Fiscal Year:	FY 2009	**Task Last Updated:**	FY 05/11/2009
PI Name:	Sandor, Aniko Ph.D.		
Project Title:	Usability evaluation		
Division Name:	Human Research		
Program/Discipline:	HUMAN RESEARCH		
Program/Discipline--Element/Subdiscipline:	HUMAN RESEARCH--Space Human Factors Engineering		
Joint Agency Name:		**TechPort:**	No
Human Research Program Elements:	(1) **SHFH**:Space Human Factors & Habitability (archival in 2017)		
Human Research Program Risks:	(1) **HSIA**:Risk of Adverse Outcomes Due to Inadequate Human Systems Integration Architecture		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
PI Email:	Aniko.Sandor-1@nasa.gov	**Fax:**	FY
PI Organization Type:	NASA CENTER	**Phone:**	281.483.9726
Organization Name:	Lockheed-Martin/NASA Johnson Space Center		
PI Address 1:	2101 Nasa Parkway		
PI Address 2:	Mail Code: C46		
PI Web Page:			
City:	Houston	**State:**	TX
Zip Code:	77058	**Congressional District:**	22
Comments:			
Project Type:	GROUND	**Solicitation / Funding Source:**	Directed Research
Start Date:	10/01/2008	**End Date:**	09/30/2011
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:	Woolford, Barbara	**Contact Phone:**	218-483-3701
Contact Email:	barbara.j.woolford@nasa.gov		
Flight Program:			
Flight Assignment:			
Key Personnel Changes/Previous PI:			
COI Name (Institution):	Holden, Kritina (Lockheed-Martin/ NASA Johnson Space Center) Archer, Ronald (Lockheed-Martin/ NASA Johnson Space Center)		
Grant/Contract No.:			
Performance Goal No.:			
Performance Goal Text:			
Task Description:	This proposal addresses the need for research in the area of metrics and methodologies used in hardware and software usability testing in order to define quantifiable and verifiable usability requirements. A usability test is a human-in-the-loop evaluation where a participant works through a realistic set of representative tasks using the hardware/software under investigation. The purpose of this research is to define metrics and methodologies for measuring and verifying usability in the aerospace domain in accordance with FY09 focus on errors, consistency, and mobility/maneuverability. Usability metrics must be predictive of success with the interfaces, must be easy to obtain and/or calculate, and must meet the intent of current Human Systems Integration Requirements (HSIR). Methodologies must work within the constraints of the aerospace domain, be cost and time efficient, and be able to be applied without extensive specialized training.		

	The key driver for this directed research project (DRP) is the desire to promote and facilitate the development of usable Constellation vehicles and habitats. In past programs, usability has often been an afterthought – with human factors activities coming far too late in the development lifecycle to make a difference. It is the goal of this DRP to provide research-based methodologies and metrics early enough in the Orion program to positively impact development. Once new methodologies and metrics are developed, they will be field tested in real-world design efforts, iterated based on results, and finally described in reports and guidelines manuals, along with their application to requirements
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	
Task Progress:	New project for FY2009.
Bibliography Type:	Description: (Last Updated: 03/03/2016)