Changing Dt

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Better2 | | Best Case (Current Figurers) | | Midcase1 | |
| Dt = 0.001 | Dx = 0.001 | Dt = 0.002 | Dx = 0.001 | Dt = 0.005 | Dx = 0.001 |
| C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\Better2.png | | C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\Bestcase2.png | |  | |
| C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\Better2_01.png | | C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\BestCase.png | | C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\Mid1.png | |

Changing Dx

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Better1 | | Best Case (Current Figurers) | | Midcase3 | |
| Dt = 0.002 | Dx = 0.0005 | Dt = 0.002 | Dx = 0.001 | Dt = 0.002 | Dx = 0.002 |
| C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\Better1.png | | C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\Bestcase2.png | |  | |
| C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\Better2_05.png | | C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\BestCase.png | | C:\Temp\Diffusion\MOL_PDE\4. Output files\Effect_dt_dx\Mid3.png | |

Changing Relative/Abs Tolerance

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | 80 seconds (1min 20s ) | | 35 seconds | | |
| Tol 1e-8 | Dx = 0.001 | Tol 1e-5 | Dx = 0.001 | Tol 1e-3 | | Dx = 0.001 |
|  | |  | | | C:\Temp\Diffusion\MOL_PDE\4. Output files\ODE45_solver\1e3Tol.png | |

Changing Dx

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  | |  | | Currently using | |  | |
| Mtol = 1e-6 | Dx = 1e-5 | Mtol = 1e-6 | Dx = 1e-4 | Mtol = 1e-6 | Dx = 0.5e-3 | Mtol = 1e-6 | Dx = 1e-3 | Mtol = 1e-6 | Dx = 5e-3 |
|  | |  | |  | |  | |  | |

For the current tolerance I can’t get any lowed definition in the x (Ie I can’t make dx smaller)