Purpose: To bring you a sampling of the latest documents added to the NTIS Database and to help you gain a greater understanding of the wealth of scitech information available from the National Technical Information Service.

Director: Bruce Borzino
Associate Director for Product Management & Acquisition: Don Hagen
Manager, Product & Program Management: Wayne Strickland
Technical Information Specialist: Greg Guthrie
508 & Accessibility: Rahsaan Williams
Design & Layout: Brian Congdon

This Newsletter is published twelve times a year, and delivered via e-mail on or about the 15th of each month. You may subscribe or unsubscribe by writing to ntrnews@ntis.gov. We can only unsubscribe you if you receive your copy from ntrnews@ntis.gov. Copies are also re-distributed through listservs and by other subscribers. For back issues to the Newsletter click here.

The ntrnews subscribers list is not shared with any other entities for any purpose. Your comments are always welcome. Write us at ntrnews@ntis.gov.

Connect with NTIS on Facebook & Twitter

Permission to redistribute this newsletter is granted.

National Technical Information Service
U.S. Department of Commerce
5301 Shawnee Road
Alexandria, VA 22312

The new generation NTRL V3.0 is now available! Developed by the Federal Science Repository Service

Space Exploration

N20110007105
Energy Storage Technology Development for Space Exploration.
National Aeronautics and Space Administration, Cleveland, OH. NASA John H. Glenn Research Center at Lewis Field.
2011, 18p
NASA/TM-2011-216964

Related Categories/Subcategories:
84 (Space Technology)
Keywords: Energy storage, Space exploration, Manned space flight.

ADA585898
Exploration and Validation of the Sdhash Parameter Space.
Naval Postgraduate School, Monterey, CA.
2013, 125

Related Categories/Subcategories:
62 (Computers, Control & Information Theory)
Keywords: Cryptography, Digital systems, Algorithms.

N20120004141
National Aeronautics and Space Administration, Huntsville, AL. George C. Marshall Space Flight Center.
2012, 17p
M12-1487

Related Categories/Subcategories:
54 (Astronomy & Astrophysics)
84B (Extraterrestrial Exploration)
Keywords: Space exploration, NASA space programs, General overviews.

N20120003595
National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2012, 8p
JSC-CN-25924

Related Categories/Subcategories:
71F (Composite Materials)
84 (Space Technology)
Keywords: Composite wrapping, International space station, Nondestructive tests.

PB2013106890
National Science Foundation, Washington, DC.
2013, 104p

Related Categories/Subcategories:
54C (Astrophysics)
Keywords: Microgravity, Atmospheric physics, Space exploration.

N201200003401
Launch and Assembly Reliability Analysis for Human Space Exploration Missions.
National Aeronautics and Space Administration, Hampton, VA. Langley Research Center.
2012, 20p

Related Categories/Subcategories:
84E (Space Launch Vehicles & Support Equipment)
Keywords: Space exploration, Near earth objects, Asteroids.

N20130010382
Exploration Space Suit Architecture and Destination Environmental-Based Technology Development.
National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2013, 27p
JSC-CN-28137

Related Categories/Subcategories:
54 (Astronomy & Astrophysics)
95E (Life Support Systems)
Keywords: Space suits, Extravehicular activity, Mission planning.
**FEDERAL LABORATORY CONSORTIUM FOR TECHNOLOGY TRANSFER**

**FLC** advancing federal research and technology

The Federal Laboratory Consortium for Technology Transfer (FLC) and the National Technical Information Service (NTIS) continuously collaborate on the process of Federal Technology Transfer.

As an agency of the U.S. Department of Commerce, the NTIS mission is to provide for the acquisition, archiving and dissemination of technological, scientific, and engineering information. Much of this permanent repository of information is the result of research conducted by federal laboratories that are members of the FLC. The collaborative effort of the FLC and NTIS ensures the perpetual availability of this vital research to American businesses and industries.

[www.federallabs.org](http://www.federallabs.org)

---

**Key to Database Fields Used**

The following NTIS database fields are used in this short listing of recently acquired technical reports.

- NTIS Order Number
- Title
- Source
- Report Year, Page Count
- Report Number/ISBN13 (if available)
- Related Categories/Sub-categories
- (where the document is also indexed)
- Keywords

**RSS Feeds** are available in your choice of NTIS Subject Category. For information use the RSS link on the NTIS Homepage and look for the Category RSS Feeds button.

---

**N20130010406**


National Aeronautics and Space Administration, Cleveland, OH. NASA John H. Glenn Research Center at Lewis Field.

2013, 18p

N20130010406

**Related Categories/Subcategories:**

99F (Physical & Theoretical Chemistry)

84 (Space Technology)

**Keywords:** Titanium oxides, Photodecomposition, Ruthenium.

---

**N20110009912**

Product Lifecycle Management and Sustainable Space Exploration.

National Aeronautics and Space Administration, Huntsville, AL. George C. Marshall Space Flight Center.

2011, 13p

M11-0147

**Related Categories/Subcategories:**

94 (Industrial & Mechanical Engineering)

84 (Space Technology)

**Keywords:** Aerospace industry, Project management, Production costs.

---

**N20130011586**

Situation Awareness Assistant for Human Deep Space Exploration.

National Aeronautics and Space Administration, Cocoa Beach, FL. John F. Kennedy Space Center.

2013, 9p

KSC-2013-026

**Related Categories/Subcategories:**

62 (Computers, Control & Information Theory)

84A (Astronautics)

84B (Extraterrestrial Exploration)

**Keywords:** Situational awareness, Virtual memory systems, Cameras.

---

**N20130011629**


National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.

2013, 14p

JSC-CN-28390

**Related Categories/Subcategories:**

95E (Life Support Systems)

84A (Astronautics)

**Keywords:** Environmental control, Life support systems, Systems engineering.

---

**N20130010385**

Human Missions to Mars Key Challenges.

2013, 18p

JSC-CN-28233

**Related Categories/Subcategories:**

54 (Astronomy & Astrophysics)

84B (Extraterrestrial Exploration)

**Keywords:** Manned mars missions, Mars exploration, Delta launch vehicle.

---

**N20130012764**

Launch and Assembly Reliability Analysis for Mars Human Space Exploration Missions.

National Aeronautics and Space Administration, Hampton, VA. Langley Research Center.

2013, 20p

**Related Categories/Subcategories:**

84E (Space Launch Vehicles & Support Equipment)

**Keywords:** Launch vehicles, Transfer orbits, Reliability analysis.

---

**N20110011917**

Biological-Based Risk Assessment for Space Exploration - What's New.

National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.

2011, 24p

JSC-CN-23766

**Related Categories/Subcategories:**

84 (Space Technology)

57E (Clinical Medicine)

**Keywords:** Risk assessment, Space exploration, Radiation dosage.

---

**N20130014018**


National Aeronautics and Space Administration, Hampton, VA. Langley Research Center.

2013, 19p

**Related Categories/Subcategories:**

54C (Astrophysics)

**Keywords:** Radiation protection, Radiation dosage, Solar corpuscular radiation.

---

**N20130009691**


National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.

2013, 25p

JSC-CN-28012

**Related Categories/Subcategories:**

84A (Astronautics)

**Keywords:** Data bases, Manned space flight, NASA programs.

---

**N20130010897**

Moon Next Early DRM.

National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.

2013, 14p

JSC-CN-28238

**Related Categories/Subcategories:**

54 (Astronomy & Astrophysics)

84B (Extraterrestrial Exploration)

**Keywords:** Moon, Mission planning, Space habitats.

---

**N20130011121**

ExMC Technology Watch.

National Aeronautics and Space Administration, Moffett Field, CA. Ames Research Center.

2013, 17p

ARCG-DAA-TN7665

**Related Categories/Subcategories:**

95E (Life Support Systems)

84 (Space Technology)

**Keywords:** Aerospace medicine, Technology assessment, Space exploration.
Tribute to recent retirees that shaped the NTRL Newsletter with their creativity, knowledge, and commitment.

Sue Feindt –
Manager, Cataloging/Indexing Division

Christie Langone –
Contributing Program Manager

Toni Israel –
Manager, NTIS Customer Contact Center

---

### Major Subject Categories

<table>
<thead>
<tr>
<th>Category Codes*/Title</th>
<th>New for January Quantity**</th>
</tr>
</thead>
<tbody>
<tr>
<td>41 Manufacturing Technology</td>
<td>33</td>
</tr>
<tr>
<td>43 Problem Solving Information for State &amp; Local Governments</td>
<td>231</td>
</tr>
<tr>
<td>44 Health Care</td>
<td>229</td>
</tr>
<tr>
<td>45 Communication</td>
<td>29</td>
</tr>
<tr>
<td>46 Physics</td>
<td>214</td>
</tr>
<tr>
<td>47 Ocean Sciences &amp; Technology</td>
<td>132</td>
</tr>
<tr>
<td>48 Natural Resources &amp; Earth Sciences</td>
<td>244</td>
</tr>
<tr>
<td>49 Electrotechnology</td>
<td>37</td>
</tr>
<tr>
<td>50 Civil Engineering</td>
<td>67</td>
</tr>
<tr>
<td>51 Aeronautics &amp; Aerodynamics</td>
<td>35</td>
</tr>
<tr>
<td>54 Astronomy &amp; Astrophysics</td>
<td>6</td>
</tr>
<tr>
<td>55 Atmospheric Sciences</td>
<td>43</td>
</tr>
<tr>
<td>57 Medicine &amp; Biology</td>
<td>422</td>
</tr>
<tr>
<td>62 Computers, Control &amp; Information Theory</td>
<td>135</td>
</tr>
<tr>
<td>63 Detection &amp; Countermeasures</td>
<td>31</td>
</tr>
<tr>
<td>68 Environmental Pollution &amp; Control</td>
<td>280</td>
</tr>
<tr>
<td>70 Administration &amp; Management</td>
<td>234</td>
</tr>
<tr>
<td>71 Materials Sciences</td>
<td>104</td>
</tr>
<tr>
<td>72 Mathematical Sciences</td>
<td>74</td>
</tr>
<tr>
<td>74 Military Sciences</td>
<td>449</td>
</tr>
<tr>
<td>75 Missile Technology</td>
<td>3</td>
</tr>
<tr>
<td>76 Navigation, Guidance, &amp; Control</td>
<td>16</td>
</tr>
<tr>
<td>77 Nuclear Science &amp; Technology</td>
<td>94</td>
</tr>
<tr>
<td>79 Ordnance</td>
<td>41</td>
</tr>
<tr>
<td>81 Combustion, Engines, &amp; Propellants</td>
<td>21</td>
</tr>
<tr>
<td>82 Photography &amp; Recording Devices</td>
<td>7</td>
</tr>
<tr>
<td>84 Space Technology</td>
<td>13</td>
</tr>
<tr>
<td>85 Transportation</td>
<td>121</td>
</tr>
<tr>
<td>88 Library &amp; Information Sciences</td>
<td>58</td>
</tr>
<tr>
<td>89 Building Industry Technology</td>
<td>46</td>
</tr>
<tr>
<td>90 Government Inventions for Licensing</td>
<td>0</td>
</tr>
<tr>
<td>91 Urban &amp; Regional Technology &amp; Development</td>
<td>271</td>
</tr>
<tr>
<td>92 Behavior &amp; Society</td>
<td>411</td>
</tr>
<tr>
<td>94 Industrial &amp; Mechanical Engineering</td>
<td>4</td>
</tr>
<tr>
<td>95 Biomedical Technology &amp; Human Factors Engine</td>
<td>25</td>
</tr>
<tr>
<td>96 Business &amp; Economics</td>
<td>180</td>
</tr>
<tr>
<td>97 Energy</td>
<td>131</td>
</tr>
<tr>
<td>98 Agriculture &amp; Food</td>
<td>51</td>
</tr>
<tr>
<td>99 Chemistry</td>
<td>92</td>
</tr>
</tbody>
</table>

* Scope Notes define the specific topical content for each category; http://www.ntis.gov/assets/pdf/scopenotes.pdf

** Quantities represent each new report assigned on average to 3-5 categories.

---

N20130011551
Education and Public Outreach and Engagement at NASA's Analog Missions in 2012.
National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2013, 7p
JSC-CN-28359

** Related Categories/Subcategories:**
54 (Astronomy & Astrophysics)
92D (Education, Law, & Humanities)
Keywords: Aerospace environments, Field tests, Space exploration.

N20130011207
Going Boldly Beyond: Progress on NASA's Space Launch System.
National Aeronautics and Space Administration, Huntsville, AL. George C. Marshall Space Flight Center.
2013, 24p
M13-2450

** Related Categories/Subcategories:**
84E (Space Launch Vehicles & Support Equipment)
Keywords: Spacecraft launching, Schedules, Space exploration.

N20130011532
Advanced Exploration Systems Water Architecture Study Interim Results.
National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2013, 11p
JSC-CN-28314

** Related Categories/Subcategories:**
95E (Life Support Systems)
84A (Astronautics)
Keywords: Water reclamation, Space exploration, Mission planning.

N20130013037
Advancing Autonomous Operations Technologies for NASA Missions.
National Aeronautics and Space Administration, Huntsville, AL. George C. Marshall Space Flight Center.
2013, 10p

** Related Categories/Subcategories:**
84B (Extraterrestrial Exploration)
84E (Space Launch Vehicles & Support Equipment)
Keywords: Autonomy, Space exploration, Adaptable control.

---

** Subject Category Codes/Classification **

NTIS classifies citations into 39 subject categories. Each of these subject categories is divided into subcategories. This method provides sorting categories for both hard and soft sciences. All subject categories consist of three character codes: two numerics and one alpha character. The numeric codes represent entire categories; the alpha codes are used to designate subcategories within these broad categories. The number of NTIS subcategories posted to an information product average from three to five, although there are some reports with more.
N20130013067
Game Changing: NASA's Space Launch System and Science Mission Design.
National Aeronautics and Space Administration, Huntsville, AL. George C. Marshall Space Flight Center.
2013, 12p
M13-2465
Related Categories/Subcategories:
84A (Astronautics)
Keywords: Mission planning, Launch vehicle configurations, Space exploration.

N20130013046
National Aeronautics and Space Administration, Huntsville, AL. George C. Marshall Space Flight Center.
2013, 9p
M13-2457
Related Categories/Subcategories:
84E (Space Launch Vehicles & Support Equipment)
Keywords: Spacecraft launching, Space exploration, Launch vehicles.

N20130013586
ROS in Space: Thoughts on Developing and Deploying ROS for Space Robotics.
National Aeronautics and Space Administration, Moffett Field, CA. Ames Research Center.
2013, 9p
ARC-E-DAA-TN7859
Related Categories/Subcategories:
62 (Computers, Control & Information Theory) 84B (Extraterrestrial Exploration)
Keywords: Robotics, Robot control, Space exploration.

N20130013800
Robots for Human Exploration.
National Aeronautics and Space Administration, Moffett Field, CA. Ames Research Center.
2013, 8p
ARC-E-DAA-TN8186
Related Categories/Subcategories:
62 (Computers, Control & Information Theory) 41C (Robotics/Robots) 84B (Extraterrestrial Exploration)
Keywords: Robot, Space exploration, Robotics.

N20130014057
Uncertainty Determination for Aeroheating in Uranus and Saturn Probe Entries by the Monte Carlo Method.
National Aeronautics and Space Administration, Moffett Field, CA. Ames Research Center.
2013, 29p
ARC-E-DAA-TN9519
Related Categories/Subcategories:
54 (Astronomy & Astrophysics) 84A (Astronautics)
Keywords: Space exploration, Monte carlo method, Computational fluid dynamics.

N20130014492
RESOLVE: An International Mission to Search for Volatiles at the Lunar Poles.
National Aeronautics and Space Administration, Cocoa Beach, FL. John F. Kennedy Space Center.
2013, 26p
KSC-2013-129R
Related Categories/Subcategories:
54 (Astronomy & Astrophysics) 84B (Extraterrestrial Exploration)
Keywords: Extraterrestrial resources, Space exploration, Lunar exploration.

N20120006503
Environmental Controls and Life Support System (ECLSS) Design for a Space Exploration Vehicle (SEV).
National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2012, 11p
JSC-CN-26123 JSC-CN-25156
Related Categories/Subcategories:
95E (Life Support Systems)
Keywords: Control systems design, Prototypes, Surface vehicles.

N20120009367
National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2012, 144p
NASA/TP-2012-217360
Related Categories/Subcategories:
54 (Astronomy & Astrophysics) 84B (Extraterrestrial Exploration)
Keywords: Constellation program, Human factors engineering, Lunar environment.

N20120009459
Role of Cis-Lunar Space in Future Global Space Exploration.
National Aeronautics and Space Administration, Hampton, VA. Langley Research Center.
2012, 15p
Related Categories/Subcategories:
54 (Astronomy & Astrophysics)
Keywords: Earth-moon system, Mission planning, Space exploration.
N20120009356
Potential Applications of Modularity to Enable a Deep Space Habitation Capability for Future Human Exploration Beyond Low-Earth Orbit. National Aeronautics and Space Administration, Hampton, VA. Langley Research Center. 2012, 10p
Related Categories/Subcategories: 84G (Unmanned Spacecraft) 84C (Manned Spacecraft) 84A (Astronautics)
Keywords: Deep space, Modularity, Manned space flight.

N20120008515
Cis-Lunar Propellant Infrastructure for Flexible Path Exploration and Space Commerce. National Aeronautics and Space Administration, Cleveland, OH. NASA John H. Glenn Research Center at Lewis Field. 2012, 32p
Related Categories/Subcategories: 84A (Astronautics)
Keywords: Cislunar space, Commerce, Propellants.

N20120008743
Related Categories/Subcategories: 95E (Life Support Systems) 84A (Astronautics)
98 (Agriculture & Food)
Keywords: Agriculture, Farm crops, Aerospace environments.

N20120008736
Advanced Active Materials for the Exploration of Space. National Aeronautics and Space Administration, Cocoa Beach, FL. John F. Kennedy Space Center. 2012, 35p
Related Categories/Subcategories: 99C (Polymer Chemistry) 84E (Space Launch Vehicles & Support Equipment)
Keywords: Space exploration, Polymer chemistry, Smart materials.

Just Revised: the NTIS Database Search Guide
Gain an in-depth understanding of the NTIS database structure with this new guide:

- Comprehensive list of NTIS Categories
- Helpful information and search hints
- Reference Guide to online commercial services and the NTRL
- Great Reference Manual & Teaching Tool

Design of Large-Scale Complex Engineered Systems: Present Challenges and Future Promise. National Aeronautics and Space Administration, Hampton, VA. Langley Research Center. 2012, 19p NF1676L-15350

Related Categories/Subcategories: 94 (Industrial & Mechanical Engineering) 84 (Space Technology)
Keywords: Cryogenics, Nuclear propulsion, Propulsion system configurations.


Related Categories/Subcategories: 84E (Space Launch Vehicles & Support Equipment)
Keywords: Spacecraft launching, Space exploration, Space transportation system.

Use of ISS for Validation of Advanced Power Systems for Exploration. National Aeronautics and Space Administration, Cleveland, OH. NASA John H. Glenn Research Center at Lewis Field. 2012, 32p E-18410

Related Categories/Subcategories: 84 (Space Technology)
Keywords: International space station, Deep space, Space exploration.


Related Categories/Subcategories: 84B (Extraterrestrial Exploration)
Keywords: Space exploration, Aerospace vehicle, Spacecraft power supplies.

Related Categories/Subcategories: 84C (Manned Spacecraft) 54 (Astronomy & Astrophysics)
Keywords: Manned space flight, Histories, Space exploration.

Related Categories/Subcategories: 4B (Extraterrestrial Exploration) 54 (Astronomy & Astrophysics) 41C (Robotics/Rosots)
Keywords: Space exploration, Interstellar space, Robotics.

Establishment of a Spaceport Network Architecture. National Aeronautics and Space Administration, Cocoa Beach, FL. John F. Kennedy Space Center. 2012, 15p IAC-12-D3.2.6 KSC-2012-249
Related Categories/Subcategories: 4B (Extraterrestrial Exploration)
Keywords: Space transportation, Space exploration, Satellite networks.

Related Categories/Subcategories: 84G (Unmanned Spacecraft) 84C (Manned Spacecraft) 84E (Space Launch Vehicles & Support Equipment)
Keywords: Spacecraft launching, Space exploration, Space mission.

Related Categories/Subcategories: 54 (Astronomy & Astrophysics) 84 (Space Technology)
Keywords: Space exploration, NASA space programs, Antenna radiation patterns.

Design and Application of the Exploration Maintainability Analysis Tool. National Aeronautics and Space Administration, Langley Station, VA. Langley Research Center. 2012, 14p NF1676L-14099
Related Categories/Subcategories: 84G (Unmanned Spacecraft) 84C (Manned Spacecraft)
Keywords: Manned space flight, Space exploration, Low earth orbits.

Mars: An Earthly Obsession. National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center. 2012, 64p JSC-CN-27381
Related Categories/Subcategories: 54 (Astronomy & Astrophysics) 84B (Extraterrestrial Exploration)
Keywords: Mars surface, Mars exploration, Earth (Planet).

Related Categories/Subcategories: 54 (Astronomy & Astrophysics) 84B (Extraterrestrial Exploration)
Keywords: Spacecraft launching, Space exploration, Technology utilization.

Related Categories/Subcategories: 54 (Astronomy & Astrophysics) 84E (Space Launch Vehicles & Support Equipment)
Keywords: Spacecraft launching, Space exploration, Earth orbits.

Possible Scenarios for Mars Manned Exploration. National Aeronautics and Space Administration, Huntsville, AL. George C. Marshall Space Flight Center. 2012, 18p IAC-12-A5.4.10 M12-2108
Related Categories/Subcategories: 54 (Astronomy & Astrophysics) 84B (Extraterrestrial Exploration)
Keywords: Manned mars missions, Mars exploration, Russian space program.
Concept Design of Cryogenic Propellant Storage and Transfer for Space Exploration.
National Aeronautics and Space Administration, Cleveland, OH. NASA John H. Glenn Research Center at Lewis Field.
2012, 14p
E-18444-1

Related Categories/Subcategories:
97K (Fuels)
81H (Rocket Propellants)
84 (Space Technology)
Keywords: Propellant storage, Space exploration, Propellant transfer.

National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2013, 16p

Related Categories/Subcategories:
54 (Astronomy & Astrophysics)
84B (Extraterrestrial Exploration)
Keywords: Mars science laboratory, Mars missions, Postflight analysis.

Habitable Mars Ascent Vehicle (MAV) Concept.
National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2013, 21p

Related Categories/Subcategories:
54 (Astronomy & Astrophysics)
84B (Extraterrestrial Exploration)
Keywords: Ascent, Manned mars missions, Manned spacecraft.

Mars Science Laboratory (MSL) Entry, Descent And Landing Instrumentation (MEDLI): Hardware Performance and Data Reconstruction.
National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2013, 17p

Related Categories/Subcategories:
84 (Space Technology)
Keywords: Aerodynamic characteristics, Mars 6 spacecraft, Descent.

Demonstration of Critical Systems for Propellant Production on Mars for Science and Exploration Missions.
National Aeronautics and Space Administration, Cleveland, OH. NASA John H. Glenn Research Center at Lewis Field.
2013, 17p

Related Categories/Subcategories:
54 (Astronomy & Astrophysics)
84B (Extraterrestrial Exploration)
Keywords: Mars environment, Propellants, In situ resource utilization.
Between line 13 and 14

National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2012, 2p
JSC-CN-25664

Related Categories/Subcategories:
55A (Aeronomy)
Keywords: Basalt, Planetary surfaces, Space exploration.

National Aeronautics and Space Administration, Houston, TX. Lyndon B. Johnson Space Center.
2012, 2p
JSC-CN-25613

Related Categories/Subcategories:
54 (Astronomy & Astrophysics)
Keywords: Near earth objects, Asteroids, Trajectories.

NASA Missions Inspire Online Video Games.
Goddard Space Flight Center, Greenbelt, MD.
2012, 4p

Related Categories/Subcategories:
95E (Life Support Systems)
Keywords: Space missions, Video data, Space exploration.
Title Index - For NTRL Users

The following is a list of the titles included in this month’s issue, without links to the NTIS Web site. The list is in alphabetical order by title.

<table>
<thead>
<tr>
<th>NTIS Number</th>
<th>Category</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>N20120008736</td>
<td>99</td>
<td>Advanced Active Materials for the Exploration of Space.</td>
</tr>
<tr>
<td>N20130011532</td>
<td>95</td>
<td>Advanced Exploration Systems Water Architecture Study Interim Results.</td>
</tr>
<tr>
<td>N20130013037</td>
<td>84</td>
<td>Advancing Autonomous Operations Technologies for NASA Missions.</td>
</tr>
<tr>
<td>N20120008743</td>
<td>95</td>
<td>Agriculture for Space Exploration: An Evolutionary Approach for Sustaining Space Agency Investments.</td>
</tr>
<tr>
<td>N20120019178</td>
<td>84</td>
<td>Biological-Based Risk Assessment for Space Exploration - What’s New.</td>
</tr>
<tr>
<td>N20120012885</td>
<td>84</td>
<td>Building Transatlantic Partnerships in Space Exploration The MPCV-SM Study.</td>
</tr>
<tr>
<td>N20120008515</td>
<td>84</td>
<td>Cis-Lunar Propellant Infrastructure for Flexible Path Exploration and Space Commerce</td>
</tr>
<tr>
<td>N20130010978</td>
<td>97</td>
<td>Concept Design of Cryogenic Propellant Storage and Transfer for Space Exploration.</td>
</tr>
<tr>
<td>N20130010980</td>
<td>54</td>
<td>Demonstration of Critical Systems for Propellant Production on Mars for Science and Exploration Missions.</td>
</tr>
<tr>
<td>N20120009367</td>
<td>84</td>
<td>Cis-Lunar Propellant Infrastructure for Flexible Path Exploration and Space Commerce</td>
</tr>
<tr>
<td>N201300115419</td>
<td>84</td>
<td>Design and Application of the Exploration Maintainability Analysis Tool.</td>
</tr>
<tr>
<td>N20120014579</td>
<td>94</td>
<td>Design of Large-Scale Complex Engineered Systems: Present Challenges and Future Promise.</td>
</tr>
<tr>
<td>N20130011551</td>
<td>54</td>
<td>Education and Public Outreach and Engagement at NASA’s Analog Missions in 2012.</td>
</tr>
<tr>
<td>N20120015626</td>
<td>84</td>
<td>Energy Goals and Challenges for Future Space Exploration.</td>
</tr>
<tr>
<td>N20110007105</td>
<td>84</td>
<td>Energy Storage Technology Development for Space Exploration.</td>
</tr>
<tr>
<td>N20120006503</td>
<td>95</td>
<td>Environmental Controls and Life Support System (ECLSS) Design for a Space Exploration Vehicle (SEV).</td>
</tr>
<tr>
<td>N20120015766</td>
<td>84</td>
<td>Establishment of a Spaceport Network Architecture.</td>
</tr>
<tr>
<td>N20130011121</td>
<td>95</td>
<td>ExMC Technology Watch.</td>
</tr>
<tr>
<td>ADA585898</td>
<td>62</td>
<td>Exploration and Validation of the Sdhash Parameter Space.</td>
</tr>
<tr>
<td>N20130010382</td>
<td>54</td>
<td>Exploration Space Suit Architecture and Destination Environmental-Based Technology Development.</td>
</tr>
<tr>
<td>N20130008484</td>
<td>54</td>
<td>Explore with Us.</td>
</tr>
<tr>
<td>N20130013067</td>
<td>84</td>
<td>Game Changing: NASA’s Space Launch System and Science Mission Design.</td>
</tr>
<tr>
<td>N20130011207</td>
<td>84</td>
<td>Going Boldly Beyond: Progress on NASA’s Space Launch System.</td>
</tr>
<tr>
<td>N20130009335</td>
<td>54</td>
<td>Habitable Mars Ascent Vehicle (MAV) Concept.</td>
</tr>
<tr>
<td>N20130010385</td>
<td>54</td>
<td>Human Missions to Mars Key Challenges.</td>
</tr>
<tr>
<td>N20130009691</td>
<td>84</td>
<td>Human Spaceflight Technology Needs - A Foundation for JSC’s Technology Strategy.</td>
</tr>
<tr>
<td>N20120009366</td>
<td>84</td>
<td>Innovative Technologies for Global Space Exploration.</td>
</tr>
<tr>
<td>N2012003401</td>
<td>84</td>
<td>Launch and Assembly Reliability Analysis for Human Space Exploration Missions.</td>
</tr>
<tr>
<td>N20130012764</td>
<td>84</td>
<td>Launch and Assembly Reliability Analysis for Mars Human Space Exploration Missions.</td>
</tr>
<tr>
<td>N20120015761</td>
<td>54</td>
<td>Launching Powerful Outreach to Deliver Story-Driven Experiences.</td>
</tr>
<tr>
<td>N20120016889</td>
<td>54</td>
<td>Mars: An Earthly Obsession.</td>
</tr>
<tr>
<td>N20130009743</td>
<td>84</td>
<td>Mars Science Laboratory (MSL) Entry, Descent And Landing Instrumentation (MEDLI): Hardware Performance and Data Reconstruction.</td>
</tr>
<tr>
<td>N20130010897</td>
<td>54</td>
<td>Moon Next Early DRMs.</td>
</tr>
<tr>
<td>N2013000063</td>
<td>84</td>
<td>MSFC Advanced Concepts Office Defining the Future of Space Exploration.</td>
</tr>
<tr>
<td>N20120015631</td>
<td>54</td>
<td>NASA’s Exploration Plans and Progress.</td>
</tr>
<tr>
<td>NTIS Number</td>
<td>Category</td>
<td>Title</td>
</tr>
<tr>
<td>-------------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>N20120016428</td>
<td>54</td>
<td>NASA's Space Launch System: A Flagship for Exploration Beyond Earth's Orbit.</td>
</tr>
<tr>
<td>N20130000586</td>
<td>54</td>
<td>NASA's Space Launch System: A Flagship for Exploration Beyond Earth's Orbit.</td>
</tr>
<tr>
<td>N20120014191</td>
<td>84</td>
<td>NASA's Space Launch System: A New National Capability.</td>
</tr>
<tr>
<td>N20120014190</td>
<td>84</td>
<td>NASA's Space Launch System: Exploration Beyond Earth Orbit.</td>
</tr>
<tr>
<td>N20120014545</td>
<td>54</td>
<td>National Aeronautics and Space Administration (NASA) Environmental Control and Life Support (ECLS) Capability Roadmap Development for Exploration.</td>
</tr>
<tr>
<td>N20130000620</td>
<td>54</td>
<td>Possible Scenarios for Mars Manned Exploration.</td>
</tr>
<tr>
<td>N20120009356</td>
<td>84</td>
<td>Potential Applications of Modularity to Enable a Deep Space Habitation Capability for Future Human Exploration Beyond Low-Earth Orbit.</td>
</tr>
<tr>
<td>N20110009912</td>
<td>94</td>
<td>Product Lifecycle Management and Sustainable Space Exploration.</td>
</tr>
<tr>
<td>N20130000808</td>
<td>84</td>
<td>Reliability, Maintainability, and Availability: Consideration During the Design Phase in Ground Systems to Ensure Successful Launch Support.</td>
</tr>
<tr>
<td>N20130014492</td>
<td>54</td>
<td>RESOLVE: An International Mission to Search for Volatiles at the Lunar Poles.</td>
</tr>
<tr>
<td>N20130013800</td>
<td>62</td>
<td>Robots for Human Exploration.</td>
</tr>
<tr>
<td>N20120009459</td>
<td>54</td>
<td>Role of Cis-Lunar Space in Future Global Space Exploration.</td>
</tr>
<tr>
<td>N20130013586</td>
<td>62</td>
<td>ROS in Space: Thoughts on Developing and Deploying ROS for Space Robotics.</td>
</tr>
<tr>
<td>N20130011586</td>
<td>62</td>
<td>Situation Awareness Assistant for Human Deep Space Exploration.</td>
</tr>
<tr>
<td>DE20121035102</td>
<td>84</td>
<td>Small Body Exploration Technologies as Precursors for Interstellar Robotics.</td>
</tr>
<tr>
<td>N20120003595</td>
<td>71</td>
<td>Smart Composite Overwrapped Pressure Vessel - Integrated Structural Health Monitoring System to Meet Space Exploration and International Space Station</td>
</tr>
<tr>
<td>N20120013437</td>
<td>71</td>
<td>Smart COPV: Composite Overwrapped Pressure Vessels (COPVs) Integrated with Structural Health Monitoring (SHM) Systems That Target Space Exploration and ISS Needs.</td>
</tr>
<tr>
<td>N20120015023</td>
<td>84</td>
<td>Space Launch System Status.</td>
</tr>
<tr>
<td>N20120014471</td>
<td>84</td>
<td>Space Launch Systems (SLS) for Human and Scientific Exploration Beyond Earth Orbit.</td>
</tr>
<tr>
<td>N20120015776</td>
<td>54</td>
<td>Thoughts on Social, Technical and System Challenges Associated with Space Exploration Or, How to Play Nice Across Time and Space.</td>
</tr>
<tr>
<td>N20120015220</td>
<td>84</td>
<td>U.S. Spaceflight.</td>
</tr>
<tr>
<td>N20130014057</td>
<td>54</td>
<td>Uncertainty Determination for Aerothermodynamics in Uranus and Saturn Probe Entries by the Monte Carlo Method.</td>
</tr>
<tr>
<td>N20120015444</td>
<td>84</td>
<td>Use of ISS for Validation of Advanced Power Systems for Exploration.</td>
</tr>
</tbody>
</table>