

<b>Fiscal Year:</b>	FY 2014	<b>Task Last Updated:</b>	FY 02/10/2015
<b>PI Name:</b>	Mollicone, Daniel Ph.D.		
<b>Project Title:</b>	Development of a Software and User Interface to Support Scenario Modeling of Astronaut Schedules to Aid in the Selection of Fatigue Countermeasures within the Behavioral Health and Performance Dashboard (BHP-DS)		
<b>Division Name:</b>	Human Research		
<b>Program/Discipline:</b>			
<b>Program/Discipline--Element/Subdiscipline:</b>	NSBRI--Human Factors and Performance Team		
<b>Joint Agency Name:</b>	<b>TechPort:</b>	<b>Yes</b>	
<b>Human Research Program Elements:</b>	(1) <b>BHP:</b> Behavioral Health & Performance (archival in 2017)		
<b>Human Research Program Risks:</b>	(1) <b>Sleep:</b> Risk of Performance Decrements and Adverse Health Outcomes Resulting from Sleep Loss, Circadian Desynchronization, and Work Overload		
<b>Space Biology Element:</b>	None		
<b>Space Biology Cross-Element Discipline:</b>	None		
<b>Space Biology Special Category:</b>	None		
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<b>Zip Code:</b>	19104	<b>Congressional District:</b>	2
<b>Comments:</b>			
<b>Project Type:</b>	GROUND	<b>Solicitation / Funding Source:</b>	Directed Research
<b>Start Date:</b>	11/01/2013	<b>End Date:</b>	10/31/2014
<b>No. of Post Docs:</b>	<b>No. of PhD Degrees:</b>		
<b>No. of PhD Candidates:</b>	<b>No. of Master' Degrees:</b>		
<b>No. of Master's Candidates:</b>	<b>No. of Bachelor's Degrees:</b>		
<b>No. of Bachelor's Candidates:</b>	<b>Monitoring Center:</b> NSBRI		
<b>Contact Monitor:</b>	<b>Contact Phone:</b>		
<b>Contact Email:</b>			
<b>Flight Program:</b>			
<b>Flight Assignment:</b>			
<b>Key Personnel Changes/Previous PI:</b>			
<b>COI Name (Institution):</b>			
<b>Grant/Contract No.:</b>	NCC 9-58-HFP00004		
<b>Performance Goal No.:</b>			
<b>Performance Goal Text:</b>			

<b>Task Description:</b>	<p>This project integrated the Circadian Performance Simulation Software (CPSS) biomathematical model developed by the Harvard Biomathematical Modeling Unit (Dr. Elizabeth Klerman, Ph.D.) with the Behavioral Health and Performance Dashboard Software tool (BHP-DS) to support scenario modeling of astronaut schedules (inputs related to sleep, duty, and light exposure) to aid in the selection of fatigue countermeasures within the Behavioral Health and Performance Dashboard (BHP-DS). The BHP-DS was developed to address the need to track a variety of astronaut behavioral health indicators so that behavioral and performance issues can be detected and mitigated at an early stage. It is not intended to be used to automatically establish a diagnosis but instead provide a dashboard of behavioral health indicators placed within the context of behavioral health stressors. The target users of the BHP-DS are flight surgeons and Op Psy Personnel. All data used by the tool is encrypted and securely stored and accessible to approved NASA users (e.g. flight surgeons). User access to the BHP-DS is controlled by local user groups on the server and by the existing NASA active directory infrastructure (password protected). The BHP-DS was developed to be modular in design to support the implementation of countermeasures developed by other research groups in the NASA and NSBRI community.</p>
<b>Rationale for HRP Directed Research:</b>	
<b>Research Impact/Earth Benefits:</b>	
<b>Task Progress:</b>	<p>New project for FY2014. NOTE: added to Task Book when received information (Ed., 2/10/2015)</p>
<b>Bibliography Type:</b>	<p>Description: (Last Updated: 02/23/2015)</p>