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An Initial Investigation into the Production and Use of Scientific and Technical Information (STI) at Five NASA Centers: Results of a Telephone Survey

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PROCEDURAL INFORMATION

Background

The NASA Scientific and Technical Information (STI) System operates on the two-fold premise that (1) the ability of aerospace engineers and scientists to identify, acquire, utilize, and produce STI is of paramount importance to the efficiency of the research and development (R&D) process; and that (2) NASA has a congressional mandate to actively transfer the results of its research to the aerospace community and the American public at large. STI is monitored, collected, and compiled on a world-wide basis through the NASA Center for Aero Space Information (CASI) and the American Institute of Aeronautics and Astronautics (AIAA) Technical Information Service. NASA produced STI is collected and compiled through the STI activities at each NASA field installation. This collective effort forms the basis of the NASA STI database. The STI function at each field installation provides technical editing, manuscript preparation, graphics, technical photography, printing, and technical library services to support NASA research produce and publish the results of their work. NASA researchers gain access to the NASA STI database through a variety of information products and services including ARIN, IAA, RECON, STAR, and SCAN. The NASA STI program is managed through NASA Headquarters, Code JTT.

Executive Summary

The weighted sample which combined the data from the five Centers in their "correct" proportion is presented only as percentages. This is because weighted data are subject to rounding error and, therefore, typically don't "add up" to the total sample size.

The combined sample included 70 percent engineers, 23 percent scientists, 4 percent managers (who would not be categorized as scientists or engineers), and 3 percent technicians. Ninety-one percent of the respondents were males, and 55 percent held masters or doctorate degrees.

Overall, 26 percent of those interviewed work as individual researchers, 37 percent work on project teams, 20 percent are technical managers, and 17 percent are support staff. Fully 80 percent of the participants work in aeronautics, engineering, or space sciences. This might explain why only 2 percent of the people interviewed said that using STI was "not important" to their careers.

Nearly one-quarter of the personnel interviewed felt that publishing their work was "not important." A larger percentage (45 percent) felt that publishing through the NASA STI system was "not important" to their careers. Sixty-two percent of those interviewed, though, rated the NASA STI system that supports personnel in publishing their work as "excellent or good." In fact, less than 10 percent reported encountering any problems when using the NASA STI services to help publish their work.

In terms of using STI, 88 percent of the participants in the survey said that they would first look to resources within their Center when seeking scientific or technical information. Eighty-three percent said that the NASA STI system was "important" to them, and the same proportion rated the system as "excellent or good." In general, respondents view the NASA STI system favorably.

Methodology

This study used survey research methods to obtain feedback about the NASA STI system from personnel at each of five NASA Centers. A questionnaire was administered by telephone to 550 engineers, scientists, administrators, and support personnel who might, by virtue of their job descriptions, need to access scientific or technical information or use services in support of publishing efforts.

The study was conducted by Continental Research Associates, Inc., of Norfolk, Virginia. Professional research assistance was used to establish objectivity and confidentiality, to maintain the integrity of the study, and to obtain skills not otherwise readily available to the project. An additional factor involved the almost immediate deadline imposed on this research. The study objectives and design were approved on October 11, 1991, and the results were needed (in report form) four business days later.

After the study objectives were agreed upon, a draft questionnaire was submitted to Dr. Thomas Pinelli at NASA Langley Research Center in Hampton, Virginia. Dr. Pinelli coordinated the data collection phase of the project. After incorporating Dr. Pinelli's survey design suggestions, a pre-test of the survey instrument was conducted on October 11, 1991.

The pre-test is a technique used to clarify and revise a draft questionnaire. It helps to determine likely responses to open-ended questions and locate technical problems (e.g., sequencing, misunderstood terminology). This pre-test consisted of 38 surveys with personnel at 3 of the 5 Centers. All five Centers could not be included in the pre-test because two of the sample frames had yet to be provided to Continental Research. In general, the survey was well-received by potential respondents. A number of wording and format changes were made as a result of these 38 interviews. Additionally, there were enough queries about the "authenticity" of the study that a list of contact personnel for each Center needed to be provided to the interviewing staff.

Methodology (continued)

Once the final revisions were made to the instrument, computer codes and keypunching instructions were added and the survey was printed. This final questionnaire draft included 23 interrogatives. There were 3 open-ended items and 20 closed-ended questions. The average administration time for the survey was 6 minutes.

The sample frame for the interviewing phase of this study was provided to Continental Research by Dr. Pinelli. Each Center had submitted a list (based on specified characteristics) to Dr. Pinelli. Some Centers were able to provide a listing of aerospace technologists (AST personnel) who are not contractors, while other Centers could provide only their Center phone directories. Some lists required cross-referencing each name with the Center phone directory in order to obtain the office phone number for the potential respondents. While much screening was often necessary to secure interviews with the appropriate personnel, the lists were generally current and accurate.

Because surveys seek to predict the opinions of a population by sampling only a subset of the population, a sample was drawn from the lists provided by each Center. The sample selection procedure varied by Center. For those Centers where the sample frame list included only civil service aerospace technologists, a skip interval sampling design procedure was employed. Skip interval sampling approximates true random sampling. The process involved dividing the number of names on the list by 200 and then selecting every "nth" name from the list. The selected names were then called, and any name eliminated from the sample in the screening process (e.g., secretarial staff or contract personnel) was replaced by a name from that same page.

For those Centers where a special list could not be provided, the number of names on the list was divided by 300 and a skip interval selection procedure employed. A larger number of names was required in this instance because of the large number of personnel who would later be screened out of the sample.

Methodology (continued)

The sample frames provided by the Centers totaled 9,792 names. It was decided that the target number of interviews from each Center should be 100. Because the Center staff sizes were not equal, though, these five samples would be combined into a weighted sample for reporting the results. The distribution of the sample listings was as follows:

1,941	Langley Research Center
1,179	Ames Research Center
3,098	Goddard Space Flight Center
2,205	Marshall Space Flight Center
1,369	Lewis Research Center

The approximate number of AST personnel at each Center was provided by Dr. Pinelli for use in the weighting of the overall (five Center) combined sample. The AST totals are as follows:

1,414	Langley Research Center
1,186	Ames Research Center
2,181	Goddard Space Flight Center
2,504	Marshall Space Flight Center
1,583	Lewis Research Center.

Based on these proportions, the overall weighted sample will be comprised of approximately 15.9 percent from Langley, 13.4 percent from Ames, 24.6 percent from Goddard, 28.2 percent from Marshall, and 17.8 percent from Lewis Research Center.

The 550 interviews with Center personnel were conducted by telephone from the Continental Research offices in Virginia. Because the data collection phase is critical to the success of the study, a central interviewing facility with on-site monitoring capabilities was used. Each professional interviewer worked from a private, well-equipped office with hands-free electronic telephone equipment. A briefing session with the Project Director preceded

Methodology (continued)

all interviewing and included information about the NASA STI system, how the survey was to be conducted, and how the quotas (by Center) were to be maintained. Each interviewer participated in several role-playing exercises to become completely familiar with the survey instrument before calling NASA personnel. It was agreed that open-ended responses were to be recorded verbatim. Anticipated open-ended responses were discussed as well as how to use the precoded response items. Techniques for handling respondent questions and probing vague answers were also covered in the briefing.

Phone calls were made between 8:30 a.m. and 5:30 p.m. (local times). Each person selected for inclusion in the sample was called at least once on Tuesday, October 15th. On the following two days, attempts were made to contact those who were unavailable on the 15th. People who were clearly not going to be available during the interviewing process were removed from the sample and substitute names were selected. A record of each attempt was maintained by the interviewer.

A total of 550 interviews were completed during the data collection phase. This is 10 more (per Center) than was agreed upon in the contract but is the traditional "cushion" used during projects with short deadlines. The surveys were numerically coded for entry into the computer and responses to the open-ended questions were grouped into common codes. Dr. Pinelli aided the project team by providing STAR classifications for those respondents who did not fit into the standard survey categories. The computer-ready surveys were then keyed separately by two data entry operators (for 100 percent accuracy). Computer programs were written to tabulate the responses to each question and complete special analyses.

Methodology (continued)

The results of this study are provided on the following pages. This report is divided into three sections:

SECTION 1: The overall weighted sample results for all five Centers combined.

SECTION 2: The individual Center responses to the survey.

SECTION 3: Selected crosstabulations.

Sampling Variability Estimates

The term "sampling variability" is used when referring to the difference between what survey results report and what one would get if a complete census was conducted. It is expressed as the maximum percentage that a figure in our report could vary from what a full census would produce (because of the sampling process). At a total sample size of 550, we are 95 percent certain that any percentages in the report would be within ± 4.05 percentage points (assuming a dichotomous question). Sampling error estimates for the five individual Centers are as follows:

	<u>AST Population</u>	<u>Sampling Error</u>
Ames Research Center	1186	$\pm 8.9\%$
Goddard Space Flight Center	2181	$\pm 9.1\%$
Langley Research Center	1414	$\pm 8.97\%$
Lewis Research Center	1583	$\pm 9.0\%$
Marshall Space Flight Center	2504	$\pm 9.15\%$

Results of Phone Calls:

1865 phone numbers were used in the process of obtaining 550 intvs.
Most numbers were contacted 2 to 4 times.

CONTACTED/UNUSABLE NUMBERS:

7 were disconnected phone lines
39 were wrong numbers
1 involved a language barrier
5 were no longer employed at that facility
36 were on vacation/travel
20 refused to participate
125 were contractors or clerical employees
550 completed interviews

783 contacted

NEVER CONTACTED:

217 were unanswered phones each time we called
51 had busy signals each time we called
658 had voice mail/answering machines
156 could have been called at a later date/in meetings

1082 not contacted

WEIGHTED TABULATIONS

Space Center/Research Center

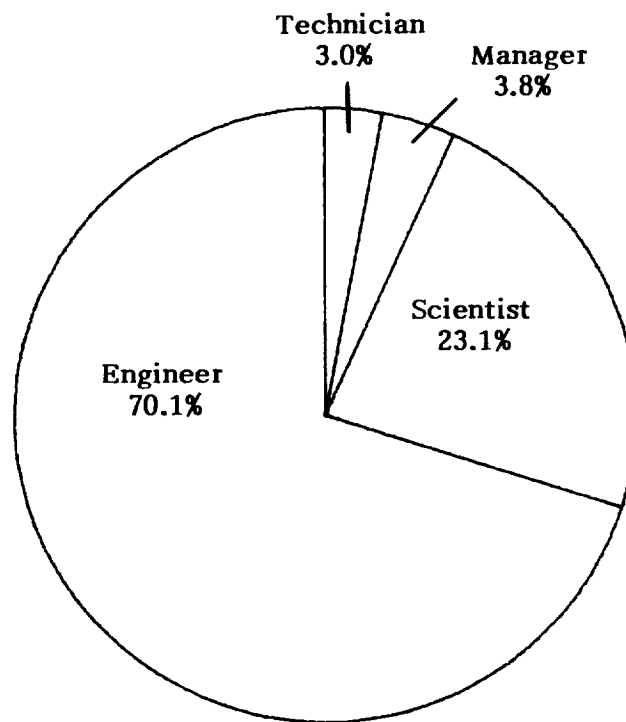
	<u>Weighted Total</u>
Ames Research Center (California)	13.4%
Goddard Space Flight Center (Maryland)	24.6%
Marshall Space Flight Center (Alabama)	16.0%
Lewis Research Center (Ohio)	17.8%
Langley Research Center (Virginia)	<u>28.2%</u>
	100.0%
	(n=550)

NOTE: Originally, 110 people from each center were interviewed. As detailed in the methodology, this sample was balanced to raise each center's AST population to its correct proportion.

If you were to define what you do at work, would you say you are an engineer, a scientist, or something else?

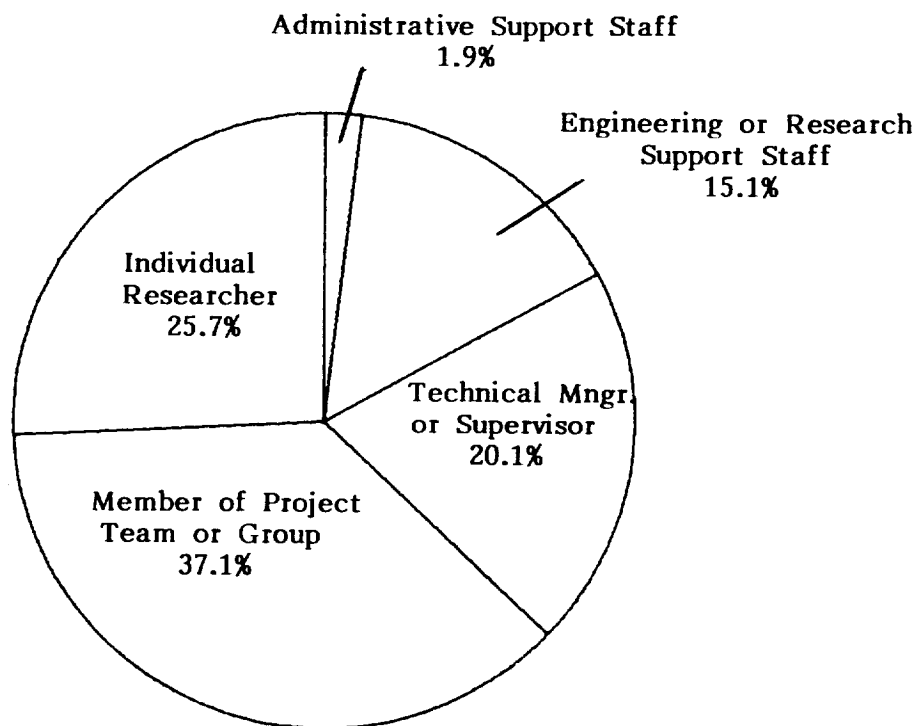
	<u>Weighted Total</u>
Engineer	70.1%
Scientist	23.1%
Manager	3.8%
Technician	<u>3.0%</u>
	100.0%
	(n=550)

NOTE: If the respondent was not an engineer or a scientist, other questions were asked to screen out clerical and support staff from this particular survey.



Which of these categories best describes what you do at work? Are you primarily
(READ CHOICES LISTED) :

	<u>Weighted Total</u>
An individual researcher	25.7%
A member of a project team or group	37.1%
A technical manager or supervisor	20.1%
Engineering or research support staff	15.1%
Administrative support staff	<u>1.9%</u>
	100.0%
	(n=550)



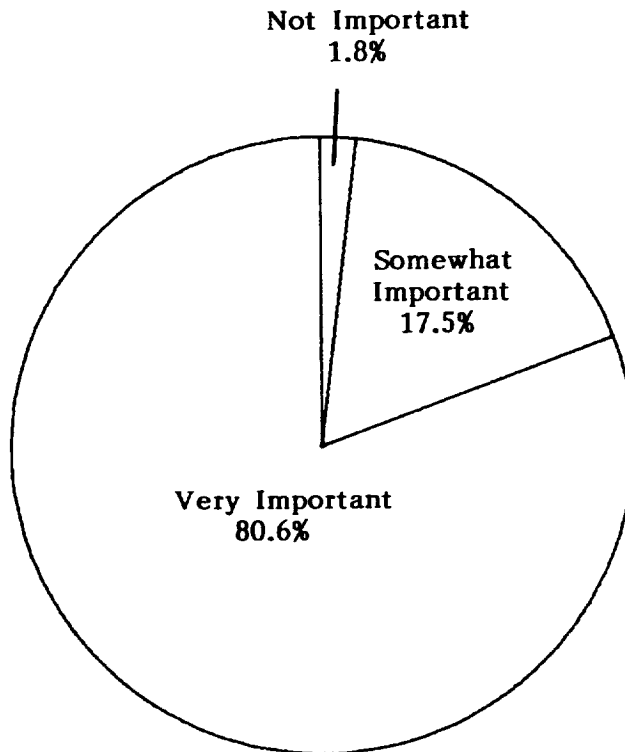
If you could use only one term to characterize your area of work or the application of your work, would it be (READ ALL CHOICES LISTED) :

	<u>Weighted Total</u>
Aeronautics	29.0%
Astronautics	8.0%
Engineering	30.8%
Space Sciences	20.8%
Chemistry and Materials	0.5%
Geosciences	3.1%
Mathematical and Computer Sciences	4.2%
Physics	1.7%
Social Sciences	1.7%
Life Sciences	<u>0.4%</u>
	100.0%
	(n=550)

NOTE: Only the first four choices were read to the respondent.

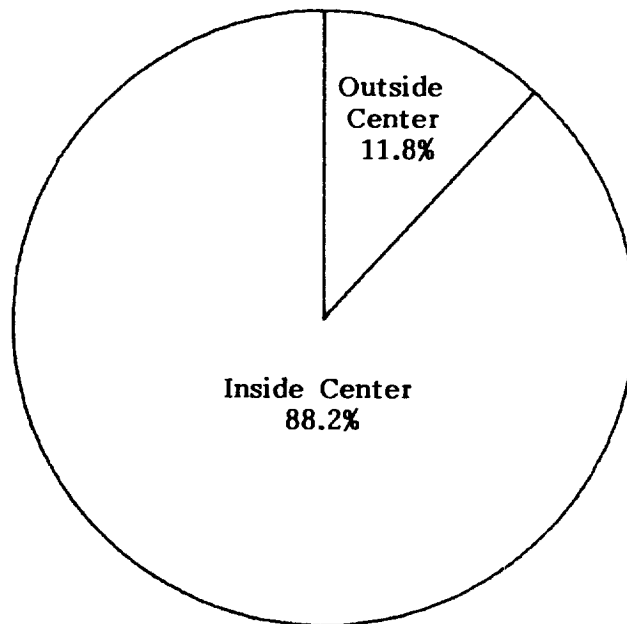
In your job, how important is it for you to use scientific and technical information?
Would you say it is very important, somewhat important, or not important?

	<u>Weighted Total</u>
Very important	80.6%
Somewhat important	17.5%
Not important	<u>1.8%</u>
	100.0%
	(n=550)



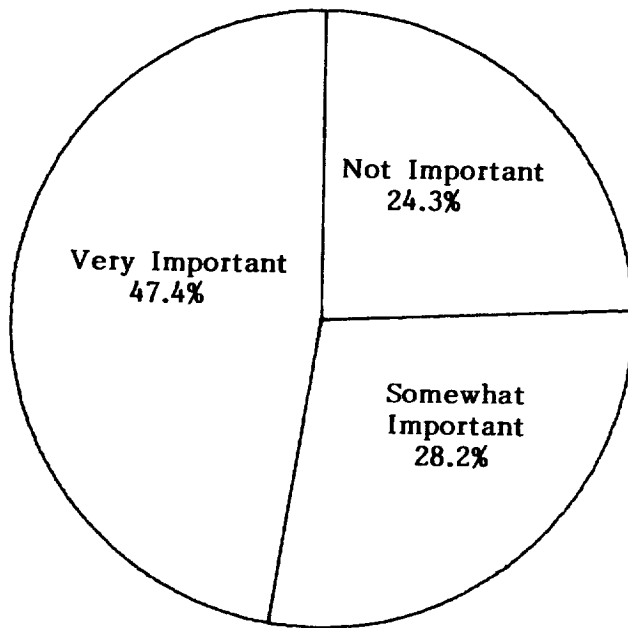
When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?

	<u>Weighted Total</u>
Within center	88.2%
Outside center	<u>11.8%</u>
	100.0%
	(n=550)



In your job, how important is it for you to publish scientific and technical information? Is it very important, somewhat important, or not important?

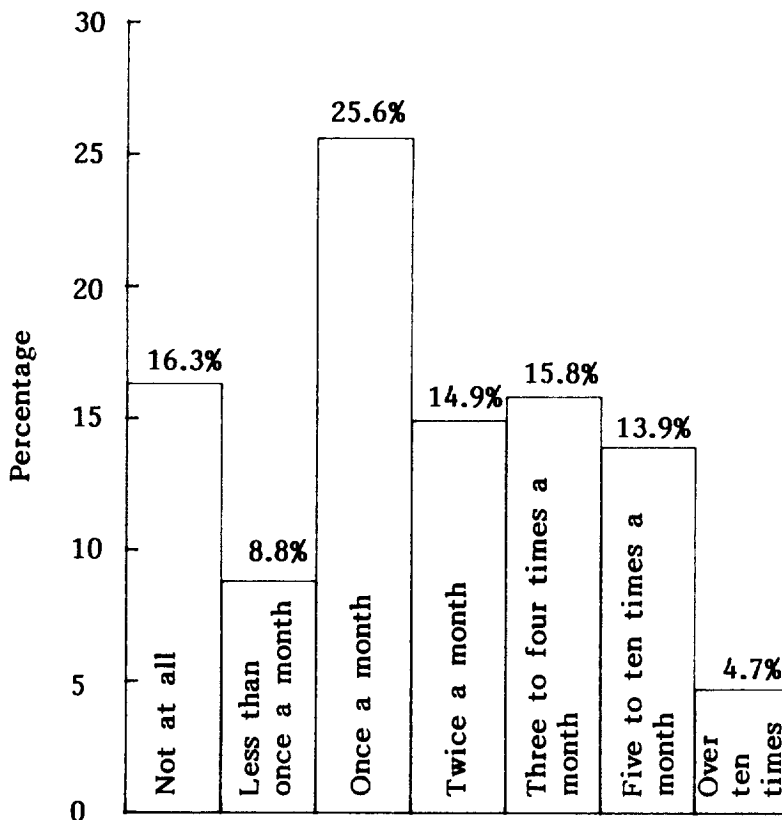
	<u>Weighted Total</u>
Very important	47.4%
Somewhat important	28.2%
Not important	<u>24.3%</u>
	100.0%
	(n=550)



The NASA scientific and technical information system provides services such as editing, graphics, photography, printing and library services at each NASA center. This system produces a variety of products including NASA technical reports. STAR, SCAN, RECON, and ARIN are also part of the STI system. How many total times per month do you use any product or service included in the NASA scientific and technical information system?

	<u>Weighted Total</u>
Not at all*	16.3%
Less than once a month*	8.8%
Once a month*	25.6%
Twice a month	14.9%
Three to four times a month	15.8%
Five to ten times a month	13.9%
Over ten times a month	<u>4.7%</u>
	100.0%
	(n=550)
Mean = 3.1 times/month	
Median = 1.0 time/month	

*NOTE: The people who used the system less than twice a month were asked their reasons for the infrequent use (see next page).



(Asked only of those people who used the NASA STI system once a month or less...)

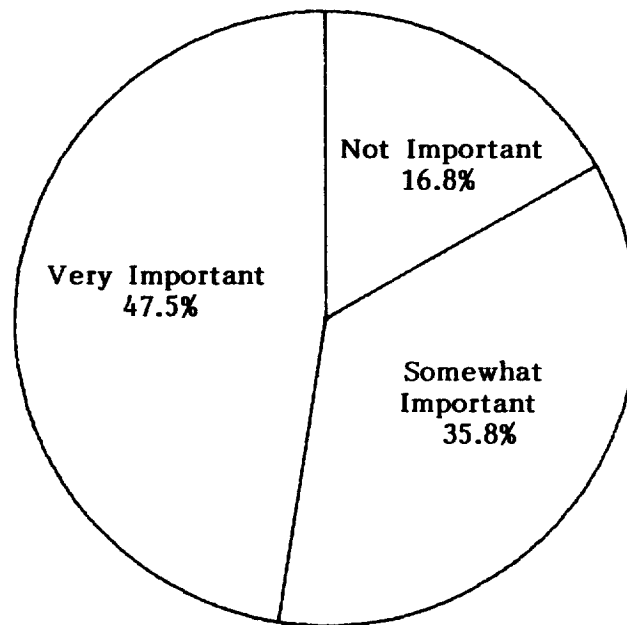
I noticed that you're not a frequent user of the NASA STI system products and services. Why is that?

	<u>Weighted Total</u>
It's not part of my job responsibilities	33.4%
I've had no need to use the NASA STI system recently	23.9%
I have the information I need in my office	9.1%
I'm not familiar with the system	6.3%
I do my own typing, graphics, etc.	5.0%
I use my own computer for searches	4.4%
I prefer to use my journals	4.1%
I prefer outside sources	3.2%
I use production services occasionally	2.9%
NASA information is "old"/I need more current information	2.6%
Contractors do the research for me	1.7%
The NASA system doesn't have what I want	1.3%
The NASA system is too slow	0.7%
The NASA system is hard to use	0.6%
Databases are not part of the NASA system	0.3%
The information is not reliable	0.3%
I prefer Telecon	<u>0.2%</u>
	100.0%

(n=279, rather than 550)

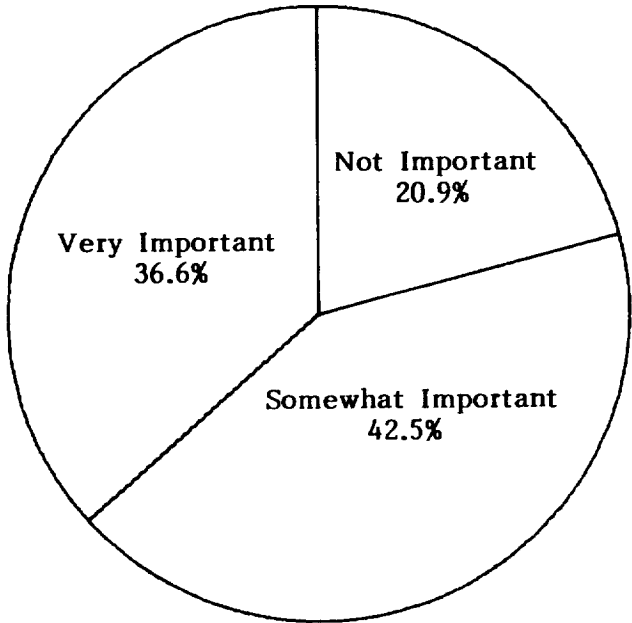
Overall, how important is this NASA STI system (I just described) to you? Would you say it is very important, somewhat important, or not important?

	<u>Weighted Total</u>
Very important	47.5%
Somewhat important	35.8%
Not important	<u>16.8%</u>
	100.0%
	(n=550)



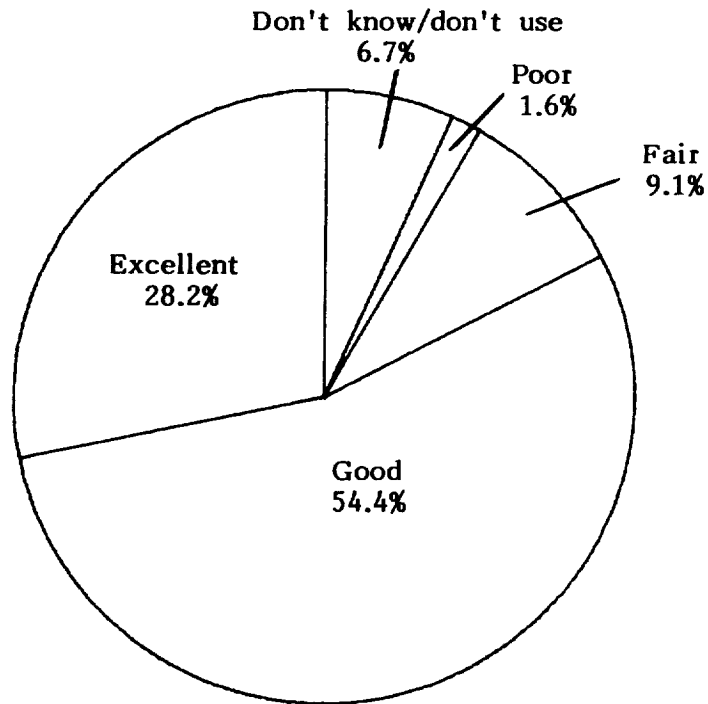
To perform your job, how important is it for you to use the NASA STI system?
Would you say it is very important, somewhat important, or not important?

	<u>Weighted Total</u>
Very important	36.6%
Somewhat important	42.5%
Not important	<u>20.9%</u>
	100.0%
	(n=550)



How would you evaluate the overall NASA scientific and technical information system in terms of meeting your information needs? Would you rate it as excellent, good, fair, or poor?

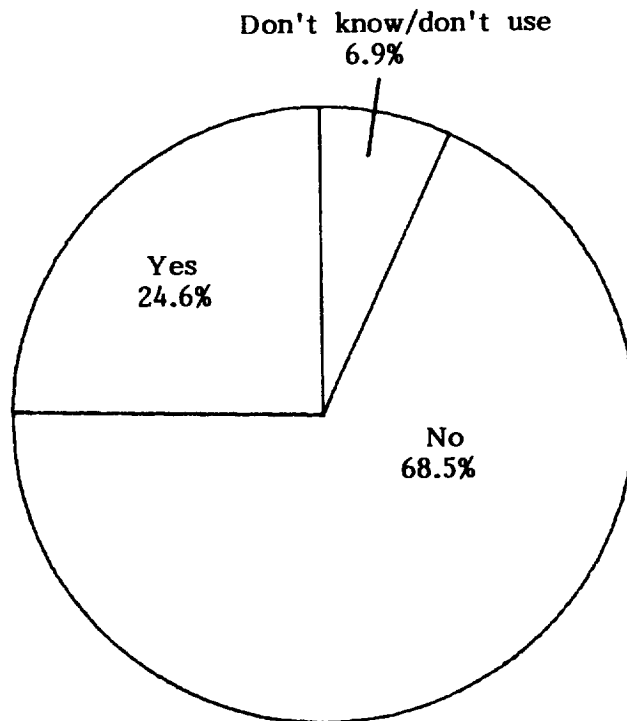
	<u>Weighted Total</u>
Excellent	28.2%
Good	54.4%
Fair	9.1%
Poor	1.6%
I don't know/don't use	<u>6.7%</u>
	100.0%
	(n=550)



Have you encountered problems using the NASA STI system when you need to access information?

	<u>Weighted Total</u>
Yes	24.6%
No	68.5%
I don't know/don't use	<u>6.9%</u>
	100.0%
	(n=550)

NOTE: The people who had experienced problems when accessing information were asked to describe their difficulties. Many of these people discussed multiple problem areas, so the next table reflects the number of times each "problem" was mentioned in conversation.



What problems have you experienced when using the NASA STI system to access information? (DO NOT READ CHOICES)

- (75.0%) had not encountered any problems using the NASA STI system to access information
- (8.0%) of the respondents mentioned that it takes too much time/effort to locate information
- (6.4%) mentioned that it takes too much time/effort to obtain information
- (4.1%) mentioned that the NASA STI system is not accurate/precise enough/reliable
- (2.4%) mentioned that the information they need is not available through NASA
- (2.1%) mentioned that the database is not extensive enough
- (2.0%) mentioned that the reports are too hard to read/use
- (1.7%) mentioned that abstract key words are bad
- (1.2%) mentioned that they prefer hard copy, not electronic information
- (1.2%) mentioned that they don't like the organization of the reports
- (0.9%) mentioned that they library personnel are not good
- (0.9%) mentioned that they hate microfilm/fiche
- (0.8%) mentioned that the NASA library is too small
- (0.8%) mentioned that RECON is hard to use
- (0.7%) mentioned that they want to access it from their own computer
- (0.5%) mentioned that RECON is out of date
- (0.5%) mentioned that the NASA information is old
- (0.4%) mentioned that they can't find and obtain foreign reports
- (0.3%) mentioned that they want what is already checked out
- (0.3%) mentioned that report titles are not always on the microfilm
- (0.3%) mentioned that the librarians are too busy with contractors
- (0.2%) mentioned that they can't use RECON from their office
- (0.2%) mentioned that the tutorials are very slow
- (0.2%) mentioned that the books are not on-site
- (0.2%) mentioned that the system is shut down and they can't use it
- (0.2%) mentioned that they don't like the pilot study with ARIN
- (0.2%) mentioned that the classified information takes too long to de-classify
- (0.2%) mentioned that the paperwork is excessive

(continued)

What problems have you experienced when using the NASA STI system to access information? (DO NOT READ CHOICES) (continued)

(0.1%) mentioned that Army reports are not in the system

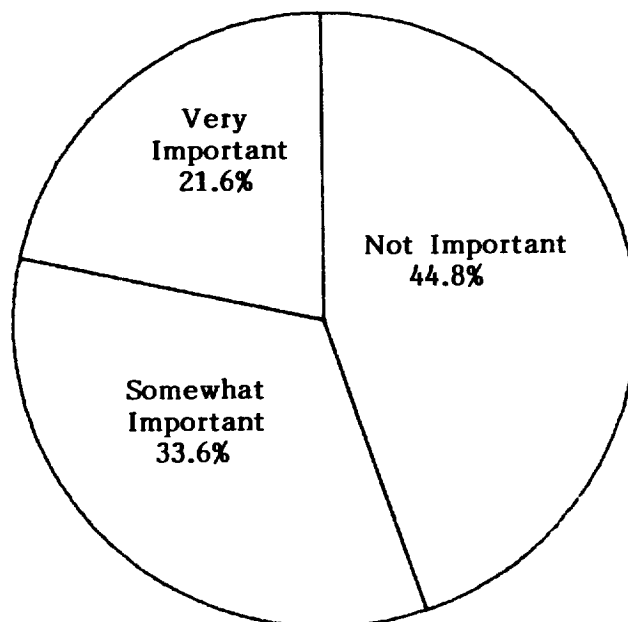
(0.1%) mentioned that it needs linkage with other NASA sites

(n=550)

NOTE: Percentage totals will exceed 100 because some people gave more than one response to this question.

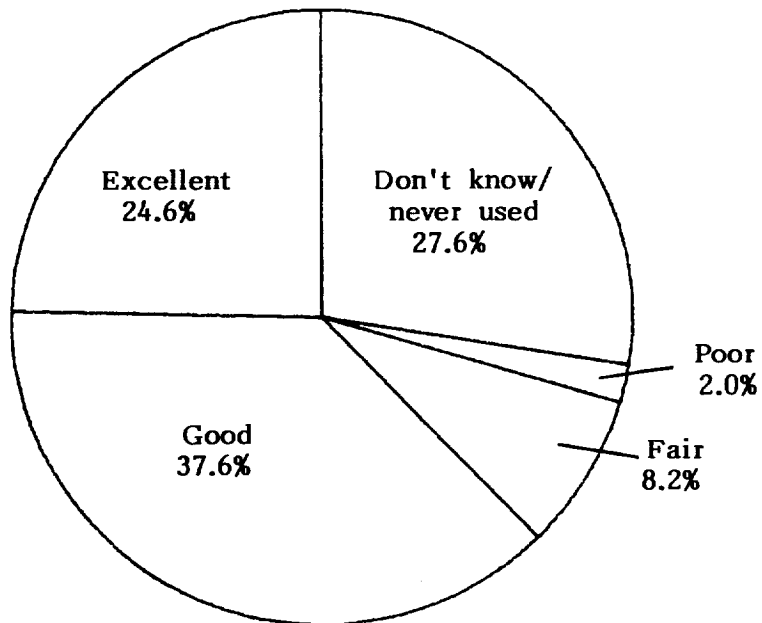
In your job, how important is it for you to publish your work through the NASA STI system? Is it very important, somewhat important, or not important?

	<u>Weighted Total</u>
Very important	21.6%
Somewhat important	33.6%
Not important	<u>44.8%</u>
	100.0%
	(n=550)



How would you evaluate the overall NASA scientific and technical information system in terms of supporting you when you publish your work? Would you say it is excellent, good, fair, or poor?

	<u>Weighted Total</u>
Excellent	24.6%
Good	37.6%
Fair	8.2%
Poor	2.0%
I don't know/never used	<u>27.6%</u>
	100.0%
	(n=550)



Have you encountered any problems using the NASA STI system services when you publish?

	<u>Weighted Total</u>
Yes	9.9%
No	61.9%
I don't know/never used	<u>28.1%</u>
	100.0%
	(n=550)

NOTE: The 54 people who had experienced problems were asked to describe their difficulties. Some people mentioned multiple problem areas, so the next table reflects the number of times a "problem" was mentioned in conversation.

What problems have you experienced when using the NASA STI system services when you publish?

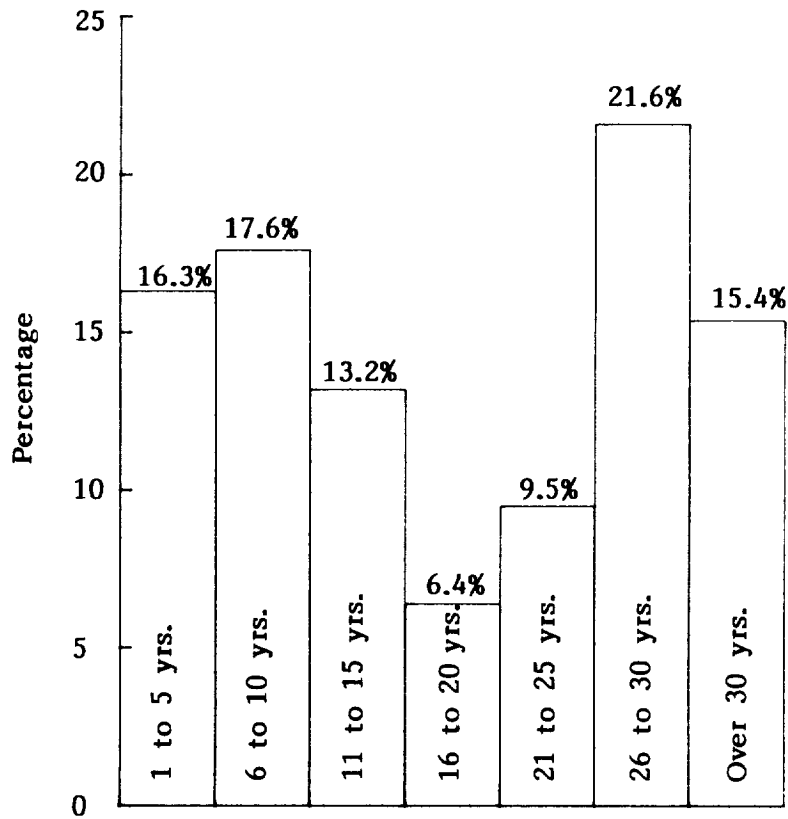
- (90.0%) had not encountered any problems using the NASA STI system services when they publish
 - (8.6%) of the respondents mentioned that the process is too time-consuming
 - (0.6%) mentioned that the graphics aren't accurate
 - (0.4%) mentioned that the staff didn't follow their instructions
 - (0.3%) mentioned that printing and binding is not good
 - (0.3%) mentioned that NASA reports are not well accepted by the scientific community
 - (0.2%) mentioned that the system is rigid/too hard to work in
 - (0.2%) mentioned that the rules for TM's make for a bad project
 - (0.2%) mentioned that the distribution limit rules are bad
 - (0.2%) mentioned that they don't understand the "rules" they have
 - (0.2%) mentioned that the editing quality isn't good
 - (0.2%) mentioned that the photo lab has a backlog
 - (0.2%) mentioned that they couldn't do 35mm slides
- (n=550)

NOTE: Percentage totals will exceed 100 because some people gave more than one response to this question.

How many total years of professional work experience have you had?

	<u>Weighted Total</u>
1 to 5 years	16.3%
6 to 10 years	17.6%
11 to 15 years	13.2%
16 to 20 years	6.4%
21 to 25 years	9.5%
26 to 30 years	21.6%
Over 30 years	<u>15.4%</u>
	100.0%
	(n=550)

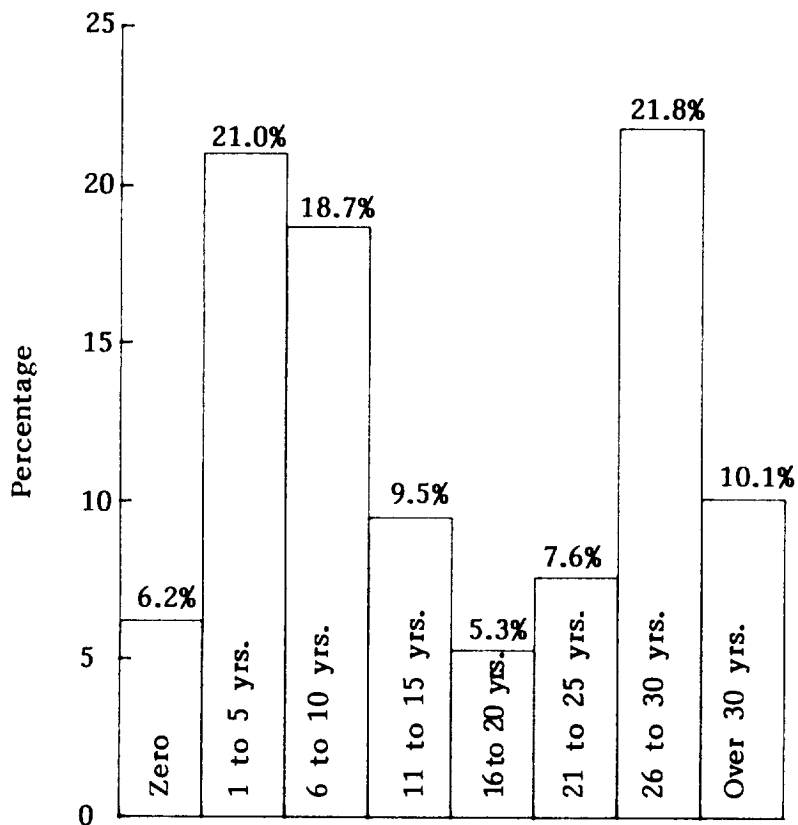
Mean = 18.8 years
 Median = 18 years



How many years, if any, of professional work experience in aerospace have you had?

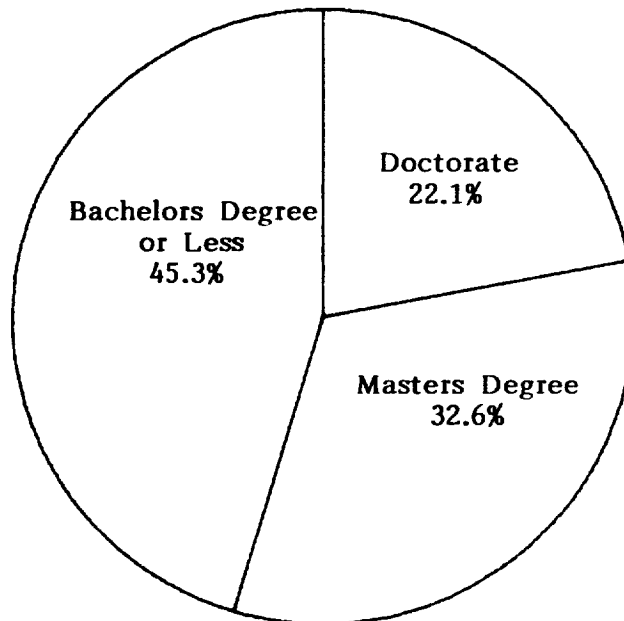
	<u>Weighted Total</u>
Zero	6.2%
1 to 5 years	21.0%
6 to 10 years	18.7%
11 to 15 years	9.5%
16 to 20 years	5.3%
21 to 25 years	7.6%
26 to 30 years	21.8%
Over 30 years	<u>10.1%</u>
	100.0%
	(n=550)

Mean = 16.1 years
 Median = 13 years



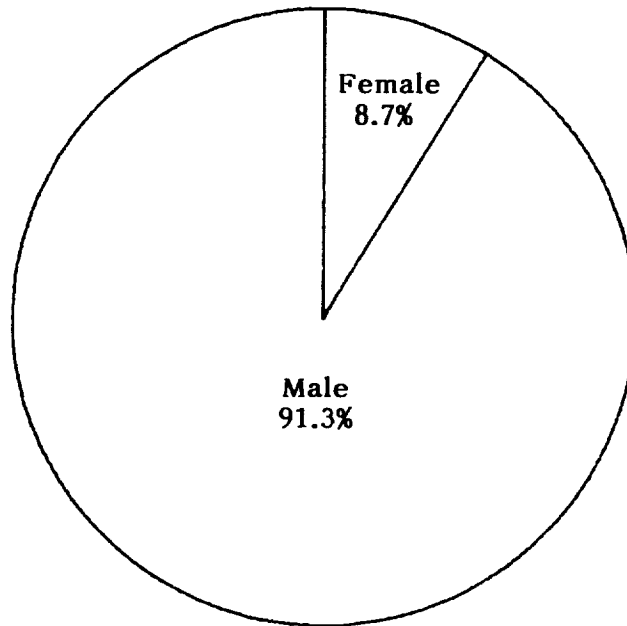
What is the highest level of education you have completed?

	<u>Weighted Total</u>
Bachelors degree (or less)	45.3%
Masters degree	32.6%
Doctorate	<u>22.1%</u>
	100.0%
	(n=550)



Gender of Respondent

	<u>Weighted Total</u>
Male	91.3%
Female	<u>8.7%</u>
	100.0%
	(n=550)



Average (Mean and Median) Number of Times Per Month Uses NASA STI System Products or Services

THEY ARE:	<u>Mean</u>	<u>Median</u>
Engineers	3.04	1.00
Scientists	3.58	2.00
Managers	1.26	1.00
Technicians	3.17	1.00

THEY ARE:		
Individual Researchers	3.86	3.00
Member of Project Team or Group	2.56	1.00
Technical Managers or Supervisors	3.73	1.00
Engineering or Research Support Staff	2.31	1.00
Administrative Support Staff	2.86	1.00

WORKS IN:		
Aeronautics	4.21	2.00
Astronautics	2.06	1.00
Engineering	2.34	1.00
Space Sciences	3.20	2.00
Chemistry and Materials	3.80	6.00
Geosciences	3.12	2.00
Mathematical or Computer Science	1.72	1.00
Physics	1.76	1.00
Social Sciences	6.21	0.00
Life Sciences	2.67	1.00

(continued)

NOTE: Many of these sub-group sample sizes are very small.

Average (Mean and Median) Number of Times Per Month Uses NASA STI System Products or Services (continued)

IN YOUR JOB, STI IS:	<u>Mean</u>	<u>Median</u>
Very important	3.47	2.00
Somewhat important	1.65	1.00
Not important	0.72	0.50

OVERALL, NASA STI SYSTEM IS:		
Very important	4.92	3.00
Somewhat important	1.86	1.00
Not important	0.60	0.50

IN YOUR JOB, NASA STI SYSTEM IS:		
Very important	5.28	3.00
Somewhat important	2.43	1.00
Not important	0.65	0.50

RATING IMPORTANCE OF PUBLISHING THRU NASA STI SYSTEM:		
Very important	4.94	3.00
Somewhat important	3.54	2.00
Not important	1.88	1.00

EDUCATION:		
Bachelors degree or less	2.99	1.00
Masters degree	2.81	2.00
Doctorate	3.73	2.00

NOTE: Many of these sub-group sample sizes are very small.

TABULATIONS BY CENTER

Tabulations for Each Center

The sample quotas were identical for each of the five Centers. This allowed the findings to be presented separately for each Center as well as in a combined (weighted) form.

Ames Research Center and Goddard Space Flight Center had the highest proportion of "scientists" (31 percent and 29 percent respectively) participating in this study, while Marshall had only 9 percent. Langley Research Center had the highest proportion of personnel working as "individual researchers." In fact, only 8 percent of the Langley participants work in support staff roles.

Langley Research Center participants were most likely to report that they work in aeronautics (48 percent), while half of the Marshall respondents were engineers. Clearly, the personnel at the five Centers differ in many ways.

It is expected that participants from each Center would have different scientific and technical information (STI) needs. Differences in their job descriptions would indicate differences in their reliance on STI. When asked if scientific and technical information was an important part of their job, most respondents thought that it was. Marshall Space Flight Center personnel were least likely to rely on STI, but this Center also had the highest representation of support staff in the sample.

In general, respondents who need scientific and technical information look first to resources within their Center. Nearly all of the people interviewed use STI in their jobs, yet some do not use the NASA-sponsored STI system. An informal network of journal "exchanges" and technology documentation serves some staff well.

Tabulations for Each Center (continued)

When asked if publishing was an important part of their jobs, nearly all of the Langley respondents said that it was. Staff at Marshall Space Flight Center were least likely to publish their work. In fact, 41 percent of the Marshall employees said that publishing was unimportant in their careers.

The NASA STI system was considered to be "very important" to 63 percent of the Langley employees interviewed. This contrasts with the Marshall staff in that only 36 percent of them felt that the NASA STI system was very important to them. The Langley personnel clearly rated the NASA STI system highly. On a scale of "excellent, good, fair, or poor," 42 percent of the Langley employees rated it as "excellent." This is a significantly higher score than was bestowed by the personnel at any other center. Additionally, Langley personnel were most likely to publish their work through the NASA STI system and least likely (of those who use the system) to encounter any problems.

If you were to define what you do at work, would you say you are an engineer, a scientist, or something else?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Engineer	71 64.5%	66 60.0%	92 83.6%	79 71.8%	80 72.7%
Scientist	34 30.9%	32 29.1%	10 9.1%	24 21.8%	25 22.7%
Manager	5 4.5%	4 3.6%	4 3.6%	6 5.5%	3 2.7%
Technician	0 0.0%	8 7.3%	4 3.6%	1 0.9%	2 1.8%
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

NOTE: If the respondent was not an engineer or a scientist, other questions were asked to screen out clerical and support staff from this particular survey.

Which of these categories best describes what you do at work? Are you primarily
(READ CHOICES LISTED) :

	Ames Research <u>Center</u>	Goddard Space Flight <u>Center</u>	Marshall Space Flight <u>Center</u>	Lewis Research <u>Center</u>	Langley Research <u>Center</u>
An individual researcher	27 24.5%	21 19.1%	10 9.1%	31 28.2%	44 40.0%
A member of a project team or group	47 42.7%	46 41.8%	44 40.0%	37 33.6%	34 30.9%
A technical manager or supervisor	22 20.0%	25 22.7%	11 10.0%	27 24.5%	23 20.9%
Engineering or research support staff	13 11.8%	16 14.5%	37 33.6%	14 12.7%	9 8.2%
Administrative support staff	1 <u>0.9%</u>	2 <u>1.8%</u>	8 <u>7.3%</u>	1 <u>0.9%</u>	0 <u>0.0%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

If you could use only one term to characterize your area of work or the application of your work, would it be (READ ALL CHOICES LISTED) :

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Aeronautics	46 41.8%	4 3.6%	9 8.2%	47 42.7%	53 48.2%
Astronautics	10 9.1%	10 9.1%	14 12.7%	9 8.2%	4 3.6%
Engineering	21 19.1%	39 35.5%	55 50.0%	27 24.5%	28 25.5%
Space Sciences	20 18.2%	41 37.3%	17 15.5%	19 17.3%	14 12.7%
Chemistry and Materials	2 1.8%	0 0.0%	0 0.0%	0 0.0%	1 0.9%
Geosciences	1 0.9%	9 8.2%	0 0.0%	1 0.9%	3 2.7%
Mathematical and Computer Sciences	5 4.5%	5 4.5%	5 4.5%	3 2.7%	5 4.5%
Physics	1 0.9%	1 0.9%	1 0.9%	4 3.6%	2 1.8%
Social Sciences	1 0.9%	1 0.9%	9 8.2%	0 0.0%	0 0.0%
Life Sciences	3 <u>2.7%</u>	0 <u>0.0%</u>	0 <u>0.0%</u>	0 <u>0.0%</u>	0 <u>0.0%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

NOTE: Only the first four choices were read to the respondents.

In your job, how important is it for you to use scientific and technical information?
 Would you say it is very important, somewhat important, or not important?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Very important	89 80.9%	92 83.6%	71 64.5%	85 77.3%	98 89.1%
Somewhat important	20 18.2%	18 16.4%	30 27.3%	24 21.8%	11 10.0%
Not important	1 0.9%	0 0.0%	9 8.2%	1 0.9%	1 0.9%
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Within center	93 84.5%	99 90.0%	102 92.7%	96 87.3%	95 86.4%
Outside center	17 15.5%	11 10.0%	8 7.3%	14 12.7%	15 13.6%
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

In your job, how important is it for you to publish scientific and technical information? Is it very important, somewhat important, or not important?

	Ames Research <u>Center</u>	Goddard Space Flight <u>Center</u>	Marshall Space Flight <u>Center</u>	Lewis Research <u>Center</u>	Langley Research <u>Center</u>
Very important	54 49.1%	44 40.0%	19 17.3%	59 53.6%	73 66.4%
Somewhat important	34 30.9%	27 24.5%	46 41.8%	26 23.6%	28 25.5%
Not important	22 <u>20.0%</u>	39 <u>35.5%</u>	45 <u>40.9%</u>	25 <u>22.7%</u>	9 <u>8.2%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

The NASA scientific and technical information system provides services such as editing, graphics, photography, printing and library services at each NASA center. This system produces a variety of products including NASA technical reports. STAR, SCAN, RECON, and ARIN are also part of the STI system. How many total times per month do you use any product or service included in the NASA scientific and technical information system?

	Ames Research <u>Center</u>	Goddard Space Flight <u>Center</u>	Marshall Space Flight <u>Center</u>	Lewis Research <u>Center</u>	Langley Research <u>Center</u>
Not at all*	25 22.7%	16 14.5%	27 24.5%	18 16.4%	11 10.0%
Less than once a month*	10 9.1%	10 9.1%	17 15.5%	18 16.4%	0 0.0%
Once a month*	24 21.8%	34 30.9%	29 26.4%	18 16.4%	31 28.2%
Twice a month	20 18.2%	15 13.6%	15 13.6%	19 17.3%	15 13.6%
Three to four times a month	18 16.4%	13 11.8%	7 6.4%	20 18.2%	25 22.7%
Five to ten times a month	11 10.0%	17 15.5%	8 7.3%	12 10.9%	22 20.0%
Over ten times a month	2 1.8%	5 4.5%	7 6.4%	5 4.5%	6 5.5%
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%
Mean =	2.56	2.92	2.62	2.74	4.01
Median =	1.0	1.0	1.0	1.0	1.0

*NOTE: The 288 people who used the system less than twice a month were asked their reasons for the infrequent use (see next page).

(Asked only of those people who used the NASA STI system once a month or less...)

I noticed that you're not a frequent user of the NASA STI system products and services. Why is that?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
It's not part of my job responsibilities	19 32.2%	21 35.0%	25 34.2%	23 42.6%	10 23.8%
I've had no need to use the NASA STI system recently	7 11.9%	15 25.0%	15 20.5%	15 27.8%	13 31.0%
I have the information I need in my office	4 6.8%	6 10.0%	8 11.0%	2 3.7%	5 11.9%
I'm not familiar with the system	4 6.8%	3 5.0%	9 12.3%	3 5.6%	1 2.4%
I do my own typing, graphics, etc.	5 8.5%	1 1.7%	1 1.4%	0 0.0%	6 14.3%
I use my own computer for searches	5 8.5%	4 6.7%	2 2.7%	1 1.9%	1 2.4%
I prefer to use my own journals	2 3.4%	4 6.7%	3 4.1%	0 0.0%	2 4.8%
I use production services occasionally	2 3.4%	1 1.7%	4 5.5%	1 1.9%	1 2.4%
I prefer outside sources	2 3.4%	1 1.7%	1 1.4%	3 5.6%	2 4.8%
NASA information is "old"/I need more current information	4 6.8%	1 1.7%	2 2.7%	2 3.7%	0 0.0%
Contractors do the research for me	1 1.7%	2 3.3%	1 1.4%	1 1.9%	0 0.0%
The NASA system doesn't have what I want	1 1.7%	1 1.7%	2 2.7%	0 0.0%	0 0.0%
The NASA system is hard to use	1 1.7%	0 0.0%	0 0.0%	1 1.9%	0 0.0%
The NASA system is too slow	1 1.7%	0 0.0%	0 0.0%	0 0.0%	1 2.4%

(continued)

(Asked only of those people who used the NASA STI system once a month or less...)

I noticed that you're not a frequent user of the NASA STI system products and services. Why is that? (continued)

	Ames Research <u>Center</u>	Goddard Space Flight <u>Center</u>	Marshall Space Flight <u>Center</u>	Lewis Research <u>Center</u>	Langley Research <u>Center</u>
I prefer Telecon	1 1.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Databases are not part of the NASA system	0 0.0%	0 0.0%	0 0.0%	1 1.9%	0 0.0%
The information is not reliable	0 <u>0.0%</u>	0 <u>0.0%</u>	0 <u>0.0%</u>	1 <u>1.9%</u>	0 <u>0.0%</u>
	59 100.0%	60 100.0%	73 100.0%	54 100.0%	42 100.0%

NOTE: This table has smaller sample sizes because only a sub-set of respondents were asked this question.

Overall, how important is this NASA STI system (I just described) to you? Would you say it is very important, somewhat important, or not important?

	Ames Research <u>Center</u>	Goddard Space Flight <u>Center</u>	Marshall Space Flight <u>Center</u>	Lewis Research <u>Center</u>	Langley Research <u>Center</u>
Very important	38 34.5%	48 43.6%	39 35.5%	54 49.1%	69 62.7%
Somewhat important	46 41.8%	42 38.2%	40 36.4%	40 36.4%	33 30.0%
Not important	26 <u>23.6%</u>	20 <u>18.2%</u>	31 <u>28.2%</u>	16 <u>14.5%</u>	8 <u>7.3%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

To perform your job, how important is it for you to use the NASA STI system?
 Would you say it is very important, somewhat important, or not important?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Very important	34 30.9%	33 30.0%	29 26.4%	40 36.4%	56 50.9%
Somewhat important	44 40.0%	54 49.1%	47 42.7%	51 46.4%	39 35.5%
Not important	32 <u>29.1%</u>	23 <u>20.9%</u>	34 <u>30.9%</u>	19 <u>17.3%</u>	15 <u>13.6%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

How would you evaluate the overall NASA scientific and technical information system
 in terms of meeting your information needs? Would you rate it as excellent, good,
fair, or poor?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Excellent	20 18.2%	23 20.9%	31 28.2%	27 24.5%	46 41.8%
Good	56 50.9%	67 60.9%	53 48.2%	65 59.1%	56 50.9%
Fair	18 16.4%	14 12.7%	5 4.5%	8 7.3%	7 6.4%
Poor	7 6.4%	1 0.9%	0 0.0%	3 2.7%	0 0.0%
I don't know/don't use	9 <u>8.2%</u>	5 <u>4.5%</u>	21 <u>19.1%</u>	7 <u>6.4%</u>	1 <u>0.9%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

Have you encountered problems using the NASA STI system when you need to access information?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Yes	35 31.8%	28 25.5%	22 20.0%	31 28.2%	23 20.9%
No	63 57.3%	77 70.0%	67 60.9%	73 66.4%	86 78.2%
I don't know/ don't use	12 10.9%	5 4.5%	21 19.1%	6 5.5%	1 0.9%
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

In your job, how important is it for you to publish your work through the NASA STI system? Is it very important, somewhat important, or not important?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Very important	26 23.6%	11 10.0%	8 7.3%	28 25.5%	40 36.4%
Somewhat important	30 27.3%	30 27.3%	35 31.8%	44 40.0%	43 39.1%
Not important	54 49.1%	69 62.7%	67 60.9%	38 34.5%	27 24.5%
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

How would you evaluate the overall NASA scientific and technical information system in terms of supporting you when you publish your work? Would you say it is excellent, good, fair, or poor?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Excellent	17 15.5%	21 19.1%	16 14.5%	29 26.4%	42 38.2%
Good	40 36.4%	36 32.7%	29 26.4%	52 47.3%	47 42.7%
Fair	18 16.4%	5 4.5%	14 12.7%	10 9.1%	5 4.5%
Poor	8 7.3%	2 1.8%	0 0.0%	2 1.8%	1 0.9%
I don't know/ never used	27 24.5%	46 41.8%	51 46.4%	17 15.5%	15 13.6%
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

Have you encountered any problems using the NASA STI system services when you publish?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Yes	17 15.5%	4 3.6%	6 5.5%	14 12.7%	15 13.6%
No	67 60.9%	54 49.1%	53 48.2%	80 72.7%	82 74.5%
I don't know/ never used	26 23.6%	52 47.3%	51 46.4%	16 14.5%	13 11.8%
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

How many total years of professional work experience have you had?

	Ames Research <u>Center</u>	Goddard Space Flight <u>Center</u>	Marshall Space Flight <u>Center</u>	Lewis Research <u>Center</u>	Langley Research <u>Center</u>
1 to 5 years	16 14.5%	20 18.2%	23 20.9%	12 10.9%	18 16.4%
6 to 10 years	26 23.6%	13 11.8%	19 17.3%	21 19.1%	21 19.1%
11 to 15 years	13 11.8%	22 20.0%	19 17.3%	10 9.1%	9 8.2%
16 to 20 years	15 13.6%	7 6.4%	8 7.3%	5 4.5%	4 3.6%
21 to 25 years	13 11.8%	17 15.5%	6 5.5%	12 10.9%	5 4.5%
26 to 30 years	16 14.5%	19 17.3%	16 14.5%	27 24.5%	34 30.9%
Over 30 years	11 <u>10.0%</u>	12 <u>10.9%</u>	19 <u>17.3%</u>	23 <u>20.9%</u>	19 <u>17.3%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%
Mean =	17.5	17.7	17.3	21.1	19.8
Median =	15.5	15.5	13.5	25.0	24.5

How many years, if any, of professional work experience in aerospace have you had?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
None	10 9.1%	8 7.3%	10 9.1%	1 0.9%	6 5.5%
1 to 5 years	21 19.1%	25 22.7%	32 29.1%	19 17.3%	20 18.2%
6 to 10 years	30 27.3%	15 13.6%	21 19.1%	25 22.7%	18 16.4%
11 to 15 years	13 11.8%	15 13.6%	8 7.3%	8 7.3%	8 7.3%
16 to 20 years	7 6.4%	9 8.2%	4 3.6%	5 4.5%	4 3.6%
21 to 25 years	9 8.2%	11 10.0%	8 7.3%	8 7.3%	6 5.5%
26 to 30 years	14 12.7%	17 15.5%	19 17.3%	28 25.5%	35 31.8%
Over 30 years	6 <u>5.5%</u>	10 <u>9.1%</u>	8 <u>7.3%</u>	16 <u>14.5%</u>	13 <u>11.8%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%
Mean =	13.6	15.1	13.3	18.4	18.1
Median =	10.0	12.0	8.0	19.0	19.0

What is the highest level of education you have completed?

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Bachelors degree (or less)	28 25.5%	55 50.0%	82 74.5%	38 34.5%	45 40.9%
Masters degree	48 43.6%	23 20.9%	17 15.5%	50 45.5%	43 39.1%
Doctorate	34 <u>30.9%</u>	32 <u>29.1%</u>	11 <u>10.0%</u>	22 <u>20.0%</u>	22 <u>20.0%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

Gender of Respondent

	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Male	95 86.4%	102 92.7%	93 84.5%	102 92.7%	105 95.5%
Female	15 <u>13.6%</u>	8 <u>7.3%</u>	17 <u>15.5%</u>	8 <u>7.3%</u>	5 <u>4.5%</u>
	110 100.0%	110 100.0%	110 100.0%	110 100.0%	110 100.0%

Average (Mean and Median) Number of Times Per Month Uses NASA STI System Products or Services

	Ames Research <u>Center</u>	Goddard Space Flight <u>Center</u>	Marshall Space Flight <u>Center</u>	Lewis Research <u>Center</u>	Langley Research <u>Center</u>
THEY ARE:					
Engineers					
Mean	1.87	2.89	2.32	2.53	4.43
Median	1.00	1.50	1.00	1.00	2.00
Scientists					
Mean	4.21	2.95	6.60	3.94	2.96
Median	2.00	1.50	3.50	3.00	3.00
Managers					
Mean	1.20	0.50	1.50	1.00	2.33
Median	1.00	0.50	0.00	1.00	2.00
Technicians					
Mean	0.00	4.25	0.75	0.50	3.00
Median	0.00	1.00	0.50	0.50	3.00
THEY ARE:					
Individual Researchers					
Mean	4.48	3.12	7.30	4.13	3.43
Median	2.00	1.00	3.50	3.00	3.00
Member of Project Team or Group					
Mean	2.26	3.25	1.53	1.93	3.12
Median	1.00	1.50	1.00	2.00	2.00
Technical Managers or Supervisors					
Mean	1.30	2.04	7.05	1.74	7.04
Median	1.00	1.00	1.00	1.00	3.00
Engineering or Research Support Staff					
Mean	1.73	2.25	1.80	3.86	2.44
Median	1.00	1.00	1.00	0.75	1.00
Administrative Support Staff					
Mean	4.00	9.50	0.50	0.50	0.00
Median	4.00	9.50	0.50	0.50	0.00

(continued)

NOTE: Many of these sub-group sample sizes are very small.

Average (Mean and Median) Number of Times Per Month Uses NASA STI System Products or Services (continued)

WORKS IN:	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Aeronautics					
Mean	3.55	4.00	2.06	3.47	5.11
Median	2.00	0.50	1.00	2.00	4.00
Astronautics					
Mean	2.05	2.40	1.14	1.28	4.25
Median	0.75	1.00	0.75	1.00	4.00
Engineering					
Mean	1.40	1.81	2.62	2.39	3.00
Median	1.00	1.00	1.00	1.00	2.00
Space Sciences					
Mean	2.35	3.24	4.74	2.63	3.07
Median	1.00	1.00	2.00	1.00	2.00
Chemistry and Materials					
Mean	1.50	0.00	0.00	0.00	6.00
Median	1.50	0.00	0.00	0.00	6.00
Geosciences					
Mean	0.00	3.94	0.00	0.50	2.00
Median	0.00	2.00	0.00	0.50	2.00
Mathematical or Computer Science					
Mean	1.20	2.40	1.10	1.50	1.80
Median	0.00	2.00	1.00	0.50	1.00
Physics					
Mean	0.50	0.00	3.00	1.75	2.50
Median	0.50	0.00	3.00	1.00	2.50

(continued)

Average (Mean and Median) Number of Times Per Month Uses NASA STI System Products or Services (continued)

WORKS IN:	Ames	Goddard	Marshall	Lewis	Langley
	<u>Research Center</u>	<u>Space Flight Center</u>	<u>Space Flight Center</u>	<u>Research Center</u>	<u>Research Center</u>
Social Sciences					
Mean	4.00	30.00	2.33	0.00	0.00
Median	4.00	30.00	0.00	0.00	0.00
Life Sciences					
Mean	2.67	0.00	0.00	0.00	0.00
Median	1.00	0.00	0.00	0.00	0.00
IN YOUR JOB, STI IS:					
Very important					
Mean	2.98	3.21	2.76	3.22	4.32
Median	2.00	1.00	1.00	2.00	3.00
Somewhat important					
Mean	0.83	1.44	2.93	1.08	1.45
Median	0.50	1.00	0.50	0.50	1.00
Not important					
Mean	0.00	0.00	0.50	1.00	2.00
Median	0.00	0.00	0.00	1.00	2.00
OVERALL, NASA STI SYSTEM IS:					
Very important					
Mean	5.13	4.45	5.10	4.31	5.39
Median	3.00	2.00	2.00	3.00	4.00
Somewhat important					
Mean	1.57	2.19	1.99	1.56	1.82
Median	1.00	1.00	1.00	1.00	1.00
Not important					
Mean	0.58	0.78	0.32	0.38	1.13
Median	0.25	0.50	0.00	0.00	0.50

(continued)

Average (Mean and Median) Number of Times Per Month Uses NASA STI System Products or Services (continued)

IN YOUR JOB, NASA STI IS:	Ames	Goddard	Marshall	Lewis	Langley
	Research <u>Center</u>	Space Flight <u>Center</u>	Space Flight <u>Center</u>	Research <u>Center</u>	Research <u>Center</u>
Very important					
Mean	5.50	4.29	5.72	4.69	5.86
Median	3.00	2.00	2.00	2.50	4.00
Somewhat important					
Mean	1.55	2.98	2.39	2.03	2.59
Median	1.00	1.00	1.00	2.00	2.00
Not important					
Mean	0.84	0.80	0.29	0.53	0.80
Median	0.00	1.00	0.00	0.00	1.00

RATING IMPORTANCE OF PUBLISHING THRU NASA STI:

Very important					
Mean	5.29	3.50	7.75	2.75	5.83
Median	3.00	1.00	1.50	2.00	4.00
Somewhat important					
Mean	2.57	3.27	3.70	3.85	3.74
Median	2.00	2.00	2.00	2.00	2.00
Not important					
Mean	1.25	2.67	1.45	1.43	1.74
Median	1.00	1.00	0.50	0.50	1.00

(continued)

Average (Mean and Median) Number of Times Per Month Uses NASA STI System Products or Services (continued)

EDUCATION:	Ames Research Center	Goddard Space Flight Center	Marshall Space Flight Center	Lewis Research Center	Langley Research Center
Bachelors degree or less					
Mean	2.75	3.22	2.35	2.46	3.78
Median	1.50	1.00	1.00	1.00	2.00
Masters degree					
Mean	1.51	2.20	2.47	2.45	4.14
Median	1.00	1.00	1.00	2.00	2.00
Doctorate					
Mean	3.90	2.92	4.91	3.86	4.23
Median	2.00	1.00	2.00	3.00	3.00

SELECTED CROSSTABULATIONS

This section of the report crosstabulates demographic and other profile information by:

In your job, how important is it for you to use STI?

When you need STI, do you look first within your center or to an outside source?

Overall, how important is the NASA STI system to you?

To perform your job, how important is the NASA STI system?

In terms of meeting your information needs, how would you rate the NASA STI system?

Have you encountered problems using the NASA STI system?

How important is it for you to publish through the NASA STI system?

How would you rate the NASA STI system in supporting you when you publish?

Have you encountered problems using the NASA STI system when you publish?

ENGINEERS VS. SCIENTISTS

In your job, how important is it for you to use scientific and technical information? Would you say it is very important, somewhat important, or not important?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Very important	79.0%	90.3%	53.3%	78.4%	80.6%
Somewhat important	19.2%	9.7%	39.1%	12.1%	17.5%
Not important	<u>1.8%</u>	<u>0.0%</u>	<u>7.6%</u>	<u>9.5%</u>	<u>1.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Within center	90.2%	82.7%	88.3%	83.1%	88.2%
Outside center	<u>9.8%</u>	<u>17.3%</u>	<u>11.7%</u>	<u>16.9%</u>	<u>11.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

Overall, how important is this NASA STI system (I just described) to you? Would you say it is very important, somewhat important, or not important?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Very important	43.5%	63.1%	38.6%	31.6%	47.5%
Somewhat important	37.5%	28.7%	45.8%	36.3%	35.8%
Not important	<u>19.0%</u>	<u>8.2%</u>	<u>15.6%</u>	<u>32.1%</u>	<u>16.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

To perform your job, how important is it for you to use the NASA STI system?
 Would you say it is very important, somewhat important, or not important?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Very important	32.9%	52.7%	21.1%	17.9%	36.6%
Somewhat important	42.8%	39.1%	44.2%	59.9%	42.5%
Not important	<u>24.3%</u>	<u>8.2%</u>	<u>34.7%</u>	<u>22.2%</u>	<u>20.9%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system
 in terms of meeting your information needs? Would you rate it as excellent, good,
fair, or poor?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Excellent	28.7%	29.0%	30.4%	8.4%	28.2%
Good	53.1%	59.3%	41.7%	62.6%	54.4%
Fair	9.4%	7.1%	12.2%	14.7%	9.1%
Poor	1.6%	1.9%	0.0%	0.0%	1.6%
I don't know/don't use	<u>7.1%</u>	<u>2.7%</u>	<u>15.6%</u>	<u>14.3%</u>	<u>6.7%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

Have you encountered problems using the NASA STI system when you need to access
 information?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Yes	22.8%	34.3%	13.3%	8.4%	24.6%
No	70.1%	62.0%	71.1%	77.3%	68.5%
I don't know/don't use	<u>7.1%</u>	<u>3.7%</u>	<u>15.6%</u>	<u>14.3%</u>	<u>6.9%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

In your job, how important is it for you to publish your work through the NASA STI system? Is it very important, somewhat important, or not important?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Very important	21.2%	22.7%	17.3%	26.8%	21.6%
Somewhat important	34.7%	35.2%	24.5%	8.4%	33.6%
Not important	<u>44.1%</u>	<u>42.1%</u>	<u>58.2%</u>	<u>64.8%</u>	<u>44.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system in terms of supporting you when you publish your work? Would you say it is excellent, good, fair, or poor?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Excellent	24.8%	24.2%	32.5%	12.1%	24.6%
Good	36.3%	44.9%	17.1%	38.9%	37.6%
Fair	8.4%	8.3%	12.2%	0.0%	8.2%
Poor	1.9%	3.0%	0.0%	0.0%	2.0%
I don't know/never used	<u>28.7%</u>	<u>19.5%</u>	<u>38.2%</u>	<u>49.0%</u>	<u>27.6%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

Have you encountered any problems using the NASA STI system services when you publish?

	<u>Eng.</u>	<u>Scient.</u>	<u>Mngr.</u>	<u>Tech.</u>	<u>Total</u>
Yes	8.2%	15.6%	16.5%	0.0%	9.9%
No	61.9%	66.0%	45.3%	51.0%	61.9%
I don't know/never used	<u>29.9%</u>	<u>18.4%</u>	<u>38.2%</u>	<u>49.0%</u>	<u>28.1%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%

AREA OF WORK OR APPLICATION OF WORK

In your job, how important is it for you to use scientific and technical information? Would you say it is very important, somewhat important, or not important?

	Aero- nautics	Astro- nautics	Engineer.	Space Sciences	Chem. & Mater.	Geo- Sciences	Math/ Computer		Physics	Social Sciences	Life Sciences	Total
							Sciences	Sciences				
Very important	82.5%	84.9%	75.5%	83.4%	100.0%	92.7%	79.8%	100.0%	100.0%	38.5%	100.0%	80.6%
Somewhat important	16.5%	13.3%	21.8%	16.6%	0.0%	7.3%	16.8%	0.0%	0.0%	35.1%	0.0%	17.5%
Not important	<u>1.0%</u>	<u>1.8%</u>	<u>2.7%</u>	<u>0.0%</u>	<u>0.0%</u>	<u>0.0%</u>	<u>3.4%</u>	<u>0.0%</u>	<u>0.0%</u>	<u>26.3%</u>	<u>0.0%</u>	<u>1.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?

	Aero- nautics	Astro- nautics	Engineer.	Space Sciences	Chem. & Mater.	Geo- Sciences	Math/ Computer		Physics	Social Sciences	Life Sciences	Total
							Sciences	Sciences				
Within center	89.1%	83.7%	91.8%	89.1%	75.6%	88.7%	69.7%	66.8%	66.8%	91.2%	66.7%	88.2%
Outside center	<u>10.9%</u>	<u>16.3%</u>	<u>8.2%</u>	<u>10.9%</u>	<u>24.4%</u>	<u>11.3%</u>	<u>30.3%</u>	<u>33.2%</u>	<u>33.2%</u>	<u>8.8%</u>	<u>33.3%</u>	<u>11.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Have you encountered any problems using the NASA STI system services when you publish?

	Aero- nautics	Astro- nautics	Engineer.	Space Sciences	Chem. & Mater.	Geo- Sciences	Math/ Computer Sciences	Physics	Social Sciences	Life Sciences	Total
Yes	14.6%	15.1%	5.3%	6.7%	24.4%	7.3%	10.6%	19.6%	7.4%	66.7%	9.9%
No	75.6%	52.0%	57.4%	60.8%	75.6%	50.1%	45.0%	73.0%	22.4%	33.3%	61.9%
I don't know/ never used	<u>9.8%</u>	<u>32.9%</u>	<u>37.2%</u>	<u>32.4%</u>	<u>0.0%</u>	<u>42.6%</u>	<u>44.4%</u>	<u>7.4%</u>	<u>70.3%</u>	<u>0.0%</u>	<u>28.1%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

EDUCATIONAL ATTAINMENT

In your job, how important is it for you to use scientific and technical information? Would you say it is very important, somewhat important, or not important?

	Bachelors Degree or Less	Masters Degree	Doctorate	Total
Very important	73.0%	83.0%	92.7%	80.6%
Somewhat important	23.5%	16.6%	6.6%	17.5%
Not important	<u>3.5%</u>	<u>0.4%</u>	<u>0.7%</u>	<u>1.8%</u>
	100.0%	100.0%	100.0%	100.0%

When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?

	Bachelors Degree or Less	Masters Degree	Doctorate	Total
Within center	92.1%	88.0%	80.5%	88.2%
Outside center	<u>7.9%</u>	<u>12.0%</u>	<u>19.5%</u>	<u>11.8%</u>
	100.0%	100.0%	100.0%	100.0%

Overall, how important is this NASA STI system (I just described) to you? Would you say it is very important, somewhat important, or not important?

	Bachelors Degree or Less	Masters Degree	Doctorate	Total
Very important	37.0%	47.1%	69.4%	47.5%
Somewhat important	39.0%	39.5%	23.4%	35.8%
Not important	<u>23.9%</u>	<u>13.4%</u>	<u>7.2%</u>	<u>16.8%</u>
	100.0%	100.0%	100.0%	100.0%

To perform your job, how important is it for you to use the NASA STI system?
 Would you say it is very important, somewhat important, or not important?

	Bachelors Degree or Less	Masters Degree	Doctorate	Total
Very important	25.5%	38.2%	56.8%	36.6%
Somewhat important	46.4%	42.8%	34.3%	42.5%
Not important	<u>28.2%</u>	<u>18.9%</u>	<u>8.9%</u>	<u>20.9%</u>
	100.0%	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system
 in terms of meeting your information needs? Would you rate it as excellent, good,
fair, or poor?

	Bachelors Degree or Less	Masters Degree	Doctorate	Total
Excellent	27.9%	26.8%	31.1%	28.2%
Good	51.4%	56.5%	57.5%	54.4%
Fair	10.4%	9.1%	6.7%	9.1%
Poor	1.0%	2.5%	1.3%	1.6%
I don't know/don't use	<u>9.4%</u>	<u>5.0%</u>	<u>3.4%</u>	<u>6.7%</u>
	100.0%	100.0%	100.0%	100.0%

Have you encountered problems using the NASA STI system when you need to access
 information?

	Bachelors Degree or Less	Masters Degree	Doctorate	Total
Yes	18.8%	26.3%	34.3%	24.6%
No	71.9%	68.3%	61.7%	68.5%
I don't know/don't use	<u>9.3%</u>	<u>5.4%</u>	<u>4.0%</u>	<u>6.9%</u>
	100.0%	100.0%	100.0%	100.0%

In your job, how important is it for you to publish your work through the NASA STI system? Is it very important, somewhat important, or not important?

	Bachelors Degree <u>or Less</u>	Masters Degree	Doctorate	<u>Total</u>
Very important	15.8%	28.1%	23.9%	21.6%
Somewhat important	34.2%	32.1%	34.5%	33.6%
Not important	<u>50.0%</u>	<u>39.8%</u>	<u>41.6%</u>	<u>44.8%</u>
	100.0%	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system in terms of supporting you when you publish your work? Would you say it is excellent, good, fair, or poor?

	Bachelors Degree <u>or Less</u>	Masters Degree	Doctorate	<u>Total</u>
Excellent	21.2%	23.7%	32.6%	24.6%
Good	31.1%	44.6%	40.6%	37.6%
Fair	8.1%	8.4%	8.3%	8.2%
Poor	0.8%	3.2%	2.7%	2.0%
I don't know/never used	<u>38.8%</u>	<u>20.0%</u>	<u>15.7%</u>	<u>27.6%</u>
	100.0%	100.0%	100.0%	100.0%

Have you encountered any problems using the NASA STI system services when you publish?

	Bachelors Degree <u>or Less</u>	Masters Degree	Doctorate	<u>Total</u>
Yes	4.1%	12.1%	18.6%	9.9%
No	56.8%	66.5%	65.6%	61.9%
I don't know/never used	<u>39.0%</u>	<u>21.4%</u>	<u>15.7%</u>	<u>28.1%</u>
	100.0%	100.0%	100.0%	100.0%

YEARS OF PROFESSIONAL WORK EXPERIENCE

In your job, how important is it for you to use scientific and technical information? Would you say it is very important, somewhat important, or not important?

	Years of Professional Work Experience						Total	
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Very important	86.4%	83.8%	83.5%	87.8%	77.4%	80.0%	68.2%	80.6%
Somewhat important	12.7%	13.9%	16.5%	12.2%	19.5%	18.6%	27.2%	17.5%
Not important	<u>0.9%</u>	<u>2.3%</u>	<u>0.0%</u>	<u>0.0%</u>	<u>3.1%</u>	<u>1.4%</u>	<u>4.6%</u>	<u>1.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?

	Years of Professional Work Experience						Total	
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Within center	94.1%	89.2%	92.1%	89.3%	84.7%	83.0%	86.3%	88.2%
Outside center	<u>5.9%</u>	<u>10.8%</u>	<u>7.9%</u>	<u>10.7%</u>	<u>15.3%</u>	<u>17.0%</u>	<u>13.7%</u>	<u>11.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Overall, how important is this NASA STI system (I just described) to you? Would you say it is very important, somewhat important, or not important?

	Years of Professional Work Experience						Total	
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Very important	47.8%	46.7%	52.7%	46.2%	35.0%	54.7%	41.5%	47.5%
Somewhat important	37.5%	35.9%	35.2%	28.3%	47.6%	33.3%	33.5%	35.8%
Not important	14.7%	17.4%	12.1%	25.6%	17.4%	12.0%	25.0%	16.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

To perform your job, how important is it for you to use the NASA STI system? Would you say it is very important, somewhat important, or not important?

	Years of Professional Work Experience						Total	
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Very important	37.4%	32.7%	41.3%	42.9%	23.5%	38.1%	39.3%	36.6%
Somewhat important	44.2%	47.7%	40.9%	33.4%	45.8%	45.8%	33.3%	42.5%
Not important	18.4%	19.5%	17.8%	23.7%	30.6%	16.1%	27.4%	20.9%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system in terms of meeting your information needs? Would you rate it as excellent, good, fair, or poor?

	Years of Professional Work Experience						Total
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years	
Excellent	24.6%	24.0%	26.4%	33.4%	15.5%	38.5%	28.2%
Good	62.3%	49.5%	56.9%	44.2%	73.9%	48.0%	54.4%
Fair	6.6%	18.1%	9.7%	5.4%	6.2%	6.4%	9.1%
Poor	1.5%	2.1%	0.0%	3.8%	0.0%	1.8%	1.6%
I don't know/don't use	<u>5.0%</u>	<u>6.4%</u>	<u>7.0%</u>	<u>13.2%</u>	<u>4.3%</u>	<u>5.3%</u>	<u>6.7%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Have you encountered problems using the NASA STI system when you need to access information?

	Years of Professional Work Experience						Total
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years	
Yes	28.7%	25.9%	37.4%	27.9%	17.7%	18.5%	24.6%
No	66.2%	67.0%	54.7%	59.5%	77.9%	76.2%	68.5%
I don't know/don't use	<u>5.0%</u>	<u>7.1%</u>	<u>7.9%</u>	<u>12.5%</u>	<u>4.3%</u>	<u>5.3%</u>	<u>6.9%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Have you encountered any problems using the NASA STI system services when you publish?

	Years of Professional Work Experience						Total	
	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Yes	6.3%	8.2%	11.8%	5.7%	8.3%	12.9%	12.8%	9.9%
No	57.5%	66.0%	55.7%	57.4%	45.3%	73.1%	63.7%	61.9%
I don't know/never used	<u>36.2%</u>	<u>25.8%</u>	<u>32.5%</u>	<u>36.9%</u>	<u>46.3%</u>	<u>14.0%</u>	<u>23.6%</u>	<u>28.1%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

YEARS OF AEROSPACE WORK EXPERIENCE

In your job, how important is it for you to use scientific and technical information? Would you say it is very important, somewhat important, or not important?

	Years of Aerospace Work Experience							Total	
	None	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Very important	73.8%	86.2%	84.0%	83.1%	89.6%	72.5%	80.7%	65.7%	80.6%
Somewhat important	21.4%	13.1%	14.6%	16.9%	7.4%	19.8%	18.6%	31.7%	17.5%
Not important	<u>4.7%</u>	<u>0.7%</u>	<u>1.4%</u>	<u>0.0%</u>	<u>3.1%</u>	<u>7.7%</u>	<u>0.7%</u>	<u>2.7%</u>	<u>1.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?

	Years of Aerospace Work Experience							Total	
	None	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Within center	80.8%	92.7%	92.1%	92.0%	86.3%	86.6%	81.7%	88.5%	88.2%
Outside center	<u>19.2%</u>	<u>7.3%</u>	<u>7.9%</u>	<u>8.0%</u>	<u>13.7%</u>	<u>13.4%</u>	<u>18.3%</u>	<u>11.5%</u>	<u>11.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Overall, how important is this NASA STI system (I just described) to you? Would you say it is very important, somewhat important, or not important?

Years of Aerospace Work Experience

	<u>None</u>	<u>1-5</u> <u>Years</u>	<u>6-10</u> <u>Years</u>	<u>11-15</u> <u>Years</u>	<u>16-20</u> <u>Years</u>	<u>21-25</u> <u>Years</u>	<u>26-30</u> <u>Years</u>	<u>Over</u> <u>30</u> <u>Years</u>	<u>Total</u>
Very important	43.0%	48.7%	43.2%	49.5%	57.0%	34.0%	56.7%	38.7%	47.5%
Somewhat important	30.5%	37.4%	36.8%	34.9%	28.8%	48.3%	31.3%	38.2%	35.8%
Not important	<u>26.5%</u>	<u>13.9%</u>	<u>20.0%</u>	<u>15.5%</u>	<u>14.2%</u>	<u>17.6%</u>	<u>12.0%</u>	<u>23.1%</u>	<u>16.8%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

To perform your job, how important is it for you to use the NASA STI system? Would you say it is very important, somewhat important, or not important?

Years of Aerospace Work Experience

	<u>None</u>	<u>1-5</u> <u>Years</u>	<u>6-10</u> <u>Years</u>	<u>11-15</u> <u>Years</u>	<u>16-20</u> <u>Years</u>	<u>21-25</u> <u>Years</u>	<u>26-30</u> <u>Years</u>	<u>Over</u> <u>30</u> <u>Years</u>	<u>Total</u>
Very important	41.2%	37.1%	30.3%	41.6%	46.6%	18.1%	41.1%	38.5%	36.6%
Somewhat important	26.2%	45.8%	48.1%	37.7%	36.9%	53.5%	41.8%	36.4%	42.5%
Not important	<u>32.6%</u>	<u>17.2%</u>	<u>21.6%</u>	<u>20.7%</u>	<u>16.5%</u>	<u>28.4%</u>	<u>17.1%</u>	<u>25.2%</u>	<u>20.9%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system in terms of meeting your information needs? Would you rate it as excellent, good, fair, or poor?

	Years of Aerospace Work Experience							Total	
	None	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Excellent	22.4%	23.6%	25.6%	24.7%	40.0%	10.2%	40.6%	30.4%	28.2%
Good	43.6%	62.5%	52.0%	54.1%	46.1%	75.7%	45.9%	55.7%	54.4%
Fair	13.7%	8.2%	13.0%	13.0%	7.0%	4.8%	7.0%	6.4%	9.1%
Poor	2.0%	1.2%	2.0%	1.3%	0.0%	0.0%	1.8%	3.2%	1.6%
I don't know/don't use	<u>18.3%</u>	<u>4.5%</u>	<u>7.5%</u>	<u>6.9%</u>	<u>6.9%</u>	<u>9.3%</u>	<u>4.7%</u>	<u>4.3%</u>	<u>6.7%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Have you encountered problems using the NASA STI system when you need to access information?

	Years of Aerospace Work Experience							Total	
	None	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years		Over 30 Years
Yes	19.9%	29.0%	26.1%	41.3%	16.1%	22.1%	18.6%	19.5%	24.6%
No	59.8%	66.5%	66.5%	50.5%	77.0%	68.6%	76.7%	76.3%	68.5%
I don't know/don't use	<u>20.3%</u>	<u>4.5%</u>	<u>7.3%</u>	<u>8.2%</u>	<u>6.9%</u>	<u>9.3%</u>	<u>4.7%</u>	<u>4.3%</u>	<u>6.9%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

In your job, how important is it for you to publish your work through the NASA STI system? Is it very important, somewhat important, or not important?

	Years of Aerospace Work Experience						Total		
	None	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years		26-30 Years	Over 30 Years
Very important	12.0%	19.7%	16.1%	19.7%	14.5%	9.3%	38.4%	19.8%	21.6%
Somewhat important	18.5%	35.2%	40.4%	26.8%	32.9%	44.7%	29.5%	34.0%	33.6%
Not important	69.5%	45.0%	43.5%	53.6%	52.7%	46.0%	32.0%	46.3%	44.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system in terms of supporting you when you publish your work? Would you say it is excellent, good, fair, or poor?

	Years of Aerospace Work Experience						Total		
	None	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years		26-30 Years	Over 30 Years
Excellent	18.8%	10.6%	20.7%	13.2%	35.4%	21.6%	39.8%	38.7%	24.6%
Good	29.6%	40.4%	39.5%	42.1%	36.9%	44.4%	37.0%	25.6%	37.6%
Fair	5.6%	11.3%	13.1%	7.5%	0.0%	2.1%	7.5%	5.6%	8.2%
Poor	2.0%	1.7%	2.0%	1.3%	0.0%	0.0%	2.1%	5.8%	2.0%
I don't know/never used	44.0%	35.9%	24.7%	35.9%	27.8%	31.8%	13.7%	24.4%	27.6%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Have you encountered any problems using the NASA STI system services when you publish?

Years of Aerospace Work Experience

	None	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	26-30 Years	Over 30 Years	Total
Yes	2.0%	6.2%	10.9%	14.6%	4.2%	3.8%	13.5%	16.5%	9.9%
No	54.0%	55.7%	63.0%	50.8%	68.0%	64.4%	71.7%	61.7%	61.9%
I don't know/never used	<u>44.0%</u>	<u>38.1%</u>	<u>26.1%</u>	<u>34.7%</u>	<u>27.8%</u>	<u>31.8%</u>	<u>14.7%</u>	<u>21.8%</u>	<u>28.1%</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

GENDER OF RESPONDENT

In your job, how important is it for you to use scientific and technical information?
 Would you say it is very important, somewhat important, or not important?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Very important	80.9%	77.8%	80.6%
Somewhat important	17.4%	18.8%	17.7%
Not important	<u>1.7%</u>	<u>3.3%</u>	<u>1.8%</u>
	100.0%	100.0%	100.0%

When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Within center	89.2%	78.0%	88.2%
Outside center	<u>10.8%</u>	<u>22.0%</u>	<u>11.8%</u>
	100.0%	100.0%	100.0%

Overall, how important is this NASA STI system (I just described) to you? Would you say it is very important, somewhat important, or not important?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Very important	47.0%	52.0%	47.5%
Somewhat important	36.2%	31.2%	35.8%
Not important	<u>16.8%</u>	<u>16.8%</u>	<u>16.8%</u>
	100.0%	100.0%	100.0%

To perform your job, how important is it for you to use the NASA STI system? Would you say it is very important, somewhat important, or not important?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Very important	36.9%	33.4%	36.6%
Somewhat important	41.8%	49.8%	42.5%
Not important	<u>21.3%</u>	<u>16.8%</u>	<u>20.9%</u>
	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system in terms of meeting your information needs? Would you rate it as excellent, good, fair, or poor?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Excellent	28.9%	21.1%	28.2%
Good	54.8%	50.1%	54.4%
Fair	8.5%	16.0%	9.1%
Poor	1.7%	0.0%	1.6%
I don't know/don't use	<u>6.1%</u>	<u>12.9%</u>	<u>6.7%</u>
	100.0%	100.0%	100.0%

Have you encountered problems using the NASA STI system when you need to access information?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Yes	24.3%	28.7%	24.6%
No	69.6%	57.1%	68.5%
I don't know/don't use	<u>6.2%</u>	<u>14.3%</u>	<u>6.9%</u>
	100.0%	100.0%	100.0%

In your job, how important is it for you to publish your work through the NASA STI system? Is it very important, somewhat important, or not important?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Very important	21.3%	24.8%	21.6%
Somewhat important	33.9%	30.5%	33.6%
Not important	<u>44.8%</u>	<u>44.7%</u>	<u>44.8%</u>
	100.0%	100.0%	100.0%

How would you evaluate the overall NASA scientific and technical information system in terms of supporting you when you publish your work? Would you say it is excellent, good, fair, or poor?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Excellent	25.6%	13.2%	24.6%
Good	38.0%	33.3%	37.6%
Fair	7.2%	18.8%	8.2%
Poor	2.1%	1.4%	2.0%
I don't know/never used	<u>27.0%</u>	<u>33.3%</u>	<u>27.6%</u>
	100.0%	100.0%	100.0%

Have you encountered any problems using the NASA STI system services when you publish?

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Yes	9.7%	12.7%	9.9%
No	62.8%	52.4%	61.9%
I don't know/never used	<u>27.5%</u>	<u>34.9%</u>	<u>28.1%</u>
	100.0%	100.0%	100.0%

OVERALL IMPORTANCE OF USING STI

Importance of Using Scientific and Technical Information

Importance of Using the NASA STI System (Overall)

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>	<u>Total</u>
Very important	53.7%	22.9%	8.8%	47.5%
Somewhat important	34.1%	46.3%	7.9%	35.8%
Not important	<u>12.2%</u>	<u>30.8%</u>	<u>83.4%</u>	<u>16.8%</u>
	100.0%	100.0%	100.0%	100.0%

Importance of Using Scientific and Technical Information

Importance of Using the NASA STI System (To Perform Your Job)

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>	<u>Total</u>
Very important	42.6%	12.5%	0.0%	36.6%
Somewhat important	41.4%	50.4%	16.6%	42.5%
Not important	<u>15.9%</u>	<u>37.2%</u>	<u>83.4%</u>	<u>20.9%</u>
	100.0%	100.0%	100.0%	100.0%

APPENDIX

Hello, Mr(s). _____, I'm working on a project for NASA Headquarters and we're doing a brief survey about how people use scientific and technical information. My first question is:

1. If you were to define what you do at work, would you say you are an engineer, a scientist, or something else?
1 - Engineer
2 - Scientist
3 - Other (_____)
2. Which of these categories best describes what you do at work? Are you primarily (READ CHOICES LISTED) :
1 - An individual researcher
2 - A member of a project team or group
3 - A technical manager or supervisor
4 - Engineering or research support staff
5 - Administrative support staff, or
6 - Something else? (specify other: _____)
3. If you could use only one term to characterize your area of work or the application of your work, would it be (READ ALL CHOICES LISTED) :
1 - Aeronautics 4 - Space sciences, or
2 - Astronautics 5 - Something else? (What is it? _____)
3 - Engineering
4. In your job, how important is it for you to use scientific and technical information? Would you say it is very important, somewhat important, or not important?
1 - Very important 2 - Somewhat important, or 3 - Not important
5. When you need to obtain scientific or technical information, are you more likely to look first to people and resources within your center or to people and resources outside of your center?
1 - Within center 2 - Outside center
6. In your job, how important is it for you to publish scientific and technical information? Is it very important, somewhat important, or not important?
1 - Very important 2 - Somewhat important, or 3 - Not important
7. The NASA scientific and technical information system provides services such as editing, graphics, photography, printing and library services at each NASA center. This system produces a variety of products including NASA technical reports. STAR, SCAN, RECON, and ARIN are also part of the STI system. How many total times per month do you use any product or service included in the NASA scientific and technical information system?
(IF MORE THAN "1" SKIP TO Q. 9) _____ times/mo.
8. (IF ONE TIME OR LESS A MONTH...) You're not a frequent user. Why is that?

9. Overall, how important is this NASA STI system (I just described) to you? Would you say it is very important, somewhat important, or not important?
1 - Very important 2 - Somewhat important, or 3 - Not important
10. To perform your job, how important is it for you to use the NASA STI system? Would you say it is very important, somewhat important, or not important?
1 - Very important 2 - Somewhat important, or 3 - Not important

11. How would you evaluate the overall NASA scientific and technical information system in terms of meeting your information needs? Would you rate it as excellent, good, fair, or poor?
- 1 - Excellent 2 - Good 3 - Fair, or 4 - Poor
12. Have you encountered problems using the NASA STI system when you need to access information? 1 - Yes 2 - No (SKIP TO Q. 14)
13. What problems have you experienced when using the NASA STI system to access information? (DO NOT READ CHOICES)
- 1 - Takes too much time/effort to locate info
 2 - Takes too much time/effort to obtain info
 3 - Not accurate/precise enough/reliable
 4 - Don't like the organization of the reports
 5 - Too hard to read/use them
 Other:
- _____
- _____
14. In your job, how important is it for you to publish your work through the NASA STI system? Is it very important, somewhat important, or not important?
- 1 - Very important 2 - Somewhat important, or 3 - Not important
15. How would you evaluate the overall NASA scientific and technical information system in terms of supporting you when you publish your work? Would you say it is excellent, good, fair, or poor?
- 1 - Excellent 2 - Good 3 - Fair, or 4 - Poor
16. Have you encountered any problems using the NASA STI system services when you publish?
- 1 - Yes 2 - No (SKIP TO Q. 18)
17. What problems have you experienced when using the NASA STI system services when you publish?
- _____
- _____
- _____
18. How many total years of professional work experience have you had? _____ yrs.
19. How many years, if any, of professional work experience in aerospace have you had? _____ yrs.
20. What is the highest level of education you have completed?
- 1 - Bachelors degree (or less)
 2 - Masters degree
 3 - Doctorate

Thanks for helping with our survey today. I appreciate your time!

RECORD: 1 - Male 2 - Female

CENTER: 1 - Ames in Calif. (415)

2 - Goddard in MD (301)

INTV BY: _____

3 - Marshall in Alab. (205)

4 - Lewis in Ohio

DATE: _____

5 - Langley in VA (700)

TIME ENDED: _____

CENTER DIR. PG. #: _____

NAME: _____

PHONE: _____

(area code)





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13. ABSTRACT (Maximum 200 words) A study was conducted to provide NASA management with an "initial" look at the production and use of scientific and technical information (STI) at five NASA centers (Ames, Goddard, Langley, Lewis, and Marshall). The 550 respondents who were interviewed by telephone held favorable views regarding the NASA STI system. About 65% of the respondents stated that it is either very or somewhat important for them to publish their work through the NASA STI system. About 10% of those respondents encountered problems using the NASA STI system services for publication. The most frequently reported problem was "the process is too time consuming" (8.6%). Overall, those respondents using the NASA STI system to publish their work rated the system as excellent (24.6%) or good (37.6%). About 79% of the respondents stated that it is either very or somewhat important for them to use the NASA STI system to access information. About 25% of those respondents encountered problems using the NASA STI system to access information. The most frequently reported problems were "the time and effort it takes to locate and obtain information through the system" (14.4%). Overall, about 83% of the respondents stated that the NASA STI system is important to performing their work. Overall, about 73% of the respondents stated that the NASA STI system meets their information needs.				
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