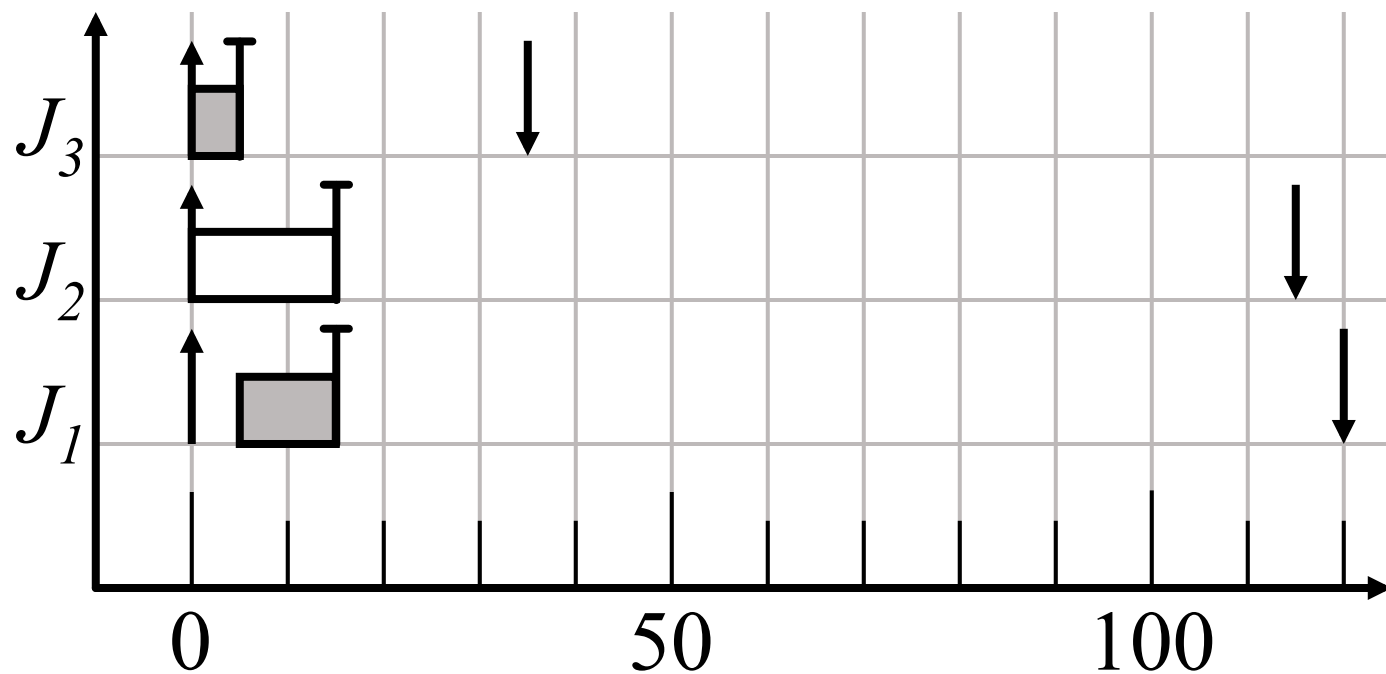
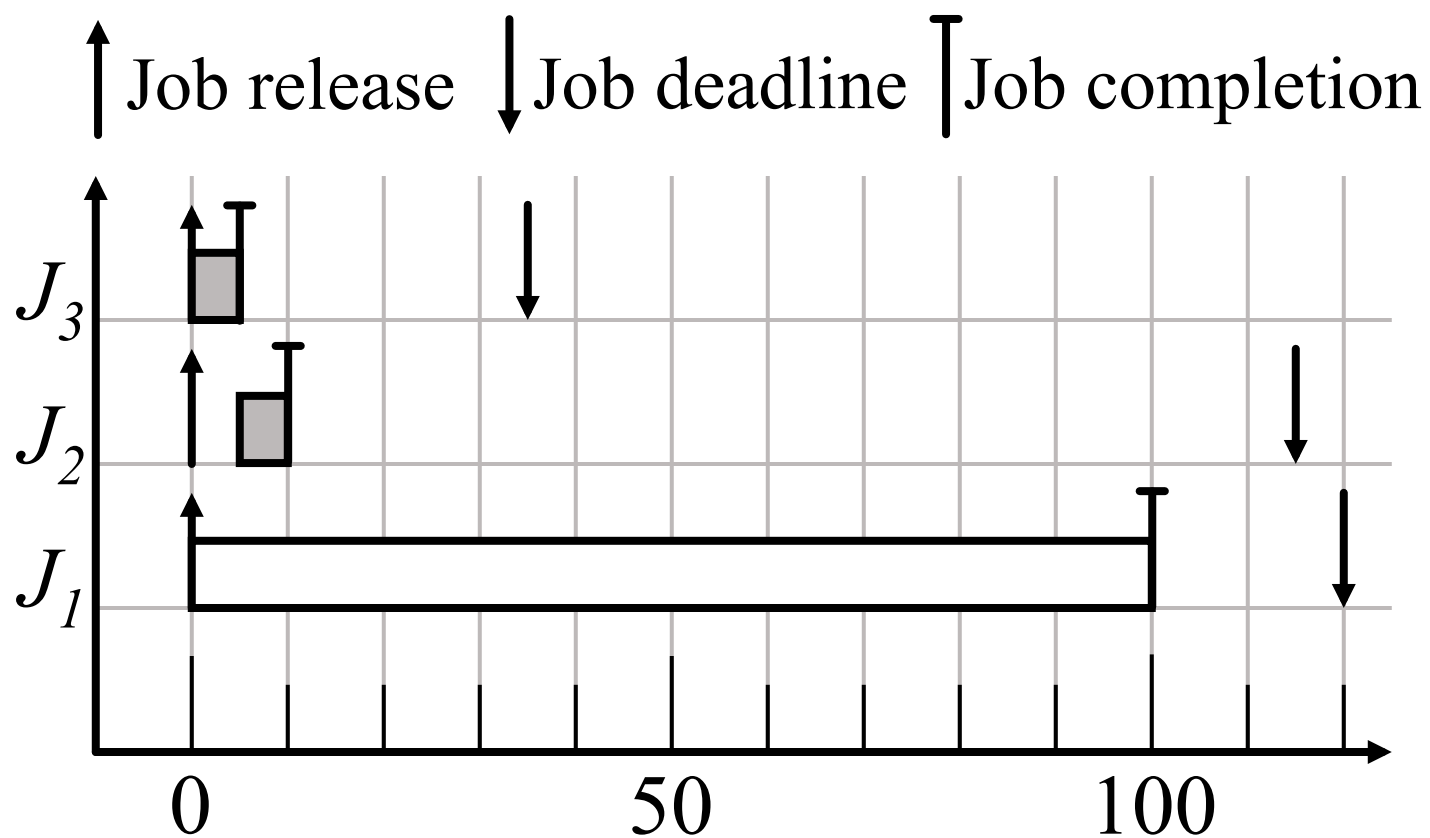


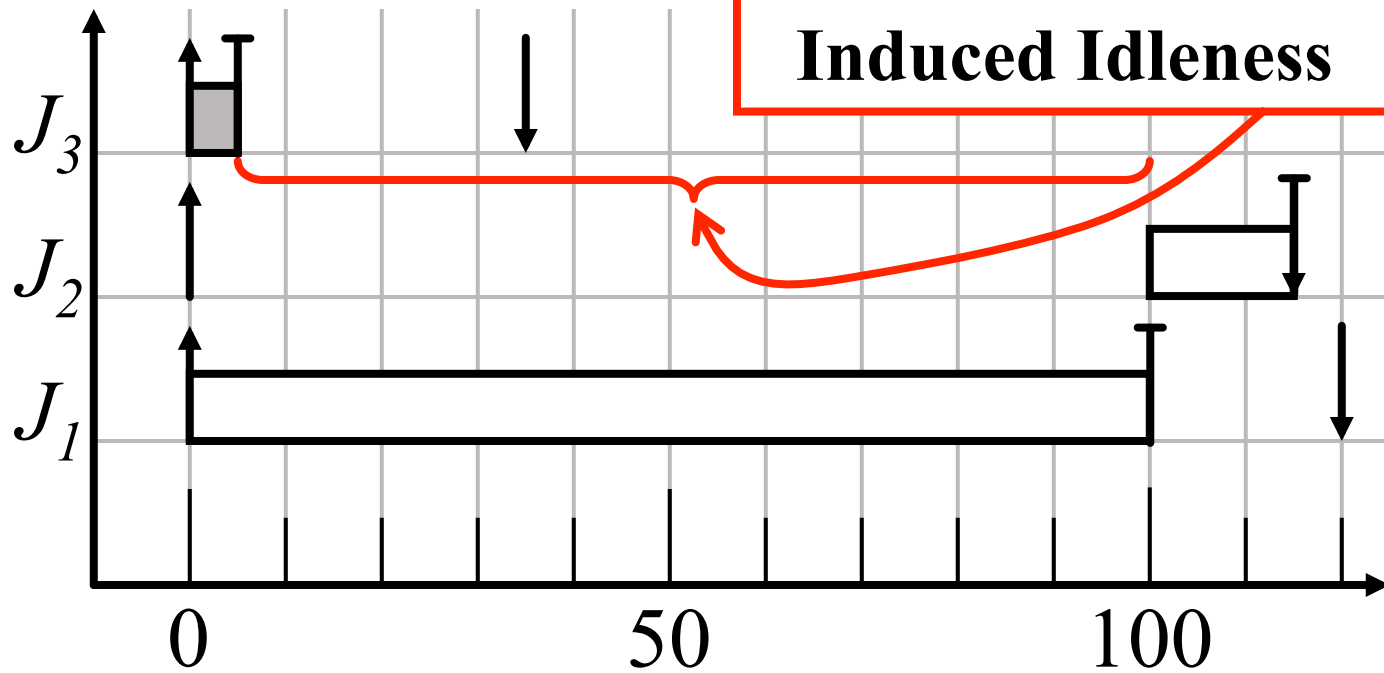
Job	Execution time (<i>ms</i>)		Energy Consumption (<i>mJ</i>)		Frequency (<i>GHz</i>)		Deadline
	big	LITTLE	big	LITTLE	big	LITTLE	
Job 3	5	15	100	7.5	3	1.5	35
Job 2	5	15	100	7.5	3	1.5	115
Job 1	10	100	200	50	3	1.5	120

 on big processor  on little processor





**Processor Selection
Induced Idleness**



Problem Type	Average Execution Cost On Big Processors				Average Execution Cost On Little Processors			
	2 GHz	2.5 GHz	3 GHz	3.5 GHz	0.5 GHz	0.75 GHz	1 GHz	1.5 GHz
Scalar Value Computation								
512x512	200 mJ	300 mJ	300 mJ	300 mJ	300 mJ	300 mJ	300 mJ	300 mJ
2048x2048	800 mJ	900 mJ	900 mJ	900 mJ	900 mJ	900 mJ	900 mJ	900 mJ
4096x4096	1200 mJ	1500 mJ	1500 mJ	1500 mJ	1500 mJ	1500 mJ	1500 mJ	1500 mJ
2D Convolution								
512x512	100 mJ	100 mJ	100 mJ	100 mJ	100 mJ	100 mJ	100 mJ	100 mJ
2048x2048	800 mJ	800 mJ	800 mJ	800 mJ	800 mJ	800 mJ	800 mJ	800 mJ
4096x4096	1200 mJ	1200 mJ	1200 mJ	1200 mJ	1200 mJ	1200 mJ	1200 mJ	1200 mJ
Matrix Multiplication								
512x512	100 mJ	100 mJ	100 mJ	100 mJ	100 mJ	100 mJ	100 mJ	100 mJ
2048x2048	800 mJ	800 mJ	800 mJ	800 mJ	800 mJ	800 mJ	800 mJ	800 mJ
4096x4096	1200 mJ	1200 mJ	1200 mJ	1200 mJ	1200 mJ	1200 mJ	1200 mJ	1200 mJ
3D Fluid Simulation								
512x512	800 mJ	800 mJ	800 mJ	800 mJ	————	————	————	————
2048x2048	1200 mJ	1200 mJ	1200 mJ	1200 mJ	————	————	————	————
N-Body Simulation								
1024 particles	800 mJ	800 mJ	800 mJ	800 mJ	————	————	————	————

Dynamic voltage and Frequency Scaling

Static

Dynamic

Mixed

Cluster

Processor Arrangement
Clustered Partitioned Global

EES EAS	EES EAS	EES EAS	EES EAS
Classic Scheduling with Processor Selection	Classic Scheduling with Processor Selection	Classic Scheduling with Processor Selection	Classic Scheduling with Processor Selection
—	—	—	EES EAS