

Fiscal Year:	FY 2008	Task Last Updated:	FY 12/15/2009
PI Name:	Barger, Laura Ph.D.		
Project Title:	Phoenix Scout Lander: Countermeasures testbed for spaceflight ground controllers		
Division Name:	Human Research		
Program/Discipline:	HUMAN RESEARCH		
Program/Discipline--Element/Subdiscipline:	HUMAN RESEARCH--Behavior and performance		
Joint Agency Name:	TechPort:	No	
Human Research Program Elements:	(1) BHP :Behavioral Health & Performance (archival in 2017)		
Human Research Program Risks:	(1) BMed :Risk of Adverse Cognitive or Behavioral Conditions and Psychiatric Disorders		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
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Organization Name:	Brigham and Women's Hospital/Harvard Medical Center		
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PI Web Page:			
City:	Boston	State:	MA
Zip Code:	02115-5817	Congressional District:	7
Comments:			
Project Type:	GROUND	Solicitation / Funding Source:	Directed Research
Start Date:	12/17/2007	End Date:	04/16/2010
No. of Post Docs:	No. of PhD Degrees:		
No. of PhD Candidates:	No. of Master' Degrees:		
No. of Master's Candidates:	No. of Bachelor's Degrees:		
No. of Bachelor's Candidates:	Monitoring Center: NASA JSC		
Contact Monitor:	Shea, Camile	Contact Phone:	281-244-2017
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Flight Program:			
Flight Assignment:	NOTE: Project extended to April 2010, per PI (12/2009)		
Key Personnel Changes/Previous PI:			
COI Name (Institution):	Sipes, Walter (NASA Johnson Space Center) Brainard, George (Thomas Jefferson University) Gilliland, Kirby (Oklahoma University) Lockley, Steven (Brigham and Women's Hospital)		
Grant/Contract No.:	NNX08AD66A		
Performance Goal No.:			
Performance Goal Text:			

Task Description:	<p>The NASA/JSC Behavioral Health and Performance (BHP) research program element is proposing to collaborate with its National Space Biomedical Research Institute (NSBRI) partner and the Space Medicine Behavioral Sciences group to develop countermeasures to treat fatigue, circadian misalignment, and sleep loss associated with the Phoenix Scout Lander mission. The proposed study provides an operational opportunity, in a Mars Time Analog, to apply these countermeasures and begin evaluating their acceptability, feasibility, and efficacy in a real-time, field setting. This study will evaluate countermeasures that may be used by ground personnel controlling current missions (Shuttle and International Space Station) as well as by those controlling future missions (Lunar and Mars) as there will continue to be rovers and unmanned space craft including orbiters, landers and rovers sent to Mars. The results of this work will benefit the current unmanned NASA robotic programs and ultimately human exploration missions to both the moon and Mars. The proposed study will examine both Phoenix Mars Lander controllers who work on a Mars sol schedule and those who work on a traditional Earth sol schedule. Major outcome measures include sleep duration (objective evaluation via actigraphy), subjective alertness (collected via daily log) and performance (evaluated with the Psychomotor Vigilance Task and other embedded and/or unobtrusive performance measures). The results of this countermeasure evaluation will benefit other operational NASA missions, such as Constellation, and also take advantage of an operational analog environment to inform gaps in knowledge of the risks of cognitive problems due to fatigue and other aspects during spaceflight.</p>
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	
Task Progress:	<p>New project for FY2008. [Ed. note: added to Task Book in Dec 2009]</p>
Bibliography Type:	<p>Description: (Last Updated: 04/11/2021)</p>