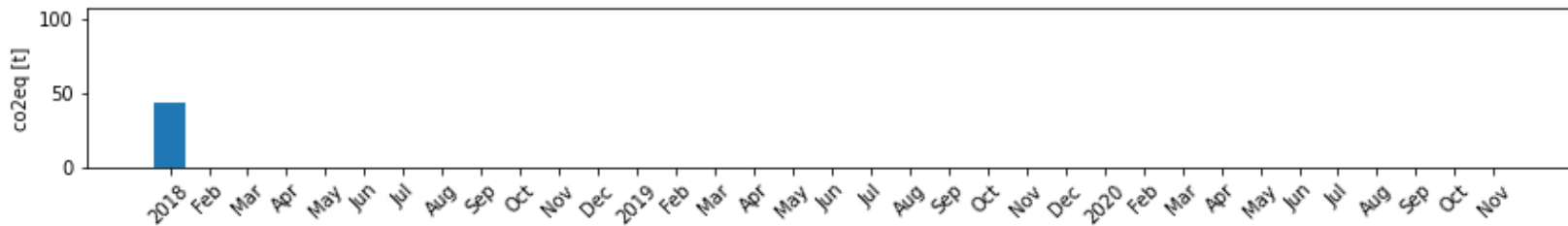


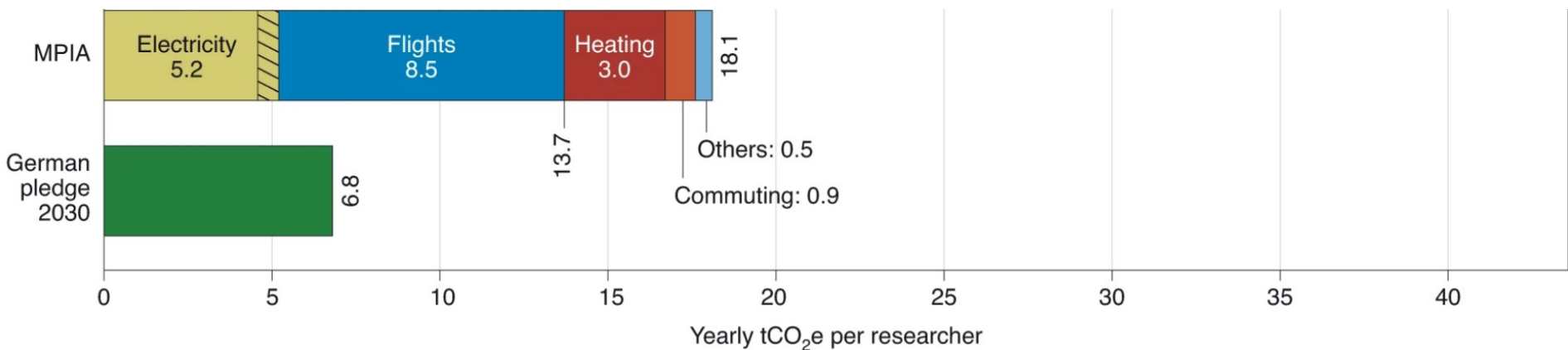
# An assessment of MPIA's travel activities



2018-2020



# Flying first Computing second





MAX PLANCK  
SUSTAINABILITY NETWORK



# Sustainability@MPIA

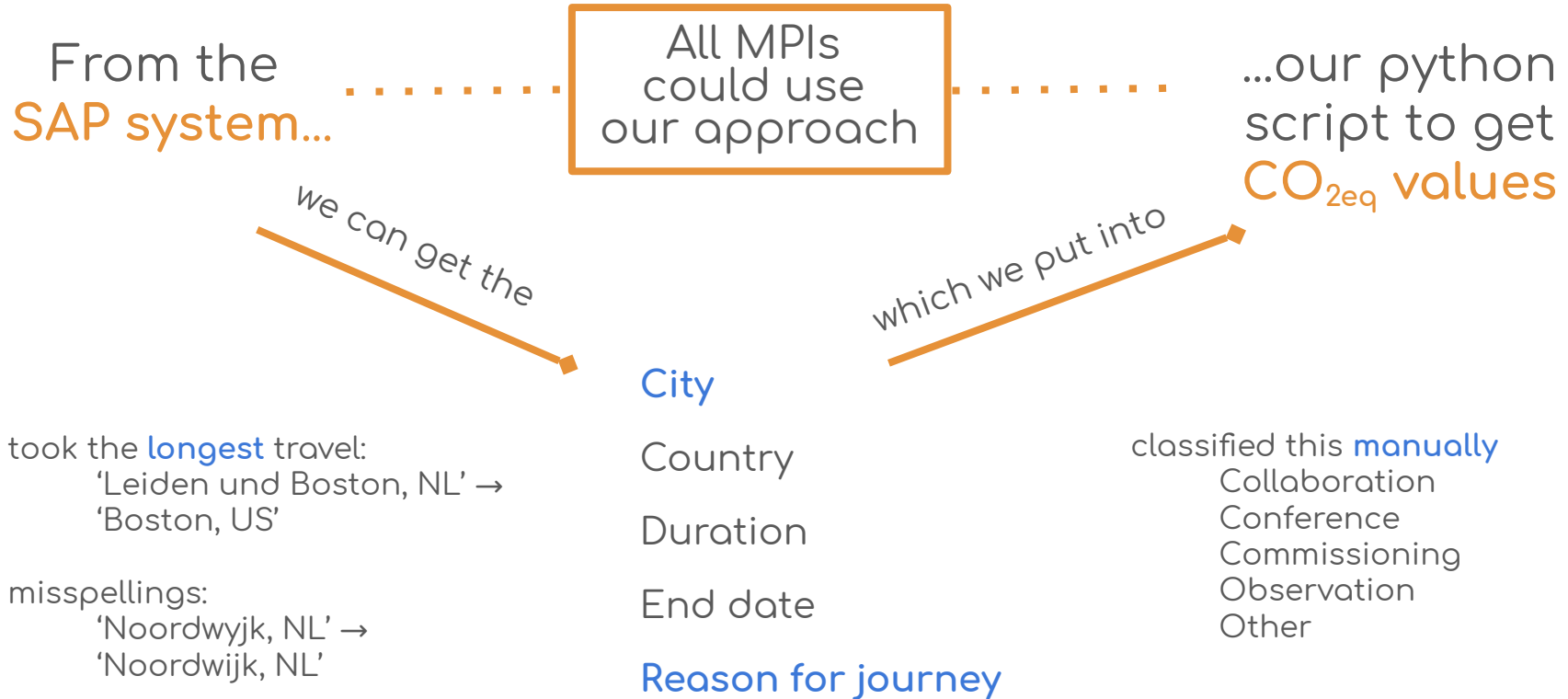
We are just a bunch of people interested in sustainability  
Please join us...

Intranet

- Sustainability

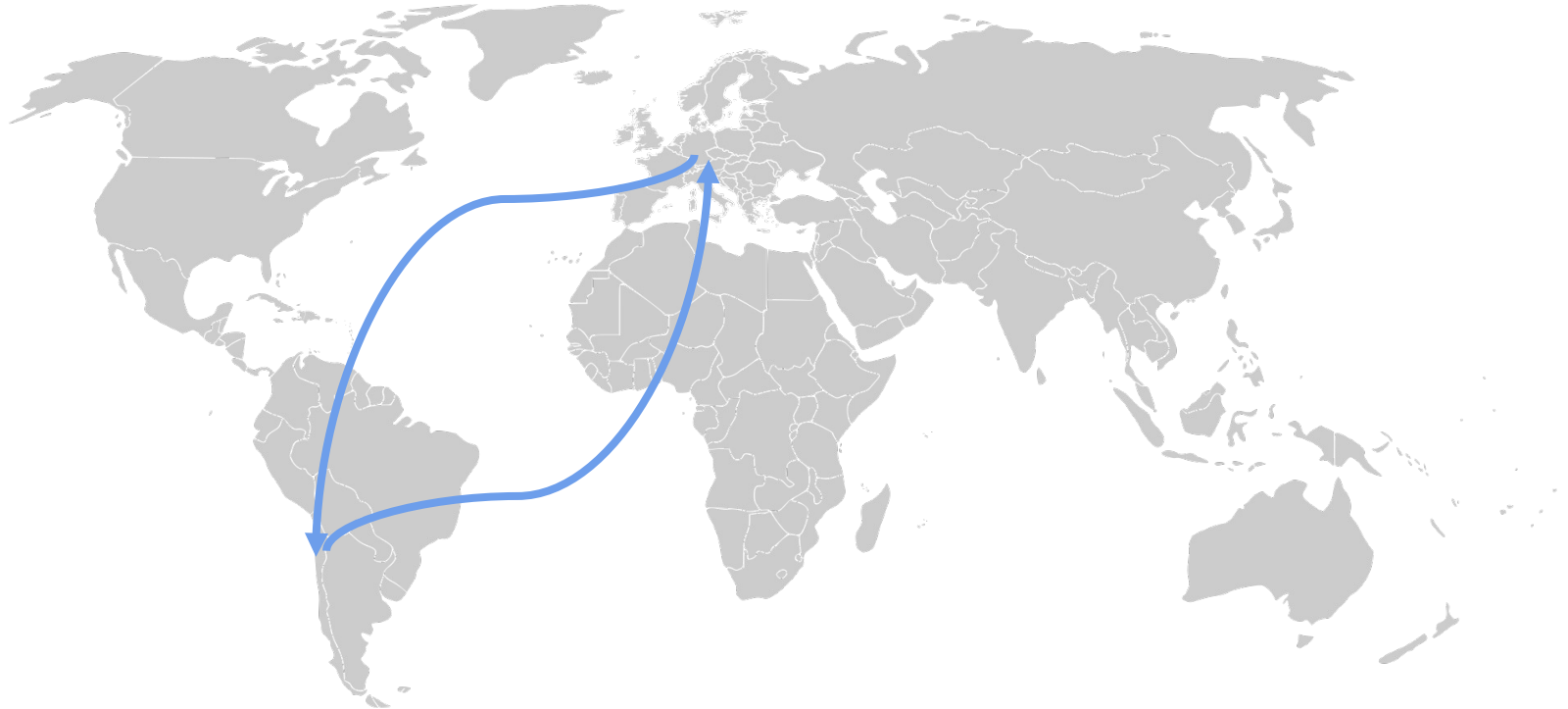
SustainabiliTea meetings Fridays 11:30am on Titan

# How do we get our data?

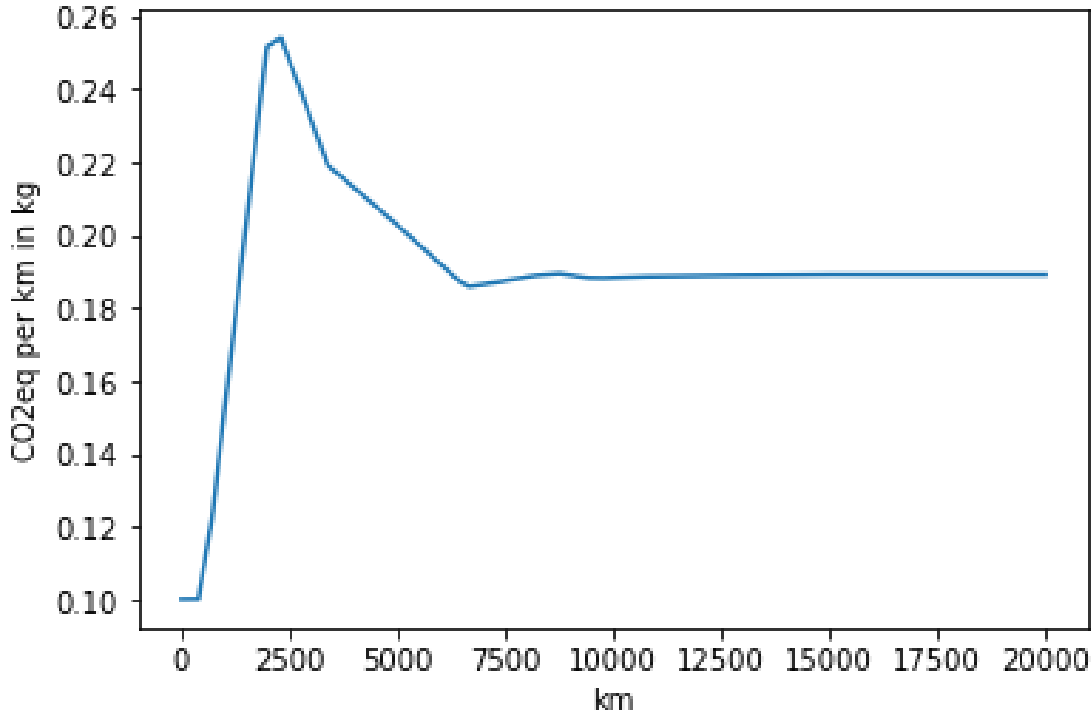


# Assumptions

we draw a direct line on the globe → we assume return flight → we add 20%



# Assumptions



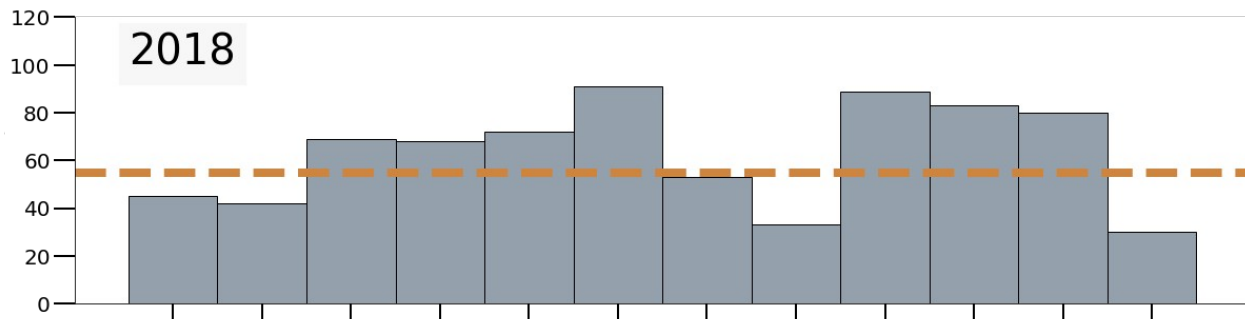
< 500 km = no flights

> 2000 km = 100% flights

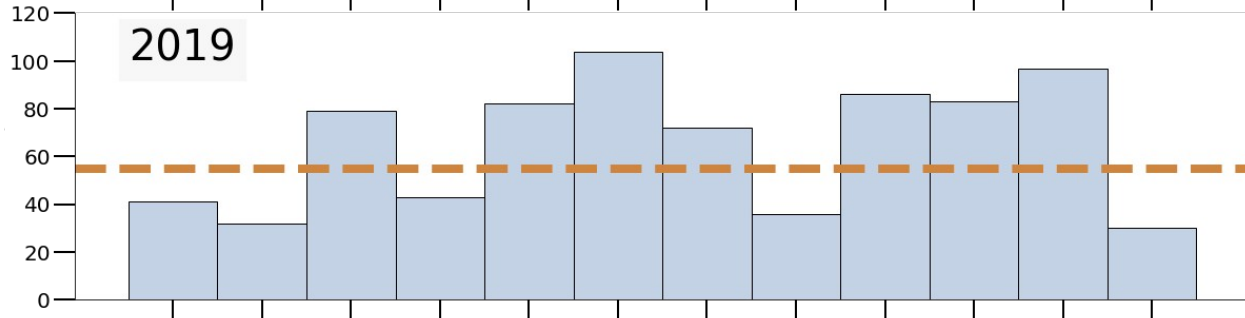
We calculate  
the **CO<sub>2</sub>eq emissions** from:  
[travel-footprint-calculator.ir](http://travel-footprint-calculator.ir)  
[ap.omp.eu](http://ap.omp.eu)

**So how many  
trips  
did we take?**

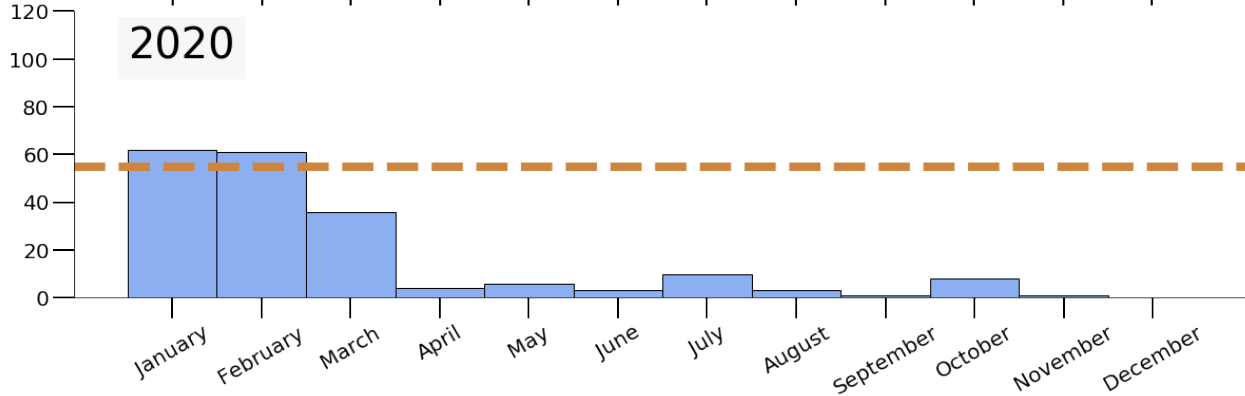
# trips



total #: 755  
total CO2(t): 571  
CO2(t)/travel: 0.8



total #: 785  
total CO2(t): 588  
CO2(t)/travel: 0.7

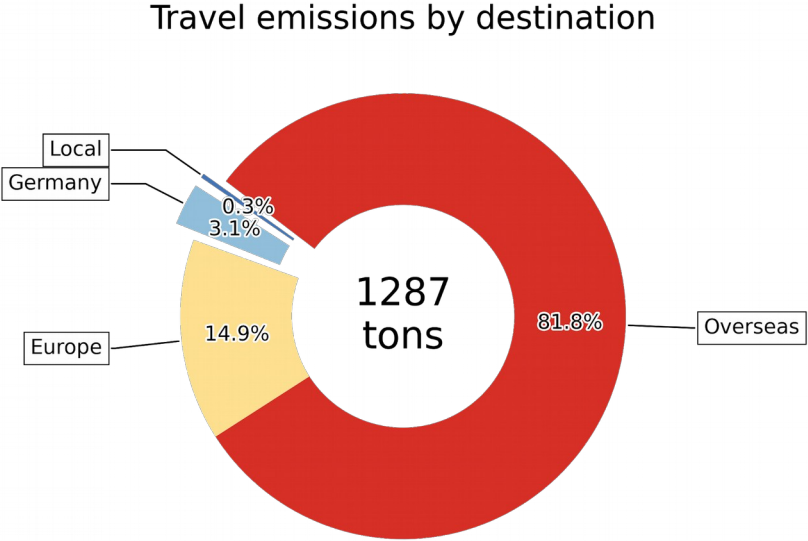
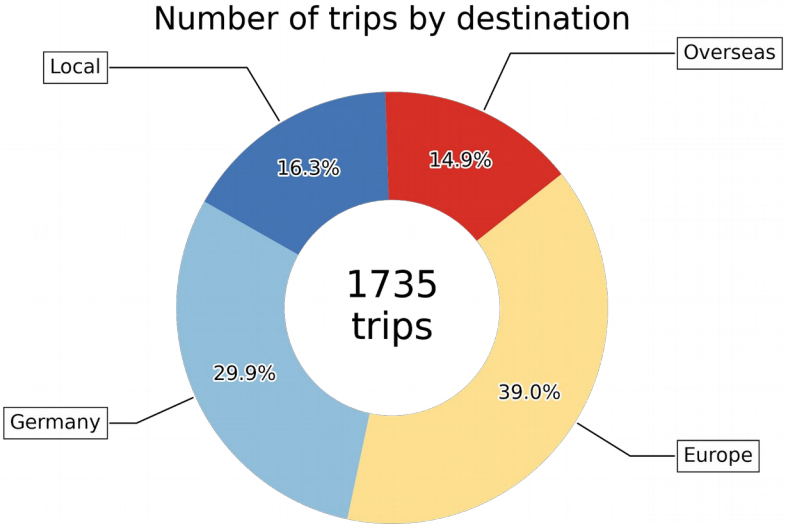


total #: 195  
total CO2(t): 127  
CO2(t)/travel: 0.7



**So where are  
we flying to?**

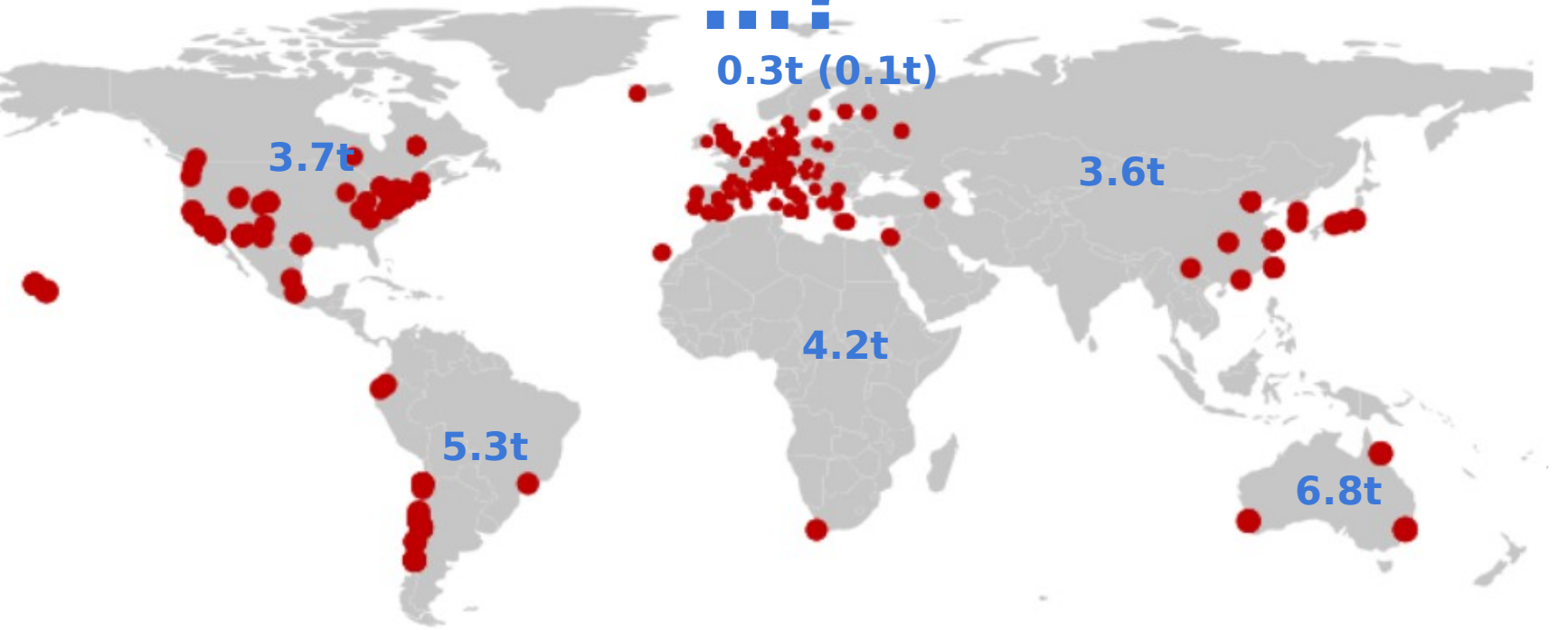
# Number of flights vs. CO<sub>2eq</sub> emissions by destination



Overseas make up **15%** of trips by number...

...but **82%** of trips by CO<sub>2eq</sub> emissions.

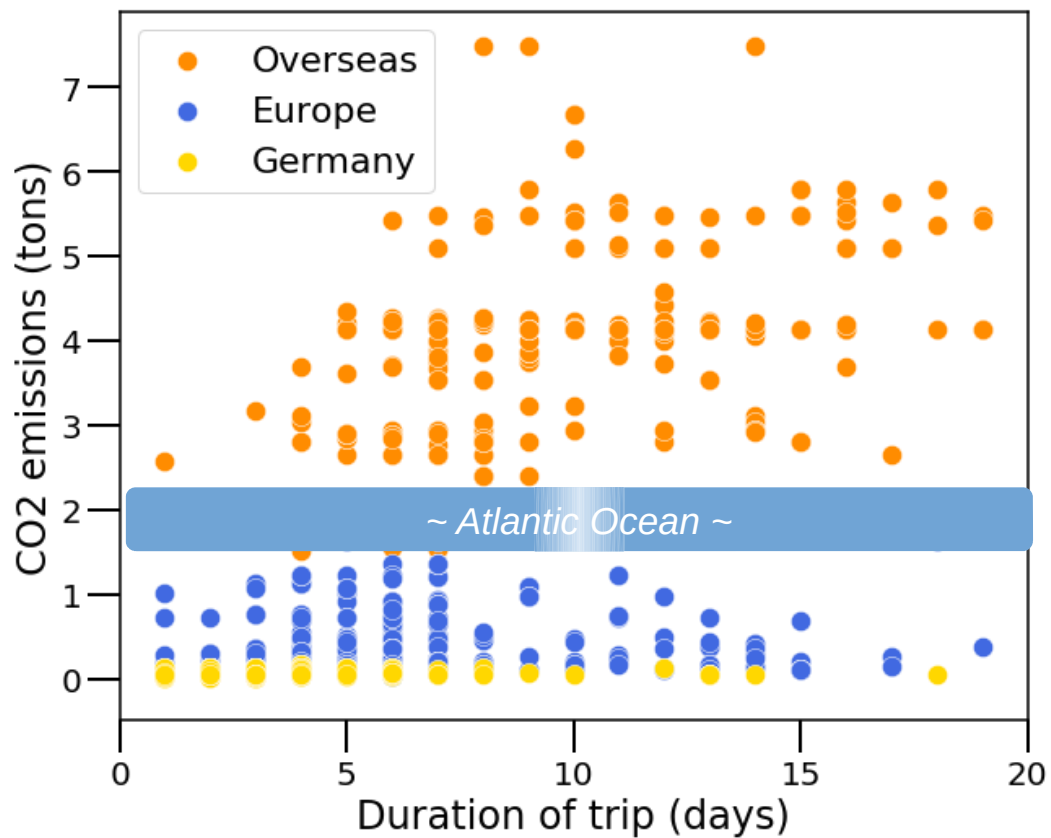
# What if we want to travel to ...?



Average CO<sub>2eq</sub> per destination continent

**How long do we  
stay there?**

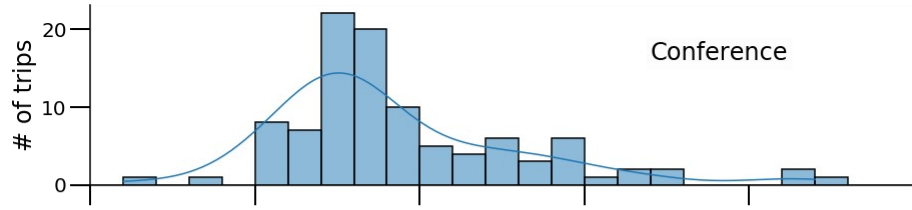
## CO<sub>2eq</sub> emissions vs. duration of travel



**What are we doing,  
when flying overseas?**

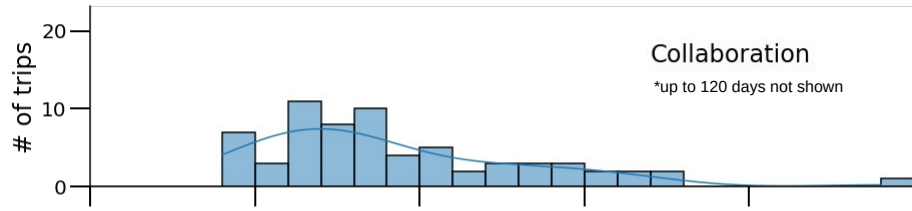
Duration of travel by reason for trips overseas

101  
trips



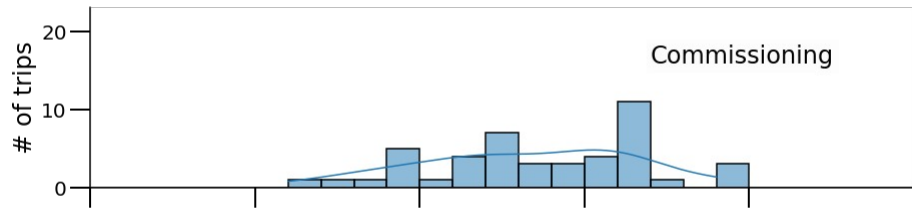
380t  
3.8t/  
trip

79 trips



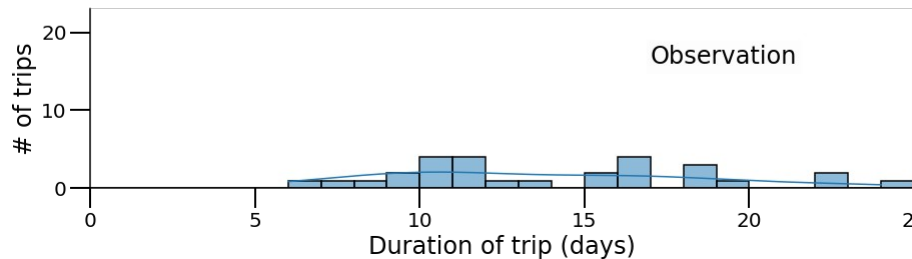
307t  
3.9t/  
trip

45 trips



196t  
4.3t/trip

29 trips



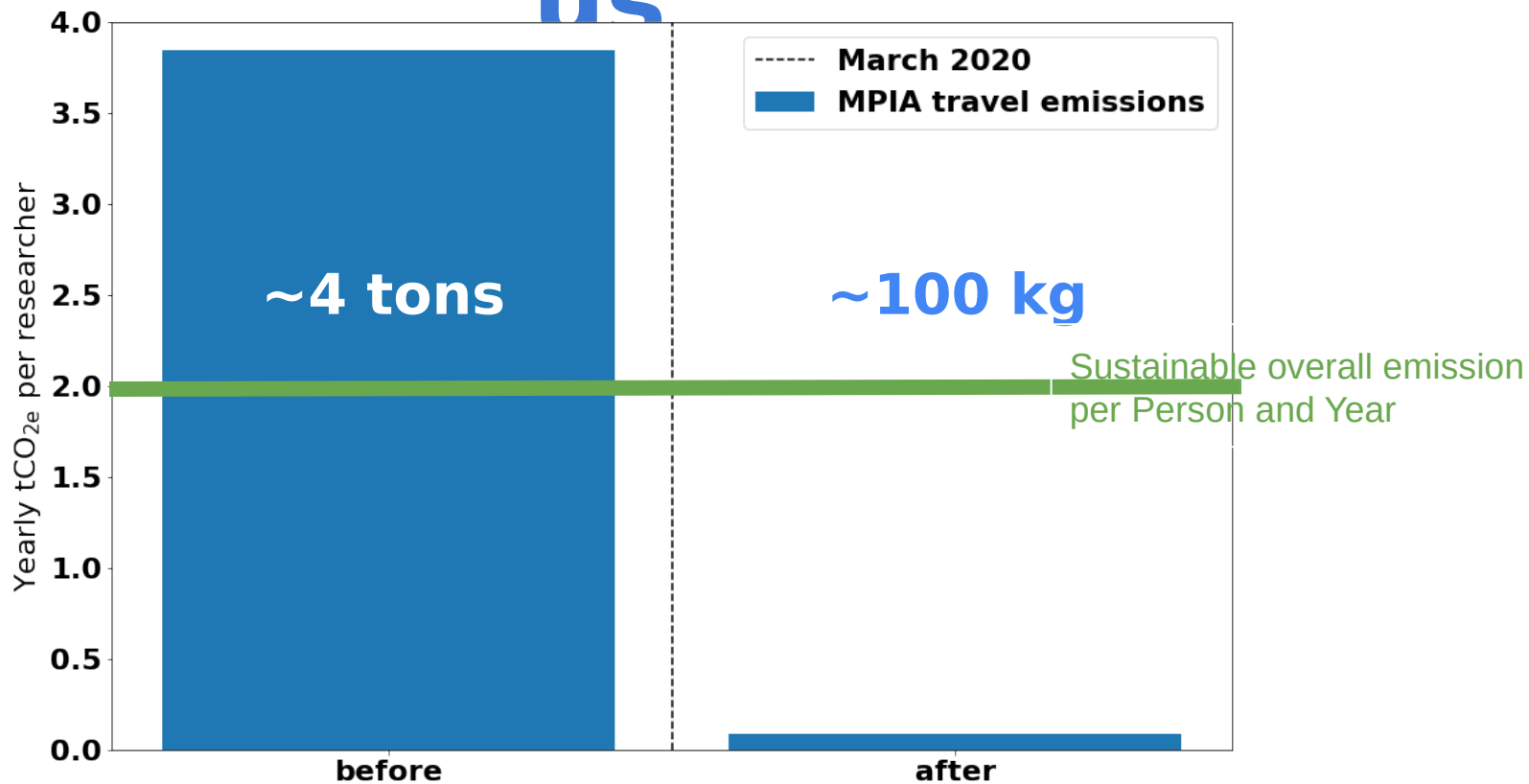
150t  
5.2t/trip

**Per year and researcher we  
have ~0.75 overseas flights  
(outside of the pandemic)**



# How did the pandemic affect

US



# Summary

Overseas flights are having by far the highest CO<sub>2eq</sub> impact

During the pandemic the travel emissions dropped by a factor of 40

We could do this analysis for 50% of the MPIs and have a yearly travel monitor

Please take the short anonymous survey:  
Link is posted in the chat window

Should MPIA set reduction targets for CO2 emissions arising from our travel activities?

Do you have the feeling that your short-term science output was diminished due to less flying during the pandemic?

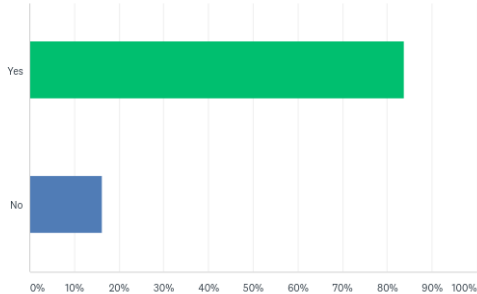
Do you think the impact on your science output will grow if the pandemic situation persists?

Do you plan to fly as much as pre-covid?

# Showing the results for galaxy coffee audience

Should MPIA set reduction targets for CO2 emissions arising from our ...

Beantwortet: 37 Übersprungen: 0

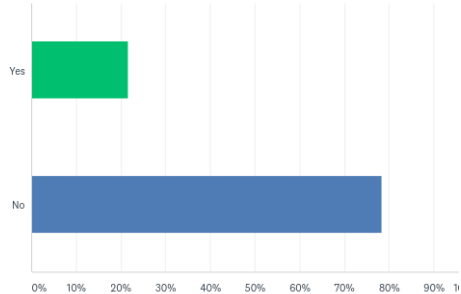


Galaxy Coffee survey:MPIA flying

🔍 (0)

Do you have the feeling that your short-term science output was dimi...

Beantwortet: 37 Übersprungen: 0

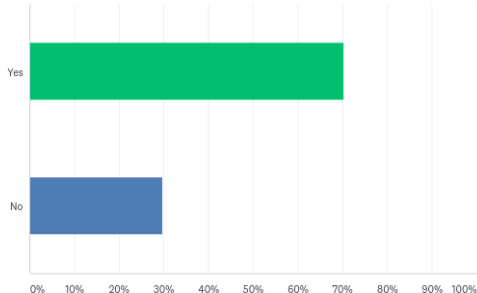


Galaxy Coffee survey:MPIA flying

🔍

Do you think the impact on your science output will grow if the pande...

Beantwortet: 37 Übersprungen: 0

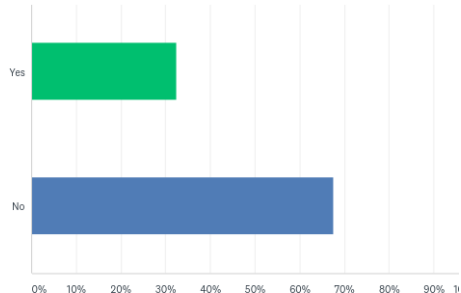


Galaxy Coffee survey:MPIA flying

🔍 (0)

Do you plan to fly as much as pre-covid?

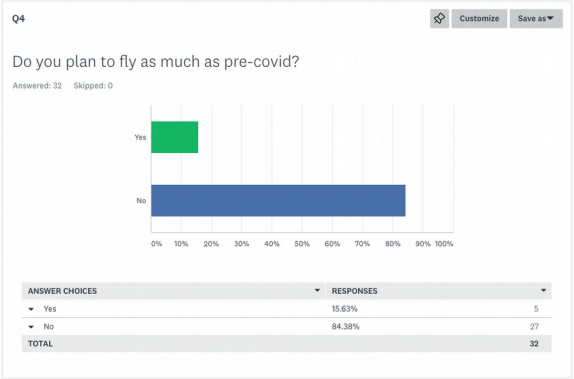
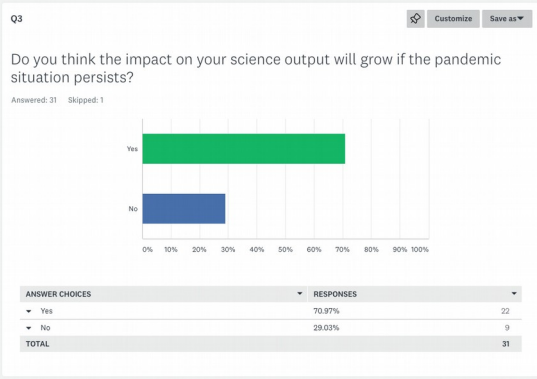
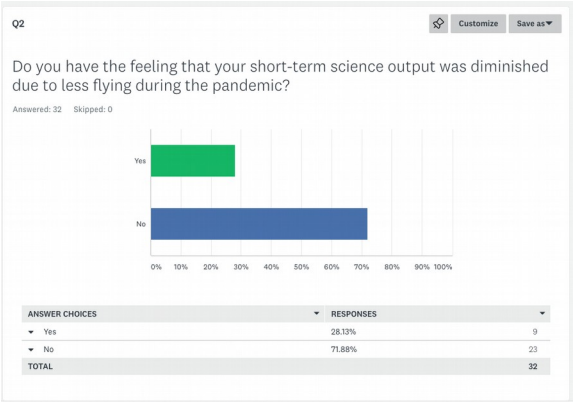
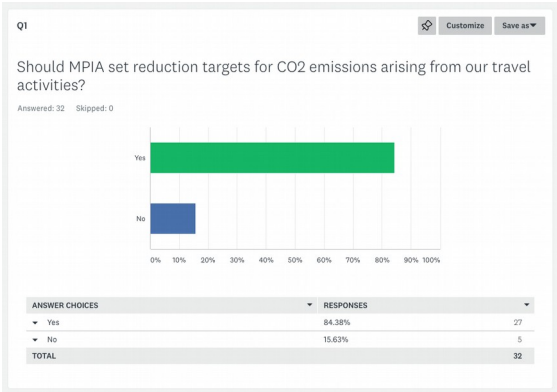
Beantwortet: 37 Übersprungen: 0



Galaxy Coffee survey:MPIA flying

🔍

# Showing the results for PSF coffee audience



Food for thought

What did we take from the pandemic? (e.g. conferences, meetings, workshops, collaborations - can we imagine doing all of this online?)

Different dimensions (observations, collaboration, conferences, commissioning, career development, prestige, perks, settling abroad)

How is your flight experience. Which journeys were good which were bad (science wise).

How about the pandemic. What are you missing?

How do young career astronomers feel about not having the chance to network in person

Making a conscious decision when flying. What do you gain by flying somewhere?

Thanks for listening