Tarea 4

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Este documento presenta los resultados de la tarea 4 de metodos computacionales. Dado que el enunciado de la tarea no incluia las unidades del coeficiente de difusion (v), se modifico con el fin que la temperatura llegara al borde de la placa dadas las condiciones iniciales del problema. Este valor es de $v = 0.1$.

A continuacion se presentan los resultados concretos:

1 Temperatura de la placa

1.1 Condiciones de frotera ABIERTAS

1.1.1 $100°C$ constante

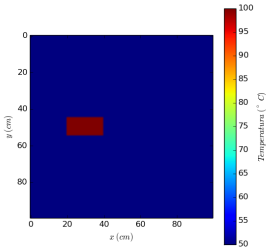

Figure 1: t =0s

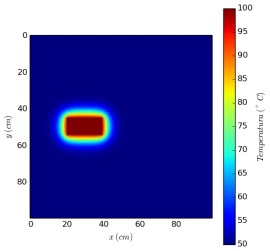

Figure 2: t = 100s

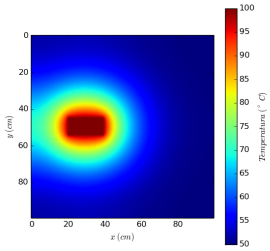

Figure 3: t = 2500s

1.1.2 $100°C$ NO constante

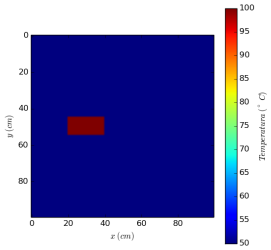

Figure 4: t =0s

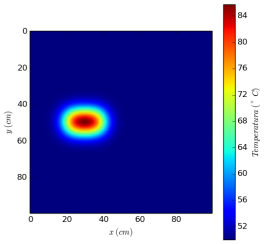

Figure 5: t = 100s

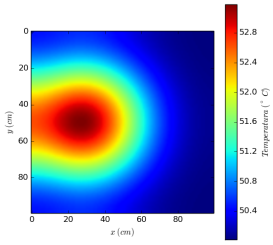

Figure 6: t = 2500s

1.2 Condiciones de frotera PERIODICAS

1.2.1 $100°C$ constante

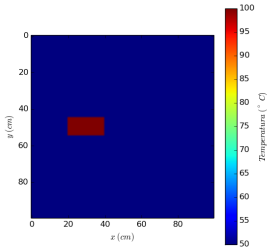

Figure 7: t =0s

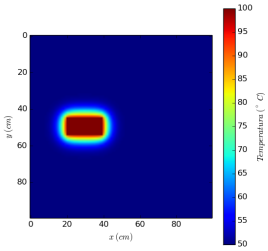

Figure 8: t = 100s

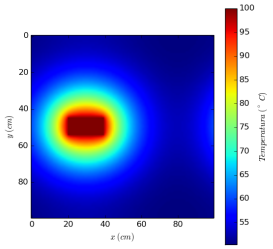

Figure 9: t = 2500s

1.2.2 $100°C$ NO constante

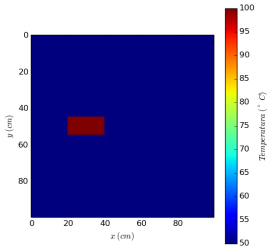

Figure 10: t =0s

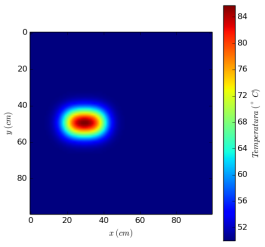

Figure 11: t = 100s

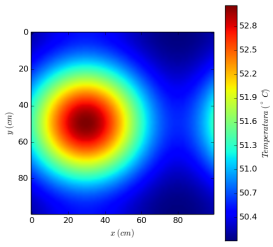

Figure 12: t = 2500s

1.3 Condiciones de frotera FIJAS

1.3.1 $100°C$ constante

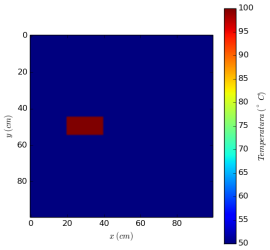

Figure 13: t =0s

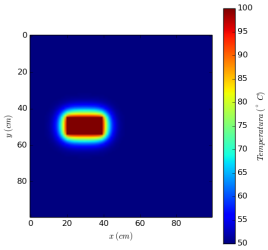

Figure 14: t = 100s

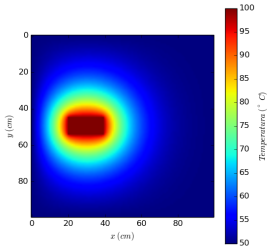

Figure 15: t = 2500s

1.3.2 $100°C$ NO constante

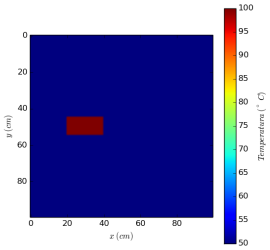

Figure 16: t =0s

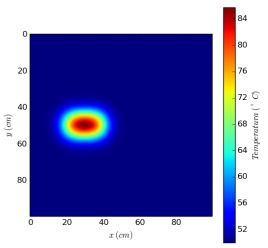

Figure 17: t = 100s

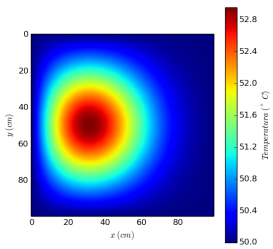

Figure 18: t = 2500s

2 Temperatura de promedio

2.0.3 $100°C$ constante

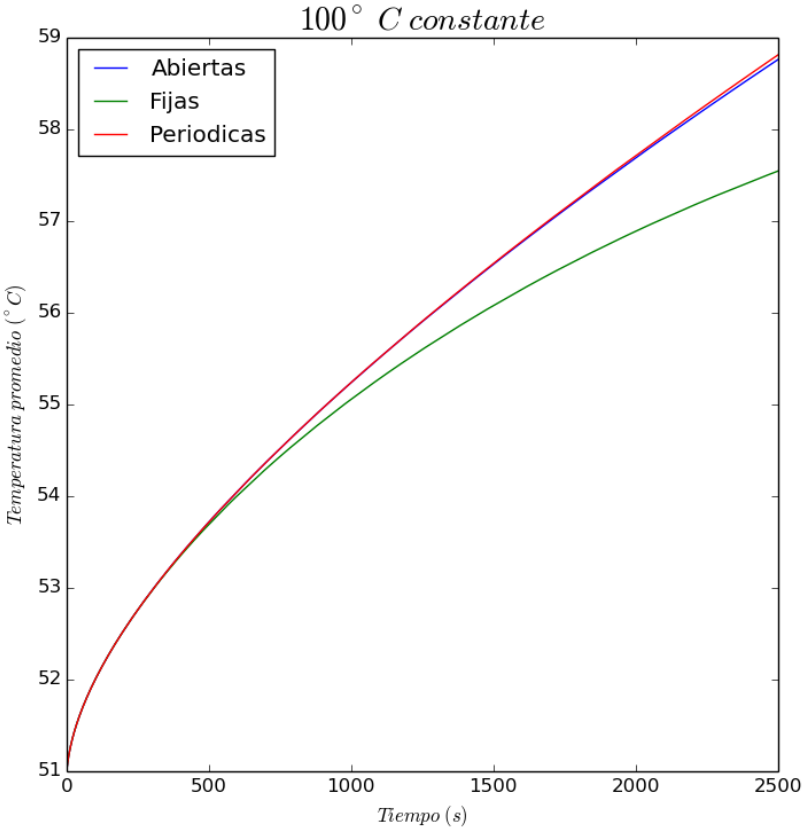

Figure 19: Promedios de temperatura

2.0.4 $100°C$ NO constante

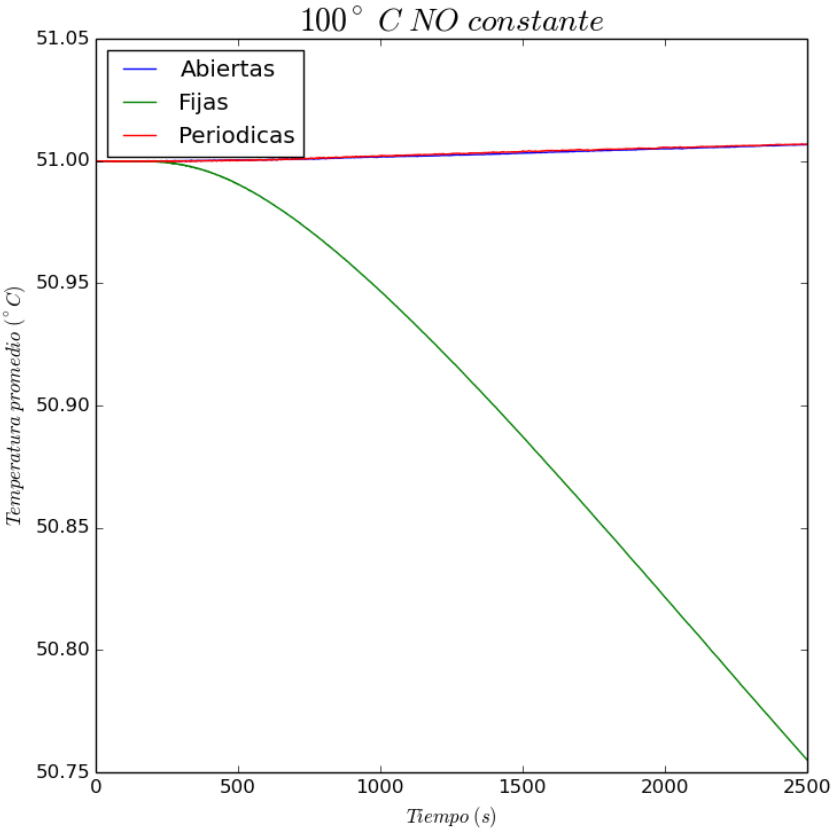

Figure 20: Promedios de temperatura