SURVEY OF ASTRONOMY INFORMATION USE

One goal of the survey is to compare the astronomical community against other surveys which have been done in the physical sciences and medicine in order to measure any differences in research efficiency which have been brought about by astronomy’s well integrated electronic resources. Such objective measures of efficiency can be used when arguing for future funding. This survey uses a “critical incident” method of sampling usage patterns, i.e. we ask about the last article you read. Your response may not be what you typically do, but when combined with all the other responses, this approach will give us a statistically valid, unbiased picture of the full range of journal and article usage which will help the AAS to plan our future efforts in a rapidly changing electronic world, which is a second goal of this survey. Your answers are extremely important to the accuracy of our study, so please try to stick with it and answer all the questions.

Pilot tests show that it will take approximately 6-10 minutes. Please answer the survey within two weeks of the receipt of this message. Your responses will be kept confidential and will not be linked to your identity.

If you have any questions, please contact me, Peter Boyce (pboyce@aas.org), or Carol Tenopir (ctenopir@utk.edu).

SECTION 1—SCHOLARLY JOURNAL READING AND USE

Question #1
In the past month (30 days), approximately how many scholarly articles have you read?

Articles include those found in journal issues, author Web sites, or separate copies such as preprints, reprints, and other electronic or paper copies. Reading is defined as going beyond the table of contents, title, and abstract to the body of the article.

_______ Number of articles read/used in the past month

The following questions in this section refer to the scholarly article you read most recently, even if it is an article you had read previously. Please note that it does not matter how long ago this last article was read.
**Question #2**
If the last article you read was in a journal, which journal did it come from?
- □ AJ (Astronomical Journal)
- □ A&A (Astronomy and Astrophysics) or A&A Letters
- □ PASP (Publications of the Astronomical Society of the Pacific)
- □ Other (please specify): ___________________________________________

**Question #3**
_________ What year was it published/posted (e.g., 1999, 2000, 2001, etc.)?

**Question #4**
What is the source of the article you last read?
- □ Journal, print
- □ Journal, electronic
- □ Author’s Web site
- □ Paper Preprint
- □ Digital e-print archive
- □ Other (please specify): ___________________________________________

**Question #5**
_________ From this same source (e.g., journal, author’s Web site, preprint archive), how many articles did you read in the last year (12 months)?

**Question #6**
Had you previously read this article, i.e. is this a re-reading?
- □ Yes
- □ No

**Question #7**
Prior to your first reading of this article, did you know about the information reported or discussed in this article?
- □ Yes
- □ No

**Question #8**
How thoroughly did you read this article?
□ With great care
□ With attention to the main points, or to find specific information I already knew was in the article/ preprint
□ Just to get the idea

**Question #9**
Please indicated your best estimate of the time in minutes that you spent reading this article the most recent time: _______ minutes

**Question #10**
How did you initially find out about this last article you read?

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**Found while browsing in:**
□ A personal print subscription
□ A personal electronic subscription
□ A library print subscription
□ A library electronic subscription
□ A print subscription copy in a department collection
□ Other digital collection (please specify) _______________________________

**It was cited in:**
□ a refereed journal
□ an electronic preprint (e.g., astro-ph)

**Found while I (or someone on my behalf) was searching:**
□ A scientific indexing/abstracting database (e.g., ADS, PubScience, SPIN)
□ Web search engine (e.g., Yahoo, AltaVista, Excite, Google)
□ Online journal collection (e.g., HighWire, ScienceDirect)
□ A preprint/ e-print service (e.g., arXiv.org/ astro-ph)
□ A current awareness service (e.g., ApJ’s list of submitted papers (“Yellow Pages”), emailed table of contents, current contents or other current awareness source)
□ Other (please specify): ________________________________

□ Another person (e.g., a colleague) told me about it
Question #11
From what source/form did you read this article the most recent time? Choose one.

☐ A personal print subscription
☐ A personal electronic subscription
☐ A library print subscription
☐ A library electronic subscription
☐ A print subscription located in a shared department, unit, etc., collection
☐ From the ADS archive
☐ Electronic Preprint, e.g., from astro-ph
☐ Copy from a colleague, author, etc.
☐ Interlibrary loan
☐ Document delivery service
☐ Author’s Web site
☐ Other (please specify) ____________________________________________

Question #12
In what form was the article when last read?

☐ Printed journal or book
☐ Photocopy
☐ Facsimile copy
☐ Online computer screen
☐ Previously downloaded, on computer screen
☐ Downloaded and printed, paper copy
☐ Other (please specify): ____________________________________________

Question #13
Approximately, how much time (in minutes) did you, and/or someone else on your behalf (e.g., graduate student, lab assistant, librarian), spend in each of the following activities? (no time spent=0)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Your own time</th>
<th>Someone else’s time for you</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browsing or searching for the article:</td>
<td>_____ minutes</td>
<td>_____ minutes</td>
</tr>
<tr>
<td>Obtaining, requesting, or displaying the article:</td>
<td>_____ minutes</td>
<td>_____ minutes</td>
</tr>
</tbody>
</table>
Download the article:     _______ minutes     _______ minutes
Photocopying or printing out the article:   _______ minutes     _______ minutes
Other (please specify):   _______ minutes     _______ minutes

Question #14
For what purposes have you used, or do you plan to use, the information obtained from the article you last read?

A. Principal Purpose (Choose only one):
   □ Primary research
   □ Background research
   □ Teaching
   □ Administration
   □ Writing proposals, reports, article, etc.
   □ Internal or external presentations
   □ Current awareness/keeping up
   □ Other (please specify): ___________________________________________

B. Secondary Purpose(s)—If you read the article for more than one reason, what were your secondary purposes for reading it? (Choose all that apply):
   □ Primary research
   □ Background research
   □ Teaching
   □ Administration
   □ Writing proposals, reports, article, etc.
   □ Consulting, advising others
   □ Internal or external presentations
   □ Current awareness/keeping up
   □ Other (please specify): ___________________________________________

Question #15
In what ways did the reading of the article affect the principal purpose?
(Choose all that apply):

- It improved the result
- It narrowed/broadened/changed the focus
- It inspired new thinking/ideas
- It resulted in collaboration/joint research
- It resulted in faster completion
- It resolved technical problems
- It saved time or other resources
- No effect on principal purpose, but was valuable to me
- Other (please specify): __________________________________________
- It wasn’t helpful; it wasted my time

**Question #16**
How important is the information contained in this article to achieving your principal purpose?

- Not at all important
- Somewhat important
- Absolutely essential

**SECTION 2--DEMOGRAPHICS**

*Since we are not linking your answers to your identity, please answer these next few questions about yourself.*

**Question #17**
What percentage of your work time do you spend doing the following? (The total should equal 100%)

- ______ %--Teaching
- ______ %--Research
- ______ %--Service work e.g., assisting visitors, committee service, etc.
- ______ %--Preparing proposals, e.g., research and observing time
- ______ %--Other (please specify): _________________________________
Question #18
What is your primary subfield of astronomy?

☐ The Sun
☐ Solar System objects
☐ Extrasolar planets, substellar companions, brown dwarfs
☐ Stellar Astronomy – including stellar evolution, atmospheres, interiors, variable stars, binaries, photometry, white dwarfs, neutron stars, pulsars, black holes, cataclysmic variables, novae, supernovae, planetary nebulae, supernova remnants
☐ Star formation and the interstellar medium – galactic & extra-galactic, molecular clouds, HII regions
☐ The Milky Way and galactic center, associations, star clusters – galactic & extra-galactic
☐ Normal and active galaxies – elliptical galaxies, spiral galaxies, dwarf, irregular, starburst galaxies, AGNs, QSOs, active galaxies
☐ Clusters of galaxies, large scale structure, evolution of galaxies, galaxy surveys, intergalactic medium, QSO absorption line systems
☐ Cosmology, the Earthly Universe, the cosmic distance scale
☐ Relativistic astrophysics, gravitational lenses, dark matter
☐ Gamma ray bursts
☐ Instrumentation and computation, data handling, image analysis
☐ History of Astronomy
☐ Other (please specify): ________________________________

Questions #19
Which best characterizes your work?

☐ Observations
☐ Theory
☐ Both theory and observations
☐ Instrumentation
☐ Other (please specify): ________________________________

Question #20
Please indicate highest degree earned:

☐ BA or BS
□ MS or MA
□ PhD or equivalent

Question #21
In what year did you receive your last degree? _______

Question #22
In what country is your principal workplace? ______________________________________

Question #23
Sex:
□ Male
□ Female

Question #24
In the past two years, how many articles in refereed journals have you published? _______

Question #25
In the past two years, how many non-refereed articles have you published in print form, perhaps with electronic versions (e.g., unrefereed conference proceedings, popular or trade magazines, etc.)? _______

Question #26
How many personal subscriptions to professional journals do you receive, including those obtained as a member of a professional society?

Personal subscriptions are those which are personally addressed to you at your home, office, or lab

________ Subscriptions paid myself
________ Subscriptions purchased by grant or other source for my personal use
________ Subscriptions purchased by grant or other source for shared use of my group or department

Thank you for your help. Please verify your answers before submitting the survey.