

**Quarterly R&D HPCS Summary Report
For The HPC Board**

Submitted by: R&D HPCS Implementation Team

Q1 FY 11

Utilization By Site and Project					
	Princeton				
	Planned Hours	Hours made available	Hours used	% EMP Allocation	Allocation used
EMP Project					
Advanced Data Assimilation R&D					
Air Quality					
BLDR-Climate					
BLDR-Grants					
Climate Model Calibration					
Climate Scenario Analysis	1,307,673	1,323,516	361,160	10.0%	2.73%
Climate Scenario Generation	2,615,346	2,647,031	8,196,674	20.0%	61.93%
Climate Test Bed					
Climate Prediction Center					
DTC					
DTC-Grants					
ESMF and Software Infrastructure Development	653,836	661,758	117,491	5.0%	0.89%
Global Reanalysis					
HMTB					
Infrastructure					
JCSDA					
CFS Reanalysis					
Next Generation Global Model Dev.					
Next-generation Ocean Model R & D	1,961,509	1,985,273	560,202	15.0%	4.23%
Observing Systems R&D					
Rapid Refresh					
Reforecasting Research and Development					
Regional Reanalysis					
Seasonal Climate Modeling R & D	1,307,673	1,323,516	401,428	10.0%	3.03%
Long-term Climate Model R & D	5,230,692	5,294,062	1,456,110	40.0%	11.00%
Hurricane Forecast Improvement					
Totals	13,076,730	13,235,155	11,093,065	100.0%	83.8%
Total Planned hours	13,076,730				
Total actual hours	13,235,155				
Cores	6784				
Hours per quarter	2,208				
Planned utilization	90%				
Null time (hrs)	418.00				
Downtime (hrs)	320.17				
Actual availability	98.18%				
Variances					
Hrs available Vs planned	158,425.48				
Hrs used Vs available	-2,142,090.34				
EMP allocation not used	-16.18%				
Currency	61%				
Variables					
Constants					

	Boulder				
	Planned Hours	Hours made available	Hours used	% EMP Allocation	Allocation used
EMP Project					
Advanced Data Assimilation R&D					
Air Quality	577,170	593,613	697,285	8.0%	9.40%
BLDR-Climate	1,154,340	1,187,225	579,586	16.0%	7.81%
BLDR-Grants	1,226,486	1,261,427	1,337,087	17.0%	18.02%
Climate Model Calibration					
Climate Scenario Analysis					
Climate Scenario Generation					
Climate Test Bed					
Climate Prediction Center					
DTC	577,170	593,613	9,593	8.0%	0.13%
DTC-Grants	577,170	593,613	281	8.0%	0.00%
ESMF and Software Infrastructure Development					
Global Reanalysis					
HMTB	72,146	74,202	746,241	1.0%	0.39%
Infrastructure			29,107		
JCSDA	216,439	222,605	0	3.0%	0.00%
CFS Reanalysis					
Next Generation Global Model Dev.	577,170	593,613	380,862	8.0%	5.13%
Next-generation Ocean Model R & D					
Observing Systems R&D	360,731	371,008	892,432	5.0%	12.03%
Rapid Refresh	1,298,633	1,335,628	1,223,943	18.0%	16.49%
Reforecasting Research and Development					
Regional Reanalysis	577,170	593,613	15,729	8.0%	0.21%
Seasonal Climate Modeling R & D			0		
Long-term Climate Model R & D					
Hurricane Forecast Improvement			0		
Totals	7,214,626	7,420,157	5,912,144	100.0%	69.6%
Total Planned hours	7,214,626				
Total actual hours	7,420,157				
Cores	3963				
Hours per quarter	2,208				
Planned utilization	85%				
Null time (hrs)	960.00				
Downtime (hrs)	9,112				
Actual availability	99.88%				
Variances					
Hrs available Vs planned	205,531.80				
Hrs used Vs available	-1,508,013.39				
EMP allocation not used	-30.38%				
Currency	11.65%				
Variables					
Constants					

	Gaithersburg				
	Planned Hours	Hours made available	Hours used	% EMP Allocation	Allocation used
EMP Project					
Advanced Data Assimilation R&D					
Air Quality					
BLDR-Climate					
BLDR-Grants					
Climate Model Calibration					
Climate Scenario Analysis					
Climate Scenario Generation					
Climate Test Bed	668,024	687,622	1,428,355	12.0%	24.93%
Climate Prediction Center	111,337	114,604	0	2.00%	0.00%
DTC					
DTC-Grants					
ESMF and Software Infrastructure Development					
Global Reanalysis					
HMTB	668,024	687,622	1,495,818	12.0%	26.10%
Infrastructure					
JCSDA	668,024	687,622	1,012,861	12.0%	17.68%
CFS Reanalysis	3,006,106	3,094,299	0	54.0%	0.00%
Next Generation Global Model Dev.					
Next-generation Ocean Model R & D					
Observing Systems R&D					
Rapid Refresh					
Reforecasting Research and Development					
Regional Reanalysis					
Seasonal Climate Modeling R & D	111,337	114,604	406,535	2.0%	7.09%
Long-term Climate Model R & D					
Hurricane Forecast Improvement	334,012	343,811	6,284	6.00%	0.11%
Totals	5,566,863	5,730,183	4,349,853	100.0%	75.9%
Total Planned hours	5,566,863				
Total actual hours	5,730,183				
Cores	2736				
Hours per quarter	2,208				
Planned utilization	95%				
Null time (hrs)	0.00				
Downtime (hrs)	860.00				
Actual availability	99.86%				
Variances					
Hrs available Vs planned	163,320.50				
Hrs used Vs available	-1,380,330.10				
EMP allocation not used	-24.09%				
Currency	27.35%				
Variables					
Constants					

EMP Projects Normalized Across all of the R&D HPC Sub-Systems

	Normalized	
	% EMP Allocation	Allocation used
EMP Project		
Advanced Data Assimilation R&D		
Air Quality	0.93%	1.09%
BLDR-Climate	1.86%	0.91%
BLDR-Grants	1.98%	2.10%
Climate Model Calibration		
Climate Scenario Analysis	6.10%	1.66%
Climate Scenario Generation	12.20%	37.78%
Climate Test Bed	3.28%	6.82%
Climate Prediction Center	0.55%	0.00%
DTC	0.93%	0.02%
DTC-Grants	0.93%	0.00%
ESMF and Software Infrastructure Development	3.05%	0.54%
Global Reanalysis		
HMTB	3.40%	7.19%
Infrastructure	0.00%	0.00%
JCSDA	3.63%	4.83%
CFS Reanalysis	14.77%	0.00%
Next Generation Global Model Dev.	0.93%	0.60%
Next-generation Ocean Model R & D	9.15%	2.58%
Observing Systems R&D	0.58%	1.40%
Rapid Refresh	2.10%	1.92%
Reforecasting Research and Development		
Regional Reanalysis	0.93%	0.02%
Seasonal Climate Modeling R & D	6.65%	3.79%
Long-term Climate Model R & D	24.40%	6.71%
Hurricane Forecast Improvement	1.64%	0.03%
Totals	100%	80.00%