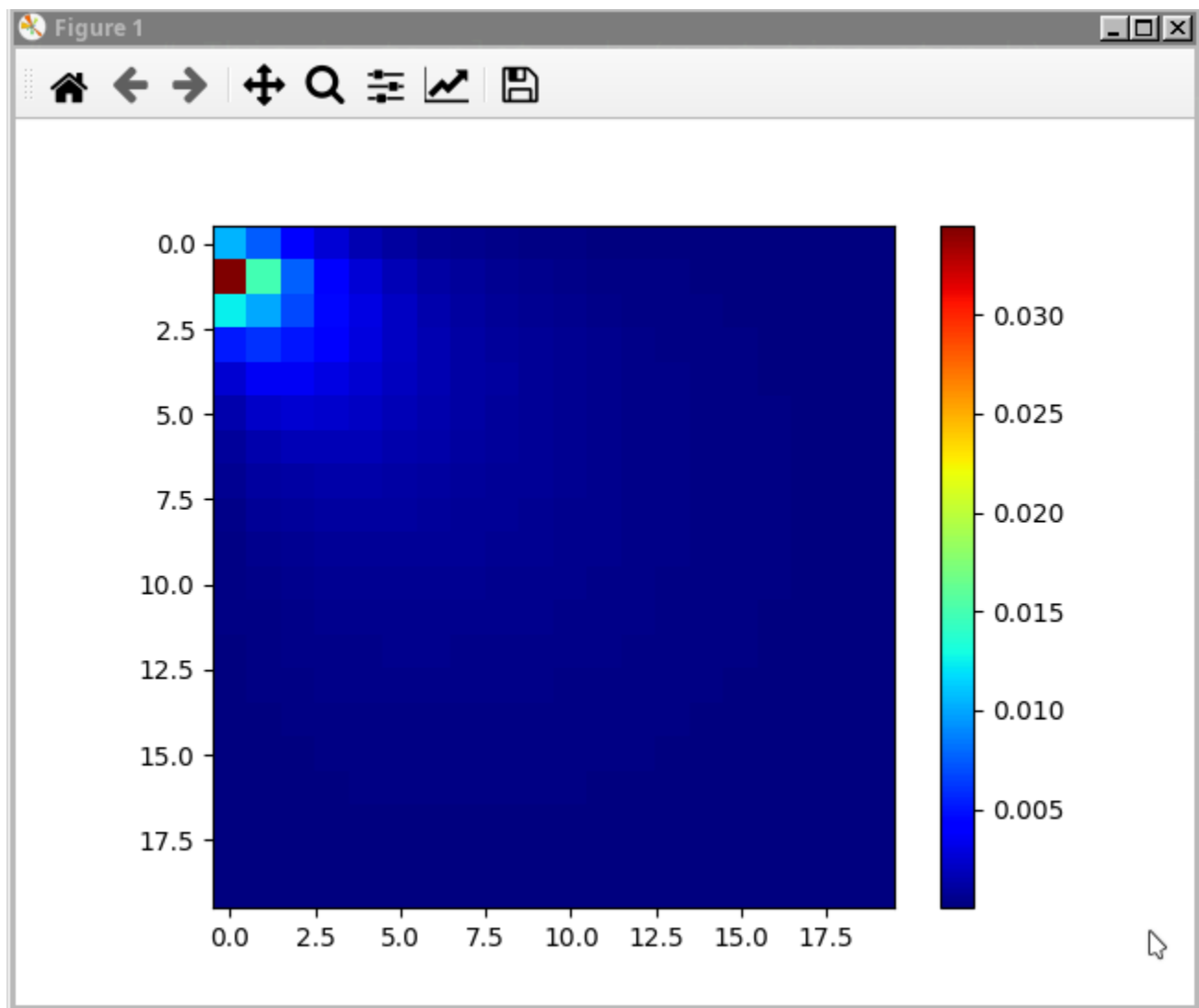


I created a system of differential equations where I used the laplace times vector  $u$  = solution vector with the boundary conditions. The solution was done with euler forward:

```
def euler_forward(u_i,h, A, sources=1):  
    return u_i + 1/(h_x**2)*h*(alpha*A@u_i + sources)
```

After spending several hours with debugging, just to notice that the problem was in the animation, I kinda gave up on animating this and just plotted the final heatmap:



After wasting hours with debugging something that was actually working, I have only implemented the forward method properly, but I can tell that it scales terrible with bigger  $n$ .