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Introduction

NTRS searches three major collections: NACA* (1915-1958), NASA (1958-present), and NASA Image eXchange (NIX) (1900-present). NTRS provides access to citations (i.e., references) and online documents and imagery for the following kinds of information: conference papers, images, journal articles, photos, meeting papers, movies, patents, research reports, and technical videos.

Searching NTRS is quick and easy using the Term Search and Navigation Search options. Start a NTRS search by <u>entering term(s)</u> into the Term Search box or <u>selecting a category</u> under the Navigation Search. (Any Navigation Search selection with a plus "+" can be clicked to initiate a search, i.e., + NACA). Users start with all the available content in NTRS and use the Term Search and Navigation Search options to reduce results down to a manageable number of results.

Term Search

Use Term Search to search for specific authors, images/pictures, movies/videos, report and patent numbers, and titles. Select from pulldown box a field to search and enter terms into search box.

Navigation Search

Select options under Navigation Search to refine. Navigation Search allows users to narrow search results to specific collections, NASA Center, Date, Subject, and PDFs, Images, and Videos available online from NTRS.

*National Advisory Committee for Aeronautics (predecessor of NASA)

Getting Started

This section covers:

- Initial Search
 Screen
- •Search and Results Screen
- •Brief Citation Display
- •Full Citation Display
- •Search Corrections
- •Error Messages





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Getting Started – Initial Search Screen

This is the initial search screen. Start a search by entering search words for a Term Search or selecting optional Navigation Search. Once search started, a different search screen appears.

Select +NACA as initial search



Getting Started – Search and Results Screen



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Getting Started - Brief Citation Display





Searching NTRS Help Guide Getting Started – Full Citation Display Example 1

Return to search and results screen

	NAVIGATION SEARCH OPTIONS		SEARCH NTRS					
	Collection > NASA Author > Smithgall, Brian Author > Wilson, Keith E.				Print citation	+ Back to Results		
	NASA Center > Jet Propulsion		Title:	Aircraft Detection System En	sures Free-Space La	aser Safety		
	INASA Certificity Set Propulsion Laboratory Publication Year > 2001-2010 > 2004 Subject > J-L > Lasers And Masers Availability Options > Order From Other Sources Item/Media Type > Journal Article		Author(s):	Smithgall, Brian; Wilson, Kei	th E.			
			Abstract:	As scientists continue to explore our solar system, there are increasing demands to return greater volumes of data from smaller				
				strategies based on free-spa	ons, which offer			
				of much lower power and mass than existing ones. These approaches, however, can pose a danger to pilots in the bea				
				because the lasers may illur Researchers thus are invest surrounding airspace for airo	ind them. will monitor the ected. This paper er propagation			
	Note: Start a new navigation se by selecting a link above	earch	NASA Center: Jet Propulsion Laboratory					
			Publication Date:	December 2004 Other Sources				
			Document Source:					
			No Digital Version Available:	Go to Tips On Ordering				
Navigatior	Search options		Document ID:	20050029451				
provide way to do <u>new</u> <u>searches</u> based upon information from citation.			Keywords:	SYSTEMS ENGINEERING L/ FREE-SPACE OPTICAL COM LASER DAMAGE AIRSPACE BEAMS DEEP SPACE SPAC	ASER APPLICATION: MMUNICATION AIRCI OPTICAL COMMUNI E PROBES SEMICO	SAFETY RAFT DETECTION CATION LASER NDUCTOR LASERS		
Example,	Search for more		Accessibility:	Unclassified; Copyright; Unli	mited; Publicly availa	ible;		
by clicking	on his name.		Updated/Added to NTRS:	2005-01-25				

+ Back to Top

Getting Started - Full Citation Display Example 1 (cont'd)

		1	Title of work
Title:	Aircraft Detection System Ensures Free-Space Laser Safety		Creator of technical work
Author(s):	Smithgall, Brian, Wilson, Kelth E.		
Abstract:	As scientists continue to explore our solar system, there are increasing demands to return greater volumes of data from smaller		Brief summary explaining content in a document, image, and/or video
	deep-space probes. Accordingly, NASA is studying advanced strategies based on free-space laser transmissions, which offer secure, high-bandwidth communications using smaller subsysteme		NASA Center authoring, funding, or sponsoring item
	of much lower power and mass than existing ones. These approaches, however, can pose a danger to pilets in the beam path		Year in which technical work published
	Researchers thus are investigating systems that will monitor the surrounding airepace for aircraft that could be affected. This paper presents current methods for safe free space laser propagation.		Organization providing document or video. Value of "CASI" means item available from CASI. Value of "Other" means item is not available from CASI and must be ordered from
NASA Center:	Jet Prepulsion Laboratory		another organization.
Publication Date:	December 2004	1	Degument not accessible online Click on "Co
Document Source:	Other Sources	1	to Tips on Ordering" to find out how to obtain
No Digital Version Available:	Go to Tipo On Ordening		document.
Document ID:	20050029451		to order item
Keywords:	SYSTEMS ENGINEERING LASER APPLICATIONS SAFETY FREE- SPACE OPTICAL COMMUNICATION AIRCRAFT DETECTION LASER DAMAGE AIRSPACE OPTICAL COMMUNICATION LASER BEAMS		Words describing concepts of technical work/video derived from NASA Thesaurus
A concertibility	DEEP SPACE SPACE PROBES SEMICONDUCTOR LASERS		NTRS only provides access to unclassified,
Accessibility:	Unclassified; Copyright; Unlimited; Publicly available;		unlimited, and publicly available technical
Updated/Added to NTRS:	2005-01-25		may not be available on NTRS if NASA does
100			not have rights to distribute works.
			Date item loaded to NTRS
(A)	* Go to end of guide for complete list of citation field	ds	

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Getting Started - Full Citation Display Example 2

Title:	Development of Supersonic Combustion Experiments for CFD Modeling	
Author(s):	Baurle, Robert; Bivolaru, Daniel; Tedder, Sarah; Danehy, Paul M.; Cutler, Andrew D.; Magnotti, Gaetano	
Abstract:	This paper describes the development of an experiment to acquire data for developing and validating computational fluid dynamics (CFD) models for turbulence in supersonic combusting flows. The intent is that the flow field would be simple yet relevant to flows within hypersonic air-breathing engine combustors undergoing testing in vitiated-air ground-testing facilities. Specifically, it describes development of laboratory-scale hardware to produce a supersonic combusting coaxial jet, discusses design calculations, operability and types of flames observed. These flames are studied using the dual- pump coherent anti- Stokes Raman spectroscopy (CARS) - interferometric Rayleigh scattering (IRS) technique. This technique simultaneously and instantaneously measures temperature, composition, and velocity in the flow, from which many of the important turbulence statistics can be found. Some preliminary CARS data are	Document available online. Click to view and/or
NASA Center:	Langlev Research Center	download.
Publication Date:	2007	
Document Source:	0481	Document number as assigned by NASA, or
Download Document	View PDE File	publication.
Document ID:	20070005147	
Report Number:	AlaA Paper 2007-0978	The contract, grant or task number under which
Contract-Grant-Task	NNL06AA16A	the work documented by the report was done.
Number:		
Price Code:	403	Cost of obtaining document in hard copy
Meeting Information:	45th AIAA Aerospace Sciences Meeting and Exhibit; 8-11 Jan. 2007; Reno, NV; United States	format.
Keywords:	COMPUTATIONAL FLUID DYNAMICS SUPERSONIC SOMBLISTION SUPERSONIC JET FLOW HYPERSONICS AIR BREATHING ENGINES FLAMES RAYLEIGH SCATTERING TURBULENCE	If document originally presented as part of a conference, symposium, meeting, etc., the details of the meeting appear here.
Accessibility:	Unclassified; No Copyright; Unlimited; Publicly available;	
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SEARCH NTRS

Previous Record | Next Record

+ Back to Results

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Author > Lowson, M. V.

Search NTRS

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- Open file locally with your Adobe software

Spectral techniques in jet noise theory Lowson, M. V.; Pao, S. P. Spectral analysis techniques applied to Lighthill aerodynamic sound equation for unified jet noise theory enter: NASA (non Center Specific) ion Date: Apr 1, 1969 ent Sourc CASI View PDF File Source: ent ID: 19700003296 on ID: 70N12600 Report Number: NASA-CR-102370; WR-68-21 Contract-Grant-Task NAS8-21060 Number: Price Code: A04 Related Information: ITS COPY 8

Note: Start a new navigation search by selecting a link above



Getting Started – Search Correction

TERM SEARCH OPTIONS Select Search Field * All Find Results With All of the words Enter Search Term Image: within returned results + GO + RESET SEARCH Search Tips: • Use only the fields with * to search NIX collection. • Enclose terms in double quotation marks (") to search for exact phrases, ie: "space shuttle". NOTE: Commas and dashes are removed from search term by search engine.	SEARCH NTRS Search Criteria: • Search Field: All > Results : All > Search Term: nanotechnology (Corrected to nanotechnology) [X] Sort results by: NASA Center Date Added to NTRS Publication Year There are a total of 292 record(s) match Sorted by: Date Added To NTRS in Dest Sorted by: Date Added To NTRS in Dest Applied Nanotechnology for Hur Author(s): Yowell, Leonard L. Abstract: A viewgraph presentation dest shown. The topics include 1) NASA's St Exploration Mission Requirements Cannot be NASA Center: Johnson Space Center Publication Year: 2007
 Select Reset Search button to start a new search. See Help for more tips. NAVIGATION SEARCH OPTIONS + Collection + NASA Center + Publication Year + Subject - Availability Options 	Added to NTRS: 2007-03-22 Document ID: 20070008216 A Model-Driven Architecture Approach for Modeling, Specifying and Deploying Policies in Autonomous and Autonomic Systems Author(s): Pena, Joaquin; Hinchey, Michael G.; Sterritt, Roy; Ruiz-Cortes, Antonio; Resinas, Manuel Abstract: Autonomic Computing (AC), self-management based on high level guidance from humans, is increasingly gaining momentum as the way forward in designing reliable systems that
+ Availability Options + Item/Media Type	hide complexity and conquer IT management costs NASA Center: Goddard Space Flight Center Dublication Maari 2000

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Getting Started – No Results Found Message



Search with Term Search Options

This section covers:

- Term Search Fields and Descriptions
- Using Find Results With
- Term Search Examples
- Term Search Hints



Term Search Field Names and Descriptions

Select choices from drop-down menu box to search for Term Search in fields, i.e., specific information found in a citation, such as abstract, title, etc. Search individual fields or "All" for a combination search of all fields in this list.

The "*" beside search fields means use only these fields to search for NIX images and videos.

Search Field Name	Field Description
All	Combination of all fields, e.g., abstract, author, report, etc.
Abstract*	Brief summary explaining content in a document, image, and/or video
Accession Number*	Unique identifier assigned to records at the time of receipt or creation. In the case of the NASA and NACA collections, this is a historic record number that was assigned by CASI between the years 1962 and 1997. For the NIX collection, this identifier is present for all records.
NASA Center*	NASA Center authoring, funding, and/or sponsoring research
Author Name	Creator of technical works
Document ID	Unique number assigned to all records in the NASA and NACA collections; may be used to order items available from CASI
Keywords	Words describing concepts of technical work/video derived from NASA Thesaurus
Publication Date*	Publication year of document, image/photo, or movie/video
Report-Patent Number	Document report numbers and U.S. Patent Office patent numbers
Title*	Words from record title (citation, documents, images, videos)

Any of the fields can be used to search the NACA and NASA collections.

Term Search using Find Results With



Term Search has two search modes under the "Find Results With" setting: *All of the words* and *At least one of the words*

TERM SEARCH OPTIONS Select Search Field *						
All						
Find Results With						
All of the words 🛛 🗸						
Enter Search Term						
+ GO + RESET SEARCH						

All of the words search means every search term has to appear in a result

NARROWS search



At least one search means one or the other search terms will appear in a result; in some cases both search terms will appear in a result if terms are found in the same citation

BROADENS search

Term Search Example 1

TERM SEARCH OPTIONS SEARCH NTRS Select Search Field * Set results by: NASA Center Date Added to NTRS Publication Year There are a total of 991401 record(s) matching your query. Sorted by: Date Added To NTRS in Descending order Search All field author, title, or citations with testing in the				Search <i>All</i> field author, title, etc citations with <i>v</i> <i>testing</i> in them	l (abstract, c.) for wind tunnel
Enter Search Term wind tunnel testing + G0 + RESET SEAR Search Tips: • Use only the fields wit search NIX collection. • Enclose terms in doubl marks (") to search for ex- phrases, ie: "space shutt	h * to le quotation kact le". NOTE:	1 2 3 4 5 6 7 8 9 10 Ne USA-SOUTH CARC Abstract: UNITED ST/ NASA Center: Johnso Publication Year: 2007 Added to NTRS: 2007- Accession Number: IS	ext >> DLINA SAVANNAH,HILTON HEAD I. ATES OF AMERICA, SOUTH CAROLINA SAVANNAH,HII n Space Center 7 ∙03-30 ፡S014-E-15511	LTON HEAD I.	
Commas and dashes are from search term by sea ● Select Reset Search start a new search. See more tips.	TERM SEAF Select Sea All Find Result All of the Enter Sear ✓ within + G0 Search Ti ◆ Use only search NIX	ACH OPTIONS rch Field * s With words ch Term returned results + RESET SEARCH ips: y the fields with * to i collection.	SEARCH NTRS Search Criteria: • Search Field: All > Results : All > Search Term: wir Sort results by: NASA Center Date Added to NTRS I There are a total of 1798 record(s) matching your que Sorted by: Date Added To NTRS in Descending order 1 2 3 4 5 6 7 8 9 10 Next >> Flutter Model Technology Author(s): Busan, Ron Abstract: Wind tunnel testing of dynamically scaled is	nd tunnel testing (X) Publication Year ry. models plays a key role in	assuring that new
	 Enclose marks (") to phrases, ie Commas ar from searc Select R start a new more tips. 	terms in double quotation o search for exact :: "space shuttle". NOTE: nd dashes are removed h term by search engine. Reset Search button to v search. See Help for	or modified aircraft will be free of futter within their flig the NASA Center: Glenn Research Center Publication Year: 2006 Added to NTRS: 2007-03-22 Document ID: 20070008371 Some Remarks on the Use of Scale Models	gnt envelopes. Typically, at	oout one-quarter of

Term Search Example 2

TERM SEARCH OPTIONS SEARCH NTRS Select Search Field * Select Search Field * Select Search Field * Sort results by: NASA Center Date Added to NTRS Publication Search All field (a author, title, etc.) All Image: Sort results by: NASA Center Date Added to NTRS Publication with either aerobr Find Results With Sort result by: Date Added To NTRS in Descending order with either aerobr All of the words Sorted by: Date Added To NTRS in Descending order aerocapture		Search <i>All</i> field (abstract, author, title, etc.) for citat with either <u>aerobraking</u> or <u>aerocapture</u> in them	ions		
Enter Search Term aerobraking aerocaptu + GO + RESET SEAR Search Tips: • Use only the fields with search NIX collection. • Enclose terms in doubl marks (") to search for ex phrases is: "space shuff	ure CH n * to e quotation :act	1 2 3 4 5 6 7 8 9 10 No USA-SOUTH CARC Abstract: UNITED ST NASA Center: Johnso Publication Year: 200 Added to NTRS: 2007 Accession Number: IS	ext >> DLINA SAVANNAH,HILTON HEAD I. ATES OF AMERICA, SOUTH CAROLINA : on Space Center 7 -03-30 38014-E-15511	SAVANNAH,HILTON HEAD I.	
Commas and dashes are from search term by sea • Select Reset Search I start a new search. See more tips.	TERM SEAR Select Sear All Find Results All of the Enter Searc	CH OPTIONS ch Field * s With words v ch Term	SEARCH NTRS Search Criteria: • Search Field: All > Results : All > Search Sort results by: NASA Center Date Add There are a total of 64 record(s) matchi Sorted by: Date Added To NTRS in Des	arch Term: aerobraking aerocapture [X] led to NTRS Publication Year ng your query. cending order	Results
	within + 60 • Search Til • Use only search NIX • Enclose marks (") to phrases, ie: Commas an from search • Select R start a new	returned results RESET SEARCH ps: the fields with * to collection. terms in double quotation search for exact "space shuttle". NOTE: d dashes are removed term by search engine. eset Search button to search. See Help for	1 2 3 4 5 6 7 Next Aerocapture Benefits to Future 3 Author(s): Artis, Gwen; James, Bonnie Abstract: techniques include aeroen atmospheric drag to decelerate an inco very NASA Center: Marshall Space Flight Co Publication Year: 2006 Added to NTRS: 2007-01-26 Document ID: 20070002619	Science Missions Itry and aerobraking .) Aerocapture relies o Iming spacecraft and capture it into orbit. Th enter	n drag ìis technique is

Term Search Example 3

TERM SEARCH OPTIONS Select Search Field * Author Name Find Results With	~	SEARCH NTRS Sort results by: NAS/ There are a total of 9	Center Date Added to NTRS Publication Year 91401 record(s) matching your query.	Search <i>Author</i> fi for citations by David Thompson	eld n.
All of the words Enter Search Term thompson david + G0 + RESET SE/ Search Tips: • Use only the fields w search NIX collection. • Enclose terms in dou marks (") to search for	ARCH with * to ble quotation exact	Sorted by: Date Adde 1 2 3 4 5 6 7 8 9 10 N USA-SOUTH CAR Abstract: UNITED S NASA Center: Johns Publication Year: 20 Added to NTRS: 200 Accession Number:	ed To NTRS in Descending order Next >> OLINA SAVANNAH,HILTON HEAD I. TATES OF AMERICA, SOUTH CAROLINA SAVANNAH,HIL on Space Center 07 7-03-30 ISS014-E-15511	LTON HEAD I.	
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	+ G0 + Search Tip • Use only t search NIX c • Enclose te marks (") to s phrases, ie: " Commas and from search • Select Re- start a new s more tips.	RESET SEARCH s: the fields with * to collection. erms in double quotation search for exact "space shuttle". NOTE: d dashes are removed term by search engine. set Search button to search. See Help for	Future Gamma-Ray Observations of Pulsars an Author(s): Thompson, David J. Abstract: Pulsars and pulsar wind nebulae seen at ga acceleration to very high energies under extreme condi about the geometry and interaction NASA Center: Goddard Space Flight Center Publication Year: 2006 Added to NTRS: 2007-02-16 Document ID: 20070005048 Chemical Fabrication Used to Produce Thin-Film	nd their En∨ironments mma-ray energies offer insi tions. Pulsed emission prov n Materials for High Pow	ght into particle ides information er-to-

Term Search Example 4

TERM SEARCH OPTIONS SEARCH NTRS Select Search Field * Sort results by: NASA Cr All Image: Select Search Field * Find Results With There are a total of 9914 All of the words Sorted by: Date Added 7		SEARCH NTRS Sort results by: NASA C There are a total of 991 Sorted by: Date Added	Center Date Added to NTRS Publication Year Add1 record(s) matching your query. To NTRS in Descending order Center Date Added to NTRS Publication Year Hervol.		<i>thor</i> field for y two o <i>hnson</i> and
Enter Search Term Johnson Hervol + G0 + RESET SEARC Search Tips: • Use only the fields with search NIX collection. • Enclose terms in double marks (") to search for example.	* to quotation	1 2 3 4 5 6 7 8 9 10 Net USA-SOUTH CARO Abstract: UNITED STA NASA Center: Johnson Publication Year: 2007 Added to NTRS: 2007-0 Accession Number: ISS	t >> LINA SAVANNAH,HILTON HEAD I. TES OF AMERICA, SOUTH CAROLINA SAVANNAH,HILTON Space Center 03-30 3014-E-15511	J HEAD I.	
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	✓ with + G0 Search • Use or search N • Enclos marks (") phrases, Commas from sea • Select	in returned results + RESET SEARCH Tips: hly the fields with * to IX collection. to search for exact ie: "space shuttle". NOTE: and dashes are removed rch term by search engine. Reset Search button to	Experimental Validation of a Closed Brayton Cycl Author(s): Johnson, Paul K.; Hervol, David S. Abstract: The Brayton Power Conversion Unit (BPCU) is working fluid. It is located in Vacuum Facility 6 at NASA G previous solar dynamic technology efforts NASA Center: Glenn Research Center Publication Year: 2006 Added to NTRS: 2006-11-16 Document ID: 20060051715	e System Transie a closed cycle syste lenn Research Cent	nt Simulation em with an inert gas er. Was used in

NASA STI Program Office

Term Search Example 5

TERM SEARCH OPTIONS SEARCH NTRS Select Search Field * Sort results by: NASA Ce Report - Patent Number Sort results by: NASA Ce Find Results With There are a total of 9914 All of the words Sorted by: Date Added T		SEARCH NTRS Sort results by: NASA Co There are a total of 9914 Sorted by: Date Added T	senter Date Added to NTRS Publication Year 401 record(s) matching your query. To NTRS in Descending order Search Report-Patent Number field for citations for NASA report, NASA-EP-251		
Enter Search Term NASA EP 251 + G0 + RESET SEARC Search Tips: • Use only the fields with search NIX collection. • Enclose terms in double marks (") to search for exa	H * to quotation	1 2 3 4 5 6 7 8 9 10 Next USA-SOUTH CAROL Abstract: UNITED STAT NASA Center: Johnson Publication Year: 2007 Added to NTRS: 2007-0 Accession Number: ISS	t >> INA SAVANNAH,HILTON HEAD I. TES OF AMERICA, SOUTH CAROLINA SAVANNAH,HILTO Space Center 3-30 014-E-15511	N HEAD I.	
phrases, ie: "space shuttli Commas and dashes are i from search term by sear Select Reset Search bu start a new search. See I more tips.	TERM SE/ Select Se Report Find Resu All of th Enter Sea	ARCH OPTIONS earch Field * - Patent Number 💌 ults With ue words 💌 arch Term	SEARCH NTRS Search Criteria: • Search Field: Report - Patent Number > Results : All Sort results by: NASA Center Date Added to NTRS Pul There are a total of 3 record(s) matching your query. Sorted by: Date Added To NTRS in Descending order	> Search Term: NASA E	Results
	 ✓ with + G0 Search • Use or search N • Enclos marks (") phrases, Commas from sear • Select start a ne more tips 	in returned results + RESET SEARCH Tips: hy the fields with * to X collection. to search for exact ie: "space shuttle". NOTE: and dashes are removed rch term by search engine. Reset Search button to aw search. See Help for	The new space network The tracking and data n Author(s): Froehlich, W. Abstract: When the Tracking and Data Relay Satellite S together with its various NASA support elements will be will substantially increase information NASA Center: NASA (non Center Specific) Publication Year: 1986 Added to NTRS: 2005-08-25 Accession Number: 87N10171; Document ID: 1987000 NASA-EP-251(S)	elay satellite system ystem (TDRSS)is comp known simply as the Sj 0738; Report Number: I	pleted, the system, pace Networks. It NAS 1.19 251 (S),

Term Search Example 6

TERM SEARCH OPTIONS SEARCH NTRS Select Search Field * Sort results by: NAS. Report - Patent Number Sort results by: NAS. Find Results With There are a total of S All of the words Sorted by: Date Add		SEARCH NTRS Sort results by: NASA C There are a total of 9914 Sorted by: Date Added 1	enter Date Added to NTRS Publication Year <mark>401</mark> record(s) matching your query. Fo NTRS in Descending order	Search <i>Rep Number</i> fie citations for <i>Paper 2006</i>	po <i>rt-Patent</i> eld for or <i>AIAA</i> 6-0069
Enter Search Term AIAA Paper 2006 0069 + GO + RESET SEARCH Search Tips: • Use only the fields with * search NIX collection. • Enclose terms in double of marks (") to search for example.	H to quotation ct	1 2 3 4 5 6 7 8 9 10 Nex USA-SOUTH CAROL Abstract: UNITED STAT NASA Center: Johnson Publication Year: 2007 Added to NTRS: 2007-0 Accession Number: ISS	t >> LINA SAVANNAH,HILTON HEAD I. FES OF AMERICA, SOUTH CAROLINA SAVANNAH,HILTON Space Center 3-30 3014-E-15511	HEAD I.	
phrases, ie: "space shuttl Commas and dashes are i from search term by sean • Select Reset Search bu start a new search. See H more tips.	TERM SEA Select Sea Report Find Resu All of the Enter Sea	RCH OPTIONS arch Field * - Patent Number 💌 Its With e words 💌 rch Term	SEARCH NTRS Search Criteria: • Search Field: Report - Patent Number > Results : All > Sort results by: NASA Center Date Added to NTRS Public There are a total of 1 record(s) matching your query. Sorted by: Date Added To NTRS in Descending order	Search Term: AIAA ication Year	Results
	withi Government Gove	in returned results + RESET SEARCH Fips: ly the fields with * to X collection. e terms in double quotation to search for exact ie: "space shuttle". NOTE: and dashes are removed ch term by search engine. Reset Search button to w search. See Help for	Wind Tunnel Tests of Evolved Mars Tumbleweed Author(s): Antol, Jeffrey; Harris, Steven B.; Hajos, Gregory Abstract: This paper summarizes the testing conducted i Tunnel (BART) at NASA Langley Research Center (LaRC) evolved Tumbleweed rover designs. NASA Center: Langley Research Center, Wallops Flight C Publication Year: 2006 Added to NTRS: 2006-08-02 Document ID: 20060004783; Report Number: AIAA Paper	Concepts A.; Strickland, Chris n the Basic Aerodyr to measure the dra center r 2006-0069	stopher V. namics Research ag properties of + Back to Top
(And	more tips.				- Edok to Fop

Term Search Example 7

TERM SEARCH OPTIONS SEA Select Search Field * Sol Report - Patent Number Sol Find Results With The All of the words Sol Enter Search Term 1.2		SEARCH NTRS Sort results by: NASA (There are a total of 99 Sorted by: Date Added	Center Date Added to NTRS Publication Year 1401 record(s) matching your query. I To NTRS in Descending order	Search Repo Number field citations for patent, NASA KSC-12246-2	ort-Patent for NASA A-Case-
 NASA Case KSC 1224 + GO + RESET SEAR Search Tips: Use only the fields with search NIX collection. Enclose terms in double marks (") to search for ex 	.6 2 CH n * to e quotation	Abstract: UNITED ST/ NASA Center: Johnso Publication Year: 2007 Added to NTRS: 2007- Accession Number: IS	OLINA SAVANNAH,HILTON HEAD I. ATES OF AMERICA, SOUTH CAROLINA SAVANNAH,HIL n Space Center 7 -03-30 :S014-E-15511	TON HEAD I.	
phrases, ie: "space shut Commas and dashes are from search term by ses ● Select Reset Search start a new search. See more tips.	TERM SEAR Select Sear Report - I Find Results All of the Enter Searc	CH OPTIONS rch Field * Patent Number 💌 s With words 💌 ch Term	SEARCH NTRS Search Criteria: Search Field: Report - Patent Number > Results : / [X] Sort results by: NASA Center Date Added to NTRS F There are a total of 1 record(s) matching your query. Sorted by: Date Added To NTRS in Descending order	All > Search Term: NAS/ Publication Year	Results A Case KSC 12246 2
	within within + G0 • Use only search NIX • Enclose marks (") to phrases, ie: Commas an from search • Select R start a new	returned results results reset SEARCH ps: the fields with * to collection. terms in double quotation o search for exact "space shuttle". NOTE: id dashes are removed h term by search engine. eset Search button to search. See Help for	Zero-Valent Metal Emulsion for Reductive Deh Abstract: A zero-valent metal emulsion is used to del non-aqueous phase liquids (DNAPLs), including trich emulsion contains zero-valent metal particles, NASA Center: Kennedy Space Center Publication Year: 2006 Added to NTRS: 2006-08-03 Document ID: 20060017040	alogenation of DNAF halogenate solvents, su hloroethylene (TCE). The	PLs ch as pooled dense e zero-valent metal + Back to To

Term Search Hints

Punctuation

- Use quotes "" for exact phrases, i.e., "space shuttle"
- Use asterisk * for wild card to expand term searching, i.e., *comput** searches for computation, computational, computer, computers, computerization, etc.
- Do not use hyphens in report and patent number searching, i.e., *AIAA Paper 87* 1746 (no punctuation)
- Do use hyphens for abstract, keyword, and title searches, i.e., x-ray
- Do not use slashes in any search, i.e., NASA NAVY

Author Searches

- Try searching for author in several ways
 - Enter first initial last name, i.e., m nelson
 - Enter first name last name, i.e., michael nelson
- Multiple Authors
 - Use last names only, i.e., yang hill

Report and Patent Number Searches

- Remove all hyphens and slashes when entering report and patent numbers
- Leave space between letters and numbers
 - NASA-EP-251 report searched as NASA EP 251
 - AIAA Paper 2006-0069 report searched as AIAA Paper 2006 0069
 - NASA-Case-KSC-12246-2 patent searched as NASA Case KSC 12246 2

Search with Navigation Search Options

This section covers:

- Navigation Search
- Navigation Search Options
- Navigation Search Example
- Navigation Search Hints

NAVIGATION SEARCH OPTIONS

- + Collection
- + NASA Center
- + Publication Year
- + Subject
- + Availability Options
- + Item/Media Type

Navigation Search



Navigation Search option provides categories to drill down into a set of results until the desired search result set is achieved

- The "+" sign means that clicking on the category will expand it for more options to select.
- The "-" sign means the category is expanded to show more options to select.

Navigation Search options are tied to the information in the citations. The initial search displays all available Navigation Search options: Collection, NASA Center, Publication Year, Subject, Availability Options, and Item/Media Type.

As search progresses, Navigation Options may disappear because option is no longer available. Example, once **+NACA** is selected, search screen will not display Collection as an option any longer.

Navigation Search Option Descriptions



NAVIGATION SEARCH OPTIONS

- + Collection
- NASA Center
- + Ames Research Center
- + Dryden Flight Research Center
- + Glenn Research Center
- + Goddard Space Flight Center
- + Jet Propulsion Laboratory
- + Johnson Space Center
- + Kennedy Space Center



Limit searches to an individual NASA Center to view publications, movie/video and image/photo from a specific NASA source.



NASA STI Program Office

Navigation Search Option Descriptions





Navigation Search Option Descriptions

AVAILABILITY OPTIONS Allows user to limit searches to items that are online, can be ordered from NASA CASI, or have to be ordered from other sources NTRS provides access to citations and online documents, NAVIGATION SEARCH OPTIONS images/photos and movies/videos. + Collection + NASA Center Some documents are available online. Documents not + Publication Year + Subject found online need to be ordered from the NASA Center for Availability Options Aerospace Information (CASI) or from the originating + Online + Order From CASI source of the content. NTRS citations provide links to + Order From Other Sources ordering information. + Item/Media Type + Online Formats: + Subject GIF, JPEG, and MPEG = image/photos Availability Options + GIE PDF = documents+ JPEG Quicktime = movies/videos + MPEG + PDF Example: Select "PDF" to only retrieve results which have + QUICKTIME online documents + Item/Media Type + Order from CASI

- + Subject
- Availability Options
- + CD-ROM, DVD, Print
- + VIDEO
- + Item/Media Type
- + Order from Other Sources

Documents and videos are available from CASI

- Documents can be ordered as: CDs, DVDs, Print copies ٠
- Videos can be ordered as: VHS or Beta •

List of sources to order content provided

NASA STI Program Office

Navigation Search Option Descriptions

ITEM/MEDIA TYPE Provides list of "types" of content found in NTRS

NAVIGATION SEARCH OPTIONS

- + Collection
- + NASA Center
- + Publication Year
- + Subject
- + Availability Options
- Item/Media Type
- + Image/Photo
- + Journal Article
- + Movie/Video
- + NACA Report
- + NASA Report
- + Other
- + Preprint
- + Technical Report
- + Thesaurus
- + Thesis
- + Bibliography
- + Collected Works
- + Conference Paper
- + Conference Proceedings
- + Congressional Report
- + Dictionary
- + Extended Abstract
- + Journal Issue

NTRS content includes may different categories of documents such as journal articles, technical reports, patents, etc.

Users may find it useful to limit results to a specific kind of document to reduce the number of results.

Use Item/Media Type to find NACA and NASA reports

- Select + NACA to find reports (1915-1958)
- Select + NASA to find reports (1958-present)

Use Availability Options to find online documents

- Select + Online
- Select + PDF

Navigation Search Example

Search on Goddard Space Flight Center information from the early 1930's

Colort Secret Field t	SEARON NIKS
	On the second state and the state of the sta
All	Sort results by: NASA Center Date Added to NTRS Publication Year
Find Results With	There are a total of 991401 record(s) matching your query.
All of the words 🛛 🗸 🗸	Sorted by: Date Added To NTRS in Descending order
Enter Search Term	4 0 0 4 5 8 7 0 0 40 November
	USA-SOUTH CAROLINA SAVANNAH, HILTON HEAD I.
+ GO + RESET SEARCH	
Search Tips:	ADSTRACT: UNITED STATES OF AMERICA, SOUTH CAROLINA SAVANNAH, HILTON HEAD I.
 Use only the fields with * to 	NASA Center: Jonnson Space Center
search NIX collection.	Publication Year: 2007
 Enclose terms in double quotation 	Added to NTRS: 2007-03-30
marks (") to search for exact	Accession Number: ISSU14-E-15511
phrases, ie: "space shuttle". NOTE: -	
Commas and dashes are removed	GREECE MACEDONIAN PEN., GLINT
from search term by search engine.	
 Select Reset Search button to 	Abstract: GREECE MACEDONIAN PEN., GLINT
start a new search. See Help for	NASA Center: Johnson Space Center
nore tips.	Publication Year: 2006
NAVIGATION SEARCH OPTIONS	Select "Goddard Space Flight Center"
+ Collection	
- NASA Center	EGYPT PU, SAFAGA, SAFAGAIS., CURAL
+ Ames Research Center	
+ Dryden Flight Research Center	ADSTRACT: EGYPT PO, SAFAGA, SAFAGA IS., CORAL
+ Glenn Research Center	NASA Center: Johnson Space Center
+ Goddard Space Elight Cepter	Publication Year: 2006
Let Dranulaian Laboratory	Added to NTRS: 2007-03-30 Accession Number 199949 El 2009
+ Jet Propulsion Laboratory	Accession Numper: 155013-E-6296

Navigation Search Example (cont'd)



Navigation Search Example (cont'd)

TERM SEARCH OPTIONS Select Search Field * All Find Results With All of the words Enter Search Term	~	SEARCH NTRS Selected Navigations: • NASA Center > Goddard Space Flight Center [X] Sort results by: NASA Center Date Added to NTRS Publ There are a total of 48275 record(s) matching your query. Sorted by: Date Added To NTRS in Descending order	ication Year	
 within returned results + GO + RESET SEARCH Search Tips: Use only the fields with * to search NIX collection. Enclose terms in double quotation marks (") to search for exact phrases, ie: "space shuttle". NOTE: Commas and dashes are removed from search term by search engine. 		1 2 3 4 5 6 7 8 9 10 Next >> Single Crystal Silicon Instrument Mirrors Author(s): Bly, Vince Abstract: The goals for the fabrication of single crystal silicon instrument mirrors include the following 1) Develop a process for fabricating lightweight mirrors from single crystal silicon (SCS) 2) Modest lightweighting 3X to 4X NASA Center: Goddard Space Flight Center Publication Year: 2007 Added to NTRS: 2007-03-30 Descument ID: 20070010898		
Select Reset Search bu start a new search. See H more tips. NAVIGATION SEARCH OPTIO + Collection Publication Year	tton to Help for	An intelligent planning and scheduling system for Author(s): Johnson, Jay; Bogovich, Lynn; Tuchman, Alan; Burkhardt, Christian; Littlefield, Ronald; Mclean, David; Po	the HST servicing missions Kispert, Andrew; Page, Brenda; tter, William; Ochs, William, et al.	
- Publication Year + 1931-1940 + 1951-1960 + 1961-1970 + 1971-1980 + 1981-1990	Date rang Sele	e range shows available date ges for Goddard citations.	ern nas been delivered to NASA-Goddard coming Hubble Space Telescope (HST) 91	
+ 1991-2000 + 2001-2010 + Subject + Availability Options + Item/Media Type		Multispacecraft Observations of Solar Flare Partic Author(s): Wibberenz, G.; Cane, H. V. Abstract: For a number of impulsive solar particle events intensities and times to maximum intensity as a function	J les in the Inner Heliosphere we examine variations of maximum of longitude, using observations from the	

NASA STI Program Office

33

Navigation Search Example (cont'd)



Navigation Search Hints

Navigation Options

 Initial search displays all available Navigation Search options: Collection, NASA Center, Publication Year, Subject, Availability Options, and Item/Media Type. As search progresses, Navigation Search options disappear when option is no longer applicable to a search set. Example, once + NACA is selected, the Collection option will not display

Searches

- Use Item/Media Type to find NACA and NASA series report
 - Select + NACA to find reports (1915-1958)
 - NACA report series: aircraft circulars, annual reports, technical memorandums, technical notes, reports, research memorandums, and wartime reports
 - Select + NASA to find reports (1958-present)
 - NASA Report series: conference paper, contractor report, educational publication, reference publication, special publication, technical notes, and technical translation
- Use Availability Options to find online documents
 - Select + Online
 - Select + PDF

Term and Navigation Search Example

Search on space shuttle documents available online from NTRS

Select Search Field *	
All 🔽	Sort results by: NASA Center Date Added to NTRS Publication Year
ind Results With	There are a total of 991401 record(s) matching your query.
All of the words 🛛 🗸 🗸	Sorted by: Date Added To NTRS in Descending order
nter Search Term	
space shuttle 🛛 🔺	1234 Term search on space snuttie
	USA-L
+ GO + RESET SEARCH	Abstract: UNITED STATES OF AMERICA, SOUTH CAROLINA SAVANNAH HILTON HEAD L
Search Tips:	NASA Center: Johnson Space Center
 Use only the fields with * to 	Publication Year: 2007
search NIX collection.	Added to NTRS: 2007-03-30
 Enclose terms in double quotation marks (") to search for exact 	Accession Number: ISS014-E-15511
phrases, je: "space shuttle", NOTE:	
Commas and dashes are removed	GREECE MACEDONIAN PEN., GLINT
from search term by search engine.	
 Select Reset Search button to 	Abstract: GREECE MACEDONIAN PEN., GLINT
start a new search. See Help for	NASA Center: Johnson Space Center
nore tips.	Publication Year: 2006
	Added to NTRS: 2007-03-30
NAVIGATION SEARCH OPTIONS	Accession Number: ISS014-E-10908
+ Collection	
+ NASA Center	EGYPT PO. SAFAGA, SAFAGA IS., CORAL
+ Publication rear	
+ Availability Options	Abstract: EGYPT PO, SAFAGA, SAFAGA IS., CORAL
+ Item/Media Type	NASA Center: Johnson Space Center
	Added to NTRP: 2007-02-20
	Added to NTR5. 2007-03-30

Term and Navigation Search Example (cont'd)

Search on space shuttle documents available online from NTRS

TERM SEARCH OPTIONS	SEARCH NTRS
Select Search Field *	Search Criteria:
All 🔽	 Search Field: All > Results : All > Search Term: space shuttle [X]
Find Results With	
All of the words	Sort results by: NASA Center Date Added to NTRS Publication Year
Enter Search Term	There are a total of 34802 record(s) matching your query.
	Sorted by: Date Added To NTRS in Descending order
within returned results	1 2 3 4 5 6 7 8 9 10 Next >>
+ GO + RESET SEARCH	Unsteady Flow Simulation of High-speed Turbopumps
Search Tips:	
 Use only the fields with * to 	Author(s): Kiris, Cetin C.; Kwak, dochan; Chan, William; Housman, Jeffrey A.
search NIX collection.	Abstract: One example of this type in aero space is related to liquid-fueled rocket turbopump.
 Enclose terms in double quotation 	Rocket turbopumps operate under severe conditions at very high rotational speeds typically at
marks (") to search for exact	NASA Center: Ames Research Center
phrases, ie: "space shuttle". NOTE:	Publication Teal: 2006 Added to NTDD: 2007-02-20
Commas and dashes are removed	Added to NTR5, 2007-03-30
 Select Reset Search button to 	Ducument ID. 20060024690
 Select Reset Search Sea Help for 	Crease Dediction Organ Desce for Astronouts on Best and Euture Missions
more tins	space Radiation Organ Doses for Astronauts on Past and Future Missions
niero npo.	Author/e): Cucinette Francie A
NAVIGATION SEARCH OPTIONS	Author(s), Countolla, Francis A. Abstract: We review methods and data used for determining astronaut organ dose equivalents on
+ Collection	neet enace missions including Anollo Skylah Snace Shuttle NASA Mir and International Snace
+ NASA Center	State
+ Publication Year	NA Select Availability Options
+ Subject	
– Availability Options	Add then select +Online
+ Online	
+ Order From CASI	
+ Order From Other Sources	Evaluation of the ground contamination environment for STS payloads
+ Item/Media Type	Author(s): Borson, E. N.
The	

NASA STI Program Office

Term and Navigation Search Example (cont'd)

Search on space shuttle documents available online from NTRS

TERM SEARCH OPTIONS	SEARCH NTRS
Select Search Field *	Selected Navigations:
All 🔽	 Availability Options > Online [X]
Find Results With	Search Criteria:
All of the words	 Search Field: All > Results : All > Search Term: space shuttle [X]
Enter Search Term	
	Sort results by: NASA Center Date Added to NTRS Publication Year
	There are a total of 18204 record(s) matching your query.
within returned results	Sorted by: Date Added To NTRS in Descending order
+ GO + RESET SEARCH	
Search Tips:	1 2 3 4 5 6 7 8 9 10 Next >>
 Use only the fields with * to 	Unsteady Flow Simulation of High-speed Turbopumps
search NIX collection.	
 Enclose terms in double quotation 	Author(s): Kiris, Cetin C.; Kwak, dochan; Chan, William; Housman, Jeffrey A.
marks (") to search for exact	Abstract: One example of this type in aerospace is related to liquid-fueled rocket turbopump.
phrases, ie: "space shuttle". NOTE:	Rocket turbopumps operate under severe conditions at very high rotational speeds typically at
Commas and dashes are removed	NASA Center: Ames Research Center
from search term by search engine.	Publication Year: 2006
 Select Reset Search button to 	Added to NTRS: 2007-03-30
start a new search. See Help for	Document ID: 20060024890
more tips.	
	Space Radiation Organ Doses for Astronauts on Past and Future Missions
NAVIGATION SEARCH OPTIONS	
+ Collection	Author(s): Cucinotta, Francis A.
+ NASA Center	Abstract: We review methods and data used for determining astronaut organ dose equivalents on
+ Publication Year	d International Space
+ Subject	elect PDF to find online documents
– Availability Options	NASA CEREF. CONTISON SPACE CEREF
+ GIF	Publication Year: 2007
+ JPEG	Added to NTRS: 2007-03-30
+ MPEG	Document ID: 20070010704
+ PDF 🚩	Even which a fitter and a subscription and income and for OTO and the de-
+ QUICKTIME	Evaluation of the ground contamination environment for STS payloads
+ Item/Media Type	Author(s): Borson, E. N.
()	

NASA STI Program Office

NASA STI Help Desk and NIX Help

Search question and ordering information for NACA, NASA, and NIX scientific and technical information and imagery

NASA STI Help Desk

NASA STI Help Desk NASA Center for AeroSpace Information (CASI) 7115 Standard Drive Hanover, MD 21076-1320 Phone: 443-757-5802 or Fax: 443-757-5803

NASA Image eXchange Help

E-mail: <u>NASA-DL-nix@mail.nasa.gov</u> Subject line: NIX Comments

Website: http://nix.nasa.gov

E-mail: <u>HELP@STI.NASA.GOV</u> Subject line: NTRS Comments

Website: http://www.sti.nasa.gov

Check the <u>NASA Reference Desk</u> for answers to other questions about NASA.

Inquiries that are **non-STI related** should be sent to <u>LARC-DL-Public-Inquiries@mail.nasa.gov</u>

Complete List of Citation Fields

Abstract	Brief summary explaining content in a document, image, and/or video
Accession No.	Unique identifier assigned to records at the time of receipt or creation. In the case of the NASA and NACA collections, this is a historic record number that was assigned by CASI between the years 1962 and 1997. For the NIX collection, this identifier is present for all records.
Accessibility	NTRS only provides access to unclassified, unlimited, and publicly available technical works. Some works may be copyrighted and may not be available on NTRS if NASA does not have rights to distribute works.
Author(s)	Creator of technical work
Available Data	Indicates what data available from CASI. For some documents that must be ordered from other organizations only the abstract may be available.
Contract-Grant-Task No.	Contract, grant, or task number
Download Doc.	Document available to download to desktop
Document ID	Unique number assigned to all records in the NASA and NACA collections; may be used to order items available from CASI
Document Source	Organization providing document or video. Value of "CASI" means item available from CASI. Value of "Other" means item is not available from CASI and must be ordered from another organization.
Keywords	Words describing concepts of technical work/video derived from NASA Thesaurus
Meeting Information	Location and date of meeting

Complete List of Citation Fields (cont'd)

NASA Center	NASA Center authoring, funding, or sponsoring item
No Digital Version Available	Document not accessible online. Click on "Go to Tips on Ordering" to find out how to obtain document.
Price Code	Code used to determine price of document or video. PDF's are free, however if document is not yet digitized there is a fee for copying and mailing, etc.
Publication Date	Year in which technical work published
Publication Info.	City, country, and related publication information
Related Information	Provides additional information about an item not included in other fields
Report Number	Unique number assigned to document by NASA, or other publishing organization, at time of publishing
Title	Title of work
Updated/Added to NTRS	Date item loaded to NTRS

