

Getting data: Conference travels

CO₂e from conference participations:

	Total	Per Trip
Global astronomy meetings (2019)	42500 ± 400t	1.0 ± 0.6t
CRC956 without guests (2019)	104.9t	1.6t
CRC1601 w.o. guests (Oct 2023 - Sep 2024)	52.4t	0.8t

- In particular European trips of the spectroscopy group (Bologna, Florence, Padova) done by train reduced our average footprint
- Total number of conference trips remained constant: 63
- CO₂ travel budget 2024 adds 9.4t for project trips and 6.8t for guests (one way)

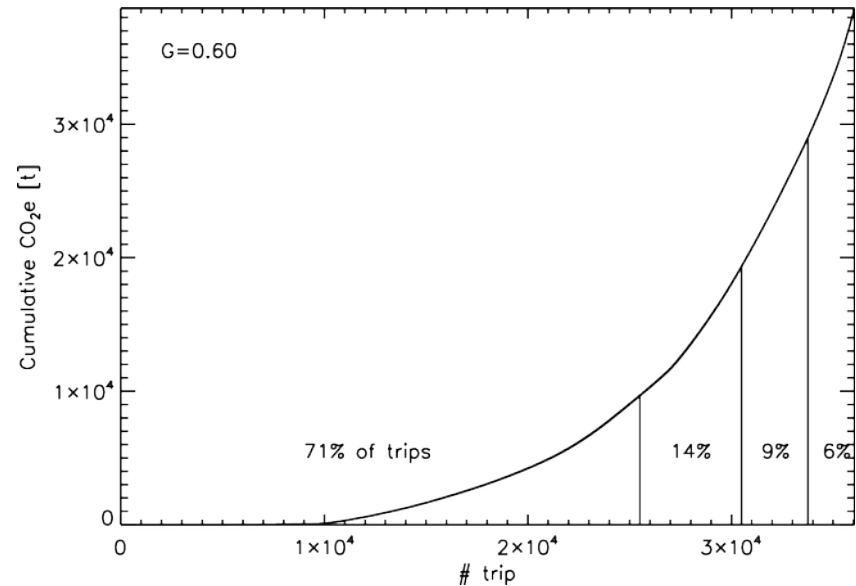
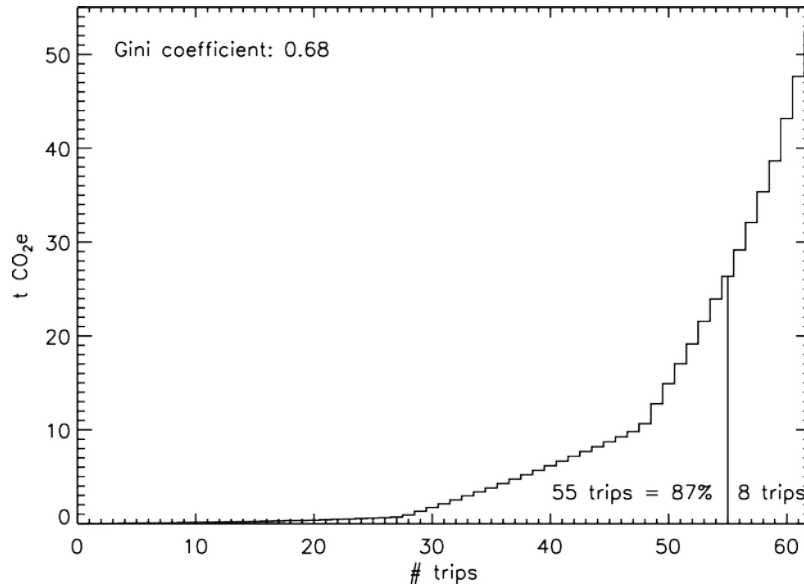
Distribution

Few long trips dominate the sum

- The sum of all ground trips is less than one flight to Toronto
- We are somewhat more skewed than the global conference participation

Gini coefficient:

$$G = \frac{\sum_{i=0}^n \sum_{j=0}^n |x_i - x_j|}{2n \sum_{i=0}^n x_i}$$



CRC1601 2024 distribution

Global astronomy conferences 2019



CO₂ compensation

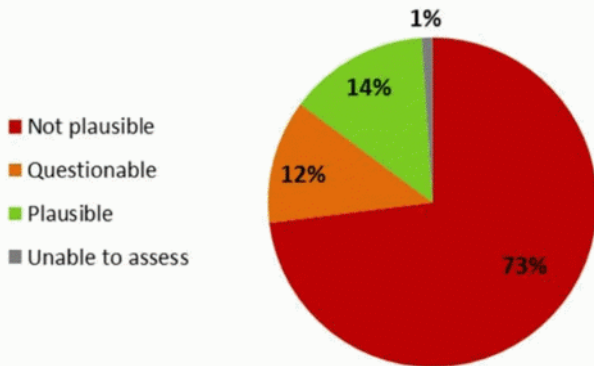
Compensation through procured certificates:

- **DFG-Richtlinie 71.03 – 01/23:**

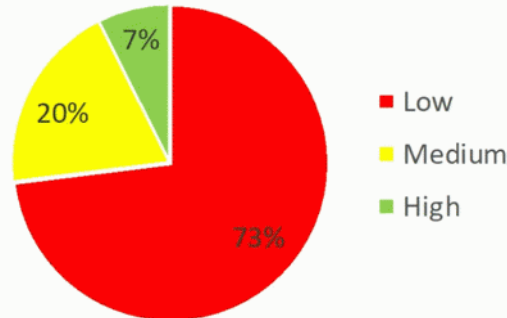
Bei der Beschaffung des Zertifikates achten Sie bitte auf die CDM-Zertifizierung bzw. die Einhaltung des Goldstandards. Weitere Informationen zur freiwilligen Zertifikatbeschaffung finden Sie auf den [www-Seiten des Umweltbundesamtes](#).

- **Problem:** Most procured certificates are not really trustworthy

**Joint Implementation (JI)
Credits issued**



**Clean Development Mechanism (CDM)
Credit supply potential 2013-2020**



Kollmuss et al. (2015),
Cames et al. (2016)

CO₂ compensation

Compensation through procured certificates:

- Certificates controlled in a self-confirming cycle
- Real carbon offsetting measures would cost ~100€/ton CO₂
 - Direct economic damage per ton CO₂ rather 180-640€ (UBA 2019)
- Because of short notice in November 2024 only „cheap“ atmosfair certificates were bought
- Future goal: Buy certificates procured by Carbon Credit Quality Initiative
 - ~5000€/a
 - Requires on-spot search for latest certificates
- No compensation is as good as avoiding emissions!