

AIRCRAFT TRAFFIC VISUALIZATIONS

LOUISVILLE, COLORADO, AND ROCKY MOUNTAIN METROPOLITAN AIRPORT (RMMA)

PREPARED FOR THE LOUISVILLE CITY COUNCIL 09/2021

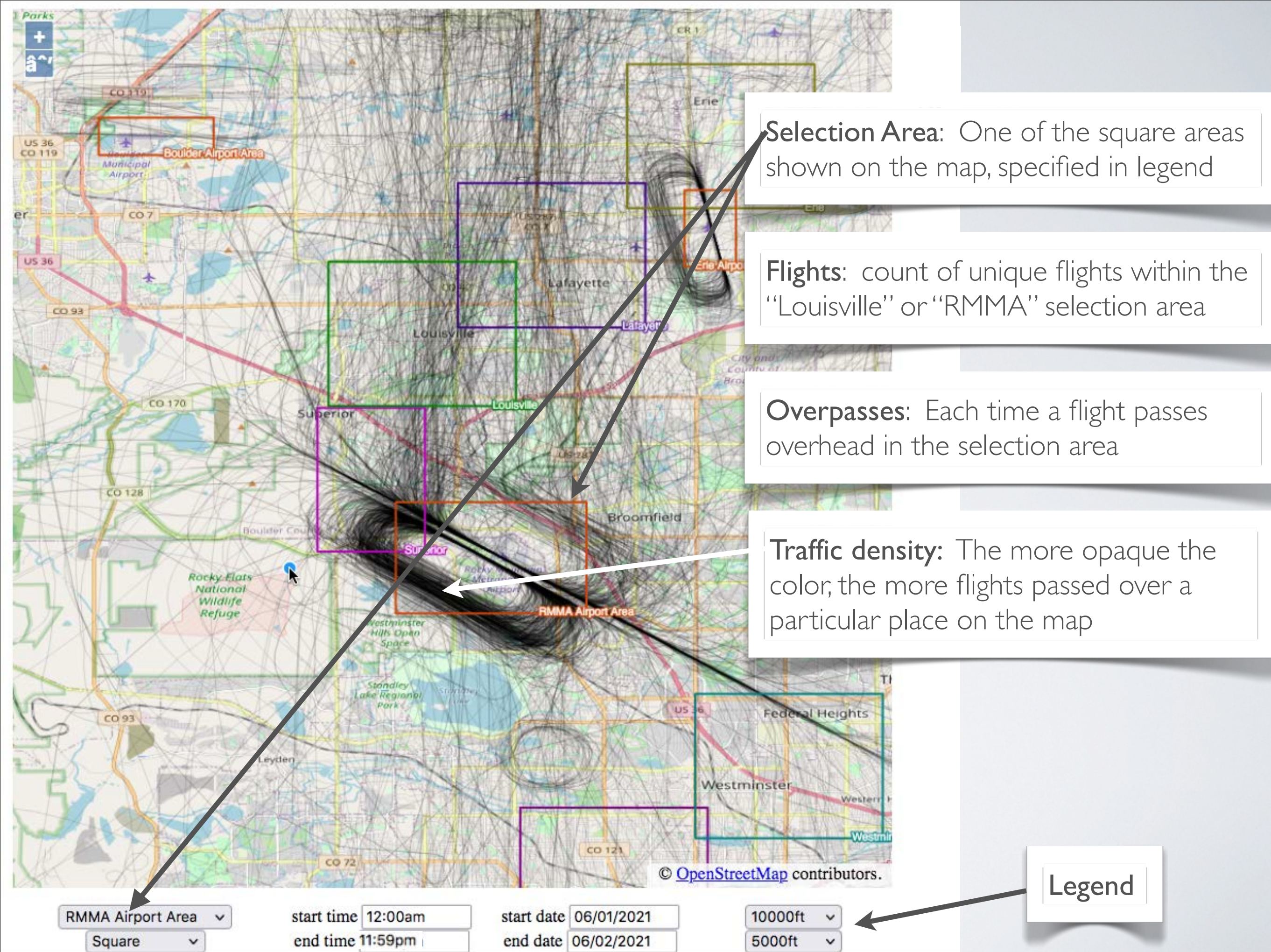
PREPARED BY: MICHAEL BUREK

PURPOSE OF THIS PRESENTATION

- Provide accurate data and visualizations about flight activity from RMMA and overflight impacts to the city of Louisville
- Receive feedback and answer questions from city council

WHAT IS IN THIS PRESENTATION?

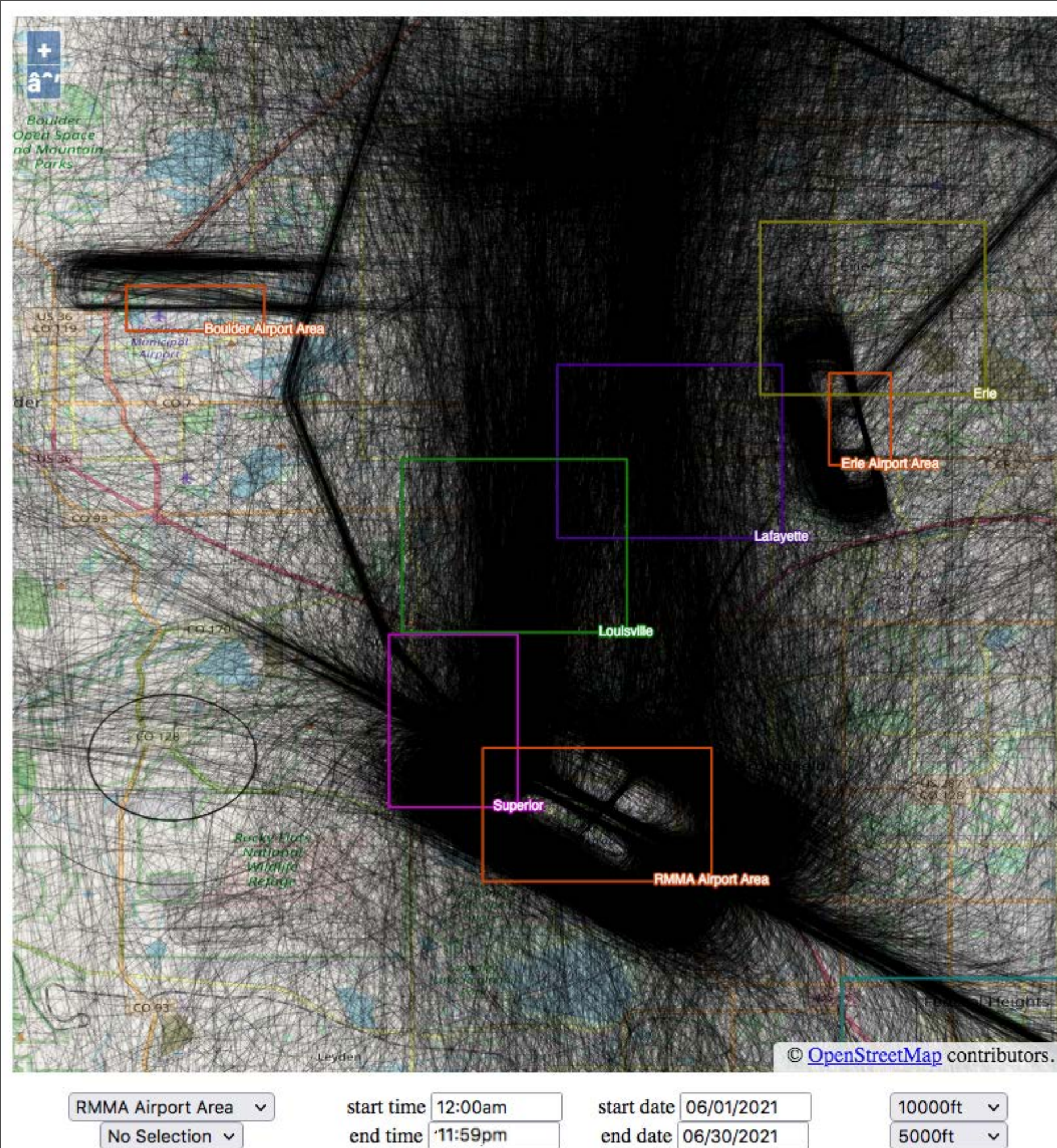
- Visualizations of June 2021 flights at RMMA
 - **Focus on June 2021 flight overpasses of Louisville**
 - Comparison of overpasses of Louisville and neighboring cities
 - RMMA flight traffic impacts compared to other front range airports
- * Data is representative of flight traffic in summer months



It takes at least 16 flights to pass over a point on the map before it is fully black
A flight is different from a RMMA flight-op

RMMA TRAFFIC
June 2021

11,364 Flights*



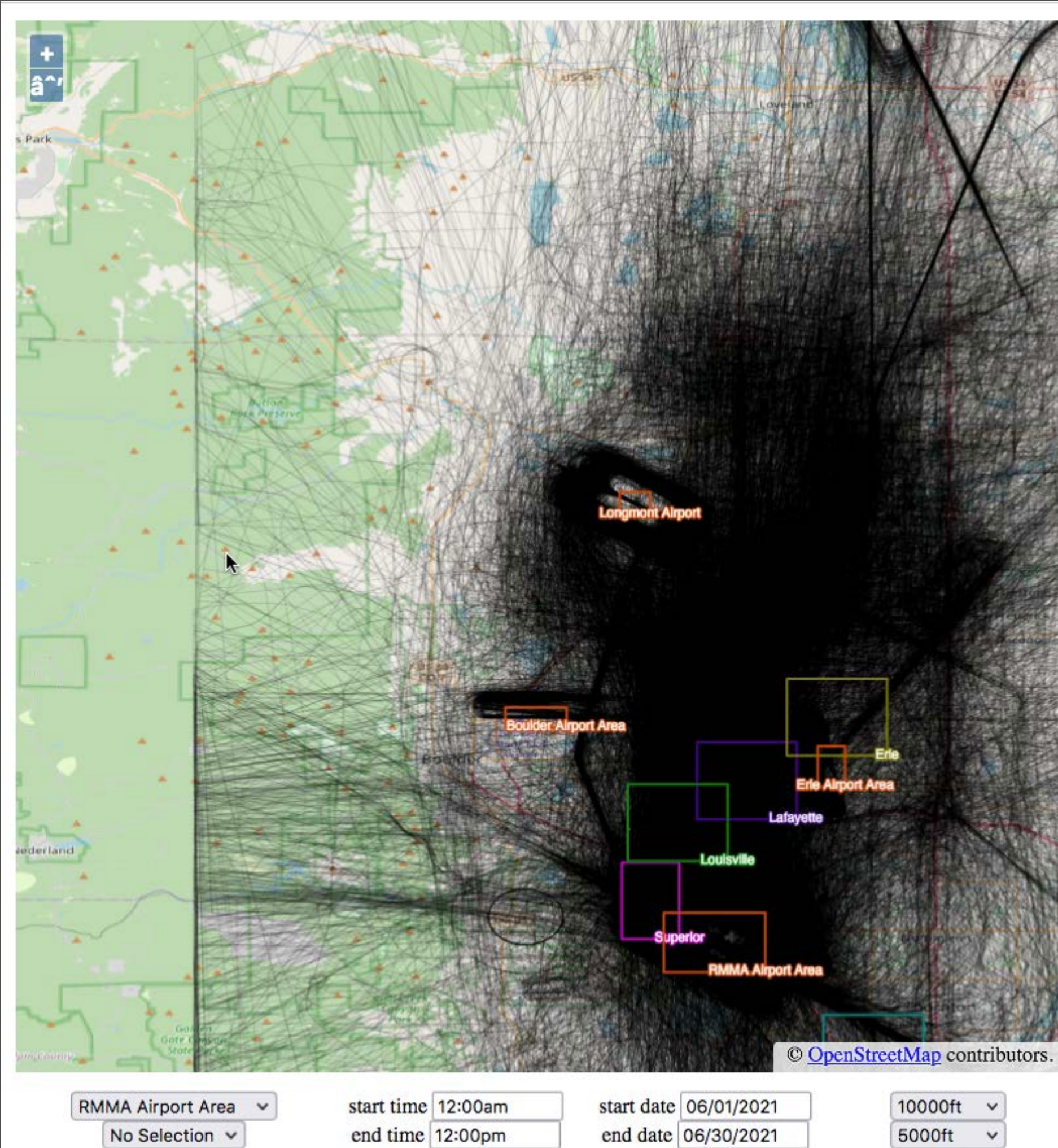
*This count will not be the same as Airport
OPSNET counts

This visualization is of all unique flights detected within the “RMMA Airport Area” using icao24 identifiers
It is related to but not the same as RMMA flight-ops

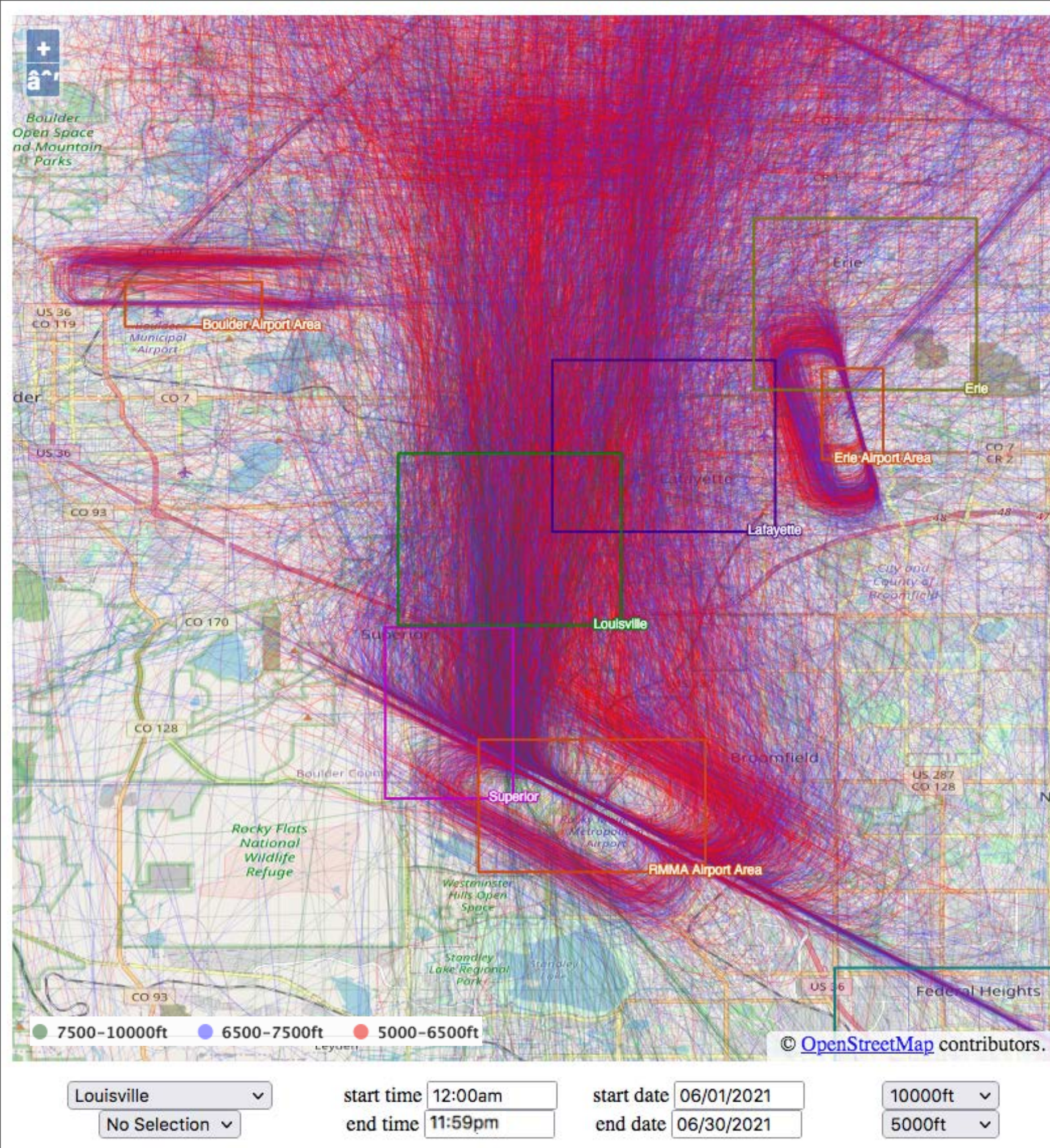
note differences in traffic north of RMMA vs all other directions

RMMA
REGIONAL TRAFFIC
June 2021

11364
Flights



A regional (zoomed out) view of the reach of RMMA traffic
The boundary on the left is the limitation of the dataset, not an indication no flights go further west



**TOTAL LOUISVILLE
OVERPASSES**

ALTITUDES
5,000-10,000FT

JUNE 2021

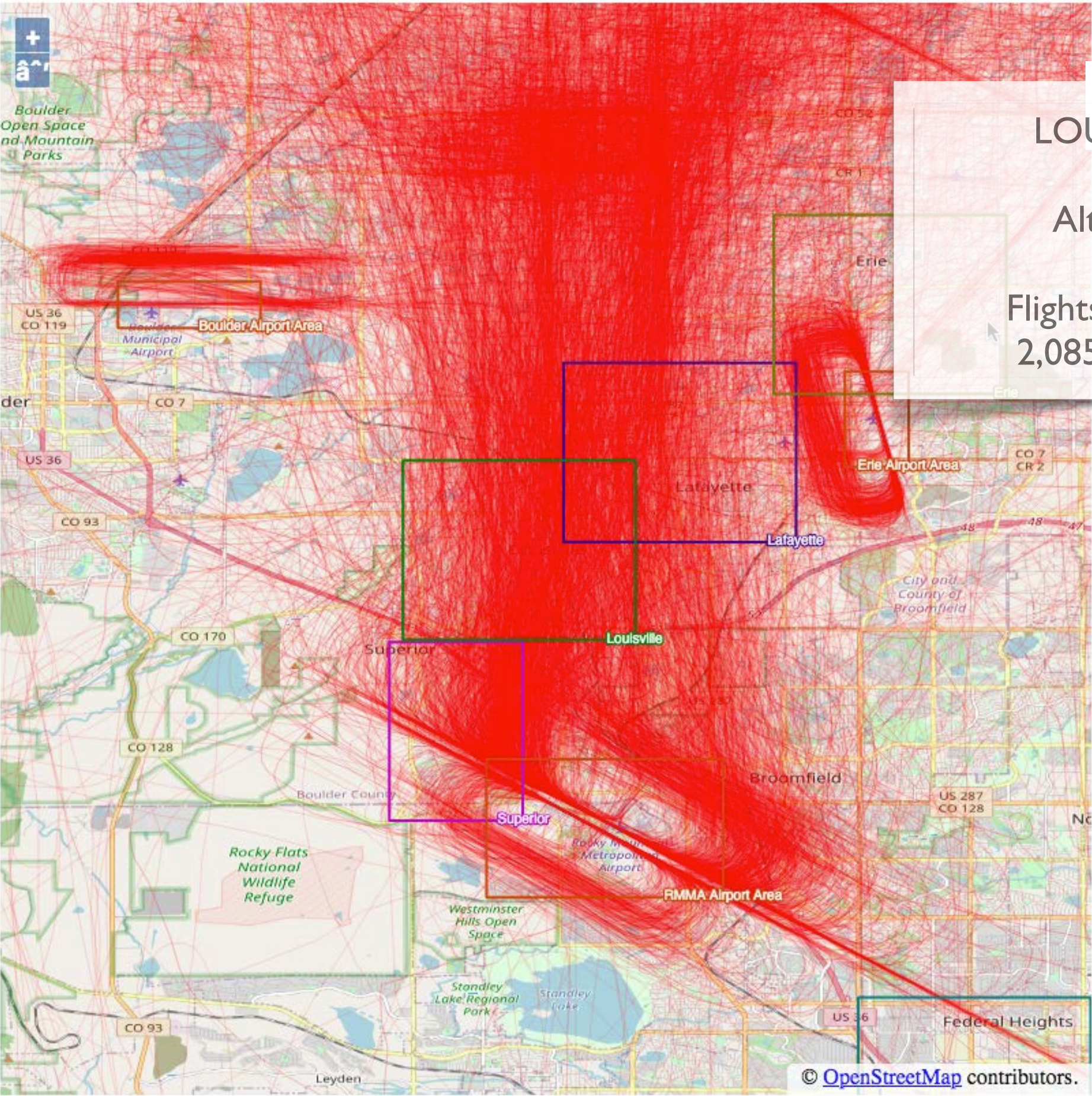
flights	overpasses
4,414	5,043

* minimum altitude is valid only in the
Louisville selection area

Flights only over a spatial sampling area (approximately 10 square miles) positioned over Louisville (green box)
A “**FLIGHT**” is a unique aircraft identified by icao24, an **OVERPASS** counts each time an aircraft flies over the
selection area

Counts of overpasses over Louisville selection area at least once **ONLY**, any flights outside of the Louisville
selection area are not shown or counted

168 overpasses per day on average in June and a maximum number of 255 flights/day (see slide 13 for more
details)



LOUISVILLE OVERPASSES

Altitudes: 5,000-6,600ft*

Flights
2,085

Overpasses
2,585

Louisville
No Selection

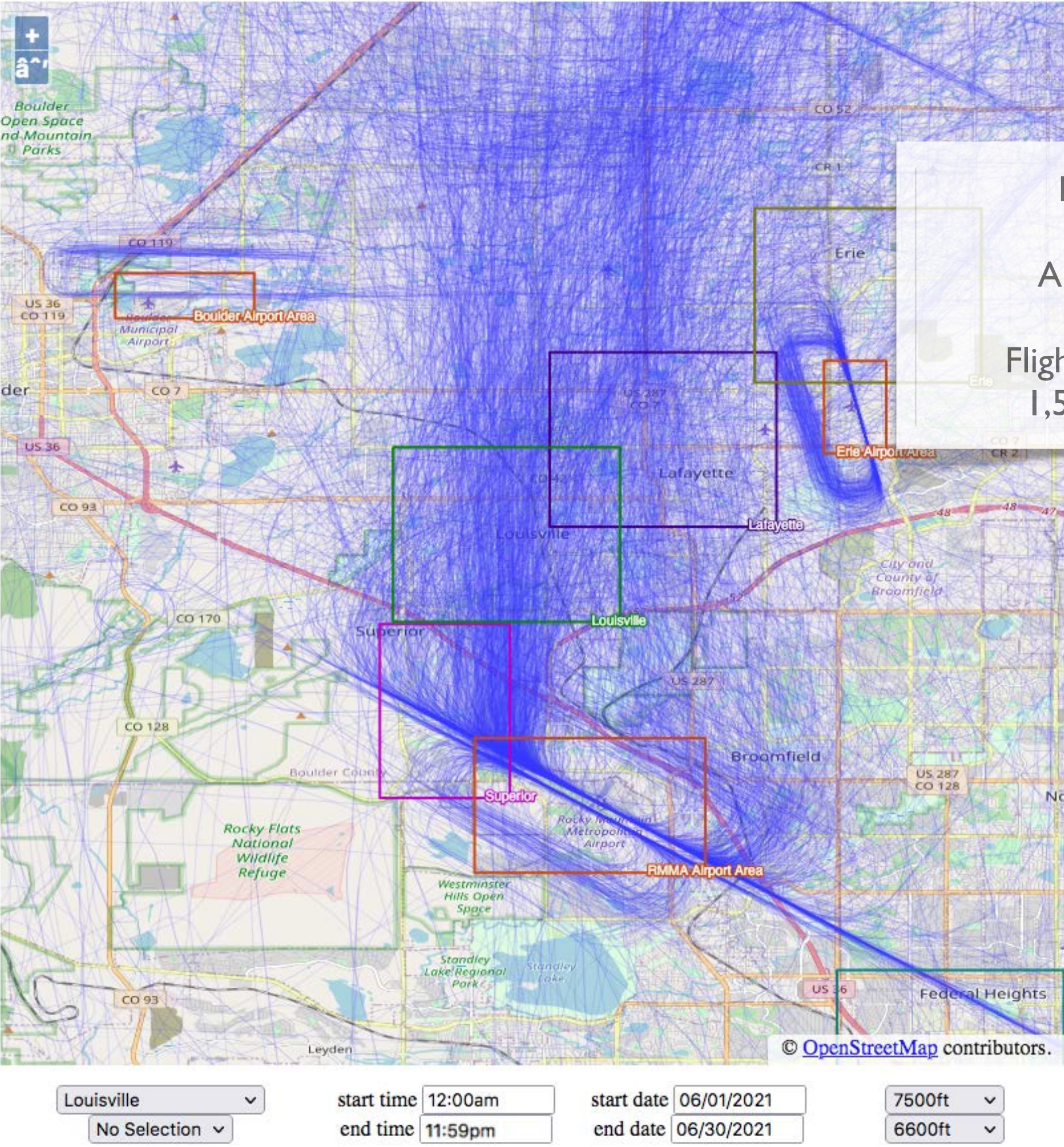
start time 12:00am
end time 11:59pm

start date 06/01/2021
end date 06/30/2021

6600ft
5000ft

* min altitudes are valid only in the Louisville selection area

41% of total overpasses
RMMA is 5669 ft



Louisville Overpasses

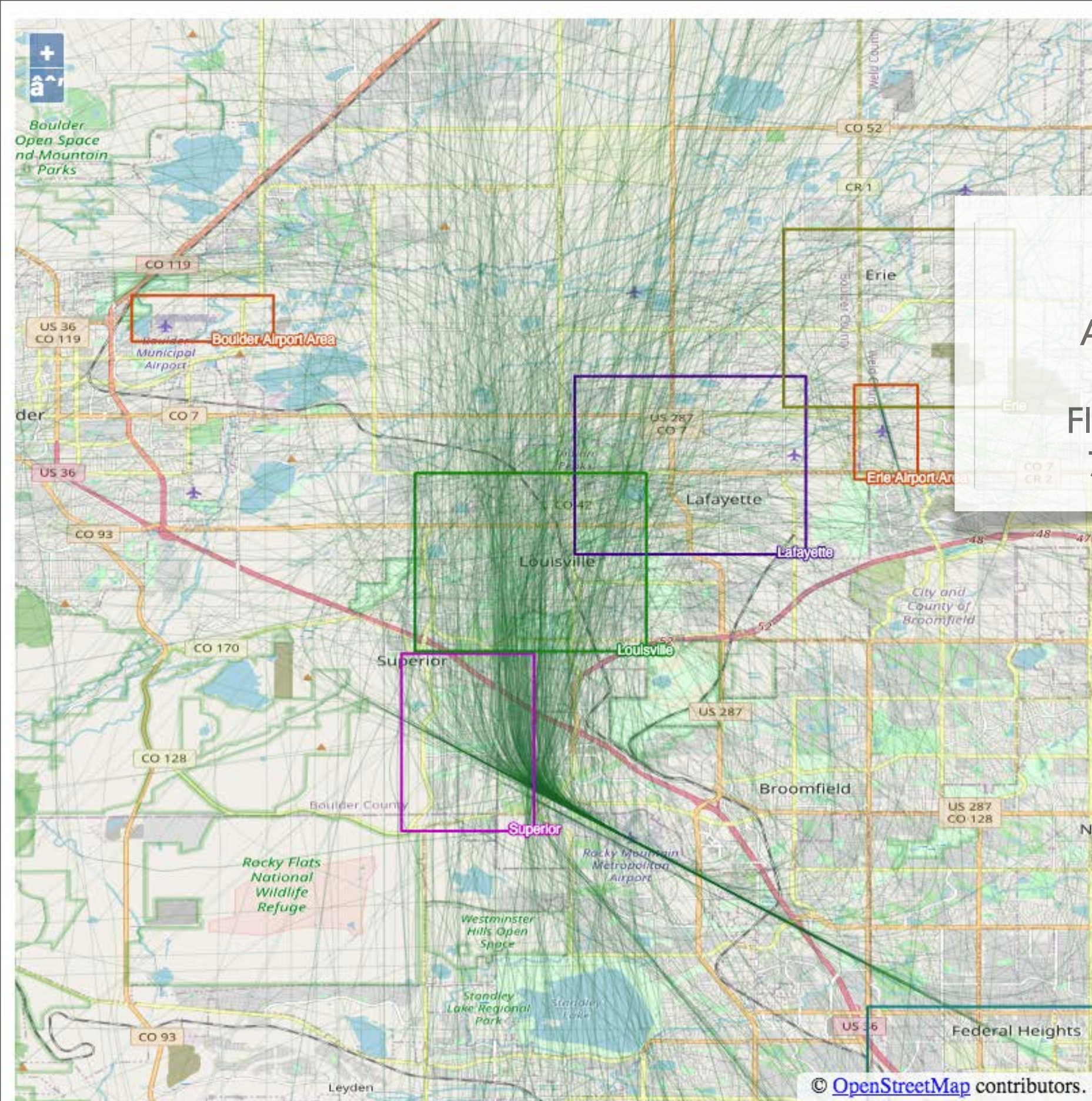
Altitudes: 6,600-7,500ft*

Flights
1,574

Overpasses
1,683

* minimum altitudes are valid only in the Louisville selection area

33% of total overpasses
A mixture of piston-aircraft and jets
Notice some leaving the area, some congregating in the “practice areas



Louisville Overpasses

Altitudes: 7,500-10,000ft*

Flights
755

Overpasses
775

* minimum altitude. Valid only in the Louisville selection area

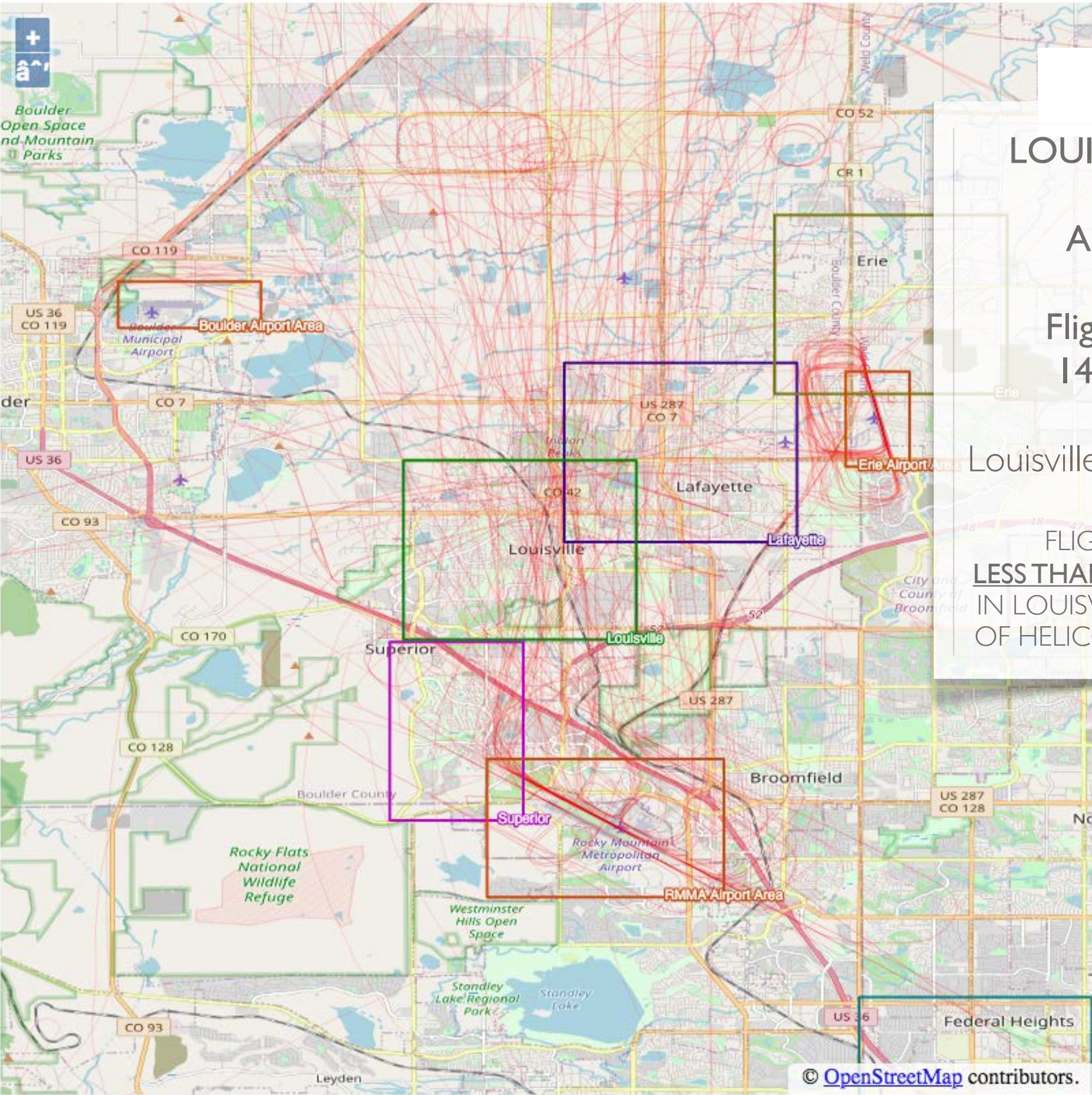
Louisville
Square

start time 12:00am
end time 11:59pm

start date 06/01/2021
end date 06/30/2021

10000ft
7500ft

15% of total overpasses likely jet aircraft, notice that the flights leave the area, not using other local airports



Louisville

No Selection

start time

12:00am

end time

11:59pm

start date

06/01/2021

end date

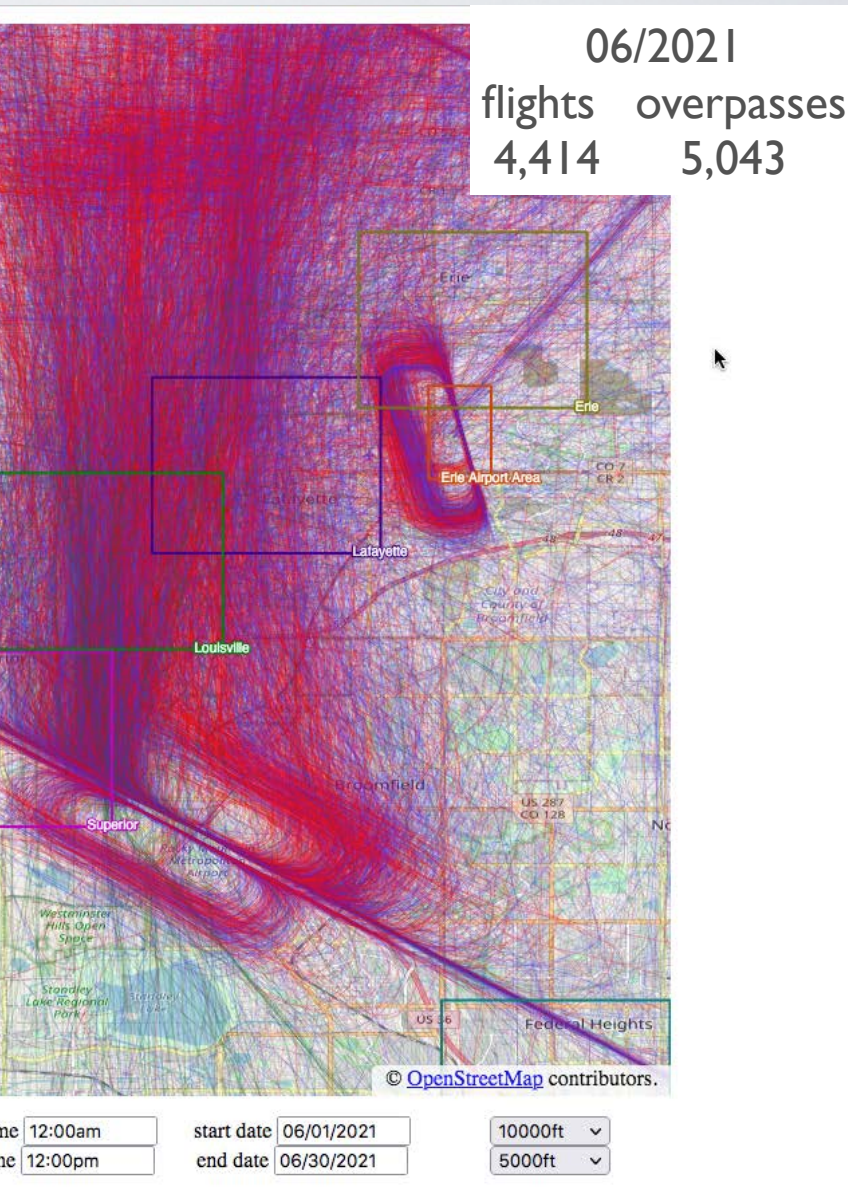
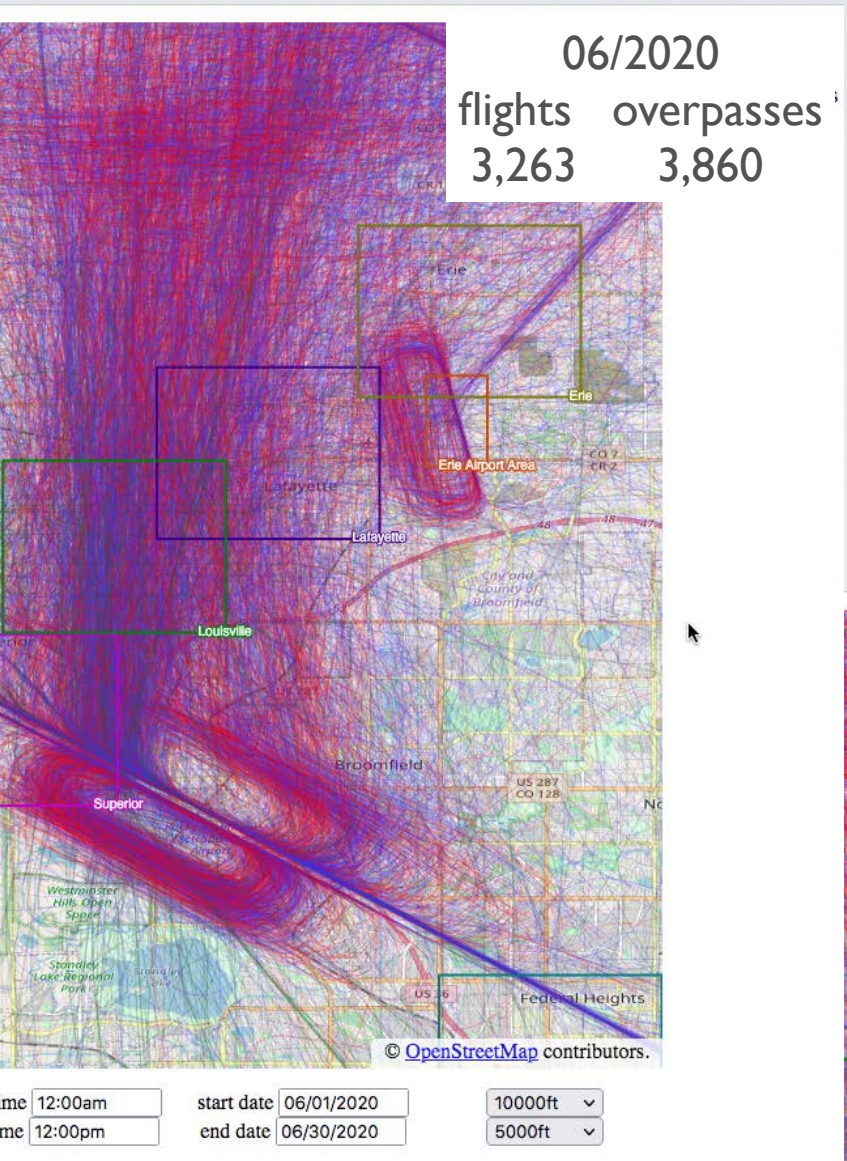
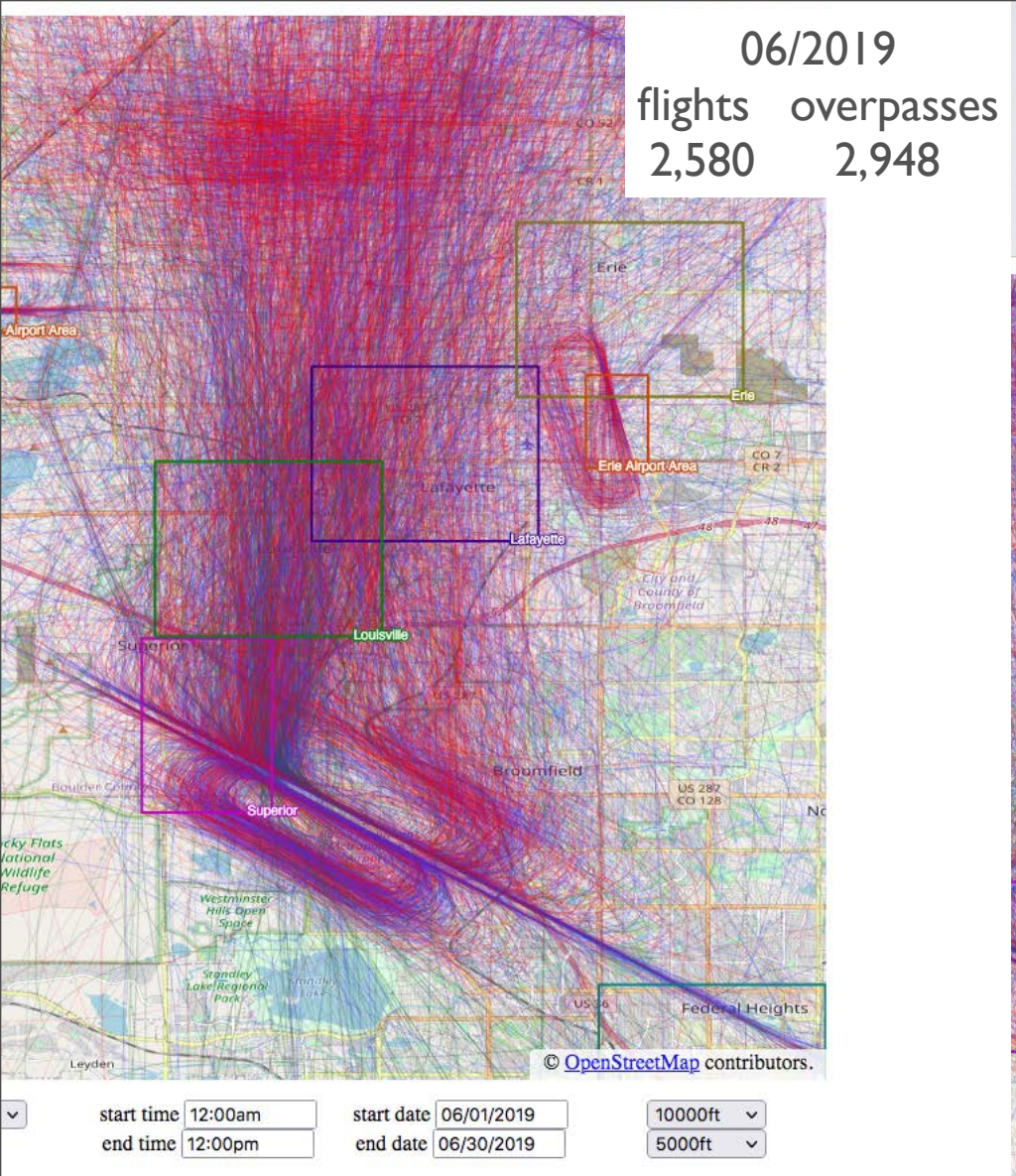
06/30/2021

6100ft

5000ft

The count is a mixture of helicopter traffic and fixed wing traffic less than 500ft above Louisville’s highest ground point

THREE YEARS OF LOUISVILLE AIRCRAFT TRAFFIC

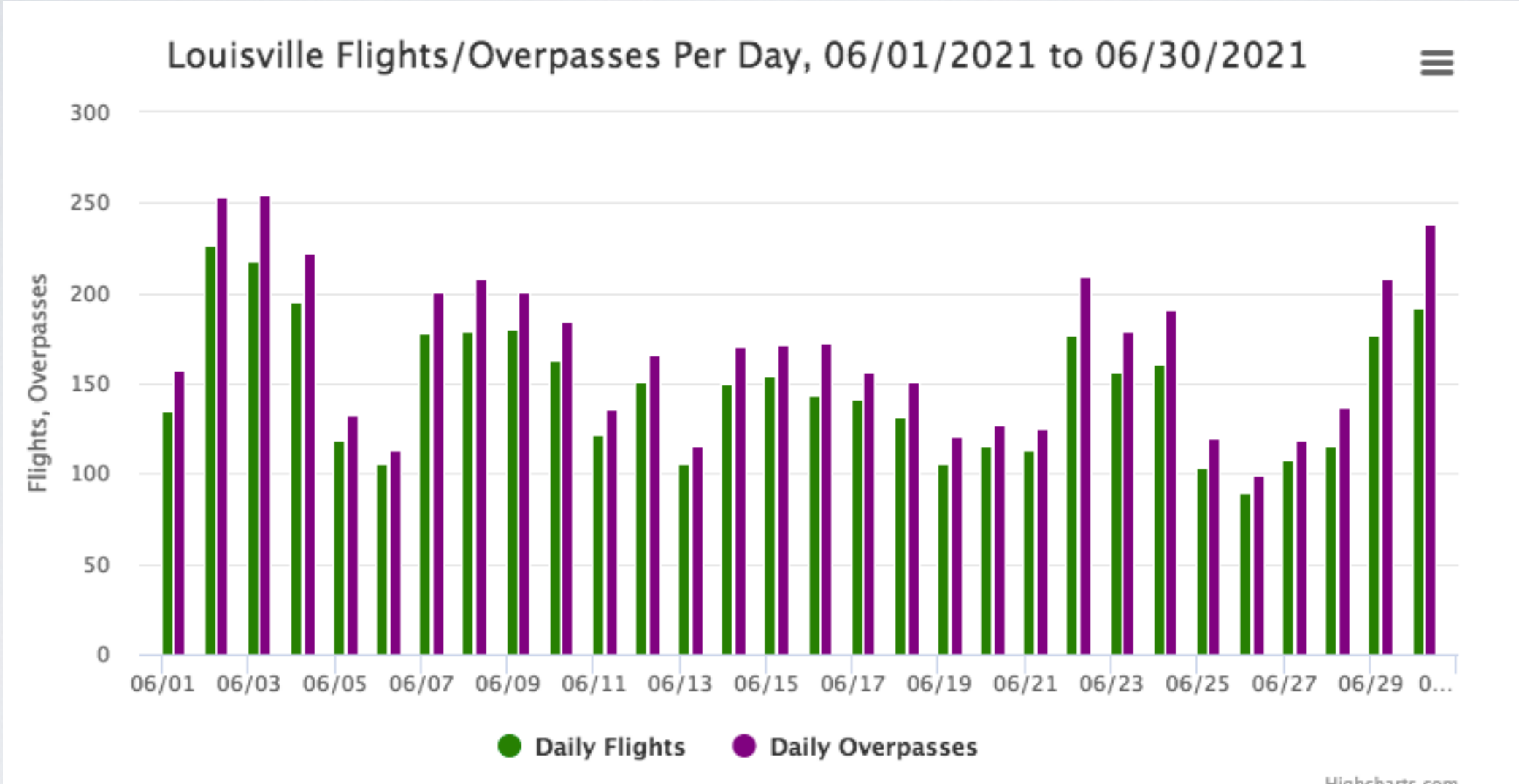


7500-10000ft 6500-7500ft 5000-6500ft

* altitudes are valid only in the Louisville selection area

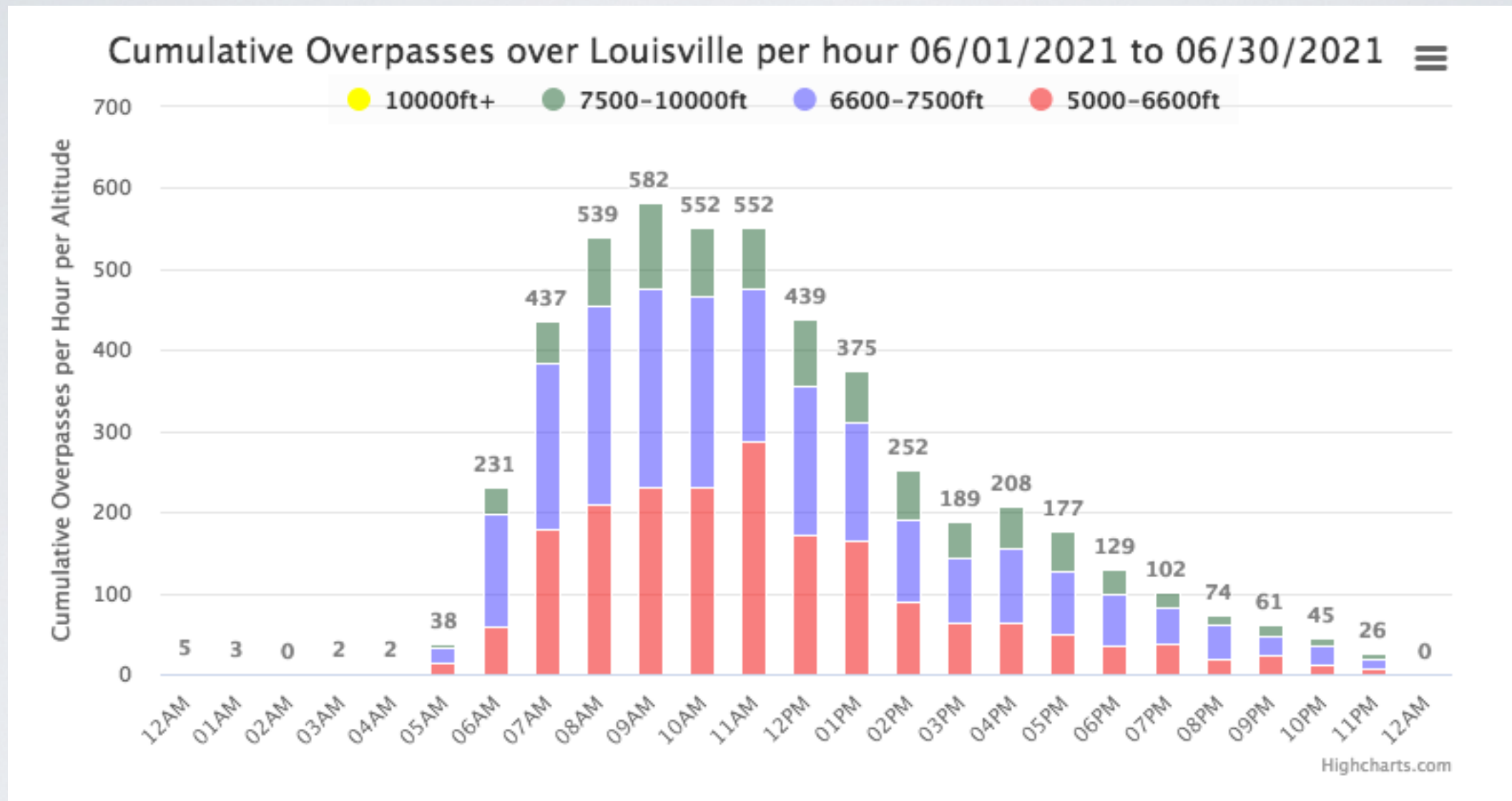
2019 compared to 2020 – flights increase 26%, overpasses increase 30%
2020 compared to 2021 – flights increase 35%, overpasses increase 30%
full compliance with ADS-B was required Jan 2020, which may cause an undercount in 2019

LOUISVILLE FLIGHTS/OVERPASSES PER DAY

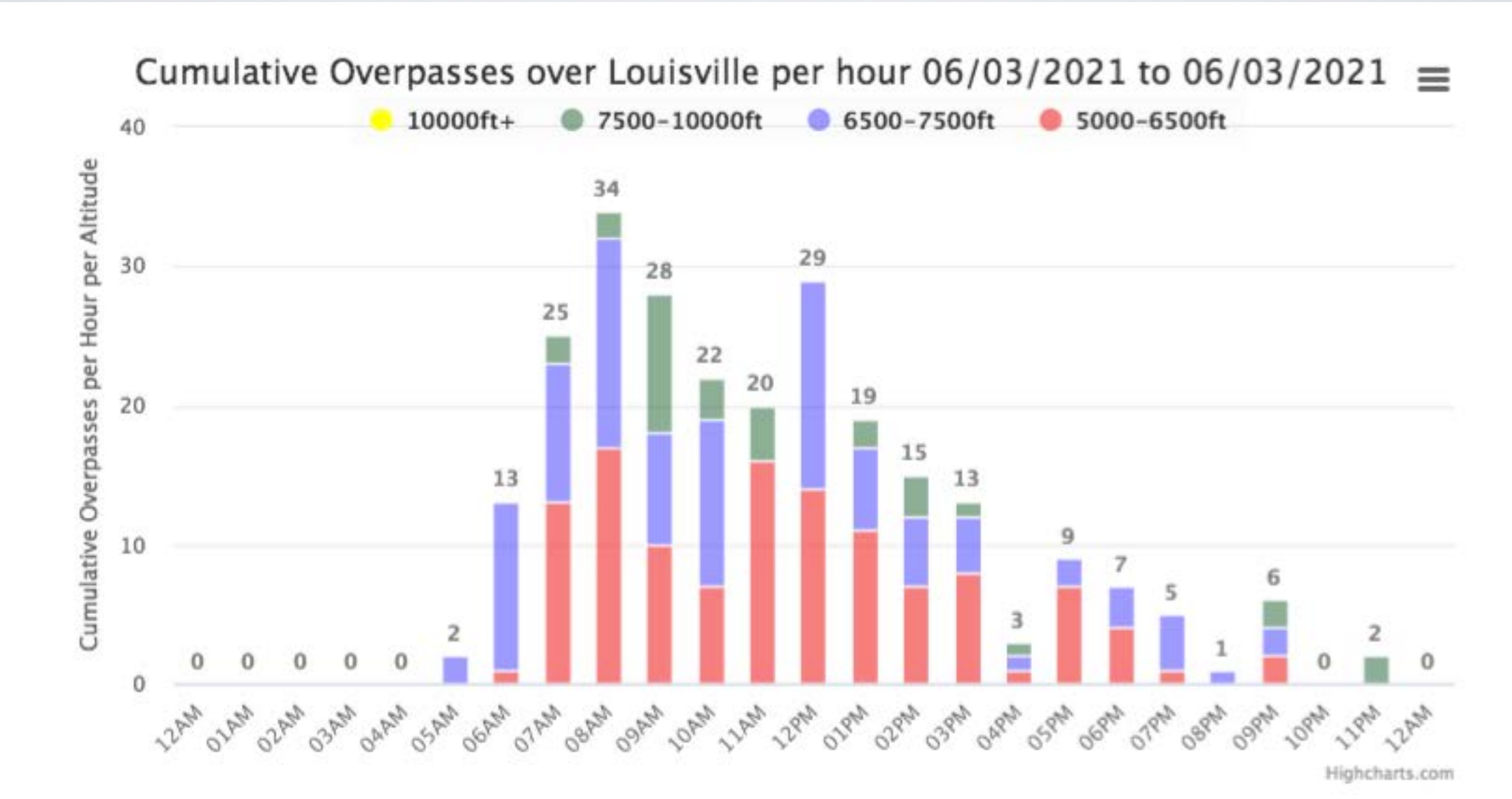


The busiest day, June 2, 3 – 255 overpasses an average of an overpass every 4.2 minutes
The least busy day was June 26 – 100 overpasses = an overpass every 10 minutes
These stats are for the 18 most flown hours, with guidance from the next slide which shows hourly averages

LOUISVILLE OVERPASSES PER HOUR

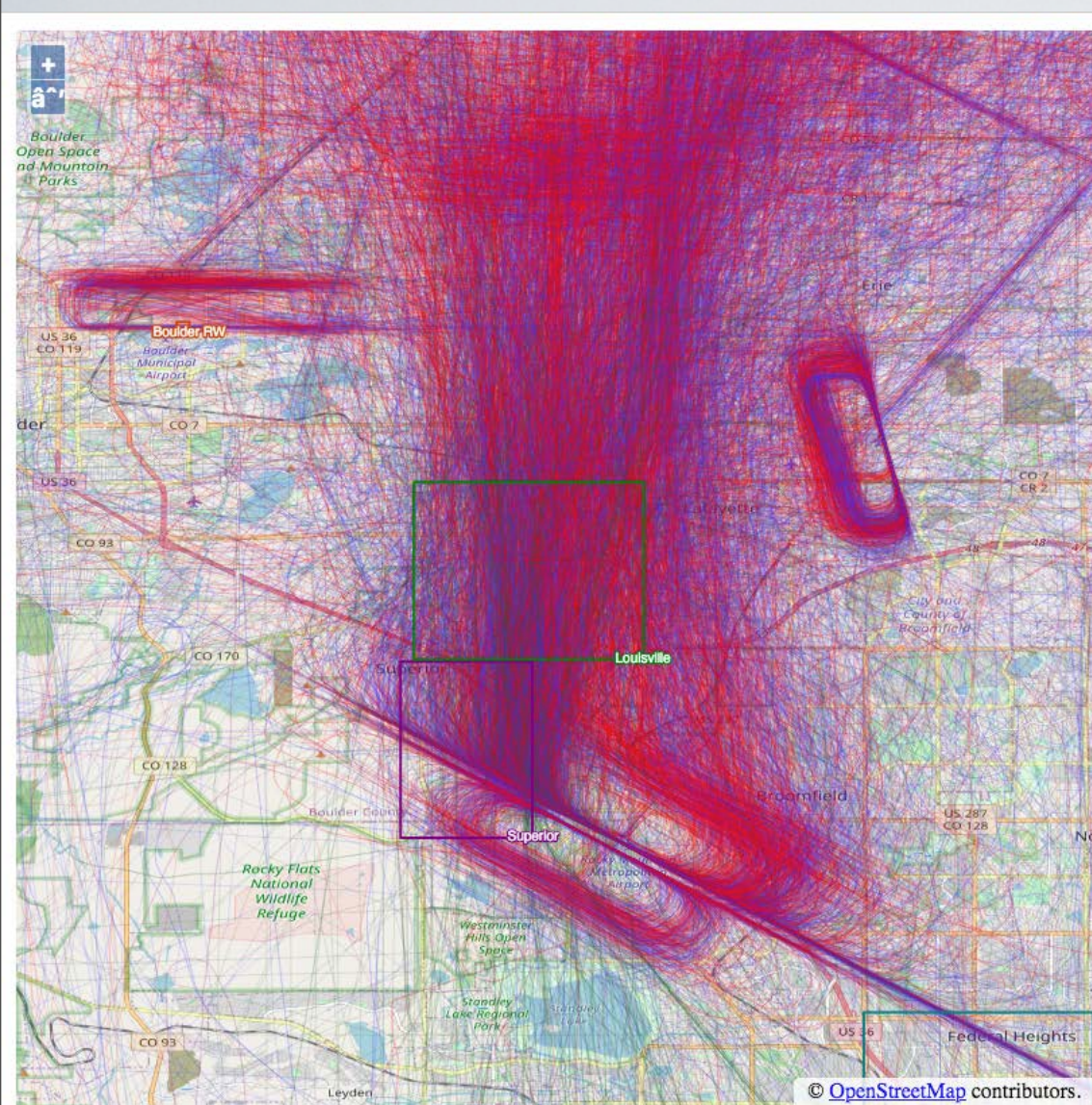


9:00 TO 10:00AM is the busiest hour – An average of 19.4 per hour,
or an **overpass every 3 minutes**, each day of the month
In the 9:00 to 10:00 range, on June 3, the busiest day of the month, **an overpass every 1.75 minutes**
(see next slide for June 3 details)



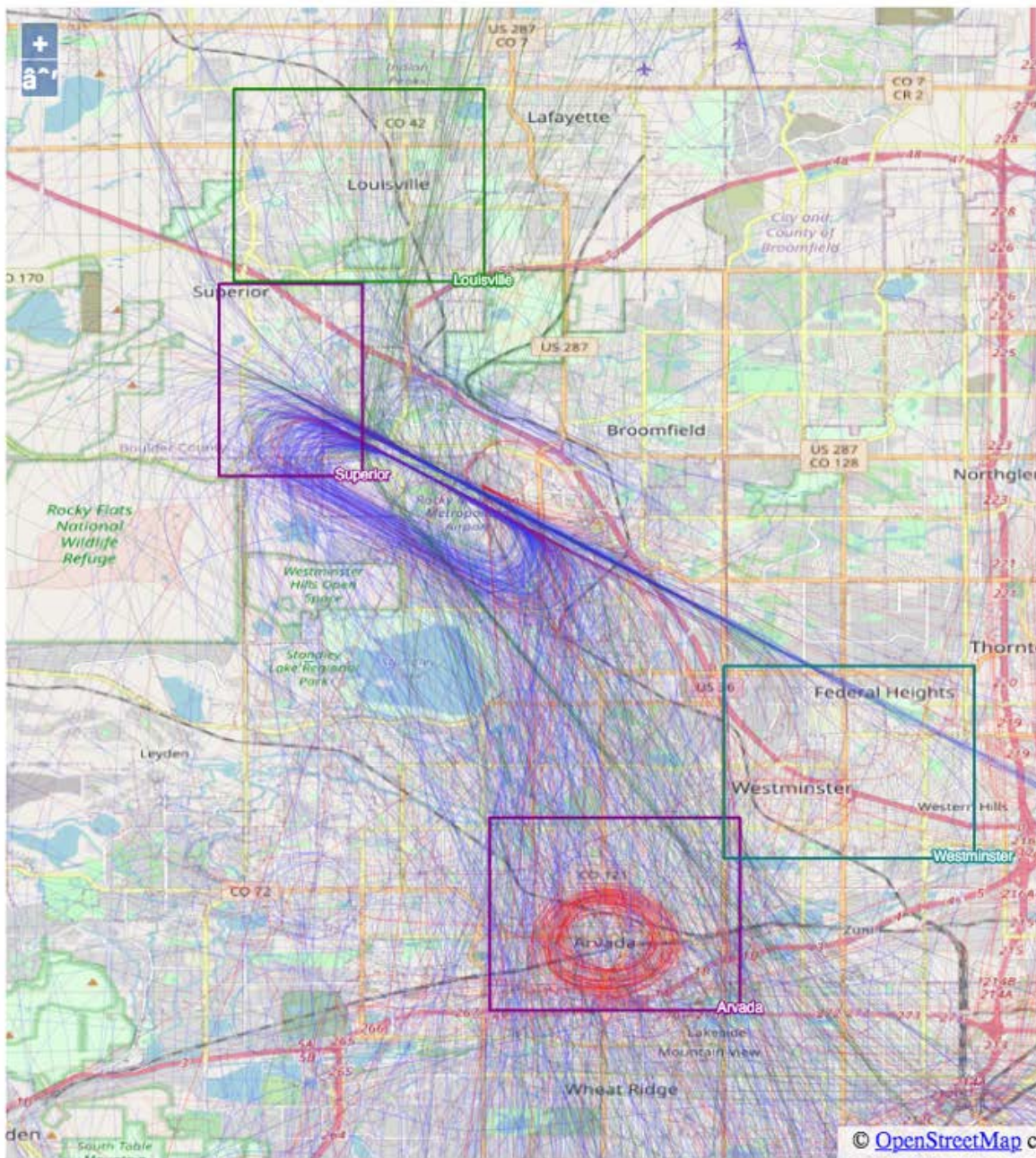
June 3 was the busiest day with 255 total flights
8:00–900am was the busiest hour with 34 overpasses = **an average of 1.75 minutes between overpasses.**

LOUISVILLE TRAFFIC COMPARED WITH ARVADA TRAFFIC 06/2021



flights overpasses
4,414 5,043

LOUISVILLE



flights overpasses
621 827

ARVADA

Louisville
No Selection
start time 12:00am
end time 12:00pm
start date 06/01/2021
end date 06/30/2021
10000ft
5000ft

7500-10000ft 6500-7500ft 5000-6500ft

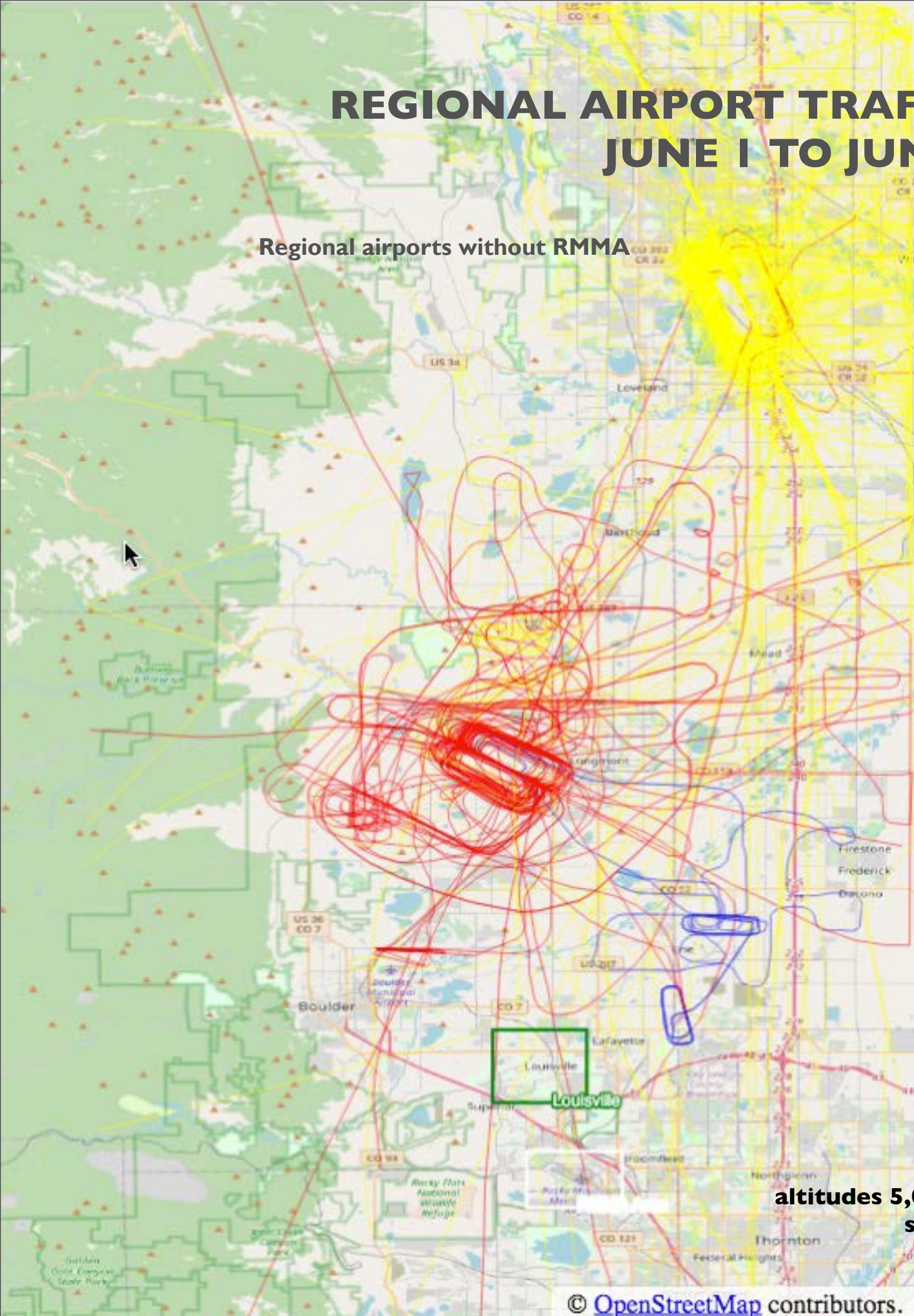
* altitudes are valid only in the Louisville and Arvada selection areas respectively

Arvada
No Selection
start time 12:00am
end time 12:00pm
start date 06/01/2021
end date 06/30/2021
10000ft
5000ft

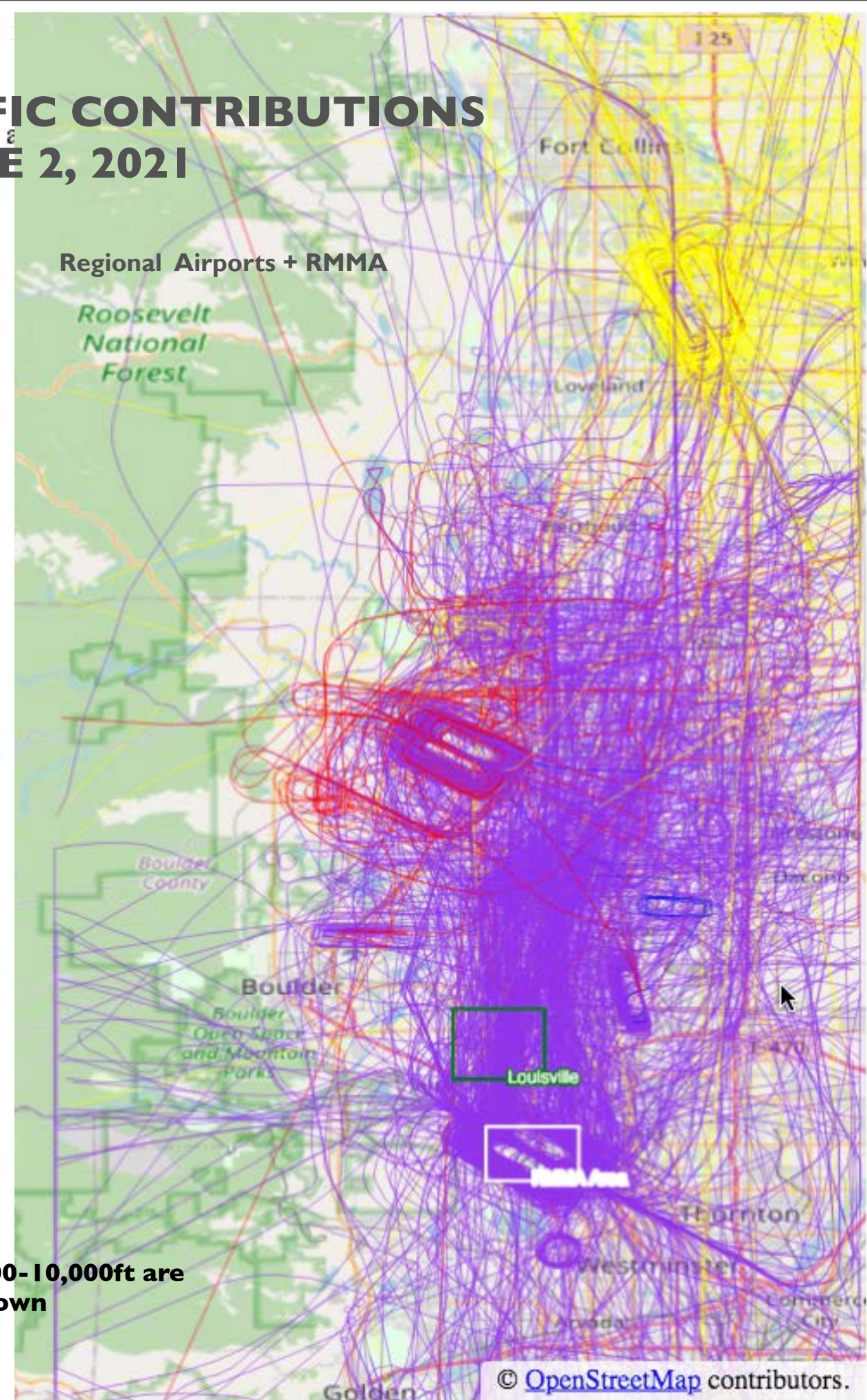
Different communities will have different numbers, Westminster's will be likely higher, for instance
To make a fair comparison, the spatial selection areas over each city are the same size
For Arvada $827 = 27.5 \text{ OVERPASSES PER DAY} / 18 \text{ HOURS} = \text{average of an overpass every 39 minutes}$
 $5043 = 168.1 \text{ OVERPASSES PER DAY} / 18 \text{ HOURS} = \text{an average of an overpass every 6.4 minutes}$

REGIONAL AIRPORT TRAFFIC CONTRIBUTIONS JUNE 1 TO JUNE 2, 2021

Regional airports without RMMA



Regional Airports + RMMA



Left image is GA airport traffic originating/departing at all GA airports except RMMA
Right image adds the contribution of RMMA

NEXT STEPS

- Similar presentation to Community Noise Roundtable (CNR)
- Support and facilitate flight path studies by the CNR and RMMA
- Engage with the community and CNR to propose flight paths to the FAA for regulatory actions
- Continue focused engagement with CNR/RMMA
- Collaboration with FAA and federal regulation partners.

QUESTIONS AND FEEDBACK