

# Rubin/LSST France meeting

# Science and computing

# survey

---

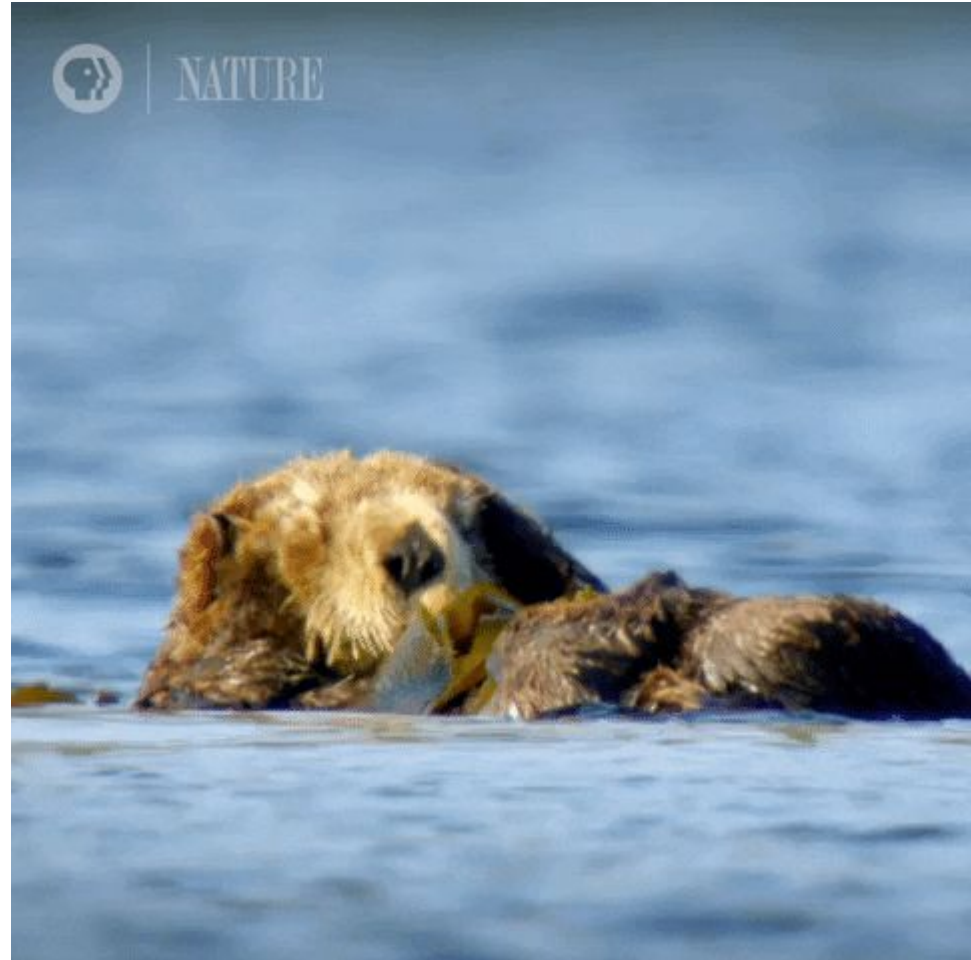
Spring 2023 – LPSC, Grenoble



LSST-France slack channel  
[#meeting-2023-spring](#)

This otter  
doesn't care  
about the  
survey.

Why should  
you?

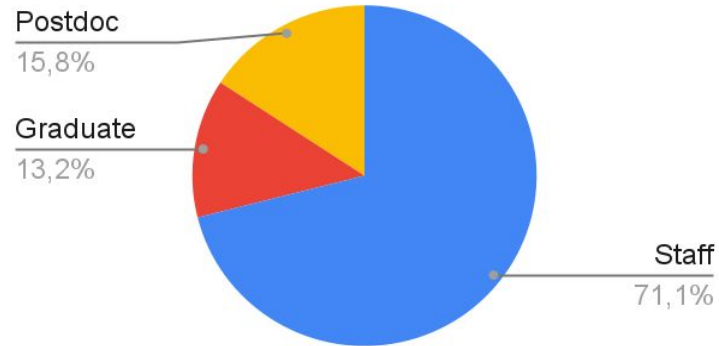


# Another survey... but why?

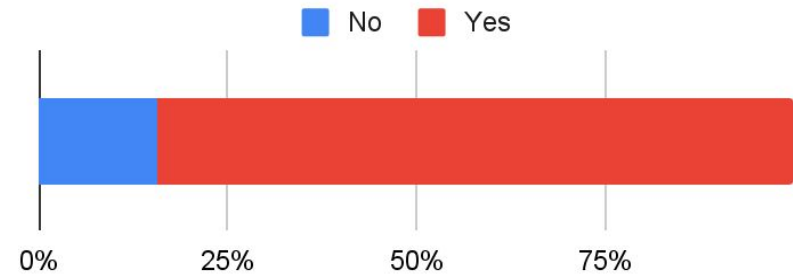
- Rubin/LSST-France represents our community, defined by common scientific goals, to IN2P3, funding agencies and Rubin SCs.
  - We need thus to *define those goals* to optimize how we use *shared resources* (funding, computing) and our *scientific return*.
- We are *now* switching from construction to commissioning and observations, so the work is changing.
- The **goals** of this survey were to
  1. Build a clearer idea of the science we want to do, to generate emulation where possible
  2. Optimize computing resources at CC-IN2P3

# Who's who?

## What is your current position?

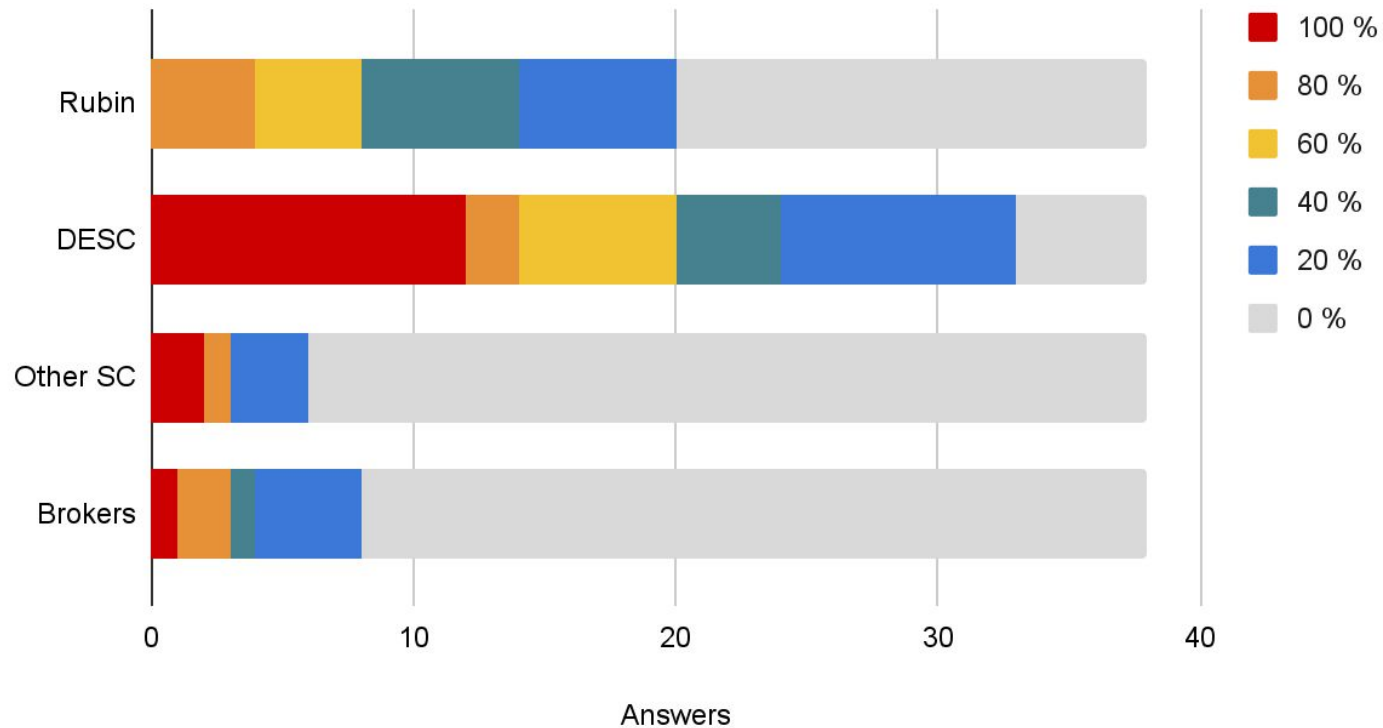


## Are you affiliated with IN2P3?



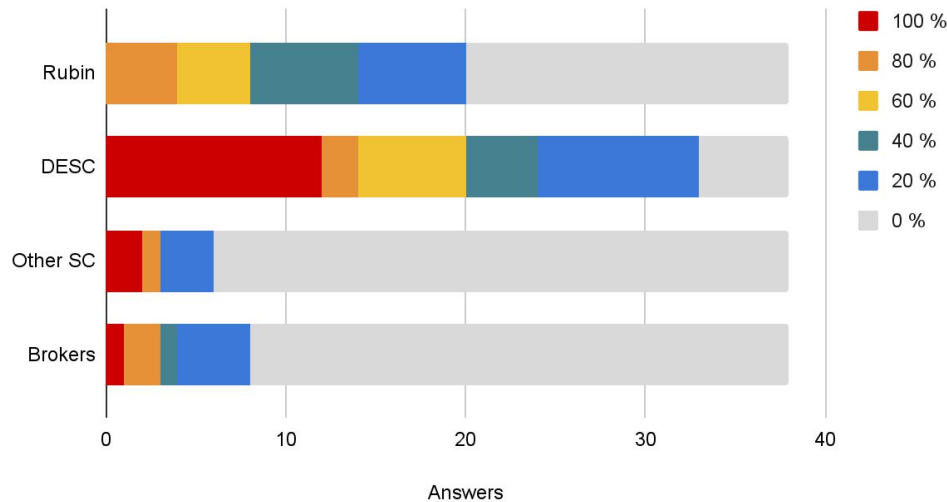
# LSST-related work distribution

How do you share your LSST-related work?

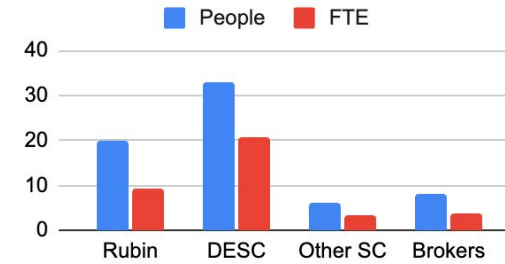


# LSST-related work distribution

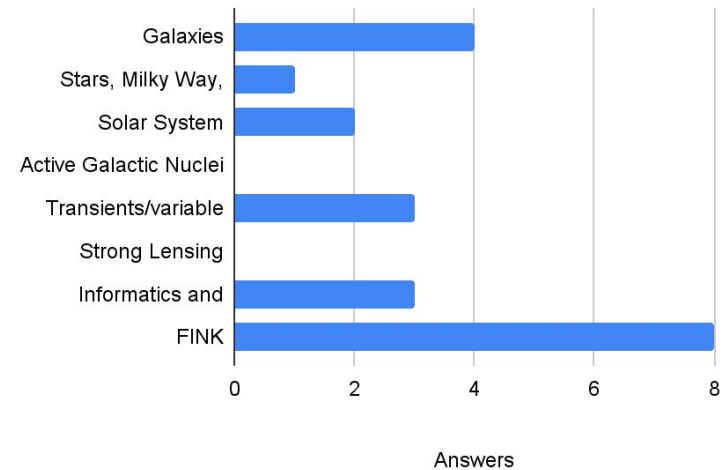
How do you share your LSST-related work?



LSST work share

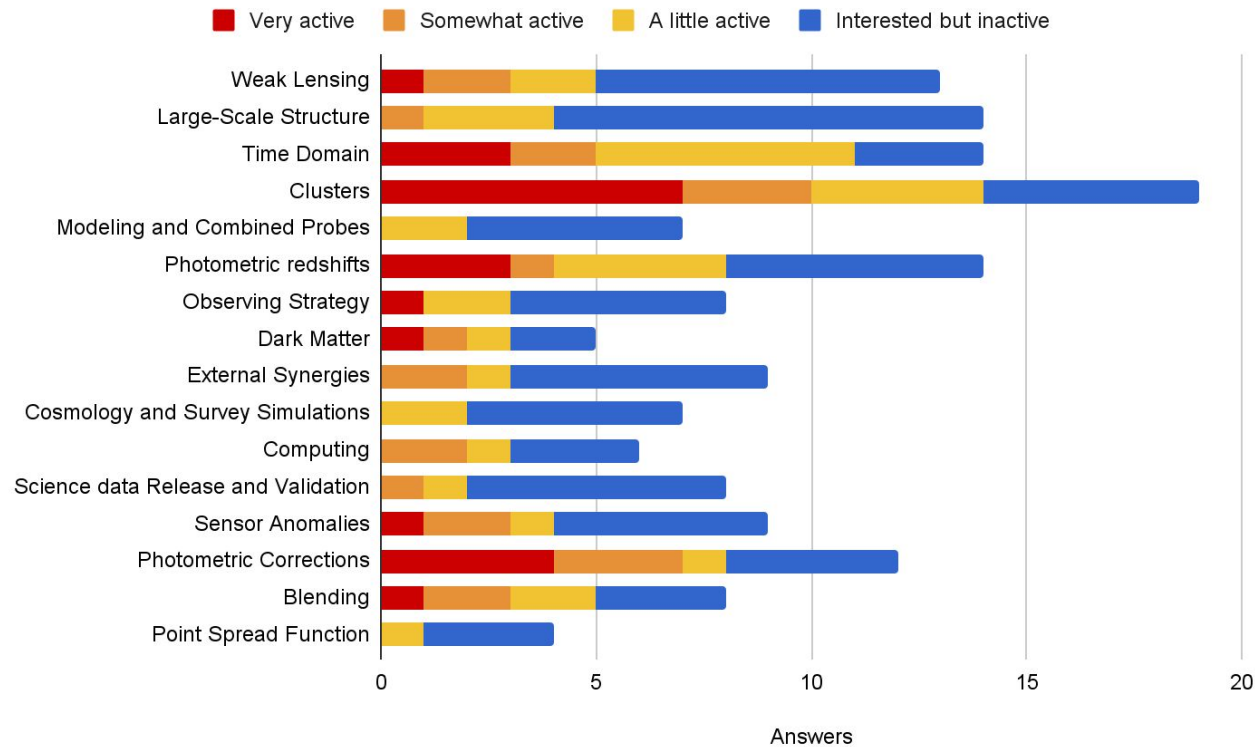


Other SCs



# Activity in DESC WGs now

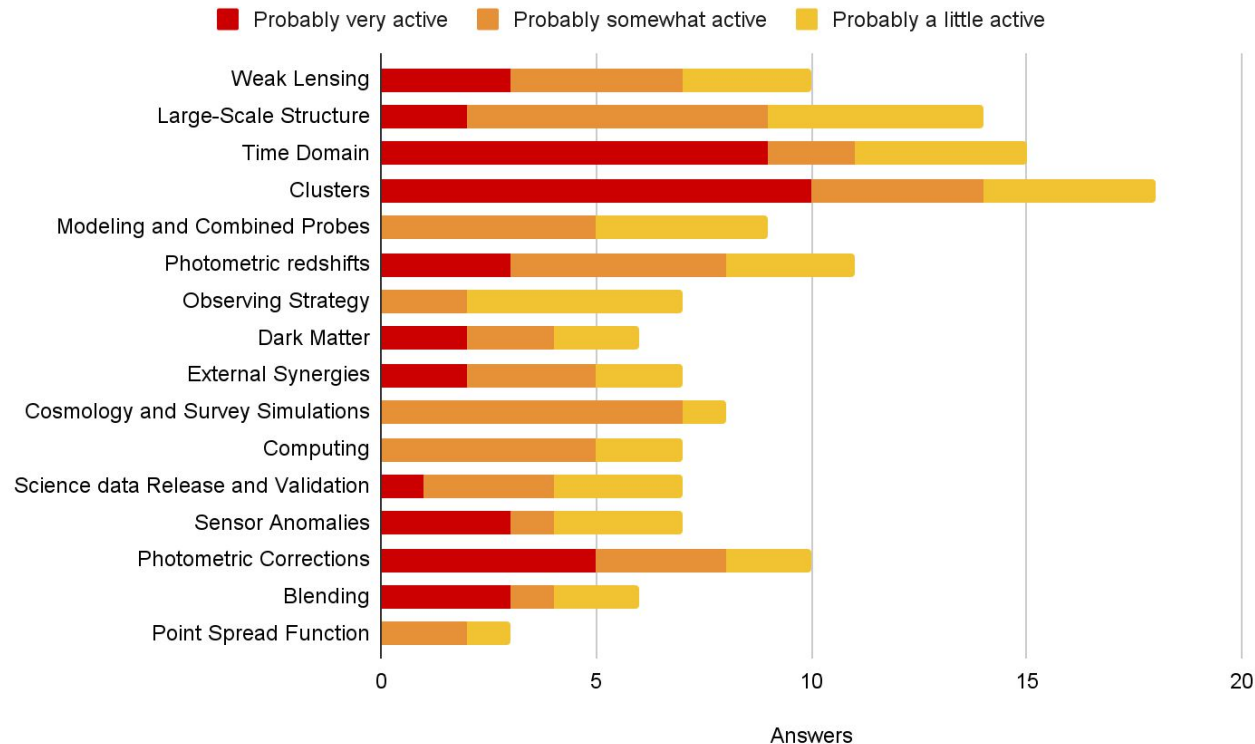
Activity in DESC WGs now





# Activity in DESC WGs when data arrives

Activity in DESC WGs when data arrives

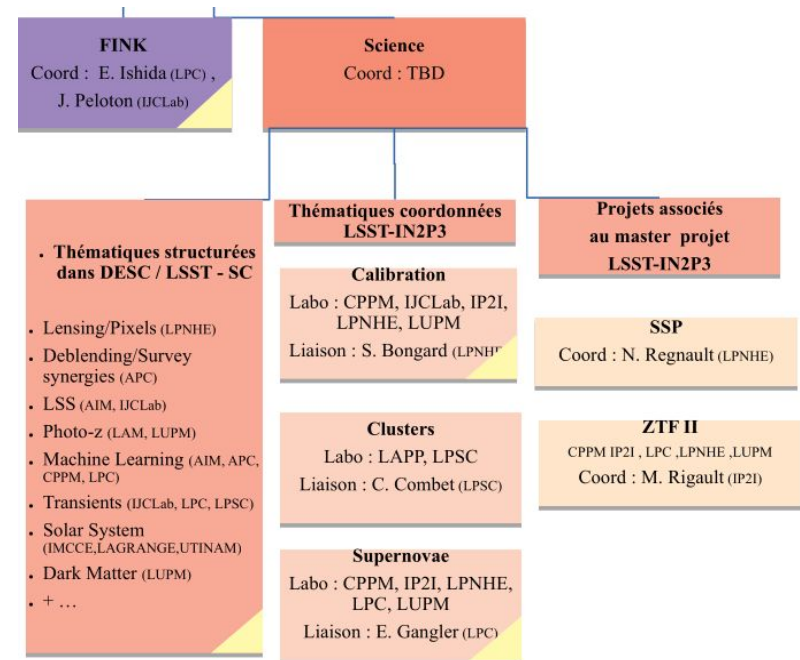


Large interest in analysis WGs currently less active, such as WL, LSS, TD.

# Discussion

- Lot of “interested but inactive” answers
  - Why? Can we do anything about it?
- Adapting the LSST-France structure
  - (Re)create groups (e.g. LSS, PZ, WL)?
    - Flexibility to create different groups in LSST-France (not limited to DESC)
    - How do they interact with DESC WGs?
  - Generate emulation to become more active?

## Current Science Working groups

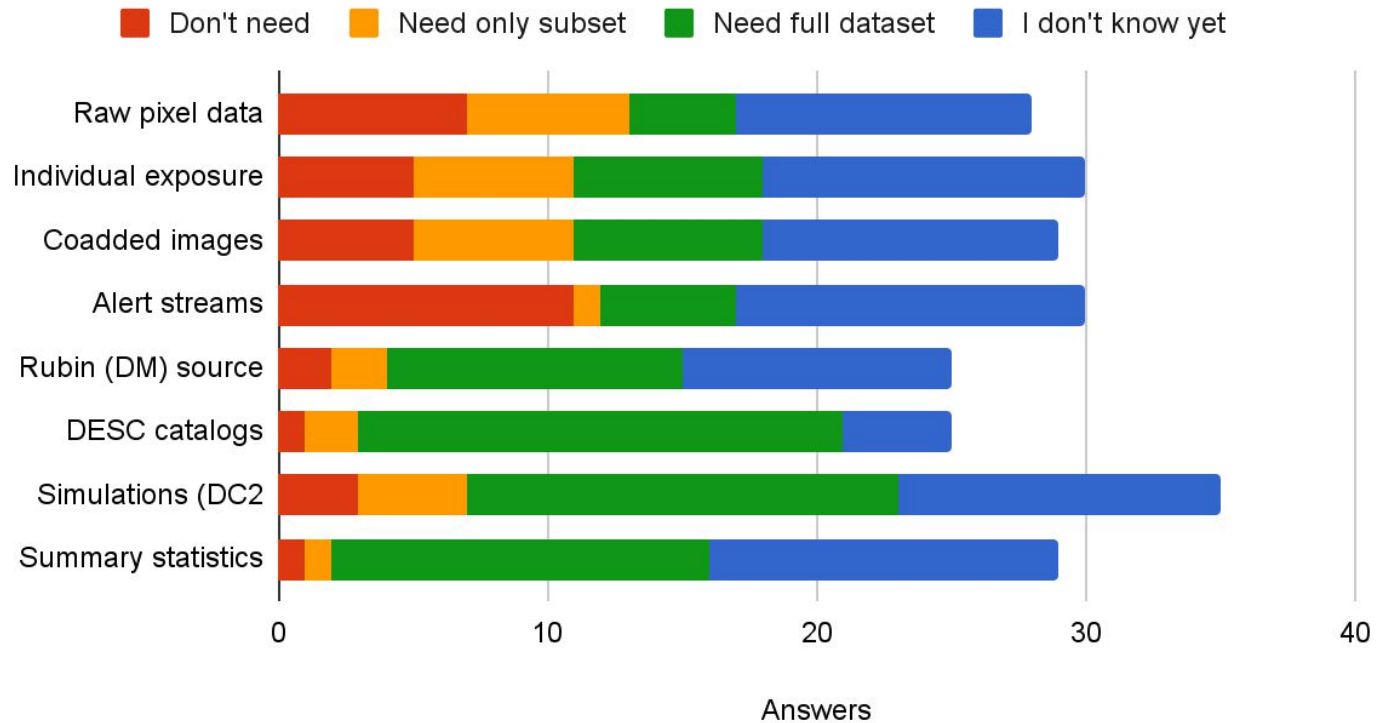


# Computing at CC-IN2P3

- Motivations
  - Agreement with Rubin regarding Data Processing and Release at CC-IN2P3
  - Everything else, including DESC science, is “best effort” at the moment
  - We need to know what we want to do so IN2P3 can commit to computing effort for DESC analyses
- Questions regarding data sets, access, job types and outputs

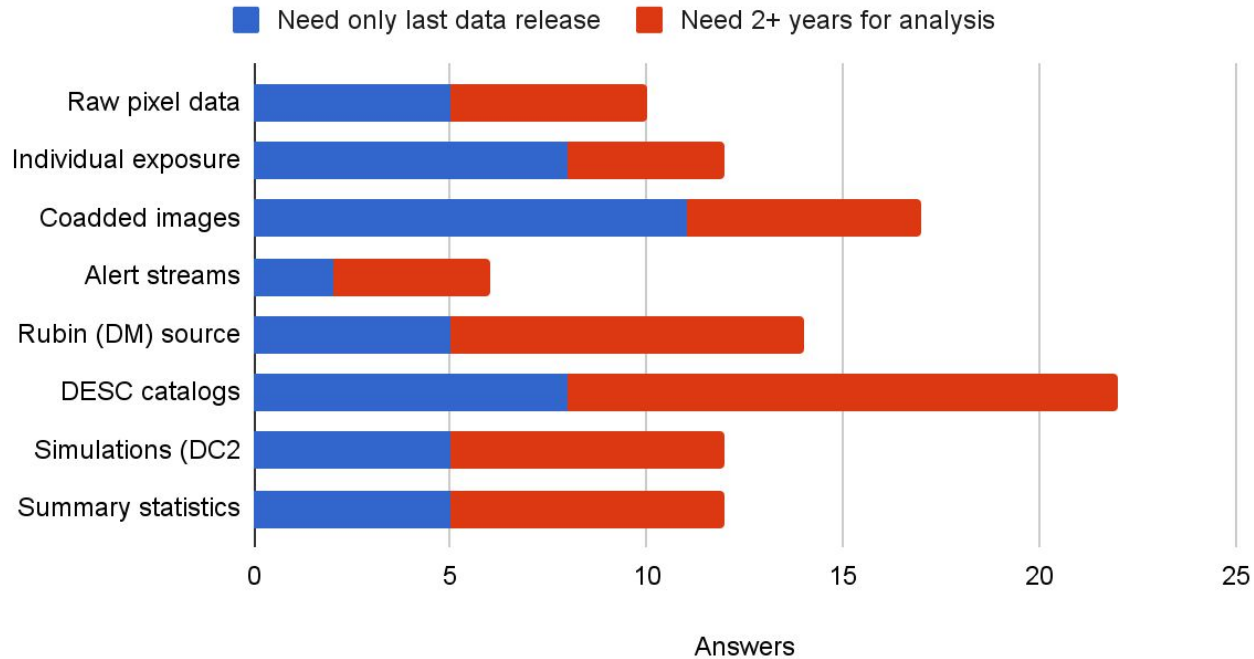
# What Rubin data sets are needed?

## Data sets needed



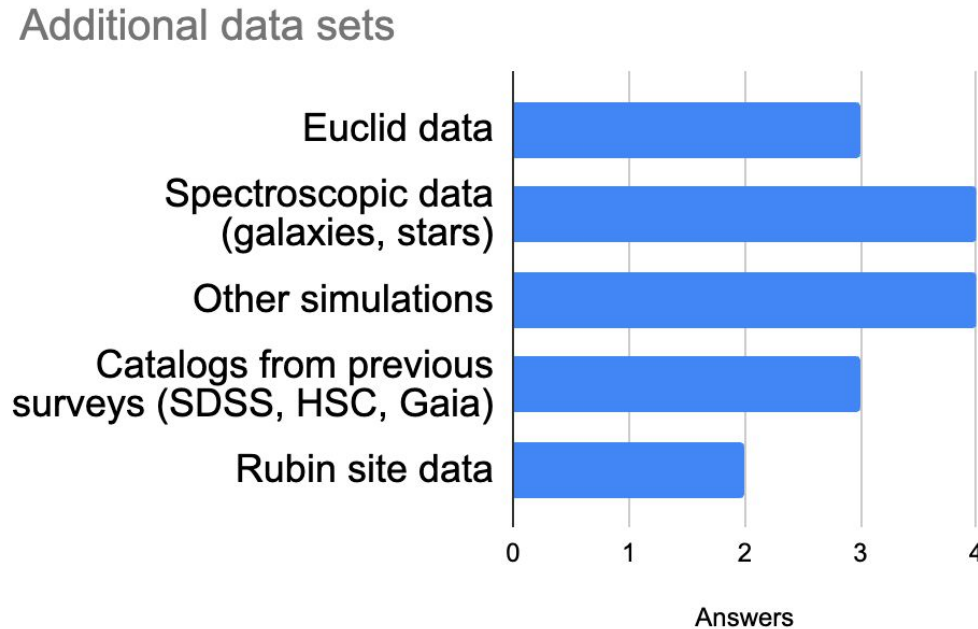
# How long should data sets versions be saved?

## Data sets versions availability



- Data archival vs availability
- Raw pixel data or calexp or co-adds? Why need for 2+ years?

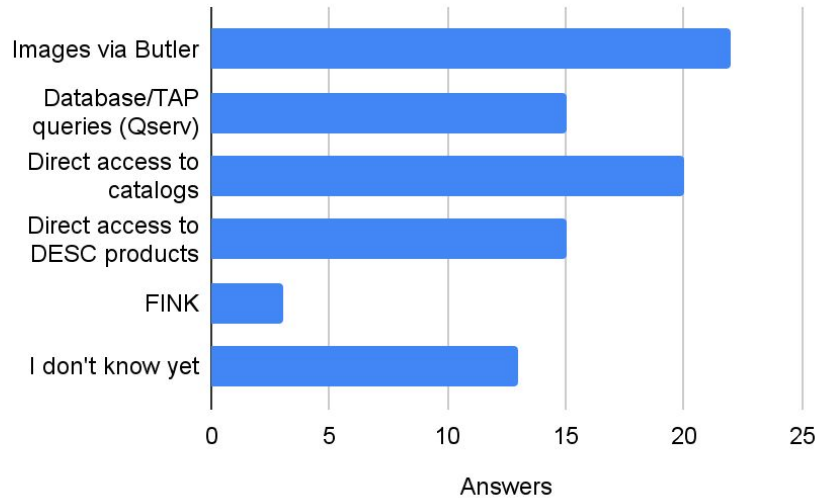
# Additional data sets



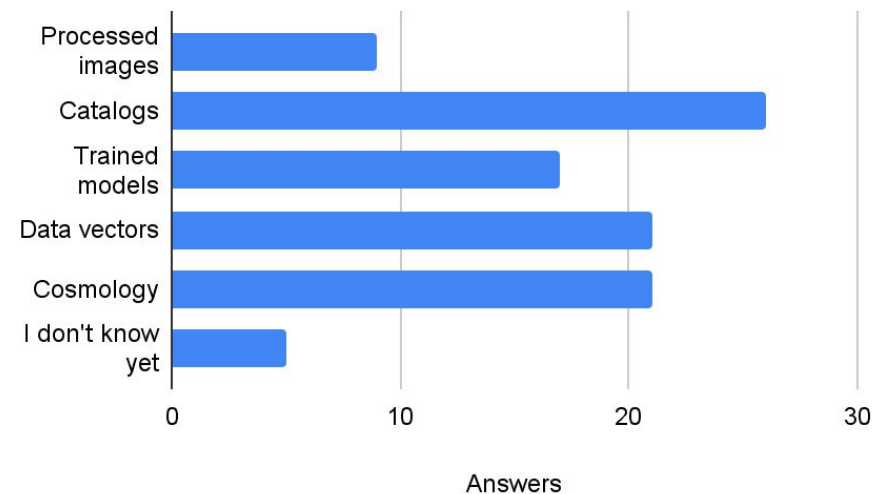
\*Summary of free-form answers

# Data access and outputs

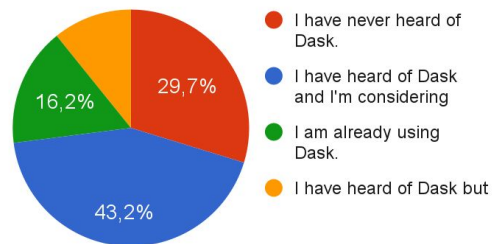
## Data access



## Analysis output types

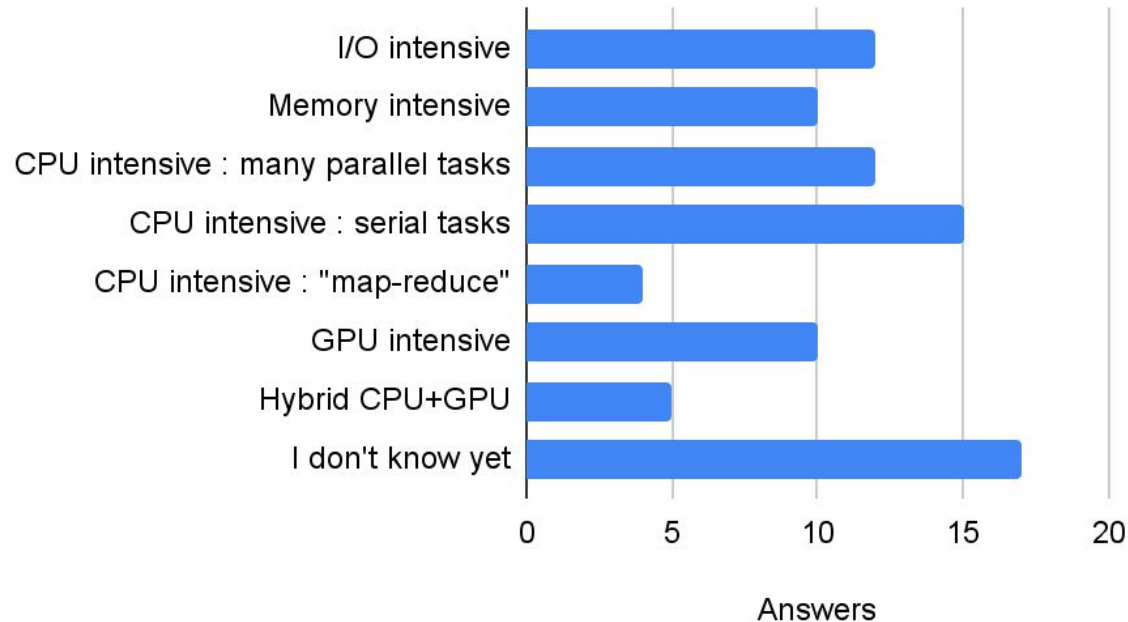


## Parallel access with Dask



# What kind of processing will you run?

## Processing types

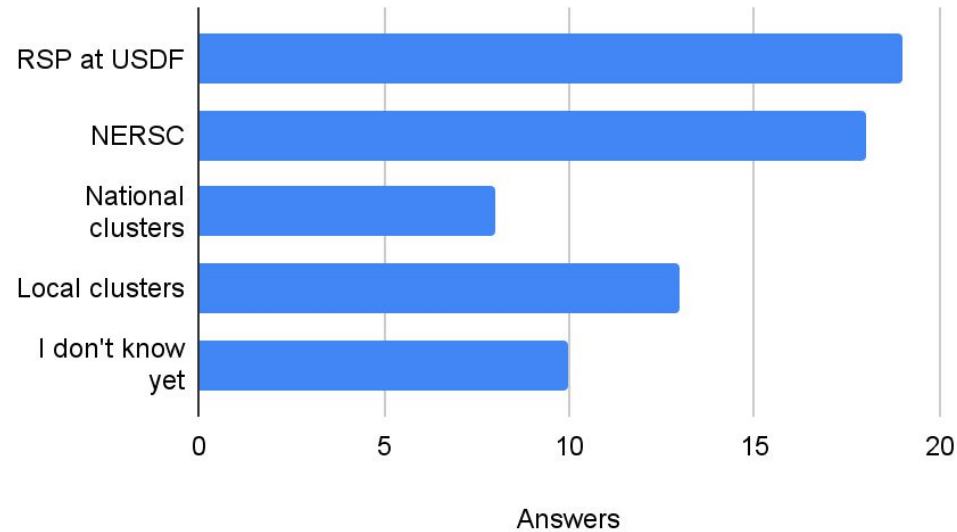


We need flexibility in the job types (and likely submission). This is important input for the CC-IN2P3 team!



# Other clusters

Other clusters usage



# Discussion

- Data storage/archival
  - DESC catalogs (+sims) needed for 2+ years necessary for cosmological analyses
  - We might not be able to have several versions of the largest data sets (images) available for processing. What are the needs?
- Lots of “I don’t know” (that’s OK!)
  - Training how to access and/or process Rubin data sets ?
  - RSP at CC?
- Get ready to move data to/from NERSC for DESC
  - For DES, NERSC allocation was not enough, so people regularly ran chains/sims elsewhere and moved output back to NERSC.
  - Seems important to be able to contribute to DESC analyses
  - Tools (scp or globus-like) needed to move data? Images vs catalogs vs data vectors.
- Need RSP at CC? Data transfer?