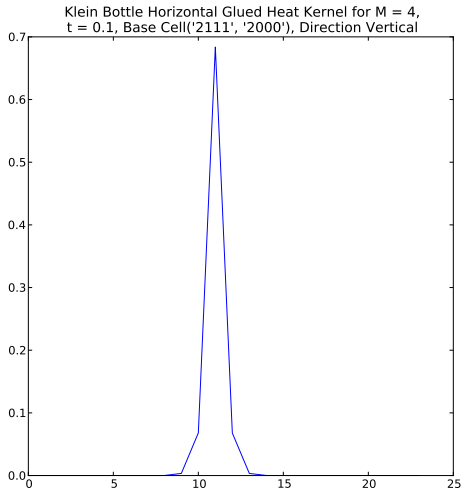


(Log — Zoomed) Horizontal

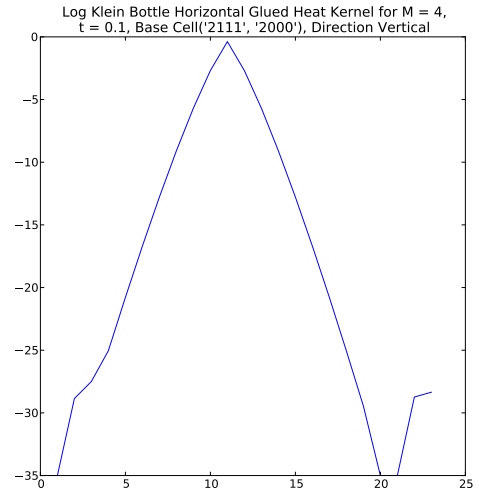


3.6 $t = 0.1$ Vertical

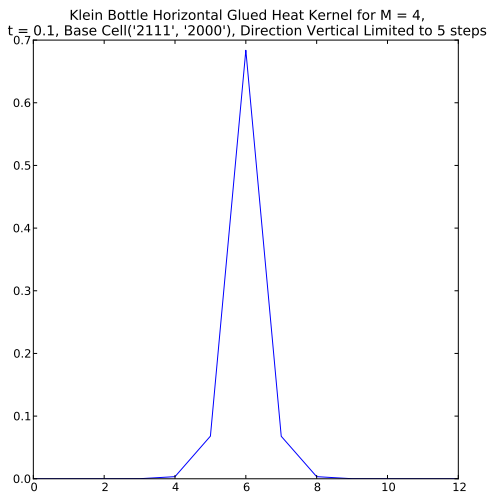
(Regular) Vertical



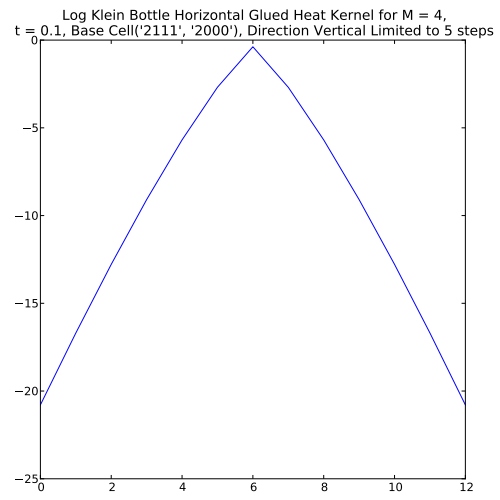
(Log) Vertical



(Regular — Zoomed) Vertical

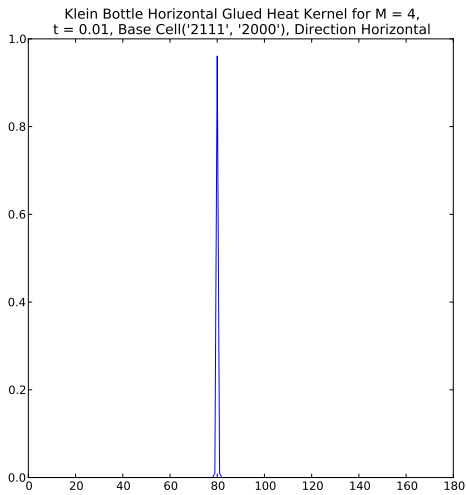


(Log — Zoomed) Vertical

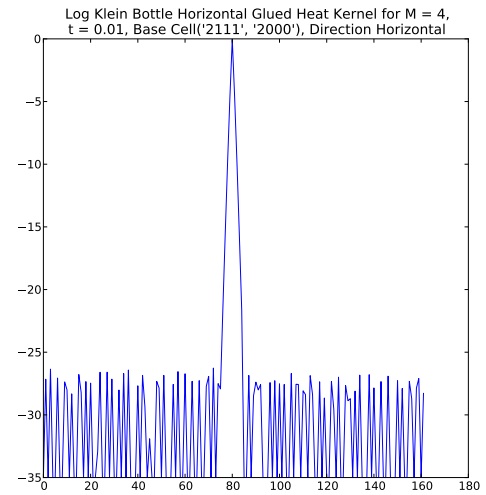


3.7 $t = 0.01$ Horizontal

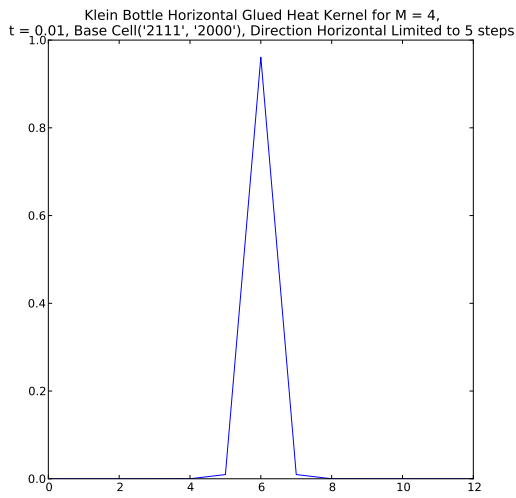
(Regular) Horizontal



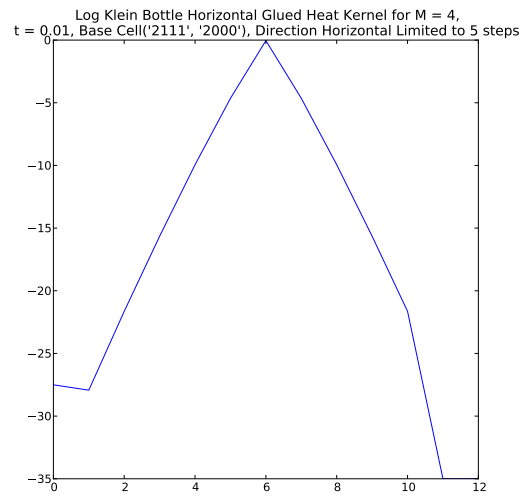
(Log) Horizontal



(Regular — Zoomed) Horizontal

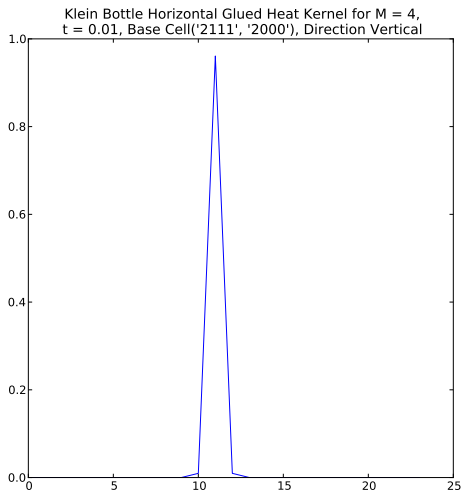


(Log — Zoomed) Horizontal

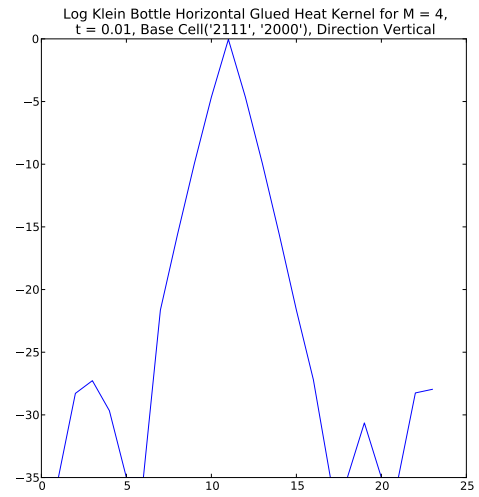


3.8 $t = 0.01$ Vertical

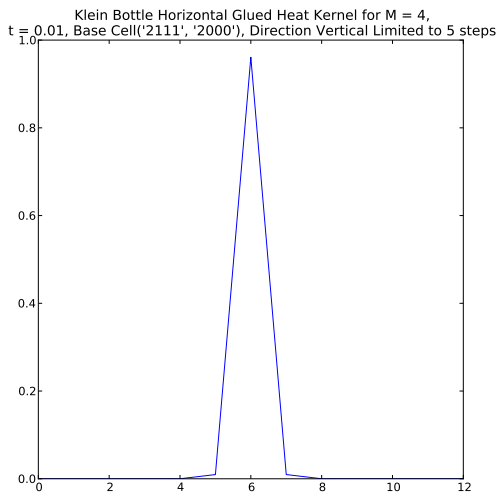
(Regular) Vertical



(Log) Vertical



(Regular — Zoomed) Vertical



(Log — Zoomed) Vertical

