

MultistepLB_notopo - 256 cores on Taub using 5 million particle system (dwf1.2048.00384) with 8000 treepieces

I. NO LB VS. MULTISTEP_LB_NOTOPO

Gravity calculation takes the major portion of time. Note that the scales of the figures are different. If I make the scale consistent, load balancing time and tree building time does not show up or one cannot note the differences. Figure 1-6.

II. COMPARISON OF MIGRATING ACTIVE VS. ALL TREEPIECES

: For this experiment, migrating only active treepieces seem to work better than migrating all treepieces for ORB3d_notopo. For Greedy, in both cases, only active treepieces are migrated. Figure 7-10.

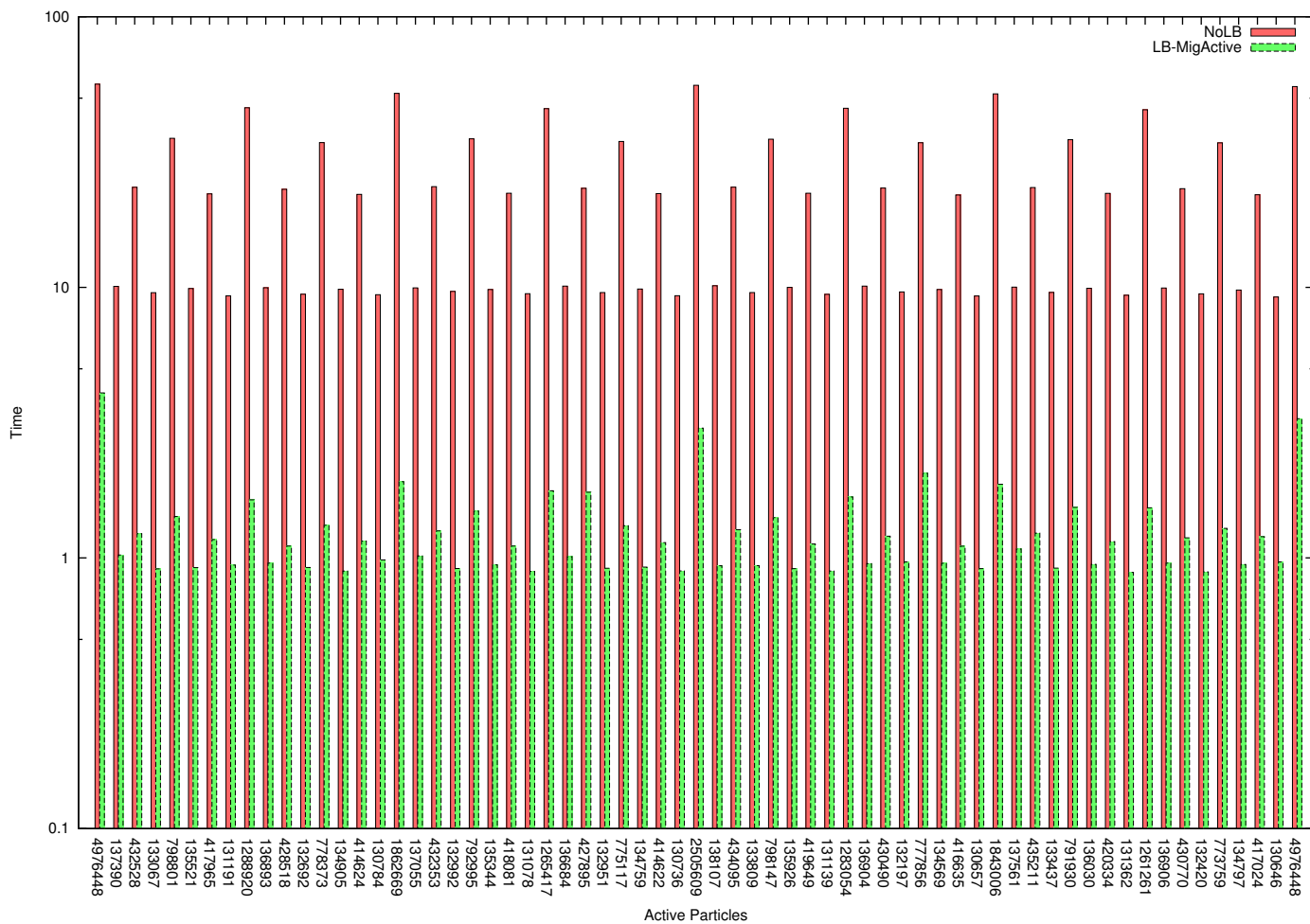


Figure 1. Total time

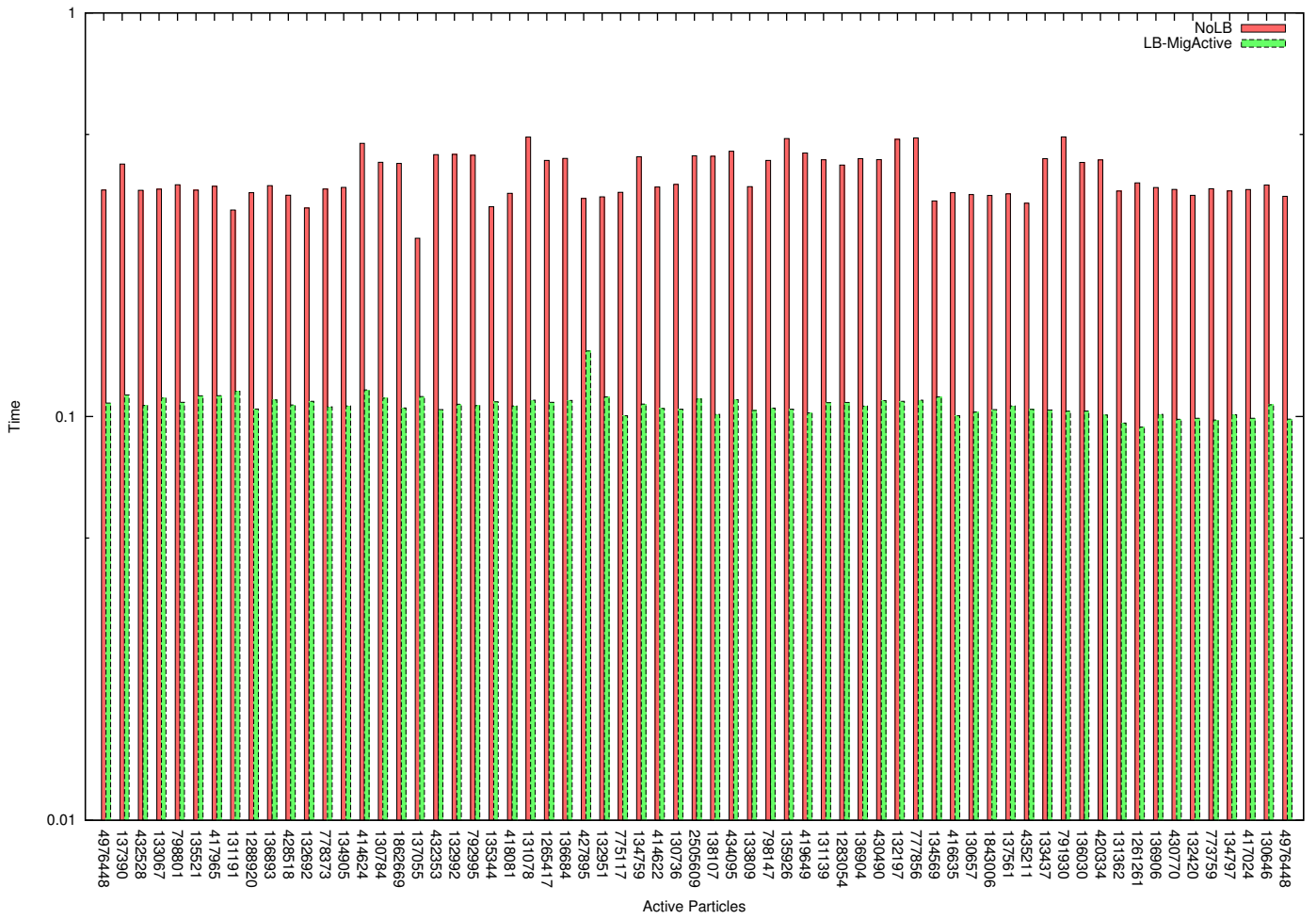


Figure 2. Domain Decomposition Time

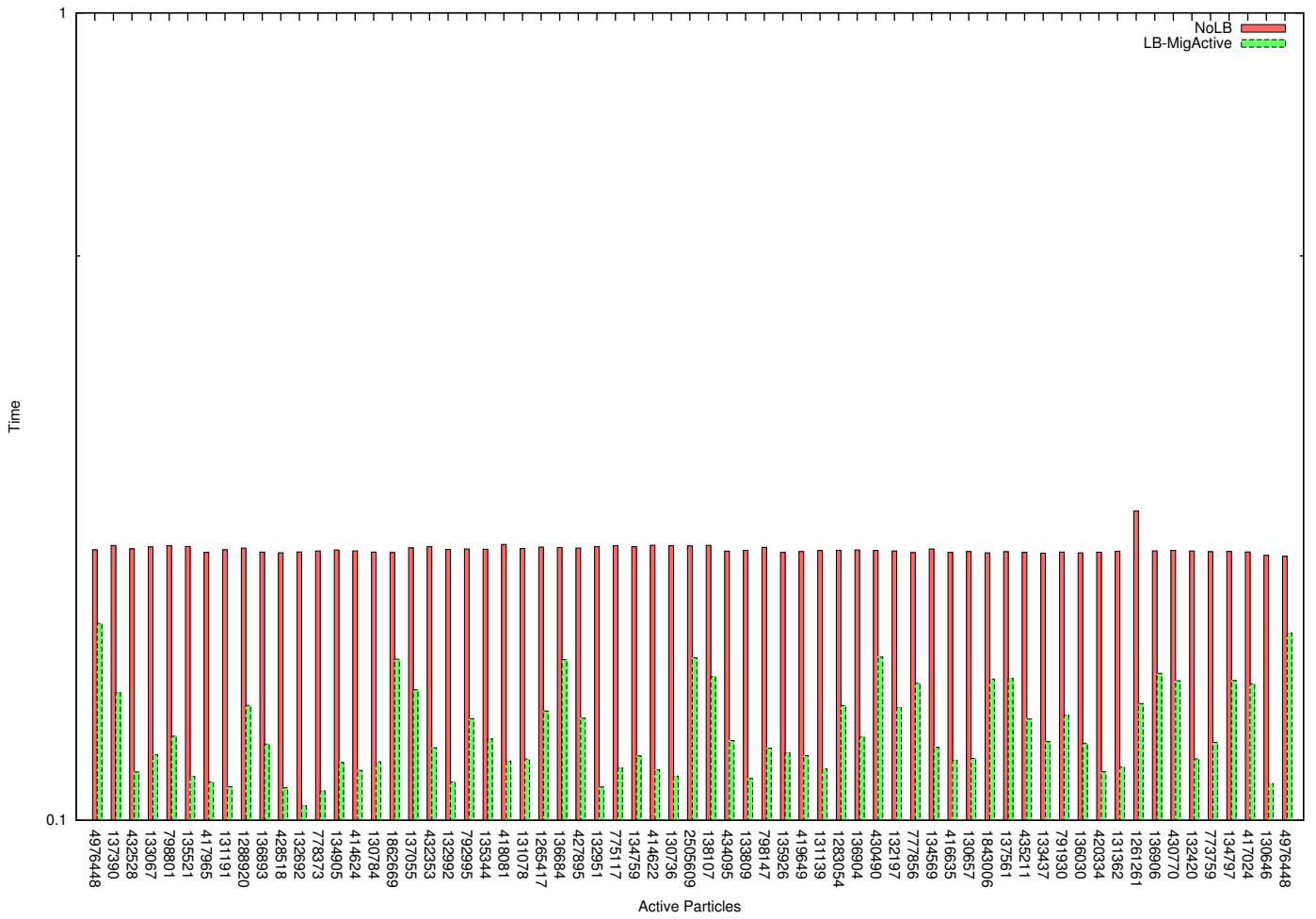


Figure 3. Tree Build Time

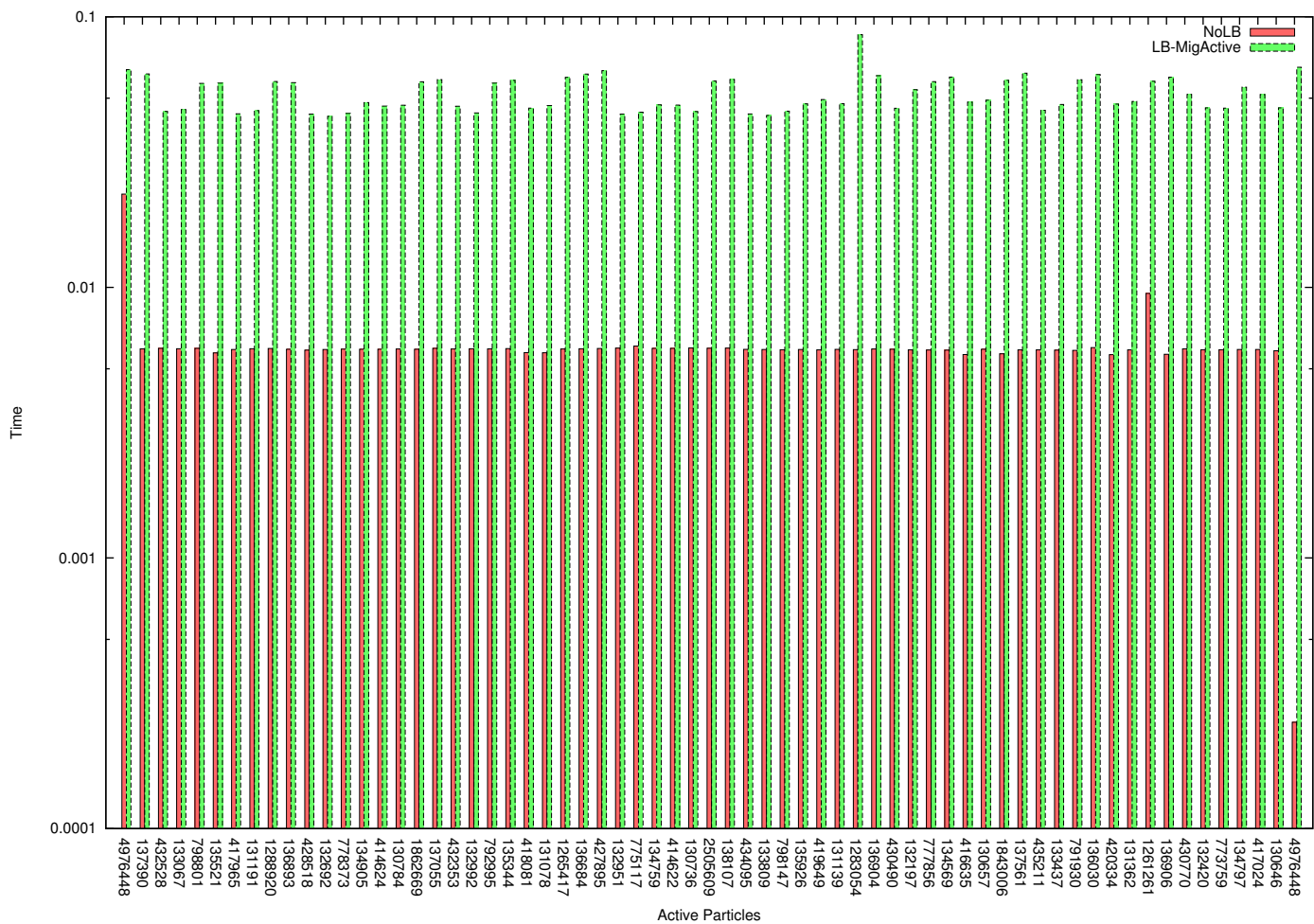


Figure 4. Load balancing Time

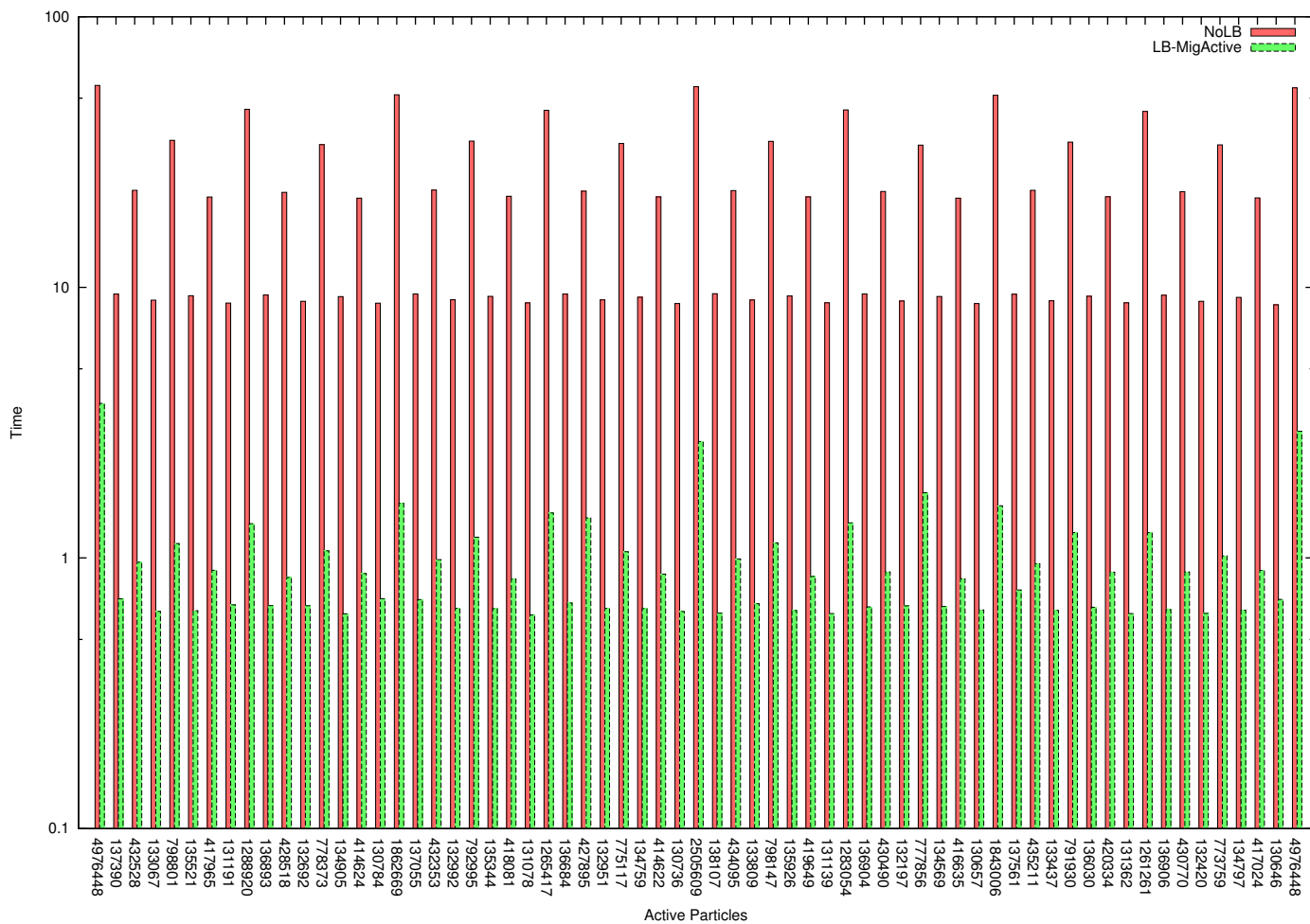


Figure 5. Gravity Time

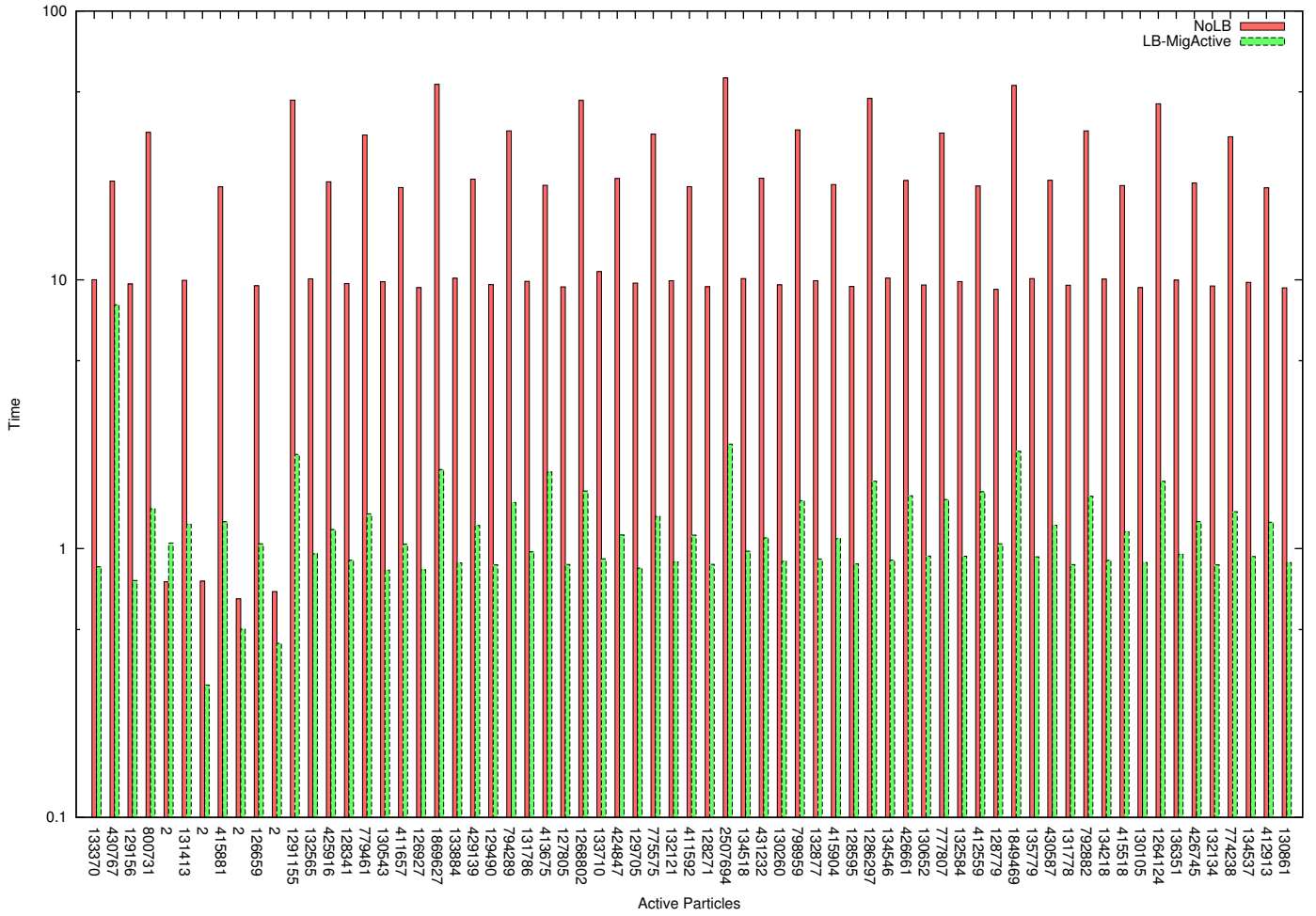


Figure 6. Total time - Iteration 1 - shows phases with just 2 active particles.

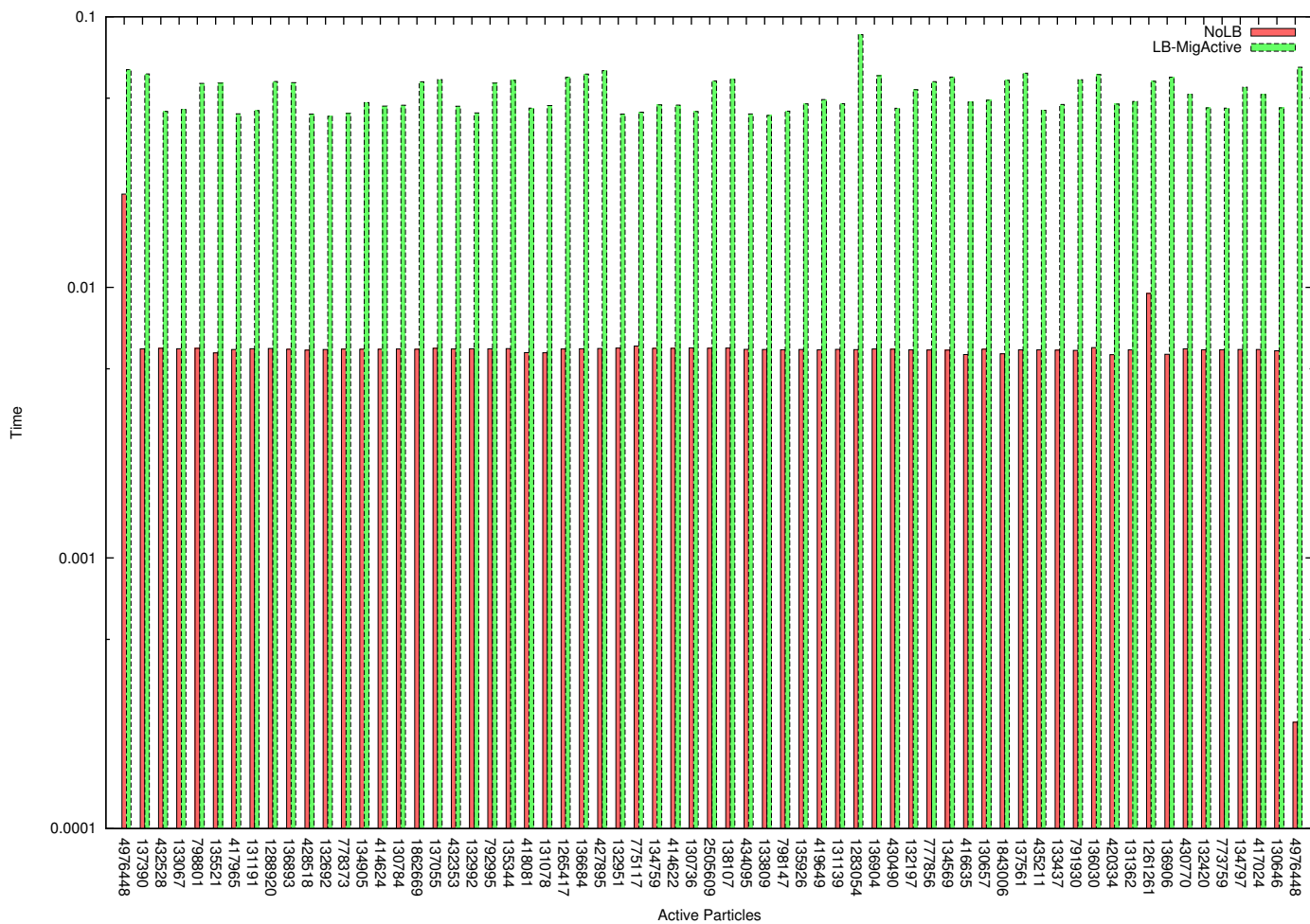


Figure 7. Load balancing Time - Iteration 1

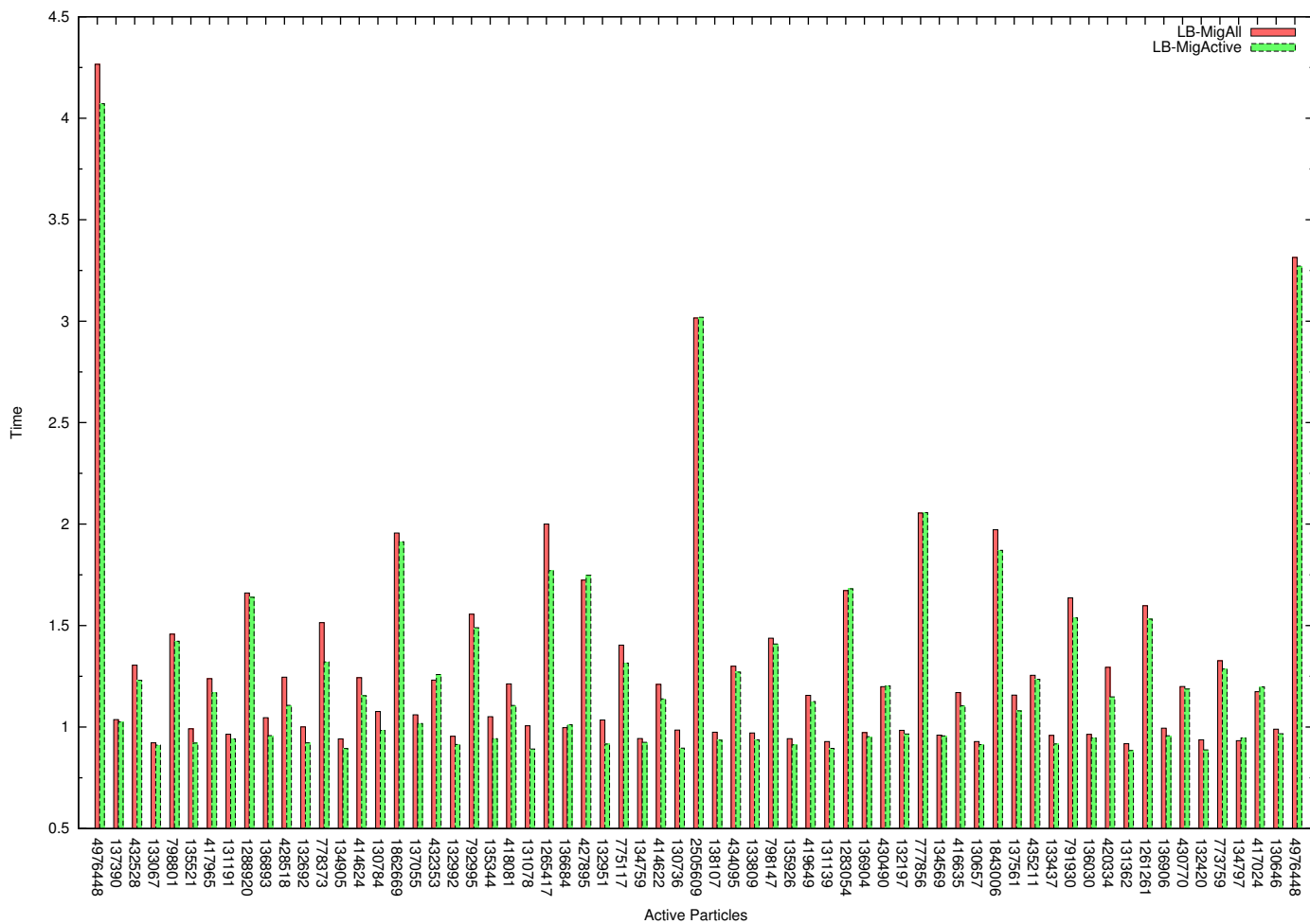


Figure 8. Total time

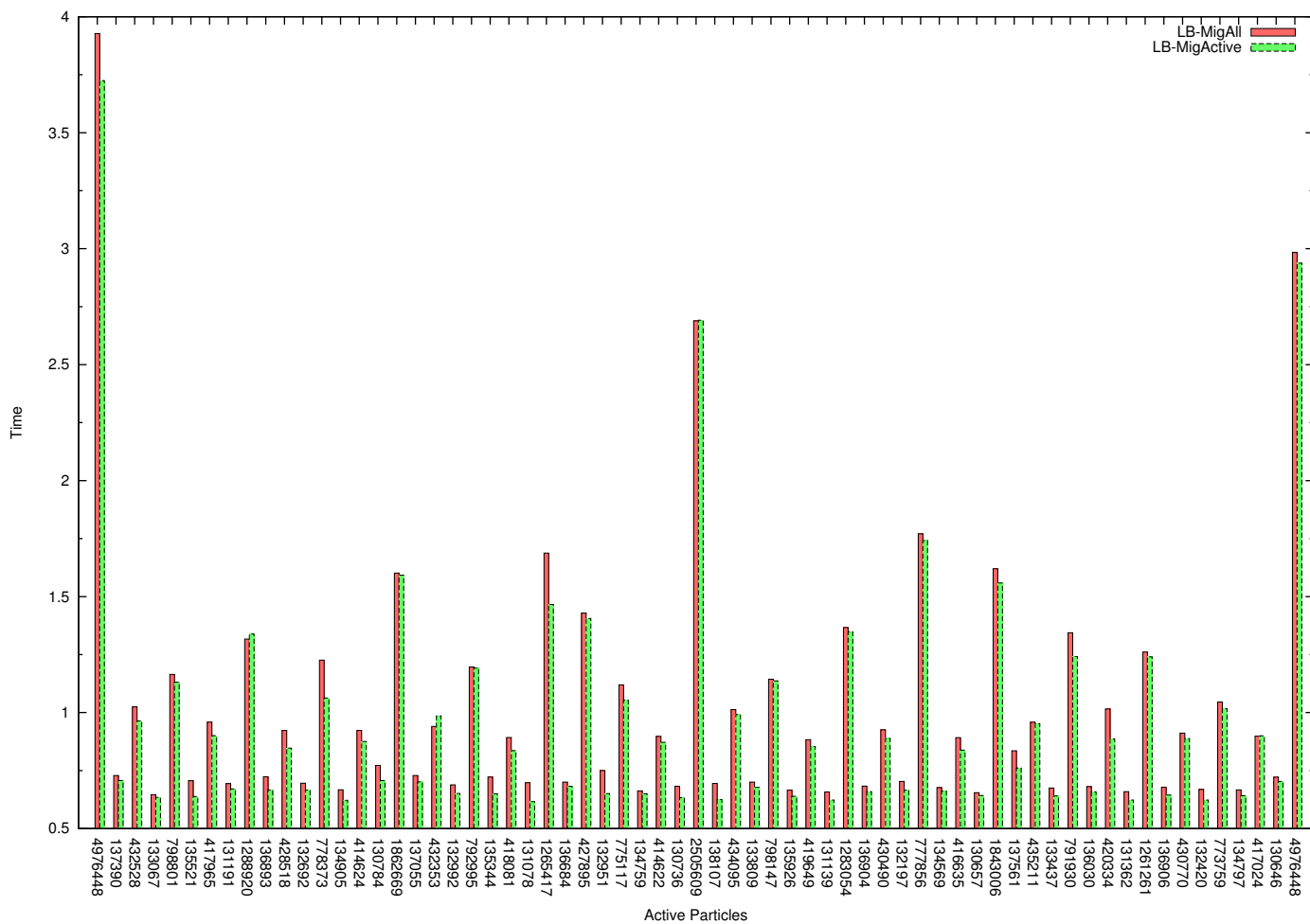


Figure 9. Gravity Time

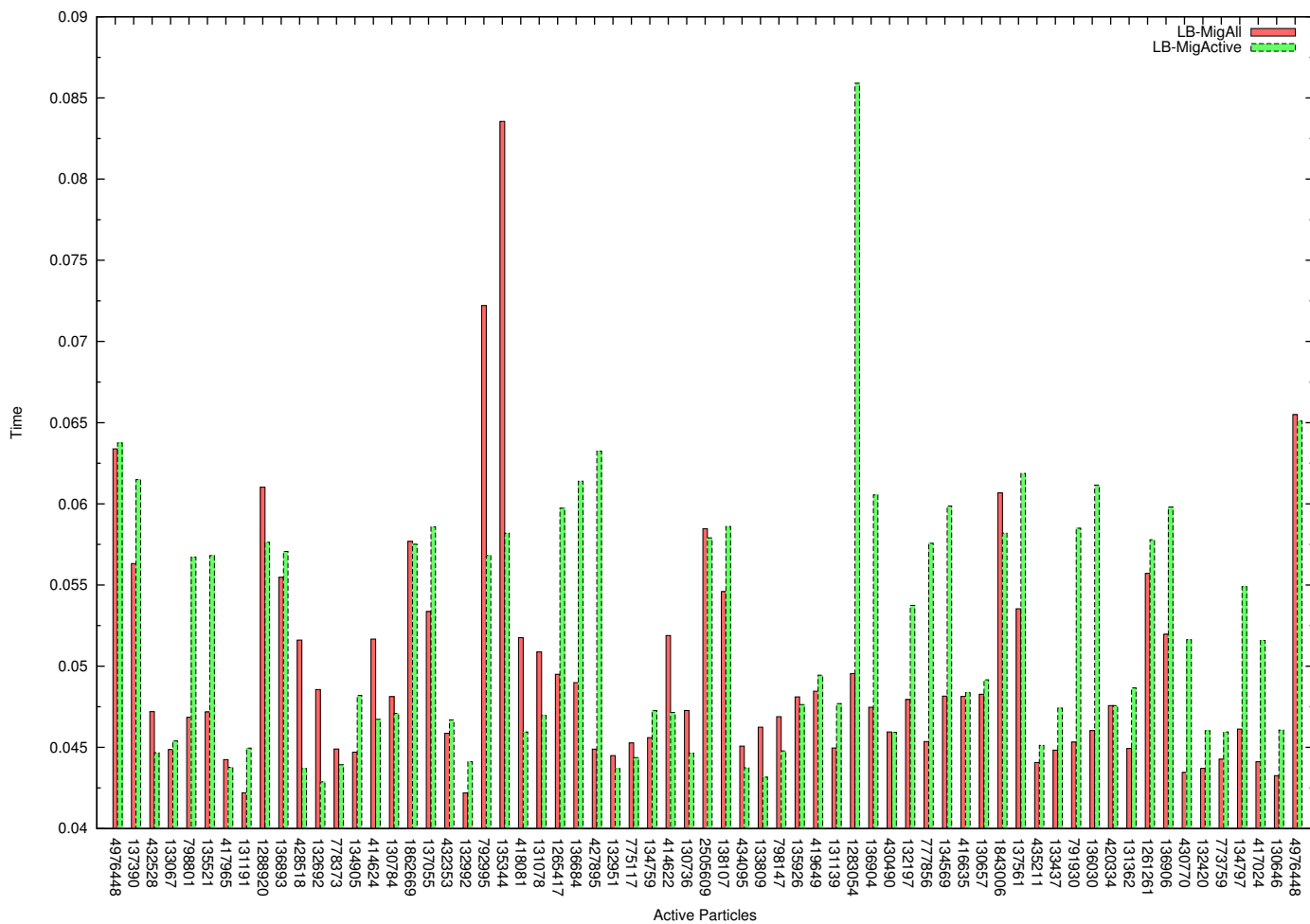


Figure 10. Load balancing Time