This is an example of a document that I put together for a research team to build a framework for the team logistics and to help new team members get onboarded quickly and consolidate a lot of the information into one source of truth. PID of the researchers I worked with have been removed for their privacy as well as links to some of the resources which were intended for internal use only.

AGEL Roadmap

Last Updated: 2025.11.11 by C. Watson

This roadmap is intended to help new researchers quickly understand what data, tools, and institutional knowledge our group has accumulated. Resources are currently scattered across individual drives, Google Drive folders, Airtable bases, and personal machines. This guide outlines **what exists, where it lives, and who the best point of contact is**.

The goal is to reduce onboarding time, avoid duplication of effort, and ensure continuity as people join and leave the team.

Regularly occurring meetings:

- AGEL Team Meeting – monthly, last Thurs/Fri of month (typically)
    - Contact: Tania
- AGEL Compound Lenses – recurring meeting focusing on science/observations of compound lenses
    - Contact: vy

How do I use this thing?

STEP 1: Read AGEL Project Policy (summary of best practices for AGEL data/members) and the AGEL Roadmap (this document; who is who and what is where)

STEP 2: Read Onboarding Checklist

STEP 3: Familiarize yourself with the AGEL Data Plan and Policies

STEP 4: Get to work! Use this document and the AGEL dataverse to navigate available AGEL data. Use this document to look through resources and tutorials that will help you out during your research.

General overview of what is contained within this Roadmap:

- Onboarding checklist – to get new team members acquainted will all the resources and data available to them in AGEL
- Offboarding checklist – to help leaving members organize their data and notes so that the work is not lost in time and you can continue to get credit for your work without making a poor undergrad repeat it all just because you forgot to leave your reduced spectra files in the shared repo!
- Who is who - table of AGEL team members, links to contact email, where they are based, and notes on specific areas of expertise
- Available Resources - available resources/sources of information that AGEL has
- Available Data Products - summary of Imaging and Spectra data products that have been compiled by the AGEL team
- Tutorials/Examples – compilation of particularly helpful tutorials/examples for data reduction and lens modelling

Onboarding New Team Members

Last Updated: 2025.10.23 by C. Watson

This document should be shared with any new AGEL researchers to learn the standards and best-practices for utilizing AGEL resources. A lot of the information here was taken from the Harvard Research Data Management website.

➔ Review AGEL Roadmap (this document)

➔ Review AGEL and Institutional Data Management Policies

- AGEL Data Management Policies

➔ Create Preliminary Data Workflow

- Review AGEL standards defined for file formatting, naming conventions, directory structures, etc.
- Creating your own workflow early on can substantially reduce the amount of unnecessary and redundant files.

➔ Create preliminary README Files for each dataset

- Again, make sure you follow AGEL standards and record the required metadata
- Readme files should be plain text format and should be created for each dataset
- Creating a README file at the beginning of your research process, and updating it consistently throughout your research, will help you to compile a final README file when your data is ready for deposit.
- Be aware of the metadata required to complete the Offboarding checklist and Knowledge Transfer Form

➔ Think about Data Storage

- 3-2-1 Rule:
  - Have **3** copies of your data (original + local/external + external/remote)
  - Have **2** types of storage formats (e.g., external hard drive + cloud storage)
  - Have **1** storage type offsite (e.g., external hard drive kept at home)
- Ensure you have proper backup procedures in place as well

➔ Be aware of institutional or team policies of data sharing (e.g. are there embargos or restrictions in place?)

Who is who?

Last Updated: 2025.11.12 by C. Watson

Here you can find the info for active AGEL researchers, what their roles are, where they are based (since we are everywhere), and any info on particular specialties. Alumni members are included at the bottom. These are not active researchers but may still be useful to reach out to for certain things.

Team directory

Name	Contact Email	Role	Location	Location Notes	Most likely to be helpful to contact for info on…
		Team Lead	Harvard …	Center for Astrophysics	General AG…
		Science L…	Swinbur…		Observations Cosmology/…
		Science …	Universit…	UC Davis	Observations Source Scie…
		Deputy L…	Swinbur…		General AG…
		Researcher	Waimea	Keck Observatory	Observations
		Researcher	The Univ…		Modeling Cosmology/…
		Grad stud…	Universit…		Modeling
		Researcher	Universit…		Modeling
		Post-doc	Harvard …	Center for Astrophysics	Einstein Spi… Compound …
		Researcher	Universit…	UC Davis	

Team directory

Name	Contact Email	Role	Location	Location Notes	Most likely to be helpful to contact for info on…
		Grad stud…	Universit…		Modeling
		Post-doc	The Univ…		
		Undergrad	Harvard …		Src/Defl En… Modeling
		Researcher	Universit…		
		Undergrad	Harvard …		Modeling
		Researcher	Universit…	UC Santa Cruz	
		Researcher	Europea…		
		Researcher	Swinbur…		
		Researcher	Harvard …	Center for Astrophysics	
		Researcher	The Univ…		Modeling
		Researcher	Universit…		
		Researcher	Waimea	Keck Observatory	Observations
		Researcher	Swinbur…		
		Researcher	Durham …		
		Researcher	Universit…	UC Santa Cruz	Source Scie…
		Researcher	The Univ…		Modeling
		Researcher	Universit…		Einstein Spi… Cosmology/…
		Researcher	Clackam…		

Team directory

Name	Contact Email	Role	Location	Location Notes	Most likely to be helpful to contact for info on…
		Researcher	Technica…		
		Researcher	Universit…		
		Researcher	Pontifical…		
		Post-doc	Universit…	Currently at Carnegie observatories , Pasadena	Source Scie…
		Post-doc	Harvard …	Center for Astrophysics	General AG…
		Undergrad	Harvard …		Source Scie…

Resources

Last Updated: 2025.11.06 by C. Watson

Here you can find a compilation of resources/tools that the team has built throughout the years, as well as notes on who the best people to contact for more info. You will need to get access to each resource individually.

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1. AGEL Dataverse
    - Permanent AGEL data archive used for curated data releases for the survey as well as collecting project specific data for individual papers
    - Free for anyone to make an account and add data. Please see instructions here
2. AGEL Slack
    - Reach out to your team lead for getting access to the AGEL Slack
    - Helpful for contacting different team members, disseminating information/data, and getting reminders about monthly meetings
3. Airtable
    - Owned/managed by Tania & Karl – reach out to them for access and questions
    - Main record of AGEL targets
        i. Parent Catalog – main catalog of AGEL systems, links to all other tables so can click on single target to open page-like view of record, some of which you can click on to see the target row in other tables
4. AGEL Google Drive
    - Managed by UC Davis (Keerthi?)
    - Main mode of disseminating data/code to rest of team as well as archiving work

- Start with “README.txt” in main drive folder to see what is where in here and to see how any uploaded folders should be structured

5. AGEL Website

- main AGEL website that contains public data releases/info
- Managed by vy
- Links to many resources that are in the google drive

NOTE: Links to most google drive resources have been removed in this example document.

Data Roadmap

Last Updated: 2025.10.08 by C. Watson

Here is a list of what data AGEL has, where it is located (should mostly be in shared google drive), and who the best contact person is for questions on specific datasets

Most of the data can be found in the AGEL Team Drive (links included below). If you cannot find the data there, you will likely need to hunt down someone for the data on their local machine.

Permanent AGEL Data Archive:

- The AGEL Dataverse - main dataverse that will hold sub-dataverses and datasets. Within this Dataverse, there are currently two additional dataverses:
  - Observational Data – this will hold curated sets of *reduced* observational data (though it is usually good to include the raw HST observations because they can be useful to the modelers).
  - Published work using AGEL Data – this is where you should link your dataverses and datasets that are associated with your specific project/paper

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Information that is available in the AGEL Google Drive

Observation Specific Information

In this folder you can find information on specific observing runs (e.g. Observing Logs, Notes, Target Lists, etc.)

2025 Data Assessment

In this folder you will find Lookbooks and assessment notes for HST observations

To find actual data products:

1. Imaging Data

- HST imaging
    - Three main programs: Glazebrook (16773), Huang (15867), and Tran (17307)
        - Glazebrook reductions can be found here:
        - Full Tran reductions are here:
    - All have quick look and raw imaging data in the drive:
    - Nice RGBs from Glazebrook program:
    - Latest contact point: Courtney
- SOAR-SAMI imaging:
    - Contact point: Karl?
- Magellan PISCO: (also has raw files in Curated-data/data/raw_data)

2. Spectra

- Keck-ESI (2019-2021)
    - Raw data:
    - Reduced data:
    - Additional ESI 1D data can be found at this GitHub repository – contact Keerthi for access
- Keck-KCWI (2020)
    - KCWI_arcs google drive with observations, logs, models, etc: Drive
    - KCWI_arcs reduced data: Combined frames by object
    - More raw data:
    - Contact: Keerthi, Rong
- Keck-NIRES (2020-2021)
    - Raw data:
    - Reduced data:
    - Additional NIRES 1D data can be found at this GitHub repository – contact Keerthi for access
- VLT-XShooter (2018)
    - Reduced data:
- DESI Spectra
    - Contact: Rodrigo

- Fitted spectra products:
    - ESI(2019) + XShooter spectra that has been run through pPXF:
        - Contact: Karl & Keerthi
    - Additional fitted spectra from ESI, NIRES, and XShooter:
    - Spectra that were in Tania's DR2 paper:

        - Contact: Tania or Keerthi

3. Modeling Inputs and Outputs [tbd]

- HST Imaging
    - Glazebrook & Huang HST/WFC3 cutouts for modeling:
        - Contact point: Makai?
    - Tran HST/ACS cutouts for modelling:
        - Contact point: Courtney

Tutorials/Examples

Last Updated: 2025.10.08 by C. Watson

This is a collection of tutorials/examples/notes that have been collected from current and previous researchers/students for reduction and modelling

Imaging

- Hubble
    - IR and UV Imaging Reduction → Anowar has really great tutorial notebooks available here
    - STIS Data Handbook – also great resource for looking into Hubble specific details on instrumentation and reduction

Spectra

- KCWI Spectra Reduction Tutorial by Keerthi
- pPXF tutorials
    - More pPXF work by Rong

Modelling

- Lenstronomy supplement tutorial created by Duncan & Rodrigo
- General Lenstronomy tutorials
- Leena's Modelling Primer

Machine Learning

- Short ML tutorial from Sina