

Openscapes Community Call

Community Call: GitHub for NASA Openscapes community calendaring & project management. An open work in progress

Tuesday, February 20, 2024, 10:00 - 11:00 am Pacific Time (UTC-7)

[Event page](#)

Slides - NA

Recording - on [YouTube](#)

Summary [blog post](#)

Zoom link: Attendees must register via zoom

Pre-call tunes: It's about damn time, Lizzo ([spotify](#))

Quick introduction:

- Welcome, thank you for being here!
 - We'll be using Zoom for video calls & Google docs for notes
 - Everything you share in this doc is available to everyone else on the call
 - Comments / emojis / gifs / +1s to say "me too" are welcome! 🥳👍
 - Please add your name to the Roll Call below
-

Roll call • 10:00 - 10:02 am PT

Name / Affiliation / Pronouns / Share a place that's meaningful to you

- Bri Lind / Land Processes Data Center (LP DAAC) / [Kruger National Park](#), South Africa
- Stefanie Butland (she/her) / Openscapes / the hill in town (Kamloops) where the bighorn sheep hang out 🐐
- Julie Lowndes (she/her) / Openscapes / The Windy Tree on our morning walks with a view of the canyon
- Jon Harmon (he/him) / R4DS Online Learning Community / The weird Last-of-Us-esque abandoned street behind my neighborhood (now a tree-lined path with intruding roots)
- Carl Malings (he/him) NASA GSFC, Greenbelt MD
- Allan Just (he/him) / Brown University / Narragansett Bay

- Joseph ("Joe") Corneli / Oxford Brookes University / (Mr/Dr) / Boundary Waters Canoe Area
- Katie Corker / Center for Open Science (Contract) / she/her / Michigan USA
- Andy Teucher (he/him) / Independent / Middle Sand Hills, Alberta, Canada
- Edward Chan / CU Boulder or Independent / he/him / San Francisco
- Emily Lescak (she / her) / University of Alaska Fairbanks / Girdwood, Alaska
- Rupesh Shrestha/ORNL DAAC
- Amy Steiker / NSIDC DAAC / she, her / Bighorn Mountains, WY
- Andy Barrett / NSIDC / Findelngletscher, Kanton Wallis, CH
- Lindsay Platt (she/her) / CUAHSI / Chateaugay, NY
- Emily Clark (she/her) / CUAHSI/ Whitecrest Beach in Wellfleet, MA
-
- Chris Hartgerink (they/them) / Liberate Science / Berlin, Germany
- Nikki Tebaldi / PODAAC / she, her /
- Matt Fisher / NSIDC / he, him / Lake Tahoe, CA
- Camila Vargas Poulsen / National Center for Ecological Analysis and Synthesis (NCEAS)/(she/her)/Santa Barbara CA
- Sophie Breitbart / University of Toronto / she, her/ the Oak Ridges Moraine
- Gregor Siegmund (he/him) / US Geological Survey / dirt path and hedge behind my apartment
- Chris Battisto / GES DISC / he, him / Ludington State Park in Michigan
- Gray McKenna / WA DNR / they, them / southern Salish Sea
- Alexandra Thompson / Resources for the Future (DC) / she/her
- Luis Lopez / NSIDC
- José María (he/him) / Geophysical engineer and Python dev/ UNAM FI
- Amanda Bradford / NOAA Fisheries / she/her / Sakhalin Island
- Cian Dawson/ Berkeley National Lab - ESnet / he-him
-
-
-

Welcome • 10:02-10:07 am PT

- **Intro Openscapes** (2 min) - Julie

- Welcome to Openscapes' 9th Community Call! **We are recording.** Transcript is available.
- **Openscapes** is an initiative to help researchers do better science in less time, together. Through our mentorship programs we help research teams develop habits for data-intensive science that is more open, reproducible, collaborative, inclusive, and kind.
- All Openscapes activities are bound by our [code of conduct](#).
 - Be respectful and value each other's ideas, styles and viewpoints.
 - Lead by example and match your actions with your words.
- Land Acknowledgement (Julie). I am grateful I am for the land where I am here in Santa Barbara California and I want to honor the Chumash peoples who have been and continue to be stewards of the lands and waters here.
 - Land Acknowledgements are one way to amplify the knowledge and work of Indigenous peoples. Learn more about the land(s) you're on: <https://native-land.ca>.
- **Our plan for today** (2 min) - Julie
 - With today's conversation, ...
 - Today we're focused on NASA Openscapes, a project to support scientific researchers using NASA Earthdata as they migrate their workflows to the cloud. The NASA Openscapes Mentors community are user support staff across 11 data centers (DAACs) who are developing and teaching common tutorials to support researchers using NASA Earthdata in the Cloud.
 - At the 2023 AGU Fall Meeting, NASA Mentors taught 4 hands-on workshops using these common materials, as well as 12 talks and posters that leveraged common elements of the transition to the cloud."
 - So as you can imagine, having a common approach to track and coordinate all these moving pieces is important, and we're using GitHub Issues for this.
 - We want to share a challenge we are actively working on openly and collaboratively – to share how it's going because we think it can be useful to others, and to get ideas for improvements for us all. To do this -
 - First 30 mins - our two speakers will introduce their work so far, then 20 mins of conversation from your questions, feedback, or your own examples.

- We're building a culture here where we all help each other out. Together we can create a rich shared resource from this conversation.
 - *screenshare: View > Show outline > navigate to headings and bookmarks*
 - Please type your questions below ([Discussion](#)), or in the chat. During Q&A we may invite you to ask your question. We encourage everyone here to add their own responses.
 - We have a spot to share [resources](#)
- **Introduce Speakers** (1 min) - Julie
 - [Bri Lind](#) is a Geospatial Data Scientist at NASA's Land Processes Distributed Active Archive Center (LP DAAC). Bri is formally trained as an ecologist and remote sensing scientist and is deeply interested in facilitating the fusion of diverse remote sensing products with field data to enhance scientific insight. As a visual learner and science-oriented coder, Bri is focused on making materials that are easy to understand and likes to convert challenging concepts into flexible and easy-to-apply approaches.
 - [Stefanie Butland](#) is a core Openscapes team member and co-leads Champions Cohorts. She is a research scientist by training and an open science and tech community builder by passion.

Presentations • 10:07 - 10:35 PT

Participants, please add your own notes below.

The motivation, how it started - Bri Lind (~5 to 6 mins)

- Who, when, what and where..... Have general plans for working together towards shared goals, but what are our shared events?
 - Facilitates more connections
 - Be aware of shared dates of interest
 - Need for advanced planning
 - A place to track and update dynamic schedules

Notes

- As the group grows, how do we keep organized?
- How do we know what's coming up, for AGU? This is how we did this for AGU 2023 <https://nasa-openscapes.github.io/2023-planning-agu/>
- How do we know what's coming up, for the whole year?
- We don't all need to separately look up the registration deadlines for conferences

How we're doing it - Stefanie Butland (~10 mins)

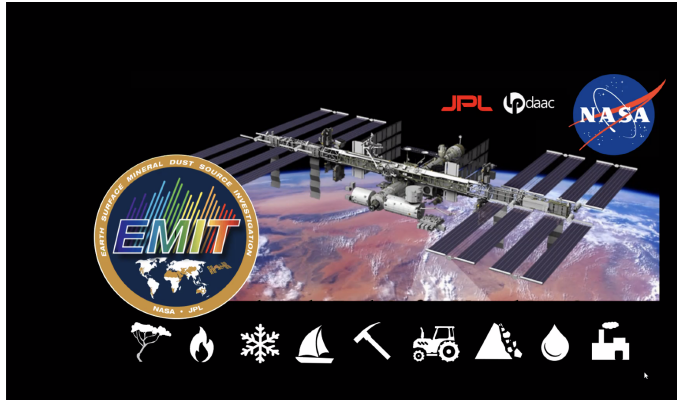
- Screensharing walk-through of a GitHub Project we're using for an open "calendar". We embrace working in the open and sharing how-we-work early before trying to make something "perfect" that doesn't suit people's needs.
-  [NASA-Openscapes](#) GitHub Organization > Projects > [MainPlanning](#)
- Different views give different ways to understand what's going on.
- [Roadmap](#) view for dates
 - e.g. Community call, hackdays, Earthdata webinar, ESA conference deadline
 - Toggle month, quarter, year
- [Table](#) view
 - Rows are GitHub Issues ... from different repositories
 - Sort by Labels or Start date
- Inspect Issue [#50](#). Community Call: "GitHub Projects..." - Feb 20
 - Checklist and notes
- Demo add an item to the "calendar"
- We're documenting this as we go in [NASA Earthdata Cloud Cookbook - GitHub for Calendaring and Project Management](#)
-

Notes

- Stef: "the view I look at most is Table View"

How we're adapting and expanding this for EMIT - Bri Lind (~10 mins)

- Communication across teams and institutions
- LP needs place where can work closely with [EMIT science team](#)
 - Need a place we can all see and keep each other informed
 - Co -planning, co-development space
 - Take notes in one shared open space



Work

https://github.com/NASA-Openscapes/projects/9/views/1?pane=info

Mail - Outlook Staff Attendance M... Earthdata Code Coll... LP DAAC - Earthdat... bitbucket Google Earthdata Search Openscapes LearningResources Wagtail GS-EROS-LP-DAAC... Other favorites

NASA-Openscapes / Projects / @LP-EMIT Synergy Space

Monthly roadmap Quarterly roadmap View 4 + New view

Filter by keyword or by field

Title	Start date	End date	Labels	Status
In progress This is actively being worked on				
1 Draft Presentation YOS #47	Feb 2, 2024		LP DAAC	In p
2 Assemble Slidedeck for Methane Plume Webinar #74	Feb 29, 2024			In p
3 Reach out to workshop attendees a week ahead of webinar #72	Mar 7, 2024			In p
4 EMIT Methane Webinar #9	Mar 14, 2024		EMIT LP DAAC workshop	In p
5 Review EMIT FAQ doc #70			documentation EMIT	In p
6 Contact 2i2c to register event #73				In p
+ Add item				
This Quarter				
7 Dana to provide EMIT Forestry related slides for Mahsa ABOP se... #59	Feb 12, 2024	Feb 16, 2024		This
8 Year of Open Science Culminating Conference - Mar 21-22 #22	Mar 21, 2024	Mar 22, 2024	EMIT LP DAAC meeting	This
9 EROS User Experience Webinar #24	Apr 30, 2024		EMIT LP DAAC	This
10 Release EMIT in AppEARS social media and news announcement #71			EMIT	This
+ Add item				

https://github.com/NASA-Openscapes/workshop-planning/issues/9

Short description
This is a space for us to use as we work together to accomplish mutual goals.

README
Next Meeting 02-29-2024
02-15-2024

- Share progress on Methane Plume Tutorial
 - a bit of confus
 - delineation vs
 - tighter ROI to
 - show RGB with
 - add IME formu
 - intro slide deck
 - Will this be lon
 - getting all the
 - Phil wants to p
- Assess what needs to be done for webinar
 - plan to have presentation material ready Feb 29
- Review phrasing for AGU workshop attendee follow-up email
- Open Science Talk was accepted (Bri in process of drafting presentation)
- How is calendaring in github synergy space going? questions/ concerns/ issues?
- Other questions:
 - will have interns again? NO
 - what about using space with both sides (Science and SDLQ)? maybe
 - Reminder: ESA talk/poster is due in 2 weeks - not going
 - consider AGU plans in advance (workshop proposal dude April 12) Dana will follow up with NEON team

01-18-2024

Type here to search

12:27 PM
2/20/2024

- Can pin the notes view
- “We needed a place to write shared notes”
- Everyone can find this, can add things to the agenda
- Requires lots of diligence to keep up to date
-
- Will be less “hey here is this document”
- Key for cross-institutional sharing
-

Discussion / Audience questions • 10:35 - 10:55 PT

Julie curates and moderates

Type your questions here or we'll copy from the chat. Include your name and we might invite you to unmute to ask. Add +1's to show your interest in a question. Add your own responses to the questions!

- (Name) Question
- (ChrisH) What's some of the best practices and/or quirks that you've run into while starting to use GH Projects?
 - Bri mentioned that you can't tag people in an issue unless they have permissions to the correct repo associated with it. Makes sense but it does taken some extra (Stef: I think we could tag people in an issue but not assign them to an issue)
 - Camila mentioned you need to give ppl access to both the repo and Project in order to be able to assign them.
- (Lindsay Platt) How do you determine what the "right size" is for an issue?
 - This is a good question too. We have been playing with this a bit - at first separate issues for "meeting abstract deadline" and "meeting"
- How open is it - can the whole world see? (Not a github user so I apologize if this is an obvious question.
 - Great question! Yes this is public, open to everyone
 - (GitHub has options for private for free with limited collaborators, or to pay for private with more collaborators)
- (Andy) Has it been a hard sell getting people in government agencies on board with this level of transparency?
 - This is new, this is a third space
 - We don't just work with people on our Jira board
 - (Lindsay Platt) Some US Federal agencies have locked down GitHub access and moved their in-progress repos to things like GitLab, so might not work for projects that are run within those agencies but I think they can participate as users on other projects.
 - Are you able to share which US Fed agencies have locked down GitHub access?
 - "Locked down" might be strong wording. USGS moved some of their in-progress repos to GitLab so that their code can be hosted on a USGS URL to meet some requirements for code/model archival. I

remember there being special permission needed to get a repo on GitHub (addition from Cian: Yes this was a recent shift, DOI was consolidating all GitHub content under a larger DOI umbrella. New associated policy required USGS folks to have paid accounts under that umbrella). I was loosely following the migration of GitHub repos to GitLab. I think GitLab has similar project views, so people could set this up there. And just to add - some of the GitLab repos are public just not the typical space where open science is happening.

- "Start small to build comfort"
- Are there export options, e.g., to Google calendar?
 - Stef: Not that I know of.
- (Jon H) Related to Andy's Q, I'm curious about the distribution of GitHub familiarity on this call (and among people who aren't on this call but would be interested in this functionality).
 - And from ongoing convo, I'm wondering how much it matters beyond getting people to try.
- (Andy) @Bri How ready/eager were science team members to adopt Projects? Especially those who were not aware of or had used GitHub.
 - No one needs how to commit or write code.
 - We intentionally are not using GitHub Actions, Templates, Bots. We're thinking about the lowest barriers to entry
 - Bri: "I've been desperately looking for a tool, and it's not Google Calendar"
 - Other tool lock-in: Jira, Confluence. Doesn't allow for collab outside those orgs
- (Matt) The struggle with the "projects issue" view and the "full issue" view is one of the most disruptive quirks of GH Projects for me! The "projects issue" view was very recently improved significantly (<https://github.blog/changelog/2024-01-18-github-issues-projects-project-status-updates-issues-side-panel/>) but as we found today, there are still some functions that aren't available there.
- (Amy) It doesn't seem like there are good options out of the box for capturing repositories across organizations within a single project. Have you or others on this call explored this at all?
 - We're contributing to places that don't "live" in our NSIDC GitHub Organization
 -

- (Cian) What level of training/guidance do you find you need to give folks new to using Github issues/projects? My experience in the past is the UI and features are great, but it's not an intuitive UX.
 - Hands on Clinics, focused on welcoming and in the browser. This is where we start:

<https://nasa-openscapes.github.io/earthdata-cloud-cookbook/contributing/setup.html#create-a-github-account>
- (Camila) Bri shared an issue or README or an issue linked to a README where the team would take meeting notes. What is the system you have in place for documenting meeting notes, is that on a repo README or an issue itself?
 - Stef: great question - we're working our way through this. E.g. When to use GitHub issues vs discussions. And when to open an issue vs start a whole new repo. We did that for [AGU conference planning](#). Had its own repo with detailed readme and issues. Then realized we wanted a repo for *all* conference planning
 - @Camila - you are right! I showed using the project README as the ongoing notes spot....this may not be the brightest idea - but thats how I have it now. Its really easy to to click edit and save..... but perhaps not as much version control? Of the doc as would be ideal.
 - Thank you both! This is very insightful I didn't know you could access the project README as a side panel in the project view.
 -

Resources we want to share

Add **your** favorites

Related CSCCE Open Source Tools Trials:

- [Using GitHub to facilitate community activities](#)
- [GitHub and Bitergia to support research and developer communities](#)
- [Using GitHub and HedgeDoc to organize and support community events](#)

Closing & thank you • 10:55 - 11:00 PT

- **Thank you** - Julie
- We'll post the video next week as part of a blog post.

- **Efficiency Tip of the Day**

- GitHub Search: Type ? for the search bar

- **Inclusion Tip of the Day**

- Embrace “the power of yet” for all of us. Let’s avoid terms like “newbies” and “experts” that narrowly define a person’s skills. Try “newer or less experienced” GitHub users or “seasoned or more experienced” GitHub users.
- More on the power of yet, and a growth mindset from Dr Carol Dweck in the [Openscapes Lesson Series](#)

Planning the event

GitHub Issue (planning): https://github.com/NASA-Openscapes/how_we_work/issues/50

Speakers Planning Meeting

Feb 14. Bri, Dana, Stef

- Checkins
 -
 -
- Flow of community call
- Discuss key messages
 - Dana & Bri: Things that make this space ideal
 - Joint space to coordinate and collaborate across efforts
 - Collaborative
 - Communicating across teams and institutions - a place we can all see, keep each other informed
 - Hoping to use as strategy for consistent codebase - codevelop instead of a horserace between teams. Who's working on what. Not everyone has to write the same extraction code. Be a bit more modular.
 - Link calendaring to the repos!
 - members of team who don't have familiarity. How to get them comfortable. What scope to get them in on.
 - Case study:
 - **Bri: motivation**
 - Helps with who, what, where, when; what is everyone up to. We can decide how to collaborate on events that a few of us are going to.
 - I didn't know you were thinking about that. Lets connect these ppl
 - Have more convos
 - Hey I'm going to that meeting too!
 - Makes new connections too difficult to make.
 - Can see for whole year. So we can plan. Need serious lead time - allocate to planning, travel for in-person, registration dates, approvals.
 - Need a place to track the info and keep each other up to date.
 - A place to take notes that's totally open
 -

- **Stef: technical show and tell NASA-Openscapes MainPlanning project.** This week, this quarter, year
 - Show these different levels
 - Labels
 - Sort by start date, sort by label e.g. meetings or lp-daac
 - Options for viewing - cards vs table vs timeline. Different ways to understand what's going on
 - Different repos
 - Then how else can we apply this? -> EMIT
 -
- **Bri: show EMIT LP as case study.** 2 teams in different orgs that need to stay abreast. Take serious notes in place so everyone can see.
- **Solicit advice.** What do we want feedback on.
 - How does this work for people with different comfort levels
- Post-meeting actions
 - choose a walk-on song :-)
 - How about: Its about damn time, Lizzo :)

Promotion

To share in Slacks

 Openscapes next Community Call is Tues, Feb 20, 10 - 11 am PT / 1 - 2 pm ET!

GitHub for NASA Openscapes community calendaring & project management. An open work in progress

[Read more and register](#)

NASA Openscapes Mentors develop, teach, and support many workshops, events, conversations, and each other, with their goal to support scientists using NASA Earthdata as they migrate workflows to the cloud. We all want (need!) to be able to see ongoing NASA

Openscapes events and activities across 11 NASA data centers, their planning status, and where they fit in our calendars. We need something that is lightweight with a low barrier to entry. Sure, there are many add-ons to make it more “functional” (GitHub templates, Actions), but for whom? These might be barriers to people less familiar with GitHub.

We embrace working in the open and sharing how-we-work early before trying to make something “perfect” that doesn’t suit people’s needs. Join us for a screenshare-and-tell of how we’re using GitHub Issues, Projects, and Roadmap to have an open, dynamic way for many people to use and contribute to this “calendar”. It’s not just about the tools though. We’ll talk about how it started, how it’s going, the mindset, skills, and how we document as we go.

Bring your questions and your experiences. We’re keen to hear about how others have done this and how we can improve our setup. We always save time for audience discussion!

Speakers will include [Bri Lind](#), a Geospatial Data Scientist at NASA’s Land Processes Distributed Active Archive Center (LP DAAC) and a NASA Openscapes Mentor, [Stefanie Butland](#) from the Openscapes team, and staff from other NASA data centers who are trying out this approach.

Toot on Mastodon

Link to Toot: <https://fosstodon.org/@openscapes/111862757408049294>

Promo status Feb 2.

- Tooted
- Slacks
 - Openscapes @channel
 - CSCCE
 - rOpenSci
 - FTS
 - RLadies organizers
 - RLadies community
 - SOSS Standard Office Space Kamloops
 - Built in Kamloops
-

Pre-call logistics: Stef, Julie (Pacific Time)

- 9:45 - sign into Zoom to setup/check audio etc;
 - double-check zoom link for participants, and if no attendees 5 mins early, triple-check!
- 9:55 - start rotating [slides](#) and letting people in Zoom
 - one slide says we'll start at at :02 after, say hello in Chat
- 10:00 - start pump up music, slides keep rotating
 - Sharing audio & slides: [Approach Guide how to](#)

Advance slides automatically while you present

1. Open a presentation in [Google Slides](#). [↗](#)
2. In the top right corner, click **Slideshow** .
3. At the bottom, click Options  > **Auto advance options**.
4. Choose how quickly to advance your slides.

Tip: Re-set the auto advance options each time you present your presentation.

Blog post

title: "Community Call: GitHub for NASA Openscapes community calendaring & project management. An open work in progress"

author:

- Name: Bri Lind
Orcid: 0000-0002-5306-9963
- Name: Stefanie Butland
orcid:

date: '2024-02-28'

categories:

- blog, community-call

image: IMAGE.png (Roadmap view screenshot)

Community Call: GitHub for NASA Openscapes community calendaring & project management. An open work in progress

Quicklinks

- [Video recording](#)
- [Collaborative Notes](#)
- Slides - none

Our 10th Openscapes Community Call was a screenshare-and-tell of how we're using GitHub Issues, Projects, and the new Roadmap feature to have an open, dynamic way for many people to use and contribute to a "calendar". We embrace working in the open and sharing how-we-work early before trying to make something "perfect" that doesn't suit people's needs so we were grateful for questions and suggestions from participants! Presented by [Bri Lind](#), a Geospatial Data Scientist at NASA's Land Processes Distributed Active Archive Center ([LP DAAC](#)) and a [NASA Openscapes Mentor](#) and [Stefanie Butland](#) Openscapes team member.

—

How do we know what we're doing together and when we're doing it?

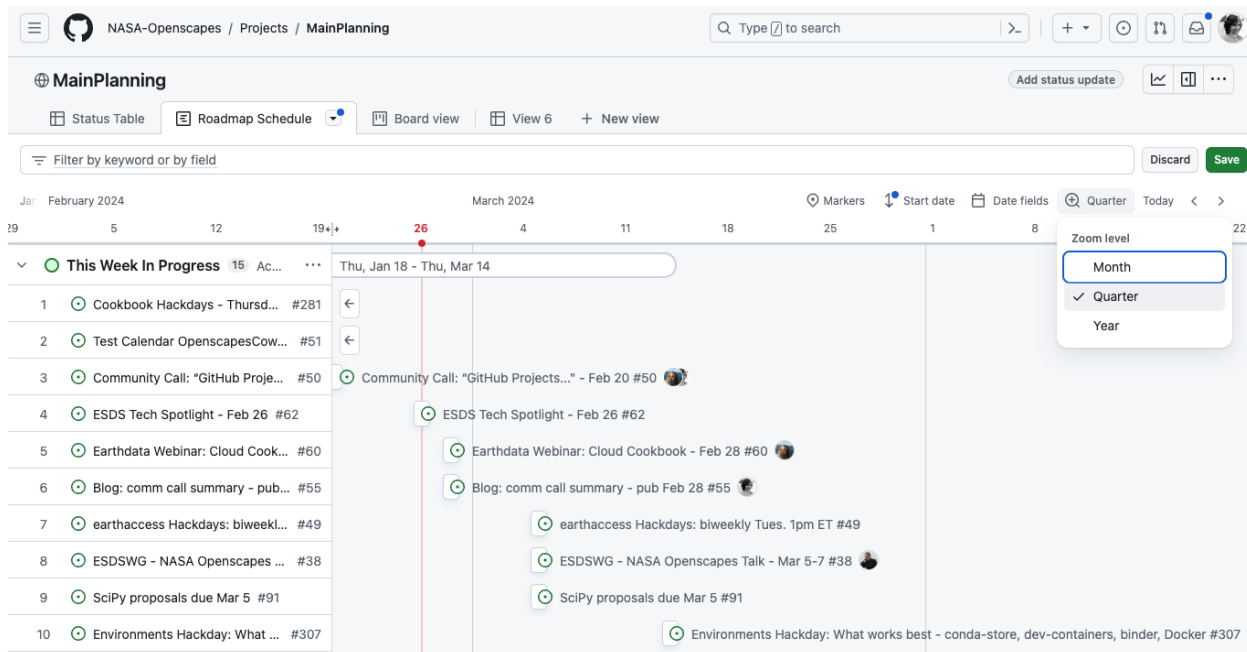
NASA Openscapes Mentors develop, teach, and support **many** conference workshops, webinars, and participate in project hackdays with their main goal being to support scientists using NASA Earthdata as they migrate their workflows to the cloud. Bri set the stage with our motivation. People working across 11 NASA data centers ([DAACs](#)) need a way to see a year's worth of "who's here; what are we doing; when are we doing it; where can we find overlap with each other?" The work requires advance planning, and we'd love to avoid having everyone need to separately look up the registration deadlines for conferences. That can all be on a community calendar. We need a solution that is lightweight, with a low barrier to entry, and agnostic to specific calendaring software like Google Calendar vs Microsoft Outlook.

How we're using GitHub for calendaring and management

> "I've been waiting for something like this for... probably a year" - Bri Lind, NASA Land Processes data center.

For the past three years, we have been using GitHub as a community to collaborate around code, tutorials, and documentation, taking advantage of its features for version control, code review, and workshop book publishing. This is important not only because it helps us develop collaboratively as a team, but it's also the same technology that Earth science researchers use, so we are able to develop practical experience to help them every day as we work. It made sense to explore using GitHub more deeply for our planning and calendaring.

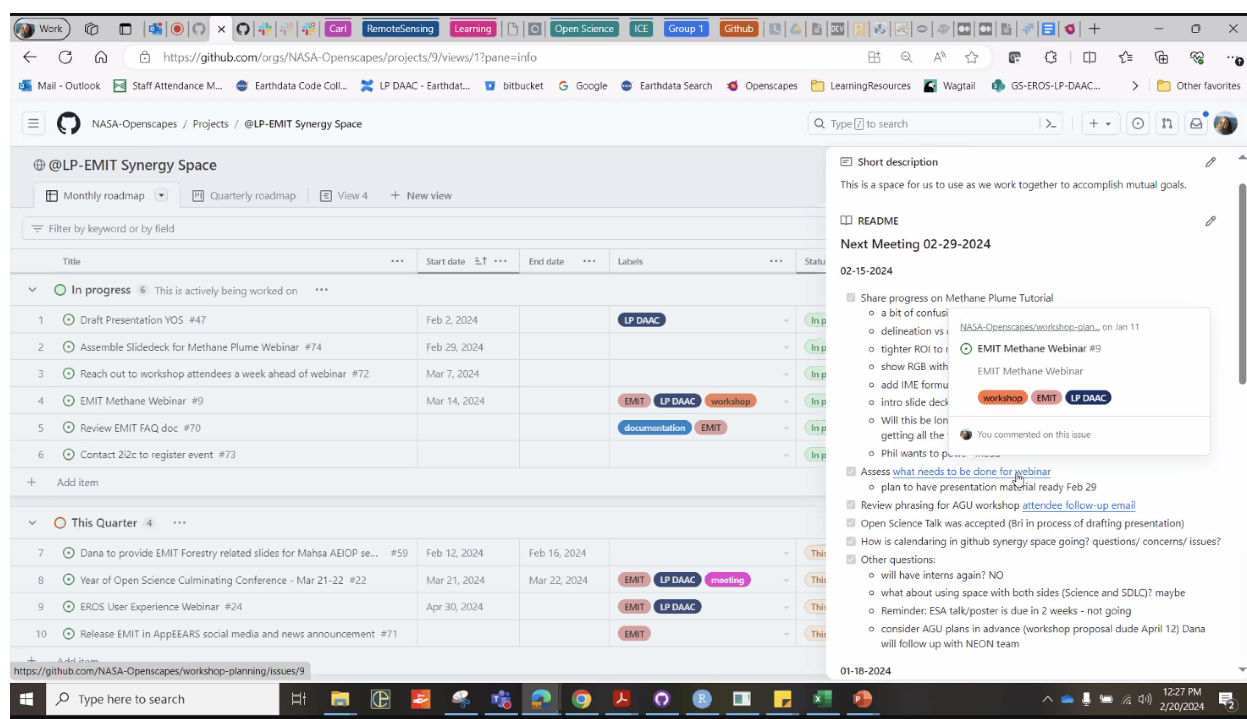
We started using GitHub as a centralized place where any of the ~40 NASA Openscapes Mentors can post dates and information for a conference workshop they are leading, for example. Everyone else can see it, and someone might comment "I'm speaking at the same conference. I can give some hands-on help.", or "Here's a python notebook I created for a similar workshop last month." During the Community Call, Stef screenshared our [MainPlanning](#) GitHub Project, the Roadmap view (screenshot below) that gives a calendar perspective and the Table view for details on each item. She demo'd creating a GitHub Issue, associating it with the Project, adding topic labels, and a Start date to have it appear in the Roadmap. She showed how we're also documenting this as we go with screenshots in [NASA Earthdata Cloud Cookbook - GitHub for Calendaring and Project Management](#).



Screenshot of Roadmap view

How NASA's LP DAAC and EMIT science teams are expanding this approach

NASA JPL's Earth Surface Mineral Dust Source Investigation (EMIT) instrument aboard the International Space Station (ISS) uses imaging spectroscopy to detect surface mineralogy, methane gas plumes and ground surface characteristics from space. The NASA Land Processes data center works closely with the EMIT science team to distribute data and develop tutorial resources and they wanted a way to do that more fluidly. A place to strategically link meeting agendas/ notes/ tasks/ progress in [a single 'open' location](#) that allows individuals on both teams to be aware of progress and decisions as they are being made. The teams are using this space to do more things in the open and having fewer reasons to say "Where's that doc? Can you email it to me?"



Dig into the discussion

Following the presentations, we had a rich discussion driven by participants' questions. Topics included:

- how to get different teams and people to 'buy into' a system like this;
- how readily government agencies adopt this sort of approach with this level of transparency;
- the importance of having something like this to support collaborations with groups that cannot access an organization's internal Jira project management system;
- quirks people encounter while GitHub continually improves the Projects system;

We all agreed on the need to start small to build comfort for people who aren't yet familiar with GitHub. See our [shared notes doc](#) for details of questions and tips from participants

Related Resources

- [NASA Earthdata Cloud Cookbook](#) developed by NASA Openscapes Mentors
- [Openscapes GitHub Clinics](#)
- CSCCE Open Source Tools Trials:
 - [Using GitHub to facilitate community activities](#)

- [GitHub and Bitergia to support research and developer communities](#)
- [Using GitHub and HedgeDoc to organize and support community events](#)