

VOLKAM & Lessons Learned



Federal Aviation
Administration

VOLKAM

In 2010, the eruption of the Eyjafjallajökull volcano in Iceland caused significant disruption to air traffic across the North Atlantic. As a result, ICAO formed the International Volcanic Ash Task Force (IVATF) to develop a global safety risk management framework that would make it possible to determine the safe levels of aircraft operation in airspace contaminated by volcanic ash. As one of its outcomes, the IVATF recommended that each of the ICAO Planning and Implementation Regional groups develop a volcanic ash contingency plan.

The ATC responsibilities are covered in ICAO Doc 4444 par 15.8:

15.8 PROCEDURES FOR AN ATC UNIT WHEN A VOLCANIC ASH CLOUD IS REPORTED OR FORECAST

15.8.1 If a volcanic ash cloud is reported or forecast in the FIR for which the ACC is responsible, the controller should:

- a) relay all information available immediately to pilots whose aircraft could be affected to ensure that they are aware of the ash cloud's position and the flight levels affected;**
- b) suggest appropriate re-routing to the flight crew to avoid an area of known or forecast ash clouds;**
- c) inform pilots that volcanic ash clouds are not detected by relevant ATS surveillance systems;**
- d) if the ACC has been advised by an aircraft that it has entered a volcanic ash cloud the controller should:
 - 1) consider the aircraft to be in an emergency situation;**
 - 2) not initiate any climb clearances to turbine-powered aircraft until the aircraft has exited the ash cloud; and**
 - 3) not initiate vectoring without pilot concurrence.****

Note.— Experience has shown that the recommended escape maneuver for an aircraft which has encountered an ash cloud is to reverse its course and begin a descent if terrain permits. The final responsibility for this decision, however, rests with the pilot.

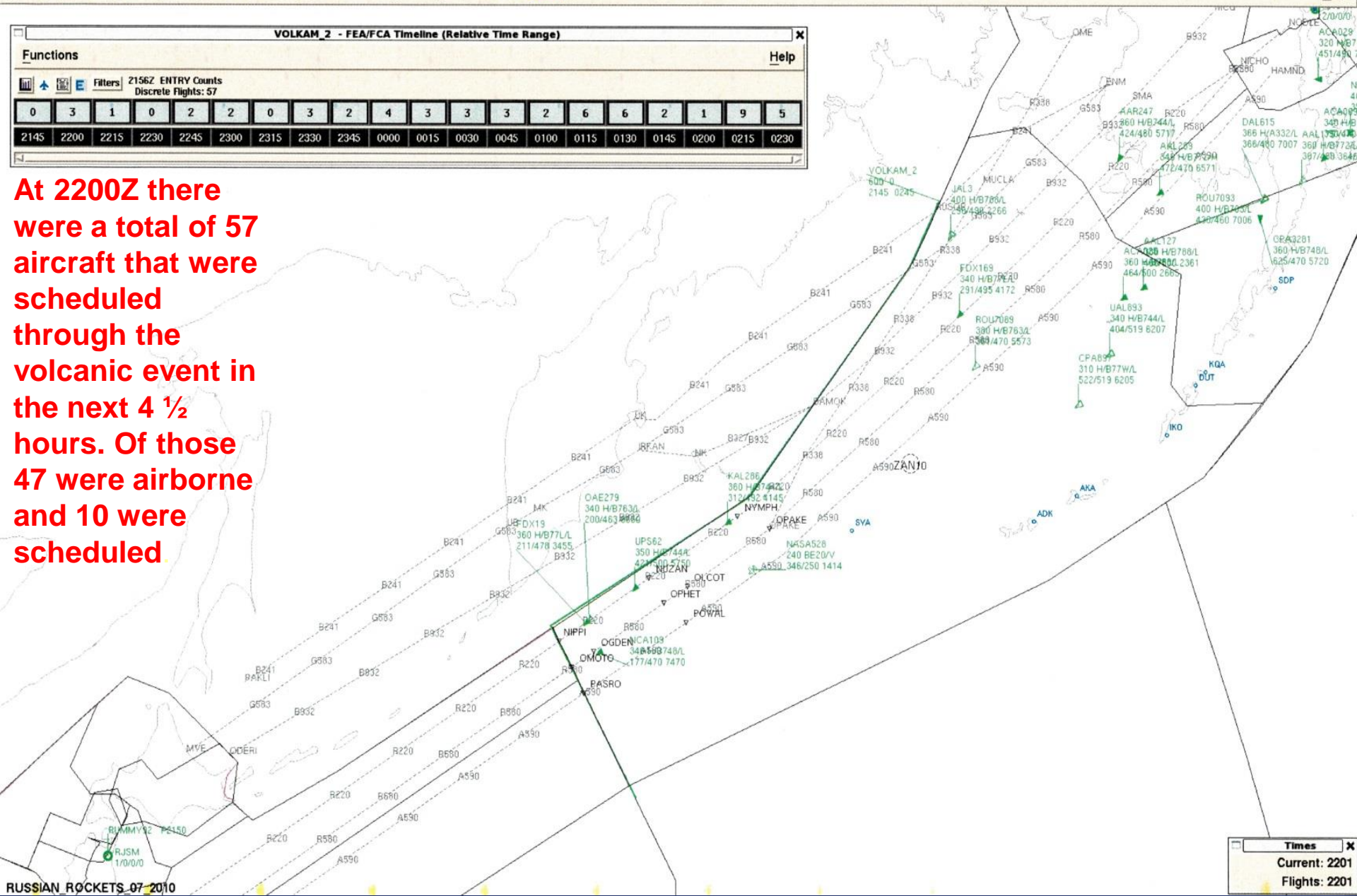
VOLKAM_2 - FEA/FCA Timeline (Relative Time Range)

Functions Help

Filters: 2156Z ENTRY Counts
Discrete Flights: 57

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2145	2200	2215	2230	2245	2300	2315	2330	2345	0000	0015	0030	0045	0100	0115	0130	0145	0200	0215	0230	

At 2200Z there were a total of 57 aircraft that were scheduled through the volcanic event in the next 4 1/2 hours. Of those 47 were airborne and 10 were scheduled



Times X

Current: 2201

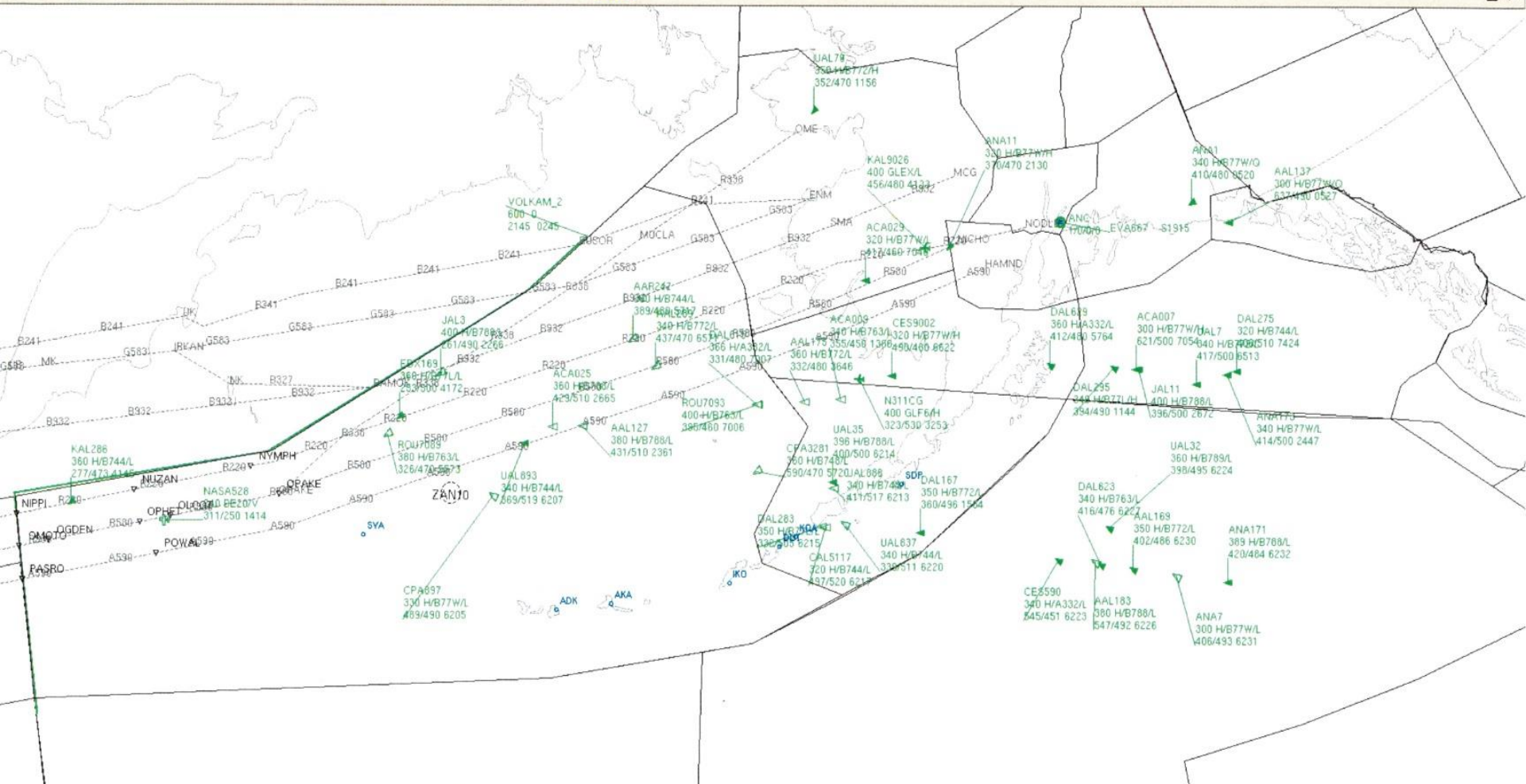
Flights: 2201

RUSSIAN ROCKETS 07-2010

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VOLKAM 2 - FEA/FCA Timeline (Relative Time Range)

Functions Help

Filters 2231Z ENTRY Counts
Discrete Flights: 54

0	2	2	0	3	2	4	3	3	3	2	6	6	3	1	7	7
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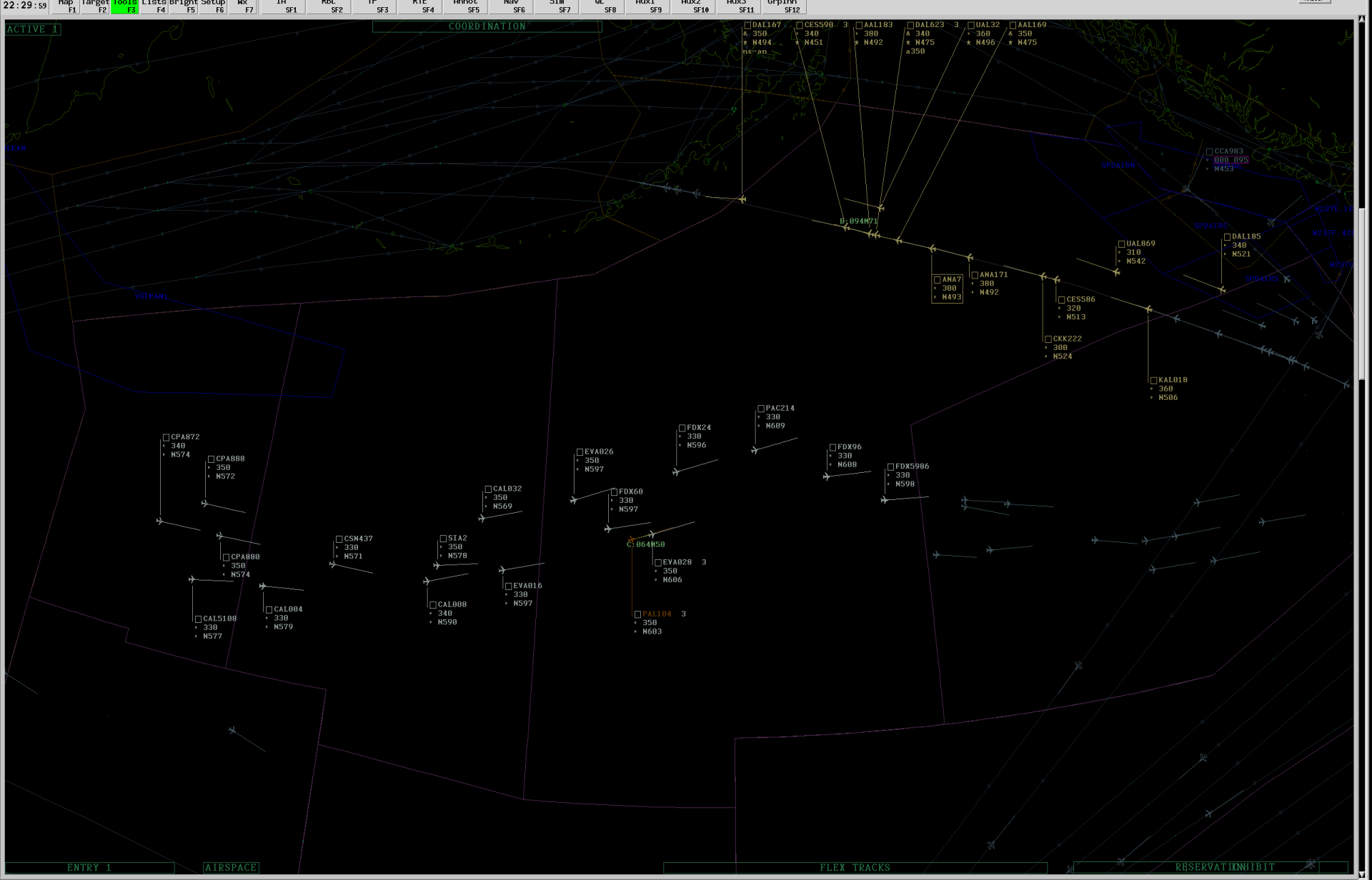
2236Z

Times X

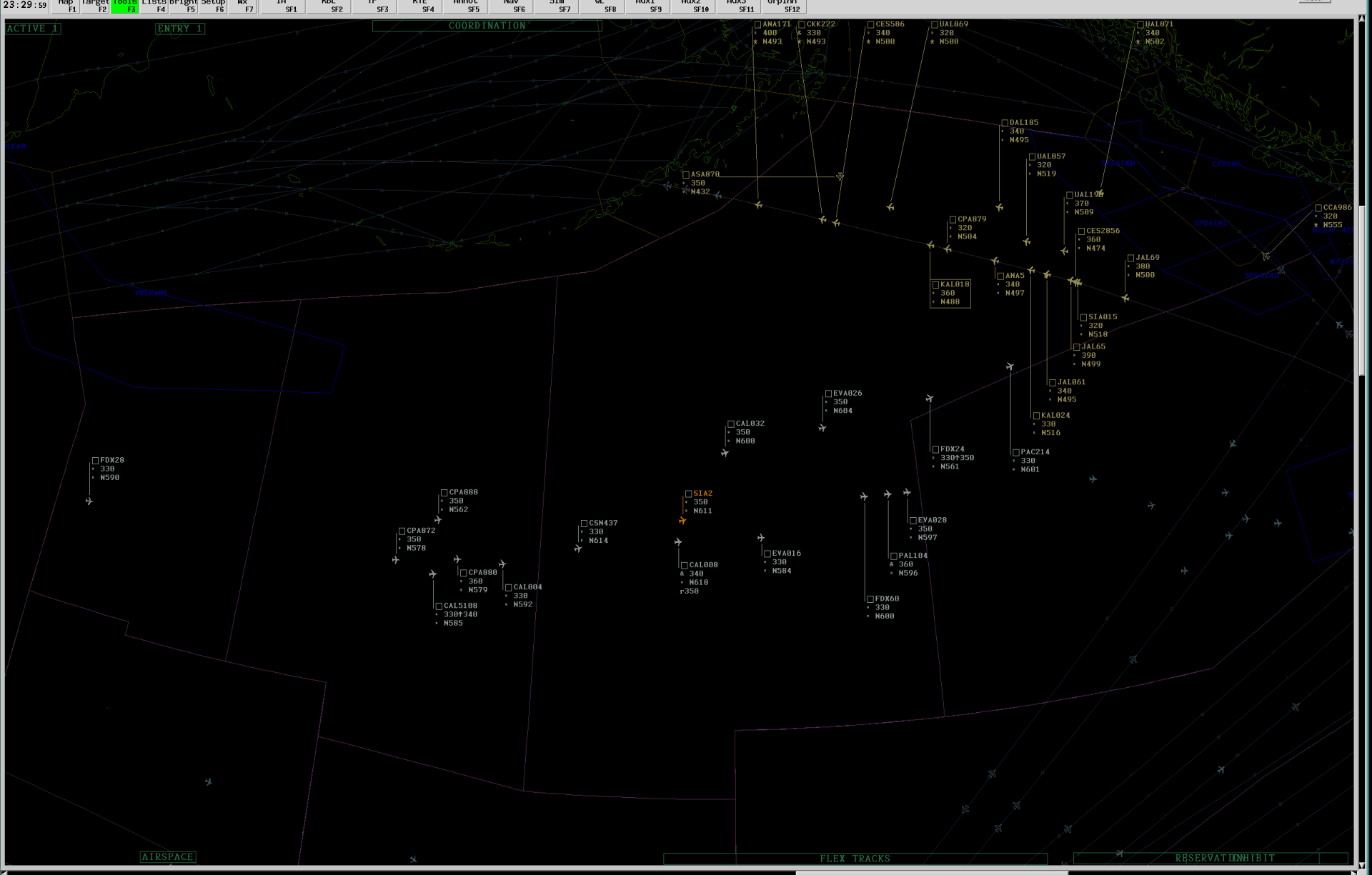
Current: 2236

Flights: 2236





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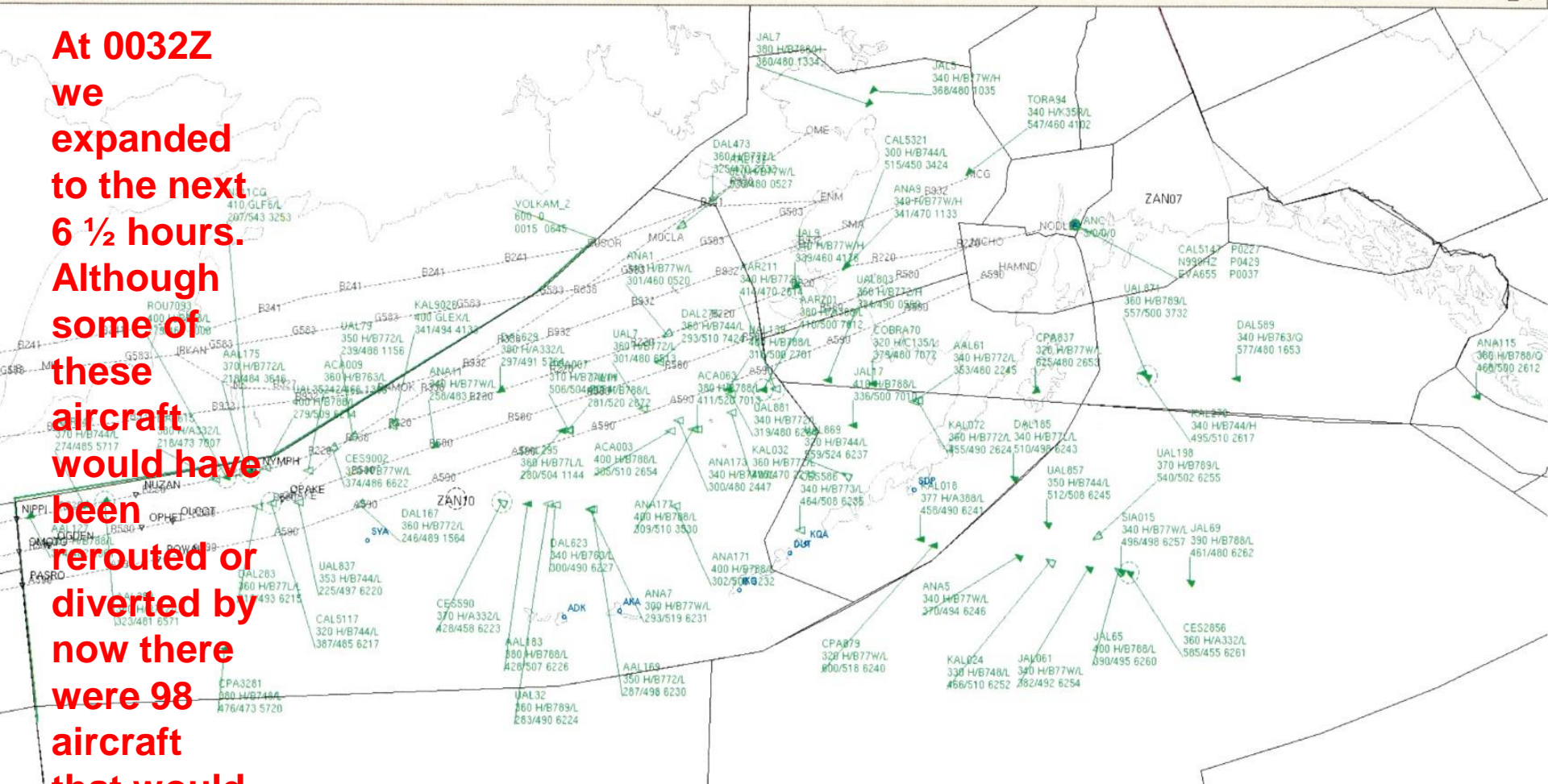


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At 0032Z we expanded to the next 6 1/2 hours. Although some of these aircraft would have been rerouted or diverted by now there were 98 aircraft that would have required some action



VOLKAM_2 - FEA/FCA Timeline (Relative Time Range)

Functions Help

Filters: 0031Z ENTRY Counts
Discrete Flights: 98

1	3	1	8	6	3	2	7	6	6	5	7	7	7	10	8	1	3	2	1	0	0	4	0
0030	0045	0100	0115	0130	0145	0200	0215	0230	0245	0300	0315	0330	0345	0400	0415	0430	0445	0500	0515	0530	0545	0600	0615

Times

Current: 0032

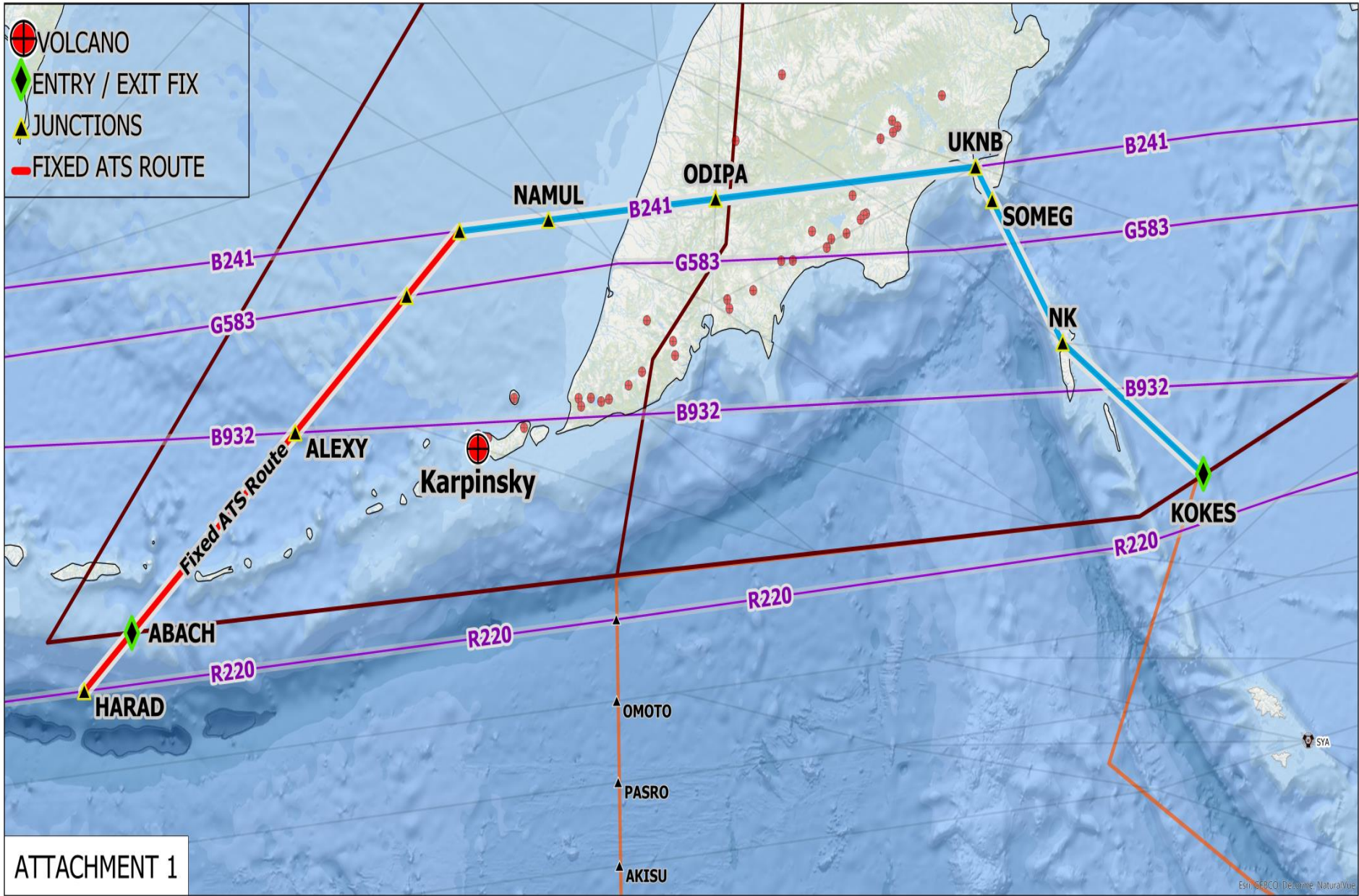
Flights: 0031

RUSSIAN_ROCKETS_07_2010

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ATTACHMENT 1



Lessons Learned

- **Communication is paramount.**
 - ANSP to ANSP
 - ANSP to Airlines
 - TMU to Controller
 - Controller and Flight Crews
 - VAC to ANSP'S
- **Work with Airlines and ANSP's to create canned routes.**

Oakland VA Active Guidance

- If time permits, have the ATCSCC schedule a teleconference with the International Operators, Japan ATMC and Anchorage ARTCC.
- The telecon would ideally be at least 1 hour from the current time to allow the operators to get the correct personnel on the telecon, however timing may not permit advance notification to the operators.
- When conducting a Volcanic Ash Telecom send a High Priority email to the Oceanic Critical Event Contact List advising of the telecom details.



Oakland VA Active Guidance

- On the telecom discuss the VA plume and options for managing the traffic. Get operator feedback and develop a plan.
- Advise adjacent ANSP's that tactical reroutes have commenced



VOLKAM

- The VOLKAM/17 exercise is planned for April 2017
- The review of VOLKAM/16 emphasized the importance of operator participation. Real time data collection, during the 3 hour exercise, revealed more than 100 aircraft traversed the simulated volcanic ash area yet fewer than 20 operators actually participated in the exercise. The review stated, “The airlines that were involved will be much more prepared to deal with a real time event than those who have chosen not to participate. From an ANSPs perspective, this lack of participation could lead to airlines not being prepared to deal with a real time eruption and possibly overloading the ANSPs.”
- Operators are urged to consider participating in VOLKAM/17
- The ICAO point of contact for the EUR (EAST) VOLCEX/SG is:
Mr. Christopher Keohan
ckeohan@paris.icao.int

VOLKAM17 Exercise

•April 20, 2017 2200Z

•Paris May 11, 2017

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Mr. Christopher Keohan

ckeohan@paris.icao.int



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- The meeting is invited to note the information provided.



