

Gemini Observatory Publications, Statistics and Archive

A Adamson
A-N Chené

Abstract

We describe the statistics of Gemini refereed publications, including relative productivity and impact of instruments and observing modes, and overall statistics such as the total publication count. We identify factors which may influence the probability of a publication emerging from a given observing program. At present, only a small fraction of publications arise purely from archival data. We present some of our plans for post-observing community support, and solicit input on various options for increased productivity in archival research.

Notes in italics on each slide are the comments added to the information in the course of the talk.

Show some of the more interesting statistics relating to publications from Gemini observations - AJA

Show some of the ways in which we may be able to increase the publication rate, and solicit input on options - ANC

Publication Statistics

Overall Statistics



Search Results

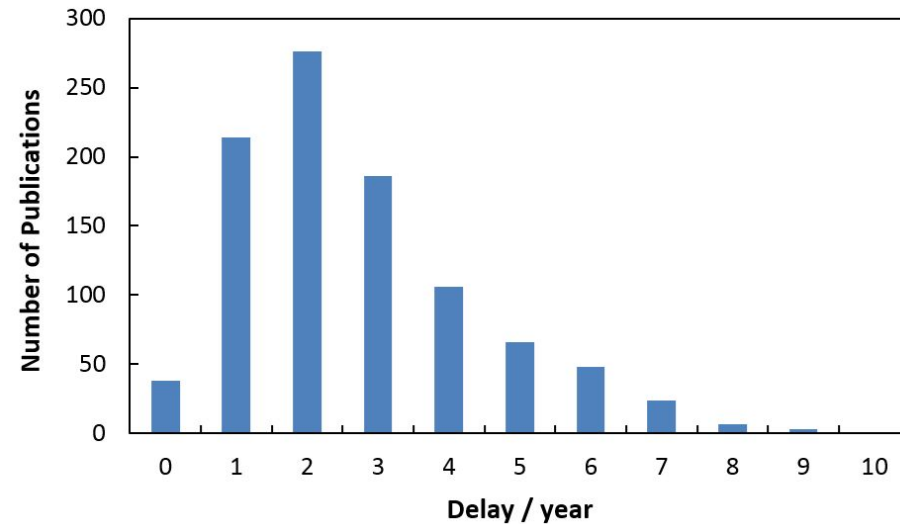
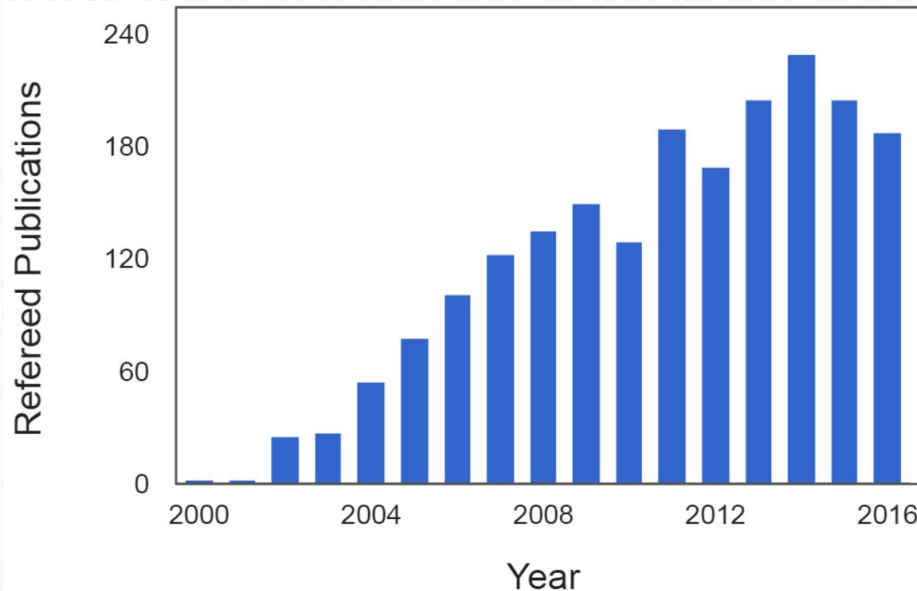
About 314 results (0.26 seconds)

[Gemini Publication Inclusion Criteria](#)

Gemini Publication **Inclusion** Criteria. by admin. To qualify as a Gemini publication, a paper must employ in an original way an image, spectrum, or data set ...
<https://www.gemini.edu/library/gemini-publication-inclusion-criteria>

Publication count has now plateaued - about 200/yr, or a couple of papers per week at each telescope.

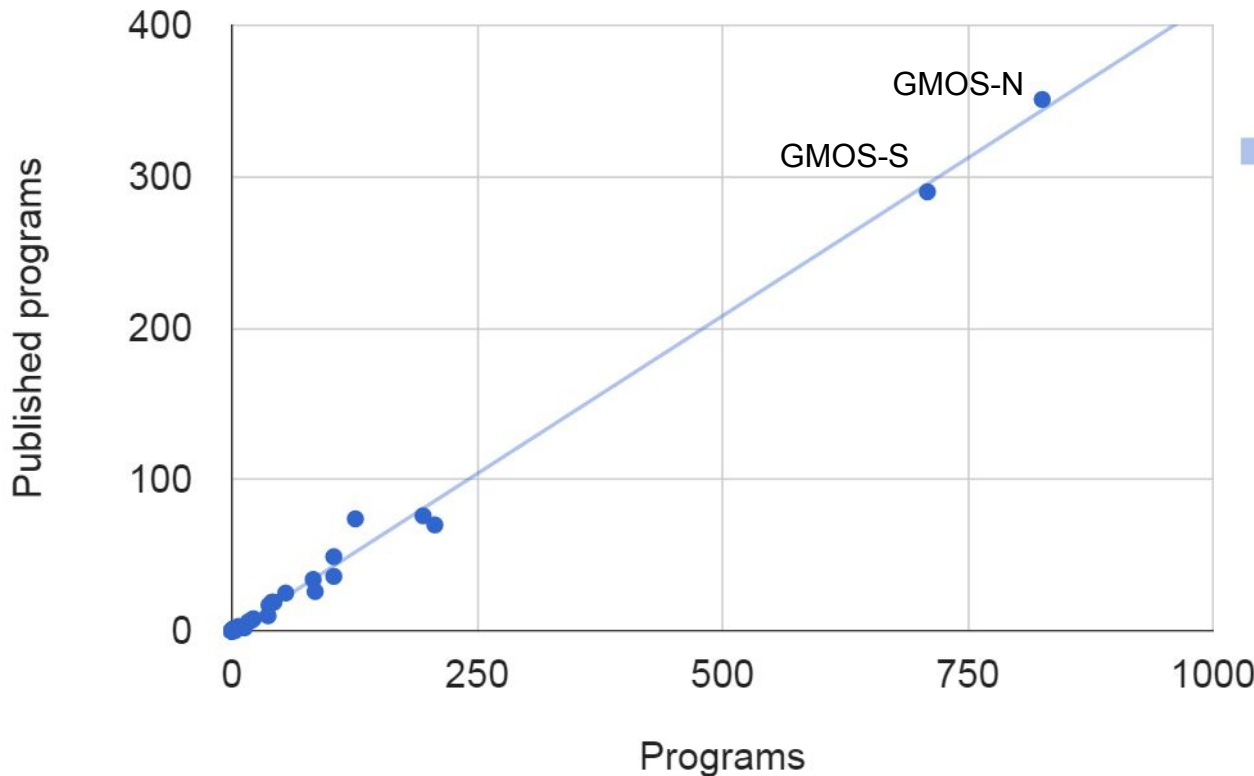
Lead time is about 2 years.



Noted in discussion: Gemini PIs across the whole partnership publish about two papers a week per telescope. Looks like we may now be at a plateau, and the influence of Large/Long programs is yet to be seen.

Publications vs Instrument

Publication/Completion per Instrument

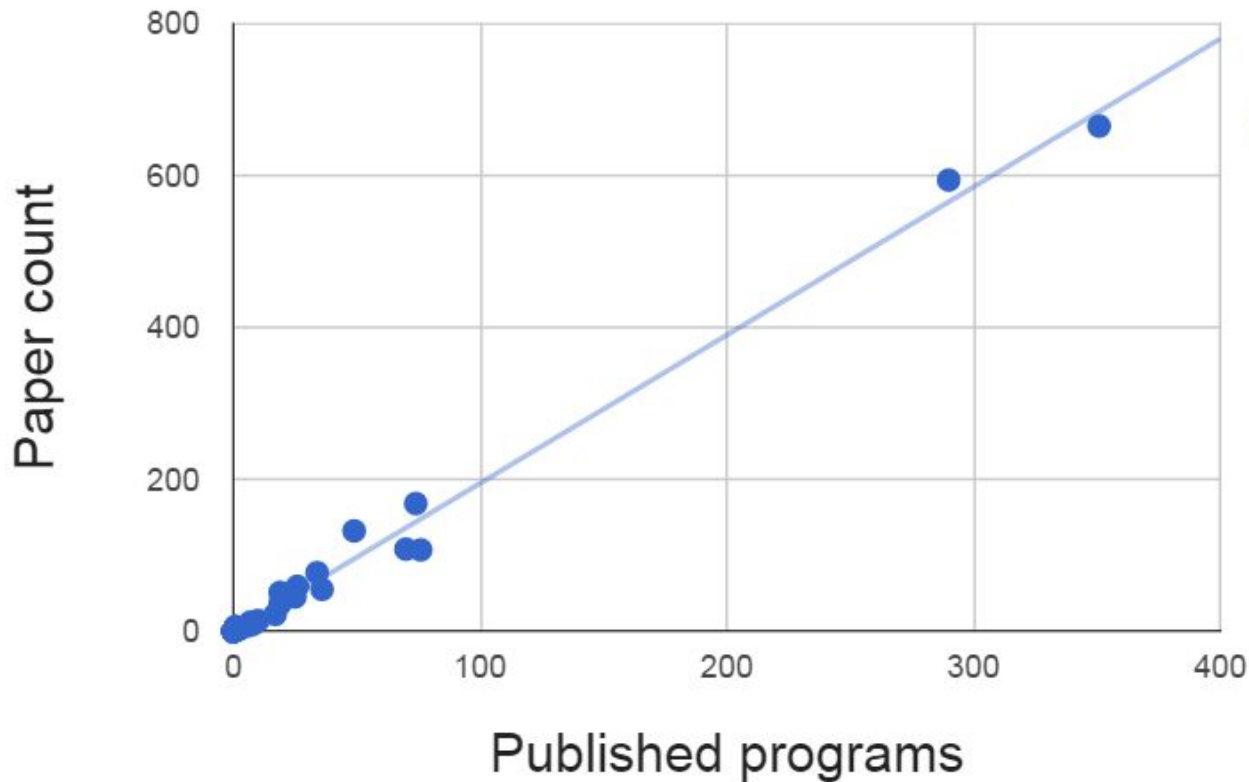


- >80% complete programs
- 2005-2014
- Each point is an instrument
- Single-instrument papers only

Noted in discussion: There's really great variation between instruments. All lie on the same line, with a slope of about 40-50% (meaning there's room to grow in terms of publication count).

Multiple publications

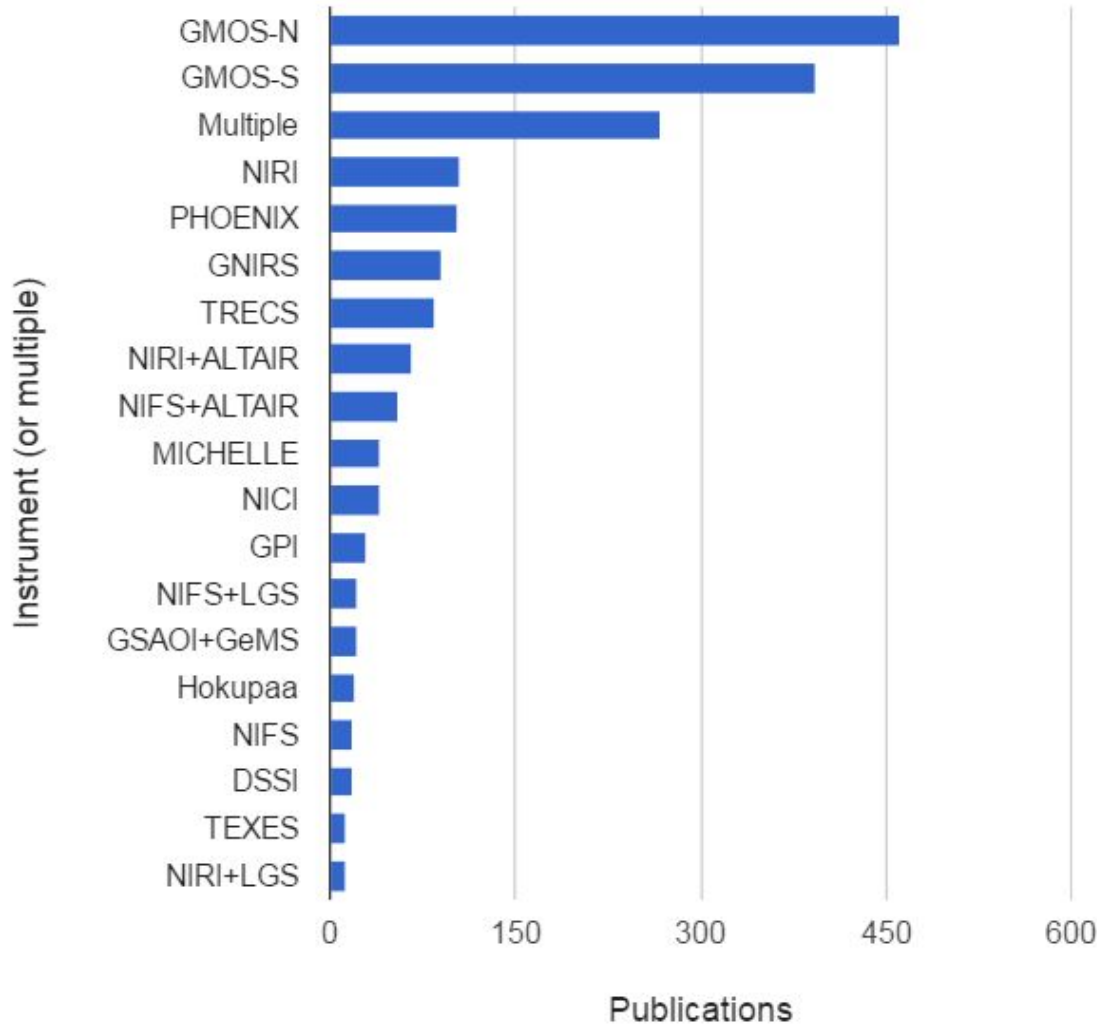
Paper count vs. Published programs



- A program that publishes, tends to publish twice
- Again, instrument-invariant

Publications by instrument

Publications per Instrument

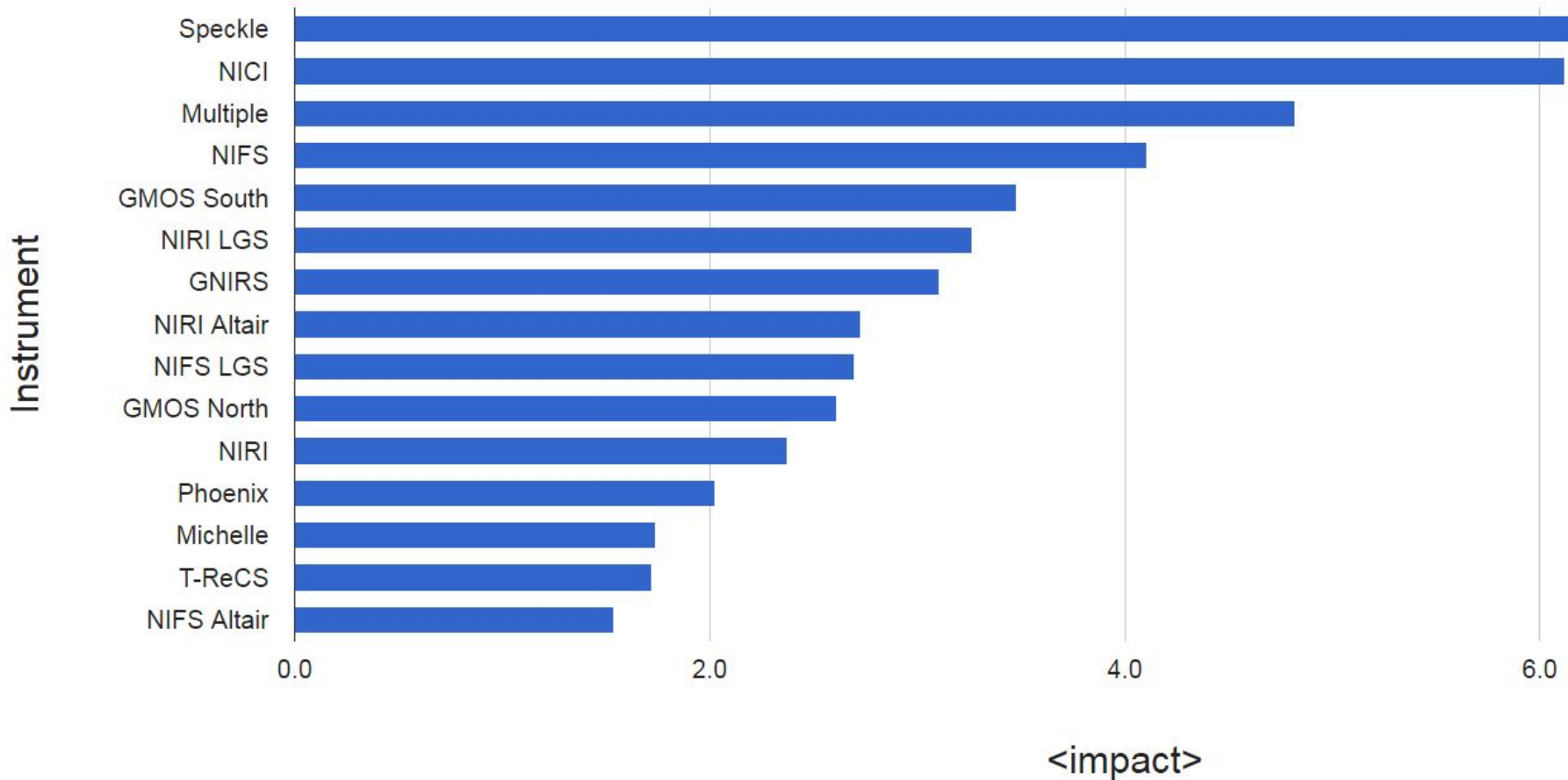


2005-2014

Note added in discussion: GMOSs being at the top is not surprising (they dominate the program count). "Multiple" instrument publications coming just below that is more interesting, probably reflects the many possible combinations of more than one instrument, and programs over more than one semester contributing to a publication.

<Impact> per instrument

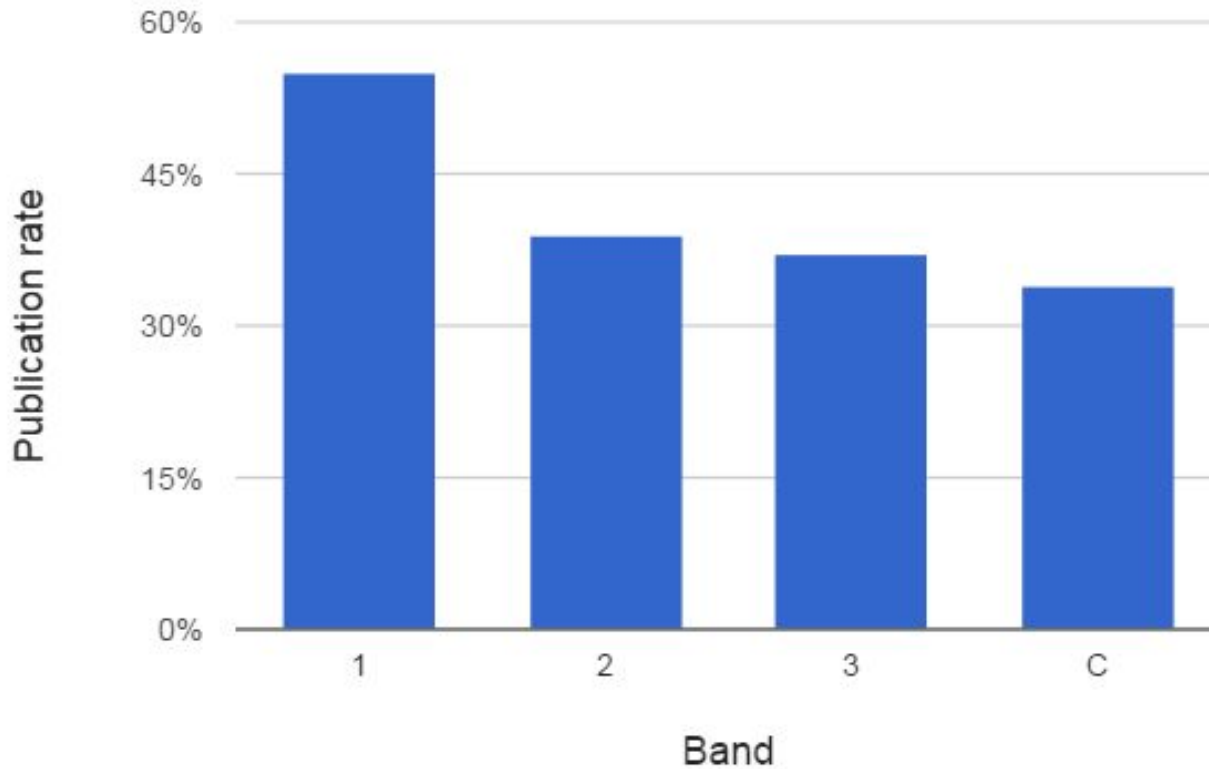
Average impact per instrument



Note in discussion: interesting that the cheapest instrument ever on the telescope has the highest current impact (but remember this is a snapshot). Also the fact that NICI - another exoplanet instrument - comes second shows that this chart is about subject fields, not instruments per se.

Publications vs band

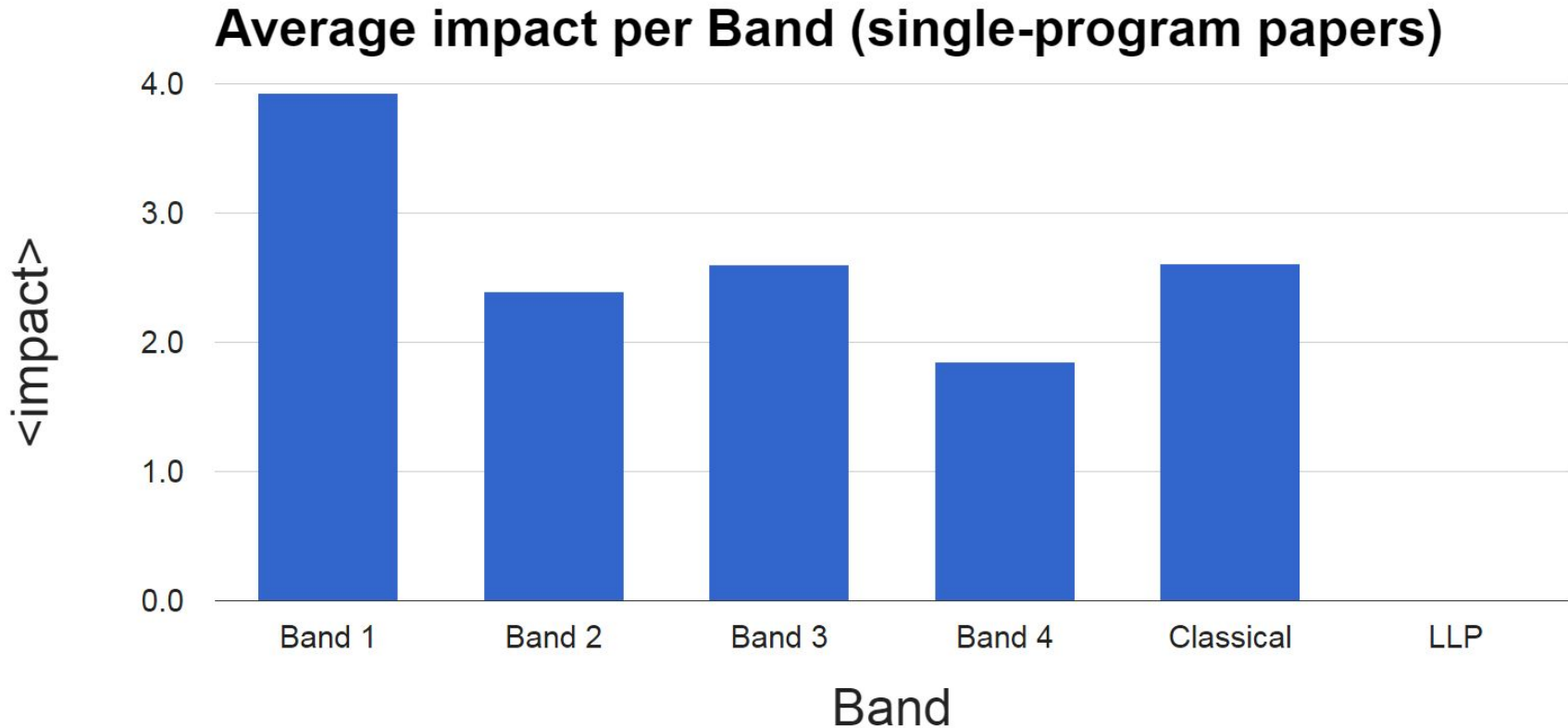
Publication rate vs. Band



- >80% complete programs
- 2005-2013

Note added in discussion: since this is all to do with programs at the same minimum completion rate, the indication is that the TACs can spot a winner.

<Impact> vs band



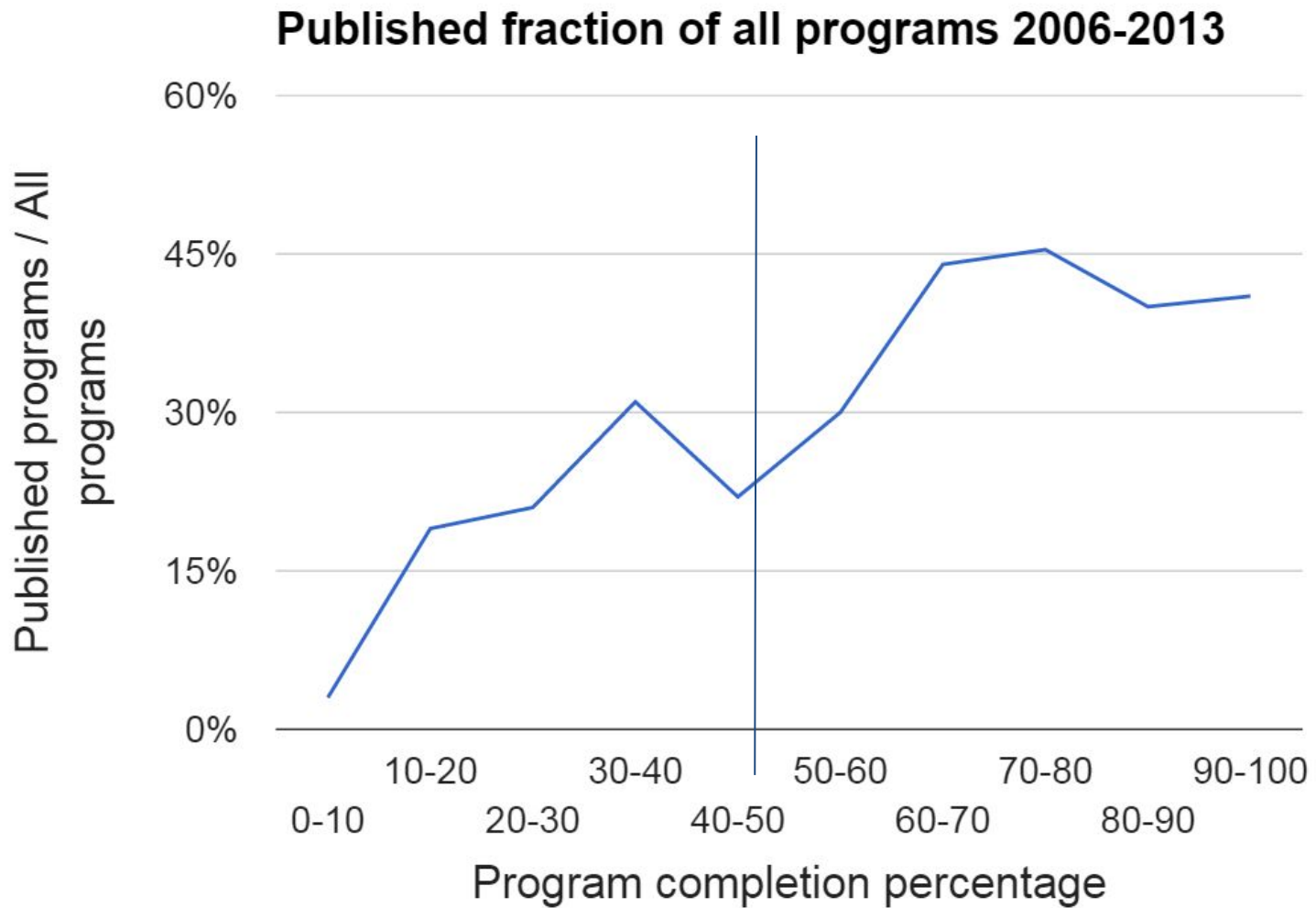
Single-program papers only, programs 2005-2015. Joints included.

Impact data from 2000-2014 publications. Updated Oct 2016

Nett coverage: publications between 2005 and 2013.

In discussion: within Band 1, Joint programs have by far the highest impact when published.

Publication vs completion



Note in discussion: once a program gets above 60-70% complete, the chance that its data will appear in the literature does not increase. This point has been discussed by Gemini and its Governance and has affected queue execution policy to some extent.

Data Gathering (NGOs):

2013-2015, with two-year lead time

Main Themes (consistent across partnership):

- Low priority data set <- longer programs
- Circumstances changed <- fast turnaround
- Postdoc left <- fast turnaround
- Didn't detect the target

Note in discussion: the most typical responses were not what had been expected. Changes in our offered observing modes may address some of these, as indicated in red.

Archive Publications

Papers emerging from purely archival data amount to only a few percent of all Gemini publications.

Gemini Science User Support, Data reduction and Archive possibilities

A-N Chené

Science User Support

- 4.6 FTE working on DR software
- 1 FTE focused on support

Avenues:

- Helpdesk
- Contact Scientists
- DR Forum
- Contacts page
 - Sus_inquiries
 - NGO contact info



So you have seen it at least once

<https://archive.gemini.edu/>

<p>Program ID: <input type="text" value="(leave empty for Any)"/> (or Obs. ID / Data Label. Exact Match)</p> <p>UTC Date: <input type="text" value="(leave empty for Any)"/> (YYYYMMDD or start - end)</p> <p>Instrument: <input type="text" value="Any"/> ▾ (Select GMOS for GMOS-N and GMOS-S)</p> <p>Obs. Class: <input type="text" value="Any"/> ▾ (help)</p> <p>Obs. Type: <input type="text" value="Any"/> ▾ (help)</p> <p>Mode: <input type="text" value="Any"/> ▾ (Imaging / Spectroscopy etc)</p> <p>Adaptive Optics: <input type="text" value="Any"/> ▾ (help)</p>	<p>Target Name: <input type="text" value="(leave blank for Any)"/> (Name of Target)</p> <p>Resolver: <input type="text" value="None"/> ▾ <input type="button" value="Resolve"/> (Name Resolver)</p> <p>RA: <input type="text" value="(leave blank for Any)"/> (HH:MM:SS.ss or decimal degrees)</p> <p>Dec: <input type="text" value="(leave blank for Any)"/> (f+-JDD:MM:SS.ss or decimal degrees)</p> <p>Search radius: <input type="text" value="(leave blank for 180 arcsec)"/> (arcsecs or decimal degrees)</p> <p>Raw / Reduced: <input type="text" value="Any"/> ▾ (Select data by processing state)</p> <p>Advanced Options ▾ (click to show / hide) Column Selection ▾ (click to show / hide)</p> <p style="text-align: center;"> <input type="button" value="Search"/> <input type="button" value="Reset to previous search"/> <input type="button" value="Start Over"/> <input type="button" value="Search ObsLogs Only"/> (help on buttons) </p>
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Set at least one of the search criteria above to search for data. Mouse over the (text in brackets) to see more help for each item.

Reducing archive data

Two possible approaches:

- People can figure it out...
- Ain't nobody got time for that!!!

Gemini reduction packages

- Gemini IRAF packages
- AstroConda!
 - set of astronomy-related packages for Anaconda
 - testing channel is now available
 - main Astroconda channel at STScI later this month

(One can contact James Turner from Gemini for any question about AstroConda.)

Reduction cookbook

http://ast.nao.edu/sites/default/files/GMOS_Cookbook/



GMOS
Cookbook

But we could do more!!!

- Publishing more cookbooks
 - That is on the way (F2)
- Adding reduced data to archive
 - Ready for GRACES and GNIRS XDmode!
 - Reduced data provided by PIs
- Making “pipelines”
 - Would require a tremendous additional effort

Thanks!

Questions?

Comments on priorities?