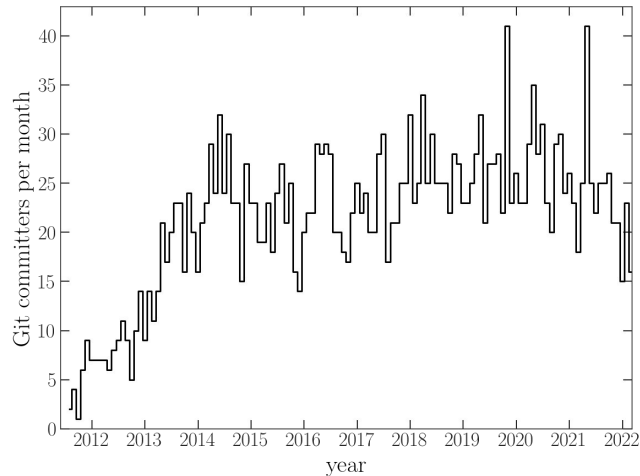
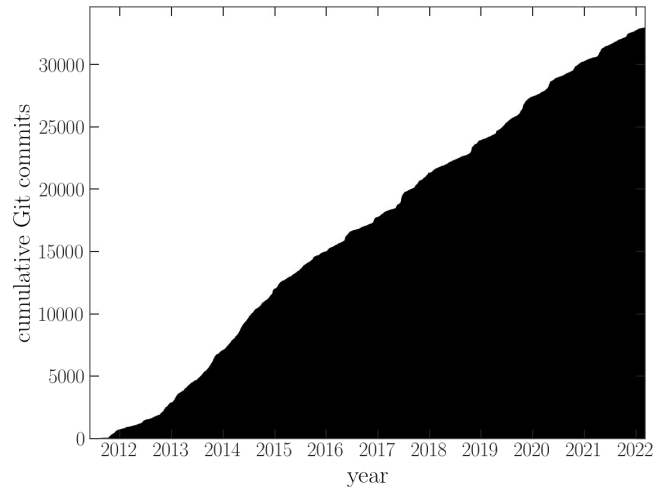


# State of The **Astropy** 2022 Project

Moritz Günther for the Coordination Committee  
(some thoughts and remarks are my own and not endorsed by the Coco)

# Astropy continues to grow and thrive

- Astropy core package
  - 5.0 is the newest LTS release
  - Stable contributor base
  - Broad adoption in the community



# Astropy continues to grow and thrive

- Healthy ecosystem
  - Infrastructure packages (sphinx-automodapi, extension-helpers, sphinx-astropy, package-template, 5 pytest plugins, astropy-helpers, ...)
  - 8 coordinated packages
  - 47 affiliated packages
- APE 19: Distributing Astropy Project Funding
- Update to APE 6: ECSV

# New team members, new roles, new voting members

- Coco elections in 2021
- Aarya joined the finance committee
- New sub-package maintainers - welcome!
- New “lifetime contributors”: Matt Craig, Adam Ginsburg
- General maintainer for core package - looking for nominations
  
- Nominations for roles - send to Coco any time
- Nomination for new voting members - send to Coco any time, but new vote to add voting members planned soon
  
- Community input essential to put people in roles!

# State of Spectroscopy

Looks like “Python in astronomy” in general 10 years ago

- Number of different and mutually incompatible packages in the wild
- Tradition (desire?) to build monolithic pipelines, not code building blocks
- We are slowly working on specreduce, but not clear if that’s “too little, too late”
- Needs help: Convince people to open up pipelines and come together - just like the rest of astropy did

# Funding (own talk later)

- Two large grants: Moore and NASA
- Phase I: Pay existing core maintainers, Phase II: proposals led by core maintainers
- Phase III of funding coming: Proposals by anyone
- Wait for talk by Arya on Tuesday

Now even more modes of work

- Funded by institution to work on astropy (e.g. STScI)
- Funded by institution to work on anything, which can incl. Astropy
- Funded for science projects
- Volunteer / donating time
- **Funded by Astropy**

# Challenges and opportunities

- **Geographic diversity**
  - All 5 Coko members are in the US, 4/5 on the East Coast
  - Finance committee a bit better
  - But generally project is US dominated in many respects
- **Other axis of diversity**
  - (academic) age
    - many of the early contributors are still very active. That is a good thing!
    - But as those people age, less representation from students / post-docs / early career engineers
  - Many white males (just like the academic landscape in general...)
- **Background / different academic degrees**
  - Astronomers - software engineers - managers
- **Wider range of roles than in the beginning**
  - Started out as purely core-package software development, now reaching into outreach, education, ...

# Challenges and opportunities

- More institutions might fund work / contribute to Astropy specifically, e.g.
  - Contributed astroquery modules
  - Gemini, Dunlap, LSST
- Growing user community means growing (perceived?) gap between “users” and “developers”.
  - What can we do to reduce perceived gap?
  - Not everyone can or wants to be a developer. But how do we take their needs for a software into account? With externally funded development, need to balance with “everyone does what they like” do-ocracy?



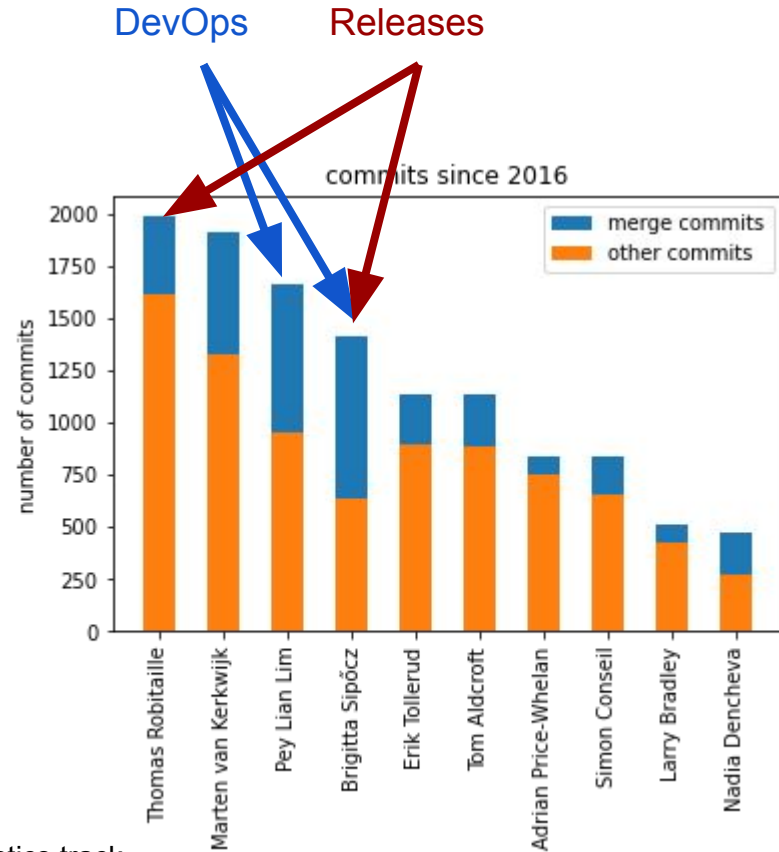
# Different roles and fair credit

## Different roles

- 5 people with > 40% merge commits in core
- Note: Contributors outside of core astropy not on this plot

## Different motivations

- need a tool to help in my science
- Be part of highly cited papers
- Learn more about coding / marketable skills
- Astropy is just part of the paid job
- Community
- ...



Thanks to Brigitta for pointing out to me how closely role and commit statistics track.

# People challenges

I'm convinced we can overcome all our technical challenges, but I'm worried the social challenges need more attention.

- Most of us came to the project to write code, not to be managers/admins/...
- Maintainer mentorship program funded by Moore and under development by Aperio.
- Pandemic impact
  - Taken away personal contact between coordination meeting attendees
  - But has levelled playing field for those not able / willing to travel to Astropy meetings
  
- What can we do?

# Engagement

- Dev telecons resurrected in 2021 - monthly - please join
- <https://community.openastronomy.org> has some uptake, but has not gone viral
- upload talks to Zenodo community, preferably not just a pdf, but also in source form (e.g. ppt, tex) so that other people can download and modify for their use. <https://zenodo.org/communities/astropy/>