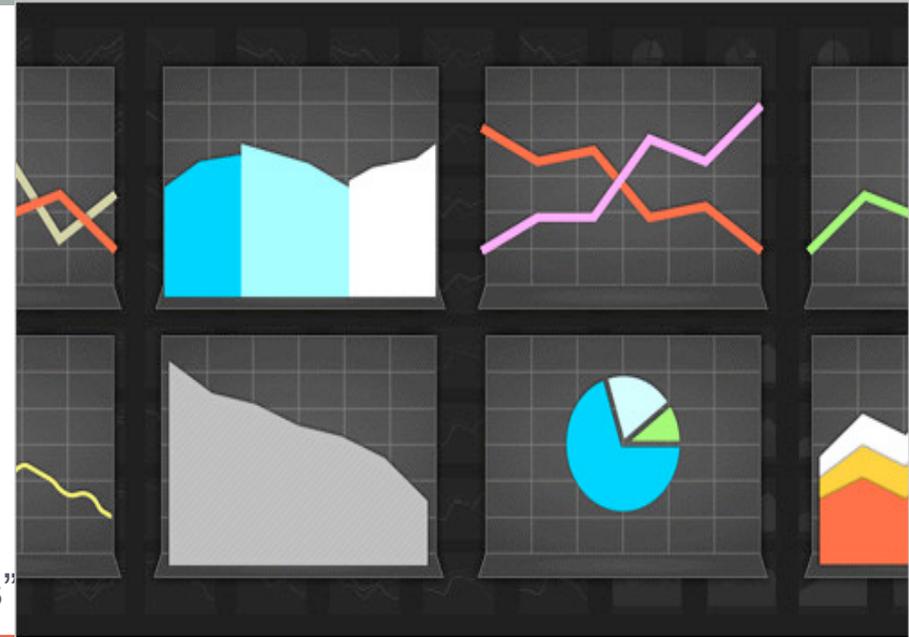


REPORTING



Or... “Lies, Damned Lies and Bibliometrics”

Jill Lagerstrom
Chief Librarian
Space Telescope Science Institute

June 12 & 13, 2005
Workshop on Shared Curation of the Astronomical Literature,
Harvard-Smithsonian CfA, John G. Wolbach Library,
June 12-13, 2015

Statistics: how are they made?

1. Astronomer publishes paper; refers to data in paper
2. Bibliographer finds data in paper
3. Paper included (or not) in bibliography database
4. Bibliographer (sometimes) assigns metadata about the data
5. Paper & metadata counts made into graphs and charts which are used for various and sundry purposes

2012 Survey Question:

How are bibliographies used to demonstrate scientific impact?

- cross-observatory comparisons
- archival vs. non-archival
- number of unique authors
- average citations per paper
- h-index
- papers per “observing mode”
- grant productivity
- countries and affiliations of authors
- papers on exoplanets, various subject categories
- the most cited papers
- the most cited programs
- the productivity of specific legacy products
- papers per instrument
- collaboration statistics

Where? Why? When?

- observatory websites
- annual reports and newsletters
- internal decision-making
- stakeholders: NASA Senior Review, NSF, and user committees.

Attempts at comparisons:

- Trimble
 - gang of grad students assigns observatory credit to each paper in a given time period
- Madrid
 - assign observatory credit to the top 200 cited papers in a given time period
- Crabtree
 - takes statistics from bibliographies and computes some things
GENERALLY DISCOURAGED BY BEST PRACTICES

HST examples

HST Bibliography Database:

<http://archive.stsci.edu/hst/bibliography/>

- Papers and citations per year
- Papers and citations per instrument
- Number of unique authors
- GO vs AR status
- Papers per program

HST examples

- NASA/ESA Senior Review
- STUC
- PASP paper in 2010
- 25th anniversary : USA Today article, etc.
- TALL page
- Reports to our overlords

Recurring themes

- The archive is valuable.
- Our numbers keep going up.
- Impact of the servicing missions.
- Demographics.
- Optimizing science from the telescope.

Recent questions

- How many papers from data in polarimetry mode?
- Time-to-publication
- Program size and productivity
- Number of ESA authors
- How many foreign PIs have NICMOS time?
- What is HST's "impact factor"?
- **Compare the topics of our proposals to those of the greater literature (!)**

Jill's "Wish List"

Data Citation

DOIs for Data/High Level Science Products

ORCID

HST Keywords in an Updated Thesaurus