

# Twitter is dead!

## How can we do better for networking & outreach?



Emily L. Hunt - University of Vienna | 11.11.25 | ADASS XXXV

**So: Why are you (an astronomer)  
at a talk about social media?**

# **So: Why are you (an astronomer) at a talk about social media?**

**We collaborate, publish, network, do outreach  
(usually internationally)**

# **So: Why are you (an astronomer) at a talk about social media?**

**We collaborate, publish, network, do outreach  
(usually internationally)**

**Social media tools can help with all of the above**

# The 2022 apocalypse

Before November 2022, Twitter was the **town square of science**

# The 2022 apocalypse

Before November 2022, Twitter was the **town square of science**

## Elon Musk takes control of Twitter in \$44bn deal

28 October 2022

James Clayton & Peter Hoskins BBC News

Share  Save 

# The 2022 apocalypse

Before November 2022, Twitter was the **town square of science**

**Elon Musk takes control of Twitter  
\$44bn deal**

28 October 2022

James Clayton & Peter Hoskins BBC News

**Twitter cuts staff from global moderation teams in Dublin  
and Singapore offices after mass lay-offs and resignations**

Community and Society

Sat 7 Jan 2023

# The 2022 apocalypse

Before November

**Elon Musk to buy Twitter for \$44bn deal**

28 October 2022

James Clayton & Peter Hoskirk

***Hate Speech's Rise on Twitter Is Unprecedented, Researchers Find***

Problematic content and formerly barred accounts have increased sharply in the short time since Elon Musk took over, researchers said.

Sat 7 Jan 2023

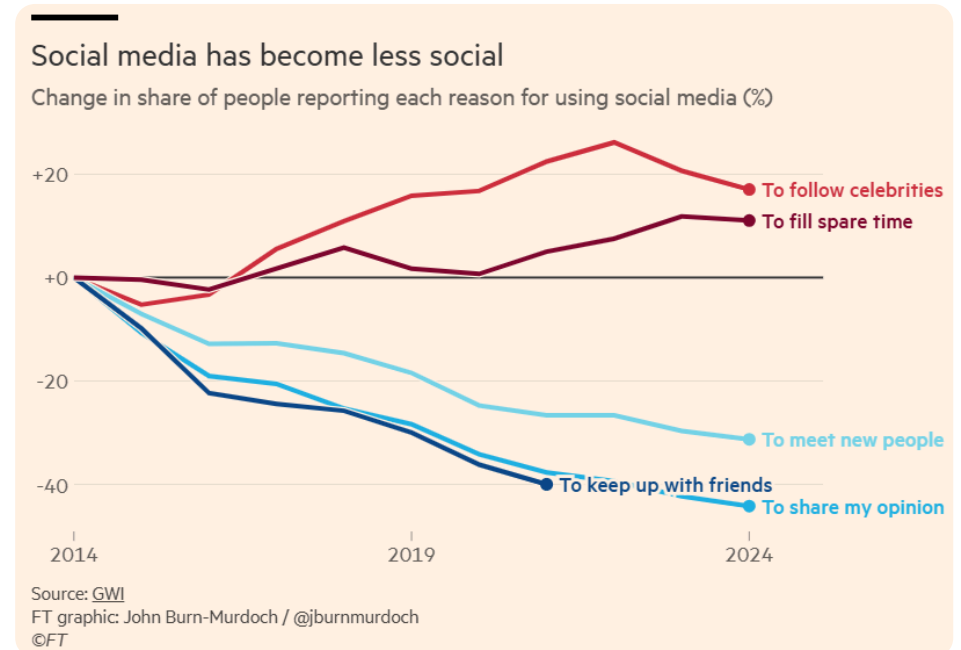
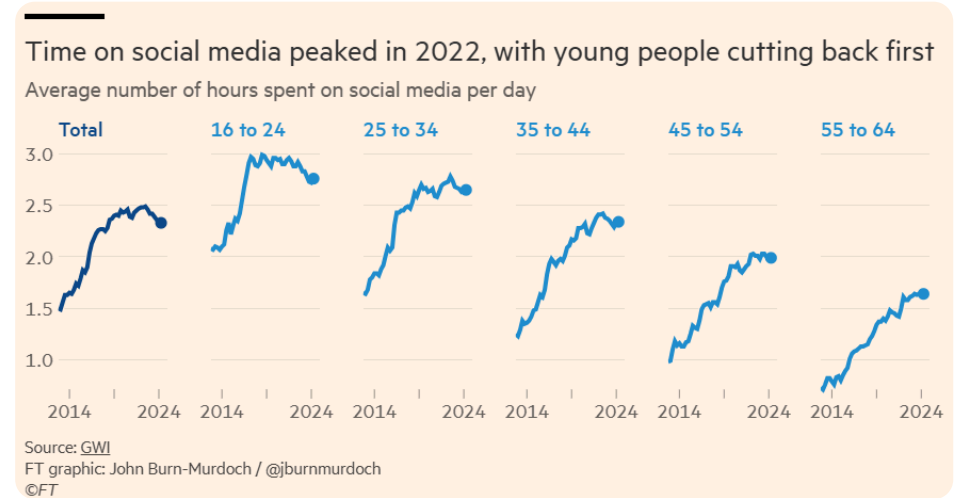
of science

**Twitter teams in Dublin and resignations**



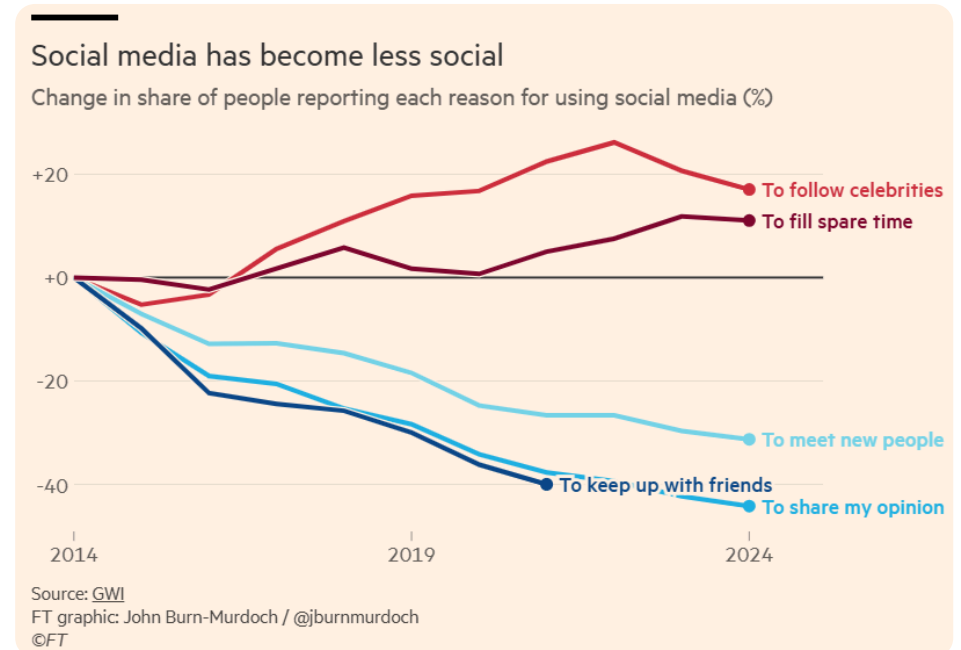
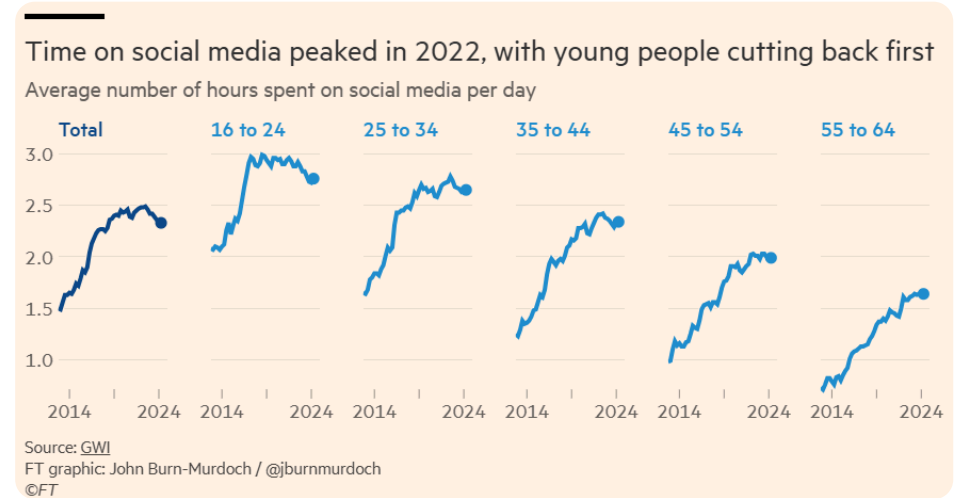
# Social media is not built for us

- Social media sites typically prioritize **profit** over **safety** and **accuracy**
- This is **unlike** other free tools we use daily as astronomers (e.g. ADS, arXiv, Astropy)
- We may even have passed 'peak social media' **globally** - most people get less out of social media, including scientists



# Social media is not built for us

- Social media sites typically prioritize **profit** over **safety** and **accuracy**
- This is **unlike** other free tools we use daily as astronomers (e.g. ADS, arXiv, Astropy)
- We may even have passed 'peak social media' **globally** - most people get less out of social media, including scientists



# **Most of the web is decentralized: Why not social media?**

**Anyone can host a website or send an email...**

**What if social media could be controlled by everyone?**

# Most of the web is decentralized: Why not social media?

Anyone can host a website or send an email...

What if social media could be controlled by **everyone**?

→ **Authenticated Transfer (AT) Protocol** makes this possible

# How AT Protocol works

# How AT Protocol works

1. Your **data** (posts, profile... anything!) lives on a **Personal Data Server (PDS)**, with one or many other accounts

# How AT Protocol works

1. Your **data** (posts, profile... anything!) lives on a **Personal Data Server (PDS)**, with one or many other accounts
2. Data from PDSes is **aggregated** and **sent out** by **relays**

# How AT Protocol works

1. Your **data** (posts, profile... anything!) lives on a **Personal Data Server (PDS)**, with one or many other accounts
2. Data from PDSes is **aggregated** and **sent out** by **relays**
3. **Other services** in the network (moderation, feeds) analyse and broadcast metadata



# How AT Protocol works

1. Your **data** (posts, profile... anything!) lives on a **Personal Data Server (PDS)**, with one or many other accounts
2. Data from PDSes is **aggregated** and **sent out** by **relays**
3. **Other services** in the network (moderation, feeds) analyse and broadcast metadata
4. **Any social application** can be built on top of this structure

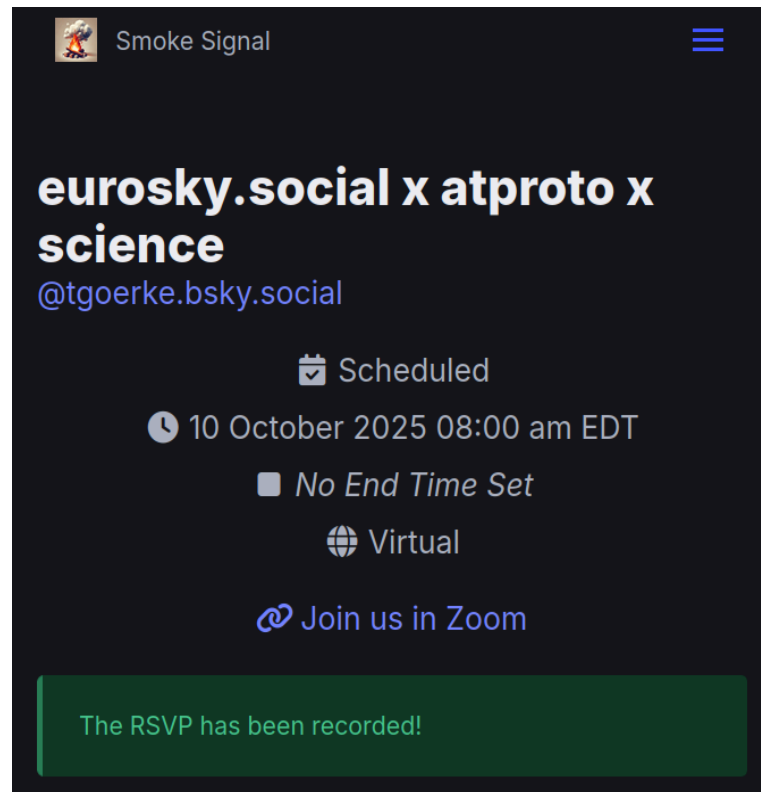
# How AT Protocol works

1. Your **data** (posts, profile... anything!) lives on a **Personal Data Server (PDS)**, with one or many other accounts
2. Data from PDSes is **aggregated** and **sent out** by **relays**
3. **Other services** in the network (moderation, feeds) analyse and broadcast metadata
4. **Any social application** can be built on top of this structure

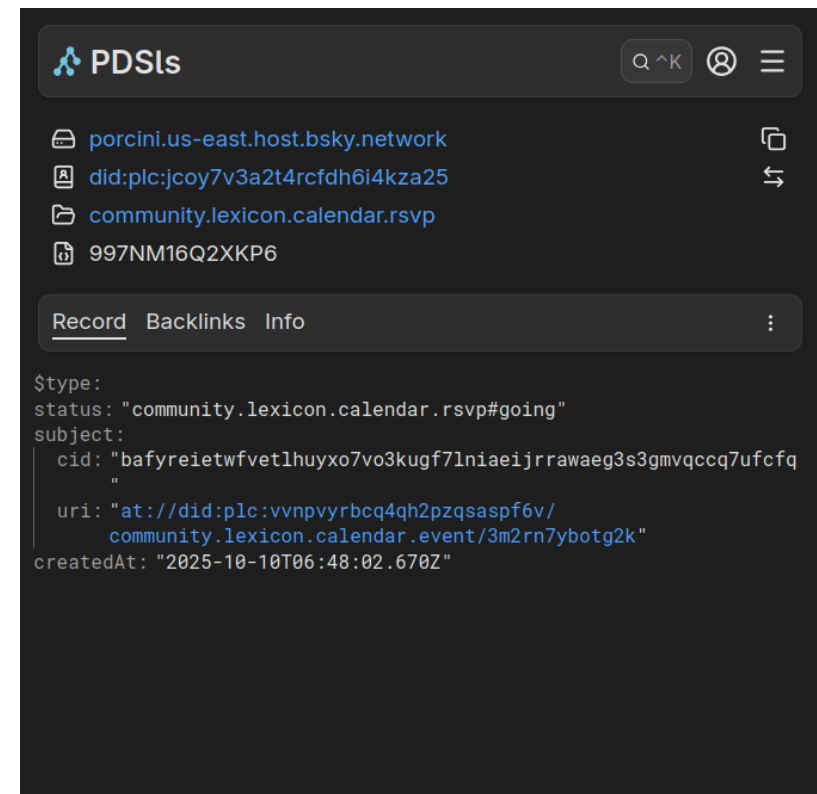
**Anyone** can host **any** of these different components!

# An example of this working

In October, I RSVP'd to a meeting on Smoke Signal



Smoke Signal put my RSVP on my PDS, & it was broadcast by relays



# The ATProto Twitter replacement: Bluesky

In Nature:

- Closed beta from 2022
- Launched in 2024
- Currently has **over 40 million** signed up users
- Has become the most popular place for scientists

**Bluesky's science takeover: 70% of *Nature* poll respondents use platform**

**'A place of joy': why scientists are joining the rush to Bluesky**

**Research posts on Bluesky are more original – and get better engagement**

# Why not ActivityPub/Mastodon?

It categorically does not scale well to a large user base.

E.g.: [astrodon.social](#), an astronomy community with ~50 users, cost **€300 / month (!!!)** to run

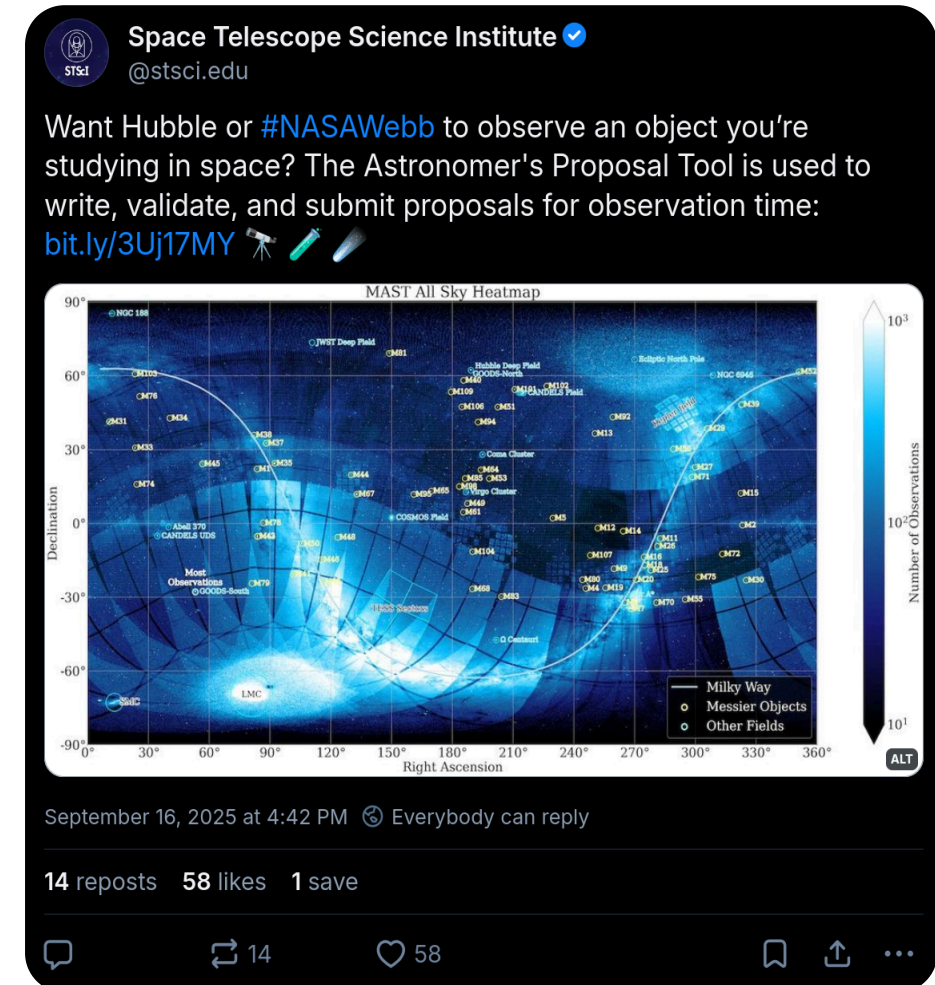
... AT Protocol components can run on a **Raspberry Pi!**

# Bluesky is a skeuomorphism





# Bluesky is a skeuomorphism

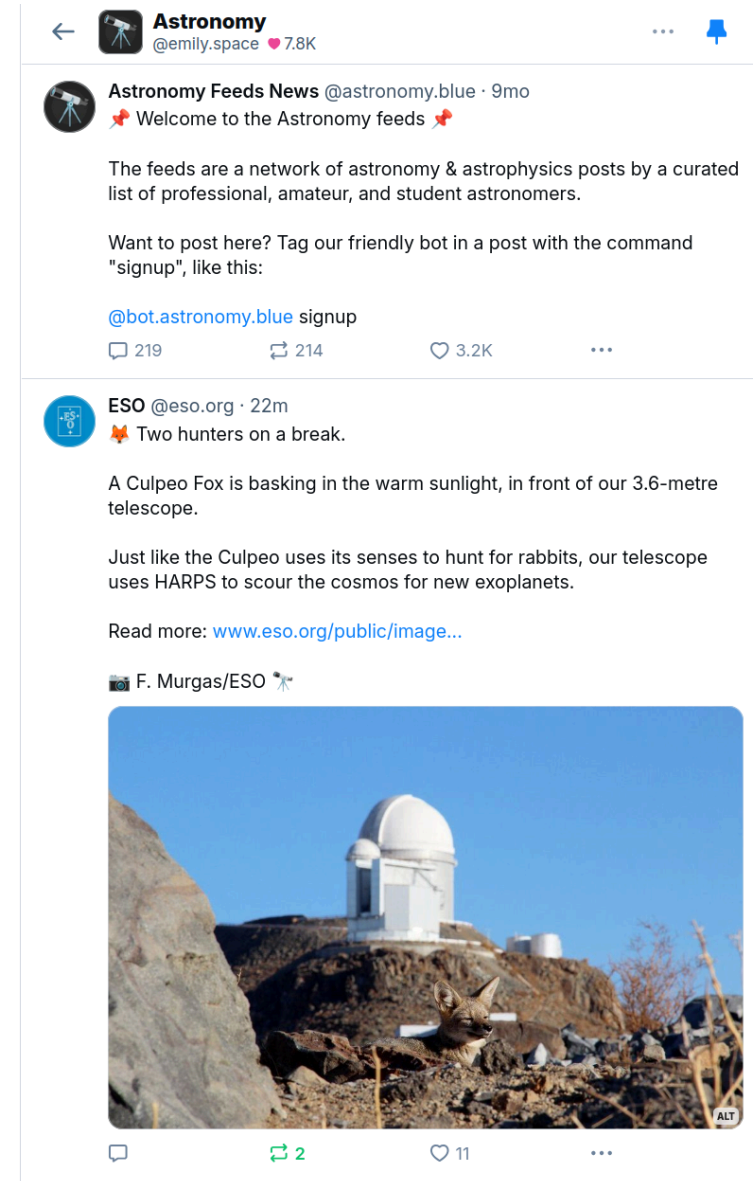


# Doing better than 'just a Twitter clone'

Anyone can make **custom feeds**  
of content on ATProtocol

In July 2023, I started out by  
making an **Astronomy feed**

It has become a **popular** way to  
post & meet others on Bluesky!





## How do the feeds work?

Python code running in the cloud **filters** events at upto ~10k / second

Flask server + PostgreSQL database provide **endpoints** for clients

**Moderation team** ensures safety & accuracy of content



## Astronomy

Astronomy posts, from astronomers.

Liked by 8K users



## Astrophotography

Astrophotography posts, from astrophotographers.

Liked by 592 users



## Cosmology

A science-oriented feed about cosmology.

Liked by 340 users



## AstroSci

Posts about astronomy research on Bluesky.

Liked by 301 users



## Extragalactic Astronomy

A science-oriented feed about extragalactic astronomy.

Liked by 272 users



## Planetary Science

A science-oriented feed about planetary science.

Liked by 240 users



## Exoplanets

A science-oriented feed about exoplanets.

Liked by 202 users



## The Milky Way

A science-oriented feed about Galactic astronomy.

Liked by 179 users



## Astrosky

A science-oriented feed about the astronomy community on Bluesky.

Liked by 170 users



## Stellar Astronomy

A science-oriented feed about stars.

Liked by 159 users



## High Energy Astrophysics

A science-oriented feed about high-energy astronomy and astroparticle physics.

Liked by 159 users



## Astro Software & Methods

A feed to discuss methods and software for astronomy research.

Liked by 135 users

**Algorithmic choice**  
Over time, this has developed  
into an ecosystem of 15+ feeds

# They're quite popular!

The feeds are used daily by ESA, ESO, StSci, Rubin...  
... and we currently get around 20,000 'scrollers' per week

**So: are permanent online spaces  
a dream or a possibility?**

# The Astrosky Ecosystem

- For about a year, **three developers** and a moderation team have worked on the feeds
- Recently ran a **crowdfunding campaign** and raised almost €700 to cover hosting, via **Open Collective**
- Planning lots more **integrations** for astronomers online...

Our lovely  
dev team →



# Next steps

1. **Host user data:** ensuring that astronomer's social data can be independently hosted forever
2. **Improving feed experience:** we want to make the feeds 'semi-algorithmic' (e.g. show less astrophotography to research astronomers)

# Ad: work on the project!

We're looking to **expand our developer team**, for projects on:

- Web frontend development
- Machine learning text classification
- Web backend / SQL (with Flask)

## *Why join us?*

You can learn about...

- Software development
- Web tools
- Databases / SQL

... improving your CV & skills!

*AND:* help astronomers online!

# Or simply: join our community

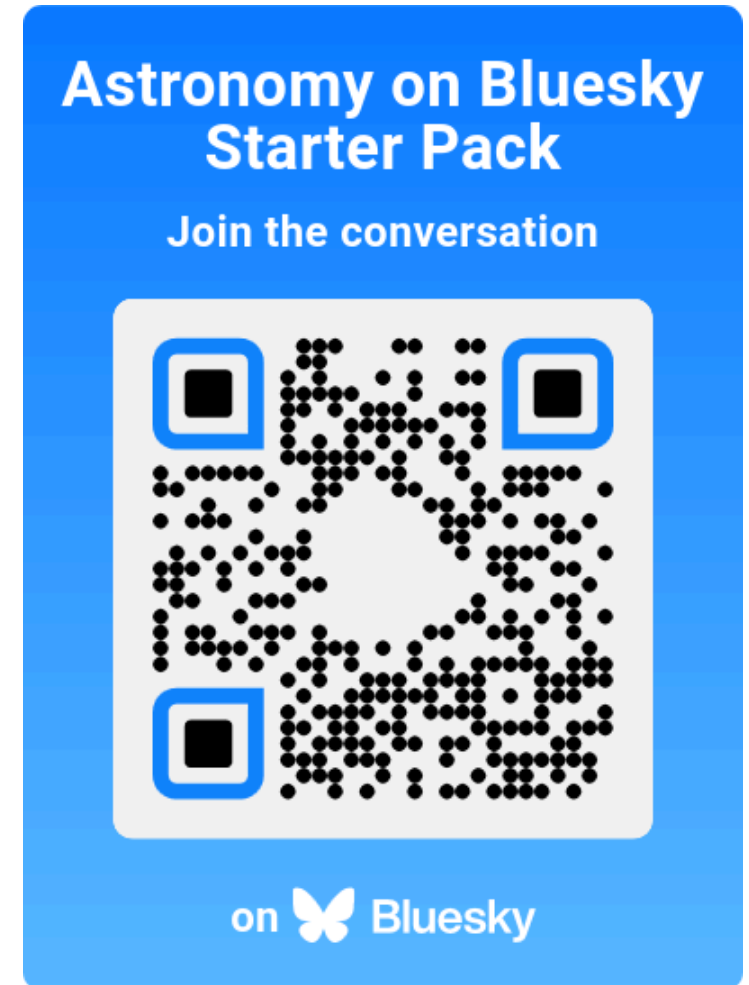
**1. Create a Bluesky account**

**2. Sign up for our feeds**

(make a new post containing the text  
"@bot.astronomy.blue signup")

**3. Join in on the community!**

(QR code on the right links to a 'starter pack')





# Conclusions

- *The Astrosky Ecosystem* is an initiative to have an **independent** online home for the Astronomy community
- After two years, we have ~**two thousand** signed up users & **tens of thousands** of readers
- **Join us!** Either the community, or as a developer

Web: <https://astrosky.eco>

