

<b>Fiscal Year:</b>	FY 2014	<b>Task Last Updated:</b>	FY 07/03/2013
<b>PI Name:</b>	Barshi, Immanuel Ph.D.		
<b>Project Title:</b>	Effects of Long-Duration Spaceflight on Training Retention: 1 Yr ISS Investigation		
<b>Division Name:</b>	Human Research		
<b>Program/Discipline:</b>	HUMAN RESEARCH		
<b>Program/Discipline--Element/Subdiscipline:</b>	HUMAN RESEARCH--Space Human Factors Engineering		
<b>Joint Agency Name:</b>	<b>TechPort:</b>	No	
<b>Human Research Program Elements:</b>	(1) <b>HFBP</b> :Human Factors & Behavioral Performance (IRP Rev H)		
<b>Human Research Program Risks:</b>	(1) <b>BMed</b> :Risk of Adverse Cognitive or Behavioral Conditions and Psychiatric Disorders (2) <b>HSIA</b> :Risk of Adverse Outcomes Due to Inadequate Human Systems Integration Architecture (3) <b>Team</b> :Risk of Performance and Behavioral Health Decrements Due to Inadequate Cooperation, Coordination, Communication, and Psychosocial Adaptation within a Team		
<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>	94035-1000	<b>Congressional District:</b>	18
<b>Comments:</b>			
<b>Project Type:</b>	FLIGHT,GROUND	<b>Solicitation / Funding Source:</b>	Directed Research
<b>Start Date:</b>	10/01/2013	<b>End Date:</b>	12/30/2016
<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> NASA JSC		
<b>Contact Monitor:</b>	Whitmore, Mihriban	<b>Contact Phone:</b>	281-244-1004
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<b>Flight Program:</b>	ISS		
<b>Flight Assignment:</b>	ISS NOTE: Risk/Gaps per E. Connell/HRP (Ed., 3/20/14) NOTE: Start date changed to 10/1/13 (from 5/22/13) per M. Whitmore/JSC (Ed., 2/24/14)		
<b>Key Personnel Changes/Previous PI:</b>			
<b>COI Name (Institution):</b>	Byrne, Vicky ( Lockheed Martin-NASA Johnson Space Center ) Holden, Kritina ( Lockheed Martin-NASA Johnson Space Center ) Vessey, Brandon ( Wyle/NASA Johnson Space Center ) Hurst, Victor ( Wyle/NASA Johnson Space Center )		
<b>Grant/Contract No.:</b>	Directed Research		
<b>Performance Goal No.:</b>			
<b>Performance Goal Text:</b>			

<b>Task Description:</b>	<p>This proposal focuses on the research opportunity afforded by the 2015 year-long mission of two crewmembers aboard the International Space Station (ISS). Given that only two crewmembers will be spending the full year in space, the research proposed here is more of a case study than a typical research project. However, using repeated measures within-subject design, important insights can be gained concerning the retention and transferability or generalizability of material learned, as well as the effectiveness of Earth-based pre-launch training. In addition, information obtained in this research could help in the design of proper intervals for onboard refresher training, and suggest domains best served by Just-In-Time training (JITT).</p> <p>This proposal will be led by the Space Human Factors Engineering (SHFE) Element within the Human Research Program (HRP). The outcomes from this study will address gaps within the SHFE Element, as well as within the Behavioral Health and Performance (BHP), and Exploration Medical Capability (ExMC) Elements, and will be a cooperative effort with those Elements. Products and tools developed by these Elements in their work under HRP will be leveraged to benefit the proposed research.</p> <p>The specific aims are as follows:</p> <p>Aim A. Test the retention and transfer of specific technical content learned pre-launch to assess the need for and possible schedule of onboard refresher and JIT training.</p> <p>Aim B. Compare the process of knowledge/skill decay on orbit with that of a closely-matched subject on Earth.</p> <p>Aim C. Collect naturalistic data from onboard crew and ground control personnel on training-related crew performance including: performance errors, requests for ground support, need to review material previously learned, and training success stories.</p>
<b>Rationale for HRP Directed Research:</b>	<p>This research is directed due to a time constraint. This proposal focuses on the research opportunity afforded by the 2015 year-long mission of two crewmembers aboard the International Space Station (ISS).</p>
<b>Research Impact/Earth Benefits:</b>	
<b>Task Progress:</b>	<p>New project for FY2014. (Ed. note 2/24/14--start date changed from 5/22/2013 to 10/1/2013 so that task now started in FY2014 instead of FY2013.)</p>
<b>Bibliography Type:</b>	<p>Description: (Last Updated: 01/11/2021)</p>