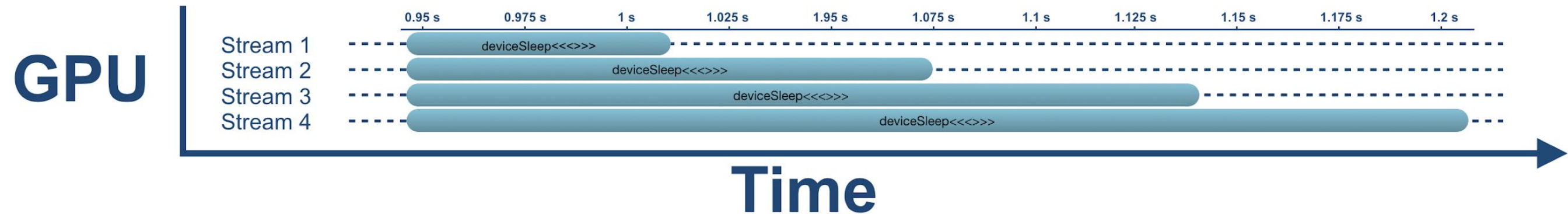
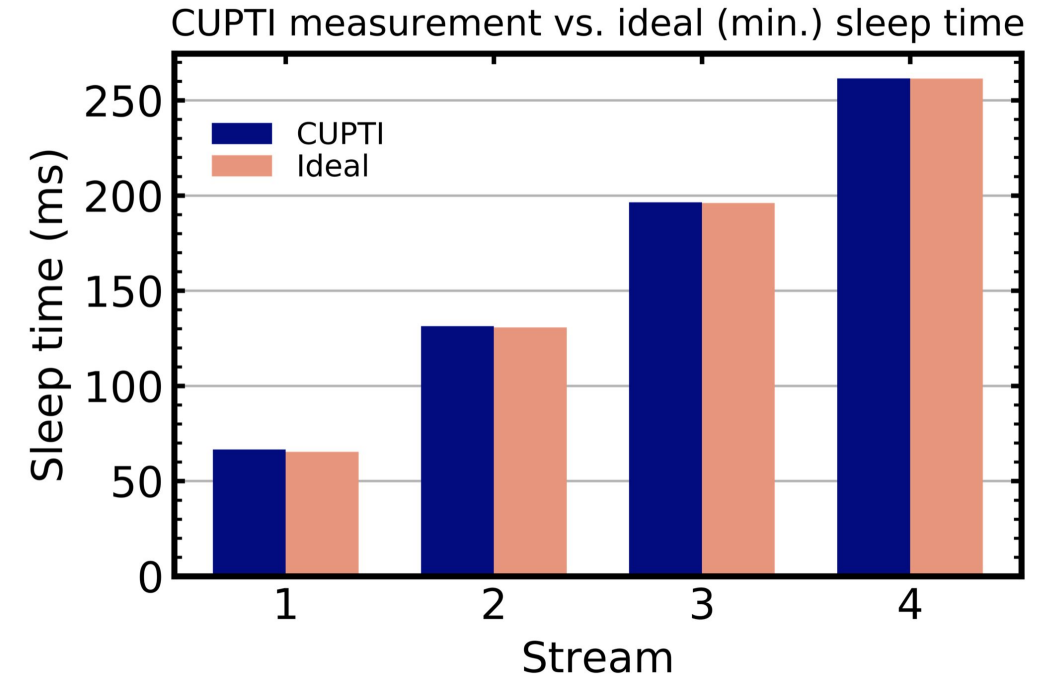


Results: implemented CUPTI-Callback timer in AMReX (Adaptive Mesh Refinement library), and tested with simple kernels

- We tested the CUPTI-based timer using a simple device sleep function
- With NVIDIA Volta V100 (peak clock frequency: 1.53 GHz), we launched sleep kernels on separate streams for multiples of 1, 2, 3, and 4×10^8 cycles (≈ 65 ms)



Tested the CUPTI Callback timer in a more realistic use case, the advanced electromagnetic particle-in-cell code WarpX

- WarpX: Advanced Electromagnetic Particle-in-Cell Code
 - Simulates laser wakefield acceleration with mesh refinement
 - Built on AMReX
- With the CUPTI Callback timer now implemented in AMReX, load balancing which properly accounts for GPU work is possible in WarpX

