

Observations from the publicly available data of the CREDO experiment

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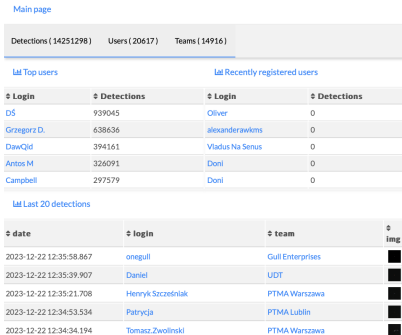
Disclaimer

- very new to this project
- only five weeks

Data we are looking at

- data on the website (live data, 22nd December 2023)
 - 14 252 292 detected events
 - 20 619 users
 - 14 918 teams
- data I downloaded (from 2022 & 2023)
 - 1 077 919 detected events
 - 1654 user accounts
 - 1956 devices

General statistics



- 5 user or 0.024 % of the user
- 2 595 512 detections or 18.2 % of all
- in top 20 38 % of all detections

Figure: General statistics page of the project.

my account

gnibell

Number of detections: 496 (1383rd place)

Time looking for particles: 256h 48m (1197th place)

User detections






date	img
2023-12-22 10:47:35.186	
2023-12-22 10:45:55.738	
2023-12-22 02:37:00.112	
2023-12-22 02:22:47.491	
2023-12-22 01:40:41.113	
2023-12-22 01:17:25.370	
2023-12-22 00:30:12.281	
2023-12-22 00:14:00.931	
2023-12-21 23:50:02.382	
2023-12-21 23:24:20.417	

Figure: General statistics for my account.

all within 15 days of its existence.

Expectation

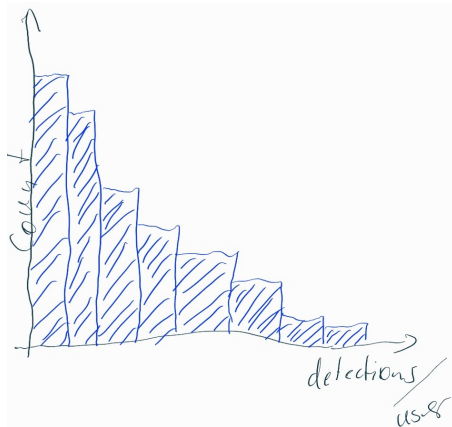
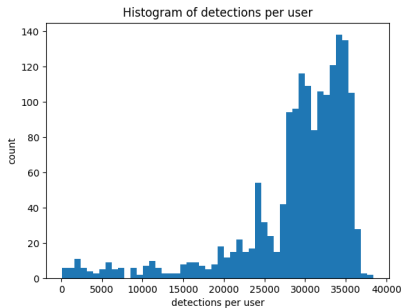
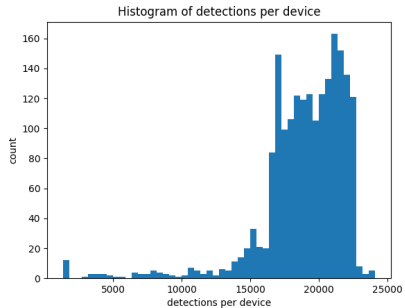


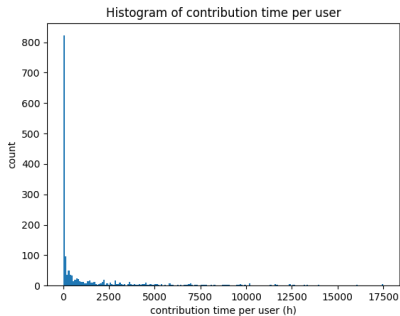
Figure: expected histogram of detections per user



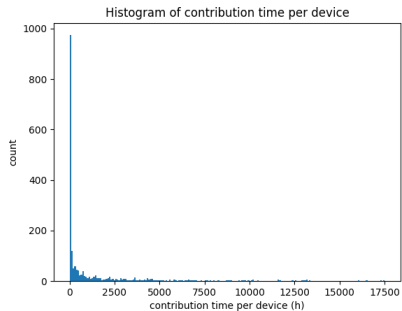
(a)



(b)




(c)



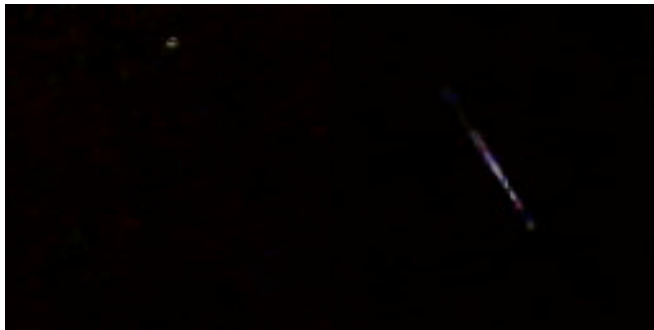
(d)

Figure: Histogram of contribute time per user.

multidetections

2023-12-22 12:31:31.725	Mateusz	PTMA Lublin	
2023-12-22 12:31:31.725	Mateusz	PTMA Lublin	

(a)

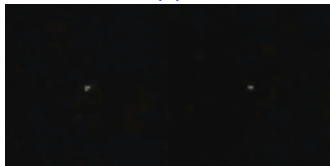


(b)

(c)

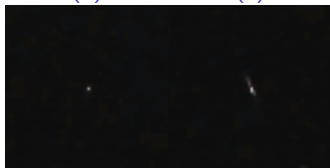
2023-12-22 15:45:47.780	Henryk Szcześniak	PTMA Warszawa	■
2023-12-22 15:45:47.780	Henryk Szcześniak	PTMA Warszawa	■
2023-12-22 15:45:47.780	Henryk Szcześniak	PTMA Warszawa	■
2023-12-22 15:45:47.780	Henryk Szcześniak	PTMA Warszawa	■

(a)



(b)

(c)



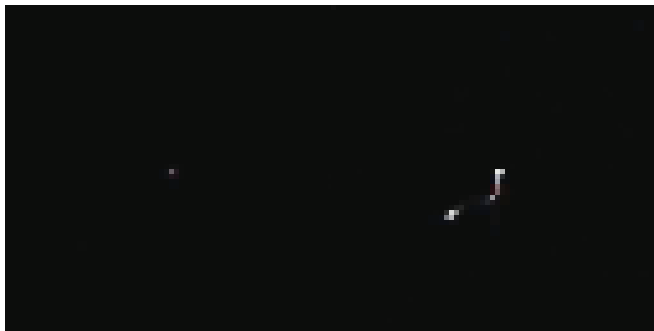
(d)

(e)



2023-12-23 21:10:17.416	Henryk Szcześniak	PTMA Warszawa	■
2023-12-23 21:10:17.416	Henryk Szcześniak	PTMA Warszawa	■

(a)



(b)

(c)

Figure: double detection by Hendryk

statistics of multi detections

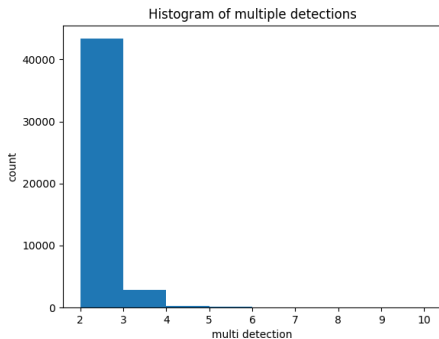


Figure: Histogram of multi detections.

- 46 600 multi
- 43 338 double
- 2802 triple
- 314 quadro
- 87 penta
- 39 hexa
- 6 hepta
- 4 octa
- 3 nona
- 7 deca

The highest number in one frame



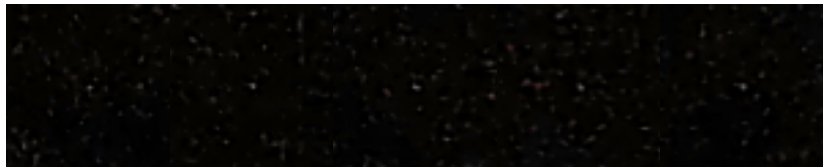
(a)

(b)

(c)

(d)

(e)



(f)

(g)

(h)

(i)

(j)

Figure: ten fold detection by User 28415

Conclusions

- The contribution time suggest that a lot of people get frustrated fast.
 - maybe give more feedback
 - maybe some type of high score
- app should be stable enough, that one can be part of CREDO and forget about it

Conclusions II

- there are quite some multiple Observations in one frame
- these are unexplained till now
- some extreme cases are likely artefacts
- the one with a few are real
- one still has to differentiate between the two
- the origin is not clear

Thank you for attention