

Fiscal Year:	FY 2016	Task Last Updated:	FY 04/06/2016
PI Name:	Salas, Eduardo Ph.D.		
Project Title:	Dynamic Team Role Allocation in Long Duration, Exploration Missions: Identification of Roles, Triggers, and Measurement Tools		
Division Name:	Human Research		
Program/Discipline:			
Program/Discipline--Element/Subdiscipline:	HUMAN RESEARCH--Behavior and performance		
Joint Agency Name:	TechPort:	No	
Human Research Program Elements:	(1) HFBP :Human Factors & Behavioral Performance (IRP Rev H)		
Human Research Program Risks:	(1) BMed :Risk of Adverse Cognitive or Behavioral Conditions and Psychiatric Disorders (2) Team :Risk of Performance and Behavioral Health Decrements Due to Inadequate Cooperation, Coordination, Communication, and Psychosocial Adaptation within a Team		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
PI Email:	eduardo.salas@rice.edu	Fax:	FY
PI Organization Type:	UNIVERSITY	Phone:	713-348-3917
Organization Name:	Rice University		
PI Address 1:	Department of Psychology		
PI Address 2:	6100 Main Street MS25		
PI Web Page:			
City:	Houston	State:	TX
Zip Code:	77005	Congressional District:	7
Comments:	NOTE: Previous affiliation was University of Central Florida, until mid-2015		
Project Type:	Ground	Solicitation / Funding Source:	2013 HERO NNJ13ZSA002N-Crew Health (FLAGSHIP & NSBRI)
Start Date:	11/03/2015	End Date:	11/02/2017
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:	Williams, Thomas	Contact Phone:	281-483-8773
Contact Email:	thomas.j.will1@nasa.gov		
Flight Program:			
Flight Assignment:			
Key Personnel Changes/Previous PI:			
COI Name (Institution):	Burke, Shawn Ph.D. (University of Central Florida) Driskell, James Ph.D. (Florida Maxima Corp.) Fiore, Stephen Ph.D. (University of Central Florida)		
Grant/Contract No.:	NNX16AB08G		
Performance Goal No.:			
Performance Goal Text:			

Task Description:	<p>ED. NOTE (4/6/2016): Continuation of project (grant NNX14AM73G) with the same title and Principal Investigator, due to PI move in fall 2015 to Rice University from University of Central Florida.</p> <p>Long duration exploration missions present a unique environment characterized by many stressors (e.g., social isolation, danger, confinement, interpersonal dynamics, periods of over/under stimulation), with little ability to escape. Research has found that within such environments interpersonal dynamics occupy a key role in effective functioning (Forsyth, 2010). While the last few years have witnessed an increase in research examining the composition requirements of high performance teams, little work has examined these issues in light of teams embedded in long duration, exploration missions. Therefore, we describe a program of work which addresses Team Gaps 1, 4, and 8 in NASA's Human Research Roadmap. We seek to answer the following questions with regard to long duration, exploration missions: (1) what are the key social and team technical (task) roles which influence team function; (2) what are the behavioral and communicative markers which can be used to assess the degree to which key identified social and team technical roles are being fulfilled; (3) what contextual aspects serve to trigger a need for the dynamic shift of social roles; (4) what are the optimal combinations (i.e., profiles, algorithms) of social roles for the maintenance and regulation of team functions; (5) what are the markers that can be used to select for those most likely to fit social profiles and how do these profiles change across the duration of the mission (i.e., the team's life cycle). In answering these questions we seek to provide a series of scientifically grounded and experimentally validated taxonomies, guidelines, and measurement tools for team selection/composition. In exploring these questions, we take a multi-pronged approach consisting of analysis of archival data (e.g., astronaut diaries, historical accounts of teams operating in isolated, confined environments (ICE), prior collected University of Central Florida astronaut interviews), scientific literatures on group dynamics, personality, team roles, stress, and diversity, interviews, and experimentation in NASA analogs.</p> <p>Forsyth D. R. (2010). Group dynamics. J. D. Hague (ED.). Belmont CA: Wadsworth, Cengage Learning.</p>
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	
Task Progress:	<p>New project for FY2016. Continuation of project with the same title and Principal Investigator, grant NNX14AM73G, due to PI move in fall 2015 to Rice University from University of Central Florida.</p>
Bibliography Type:	<p>Description: (Last Updated: 09/04/2023)</p>