

## **Tenth Meeting of the Pacific Project**

(Anchorage, Alaska 26 October 2015)

### **Preliminary Data Regarding RJAA / PAZA NOPAC Boundary Crossing Times**

(Presented by the Federal Aviation Administration)

#### **SUMMARY**

This paper presents preliminary information concerning the temporal distribution of boundary crossing time for aircraft crossing the Fukuoka (RJJJ) and Anchorage (PAZA) Flight Information Region (FIR) boundary via the North Pacific (NOPAC) route system.

## **1 Introduction**

1.1. Previous discussions, both here in the Pacific Project and at the Informal Pacific ATC Coordinating Group (IPACG), have questioned the feasibility of modifying User Preferred Routing (UPR) programs based upon “peak” and “off peak” traffic periods. In order to further this discussion, pertinent data must be obtained and analyzed. This paper provides very preliminary data concerning the temporal distribution of aircraft crossing the RJJJ / PAZA FIR boundary via the NOPAC structure. The data, presented in Attachments 1 thru 5, was collected during the time period September 28<sup>th</sup> to October 12<sup>th</sup>, 2015.

## **2 Discussion**

2.1. The data presented in Attachments 1 thru 6 are described in terms of Universal Coordinated Time (UTC). This orientation allows direct comparison between the five NOPAC routes but may not be useful for other considerations.

2.2. Based on the data sample, peak traffic occurs at NIPPI during the 02:00 thru 04:00 hours (02:00 to 04:59) and again during the 15:00 hour (15:00 to 15:59). Similarly, OMOTO traffic appears to peak during the 02:00 to 04:00 hours (02:00 to 04:59).

2.3 The data presented is shown with reference to “crossing time” at the Fukuoka / Anchorage Oceanic FIR boundary. As such, this presentation provides limited information describing when (and where) the east and westbound traffic cross. For Anchorage, the area of primary concern falls from :30 minutes to 4:00 hours prior to the FIR boundary. This represents about 200 – 250 nautical miles (NM) east of the FIR boundary to 1100 – 1400 NM east of the FIR boundary. It is within this area that the two traffic flows cross and where the controller’s workload is highest.

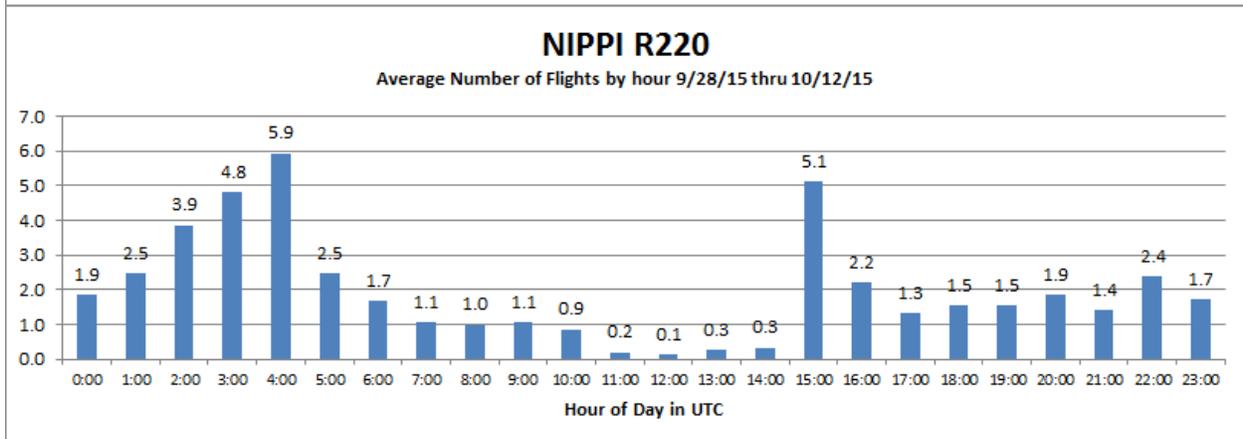
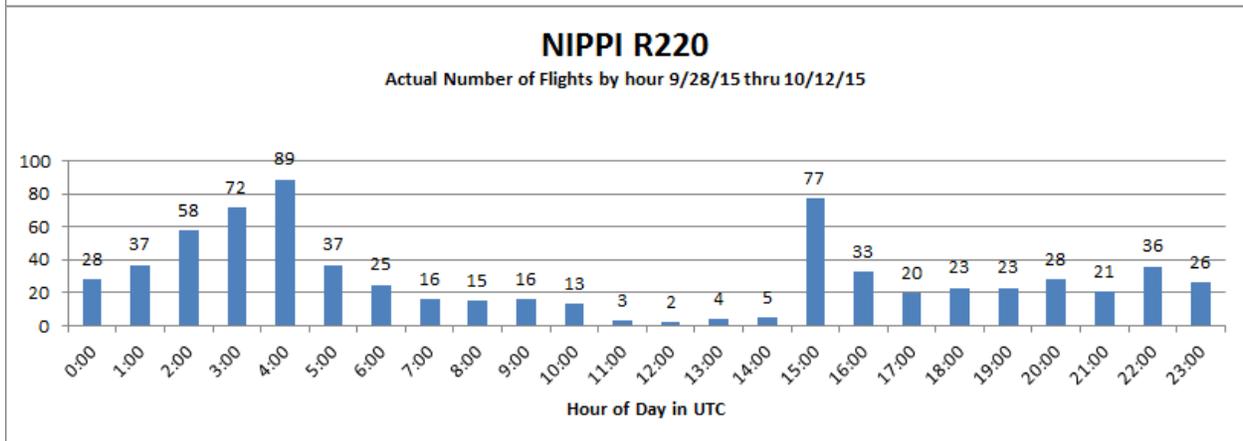
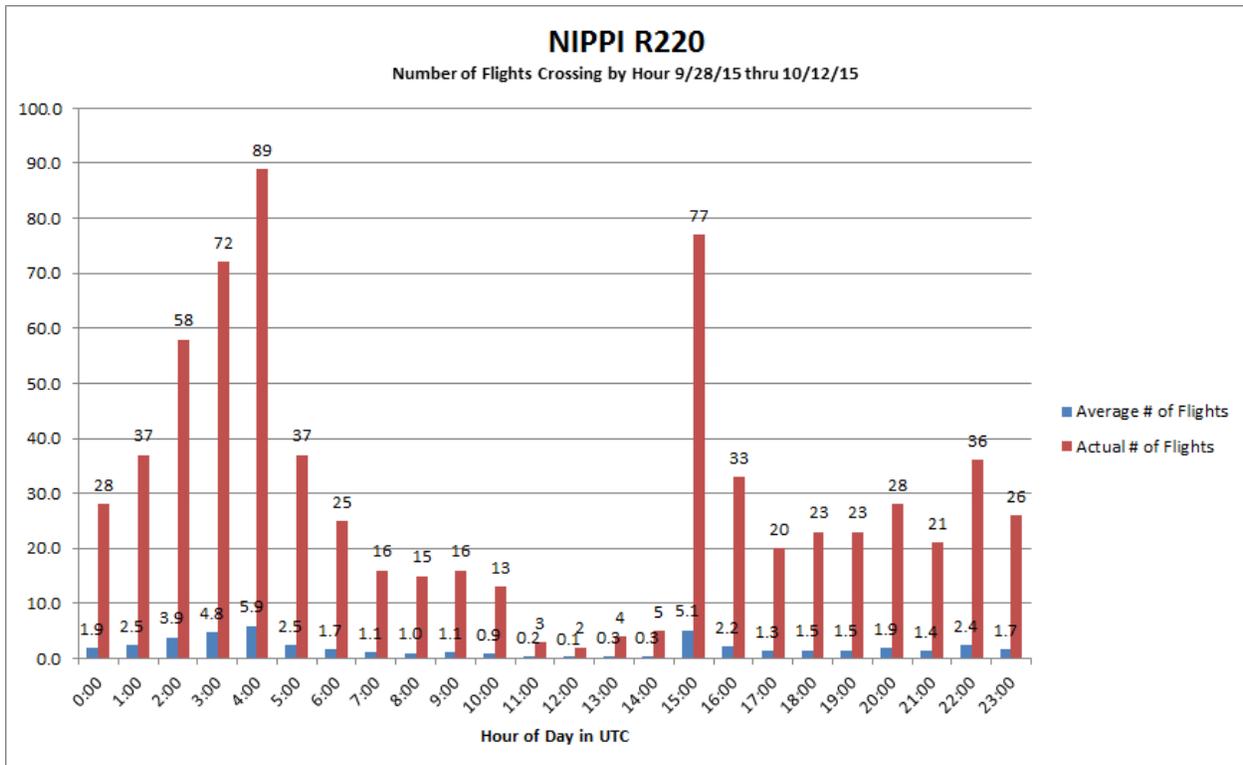
2.3. Due to the extremely small sample size, the “averaged” data presented in the charts must be viewed as highly preliminary. Additional samples must be collected to provide a sufficient “year round” view. Additionally, other data collection stratagems must be developed to overcome the issue identified in 2.3 above.

## **3 Recommendation**

3.1. The Meeting is invited to note the information provided in this paper.

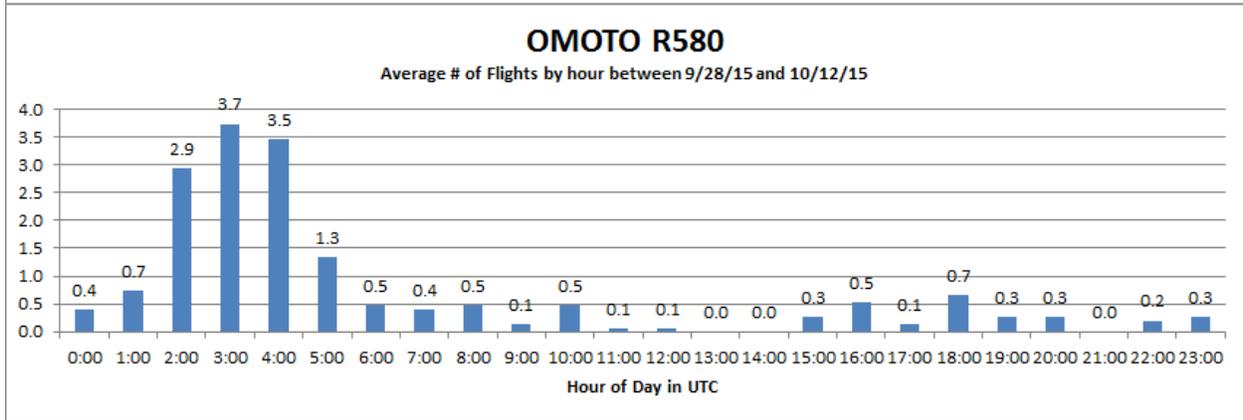
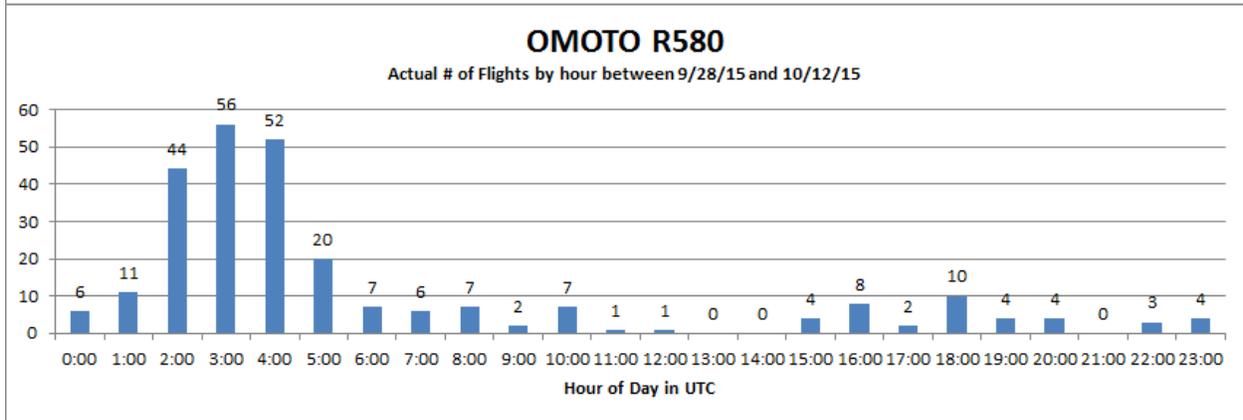
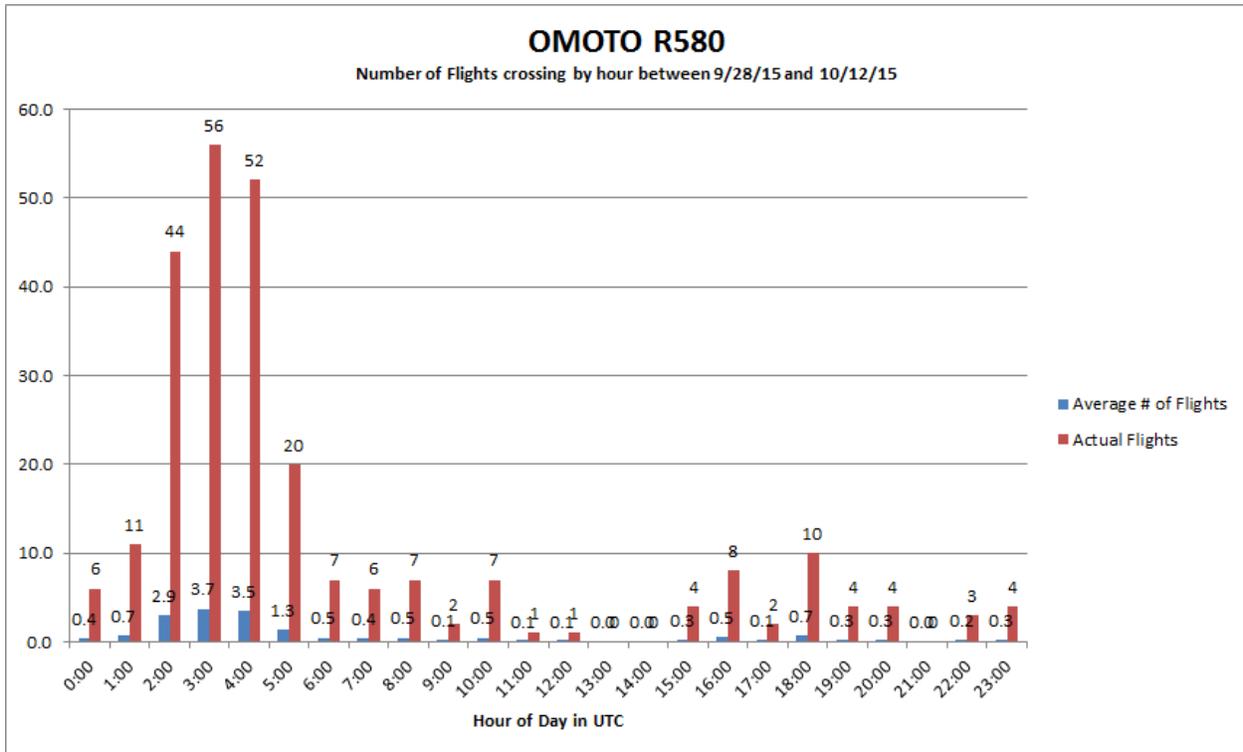
Attachment 1 – NIPPI R220

Note: R220 is a unidirectional (westbound) ATS Route. The graphs below represent only westbound traffic.



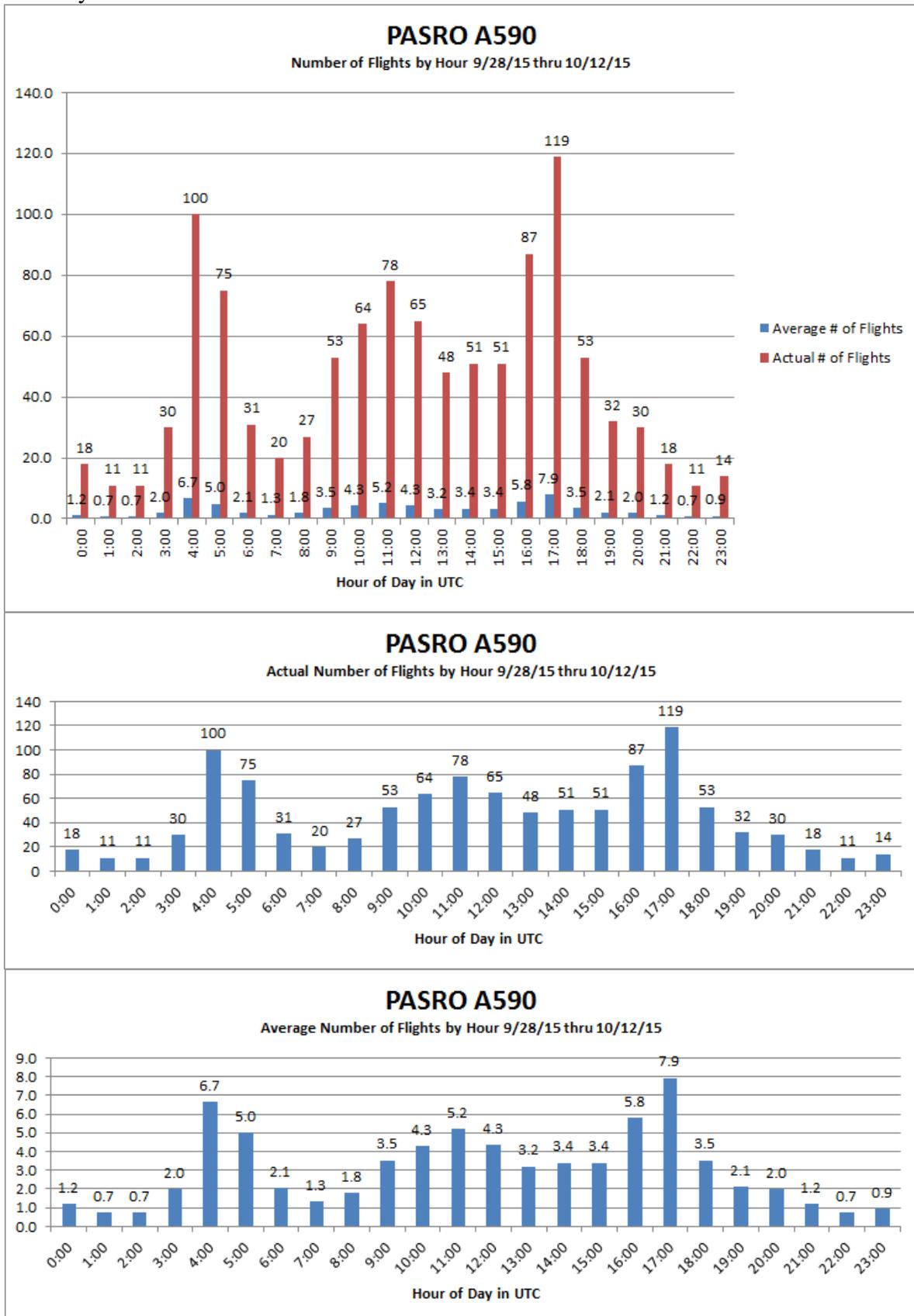
Attachment 2 – OMOTO R580

Note: R580 is a unidirectional (westbound) ATS Route. The graphs below represent westbound traffic only.



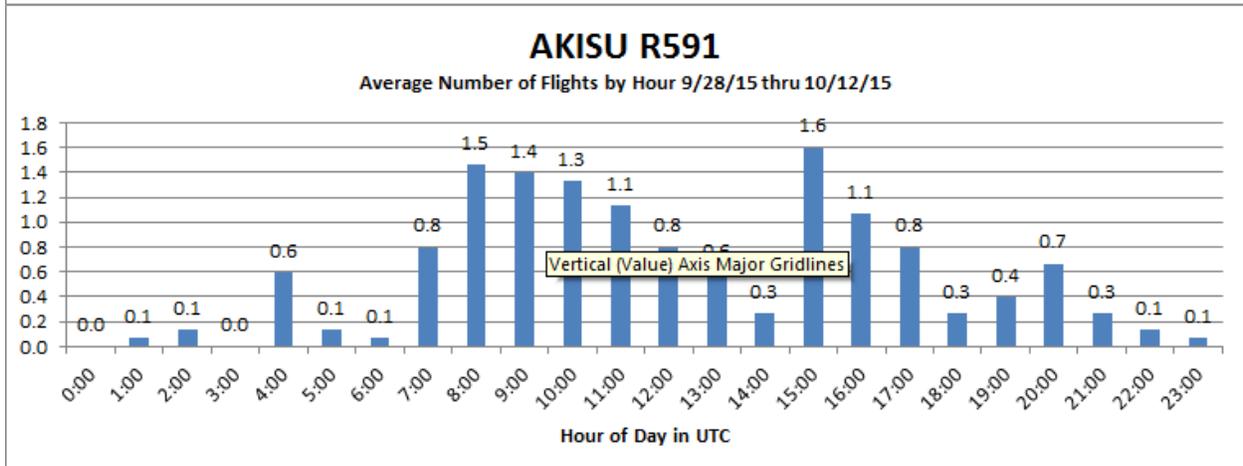
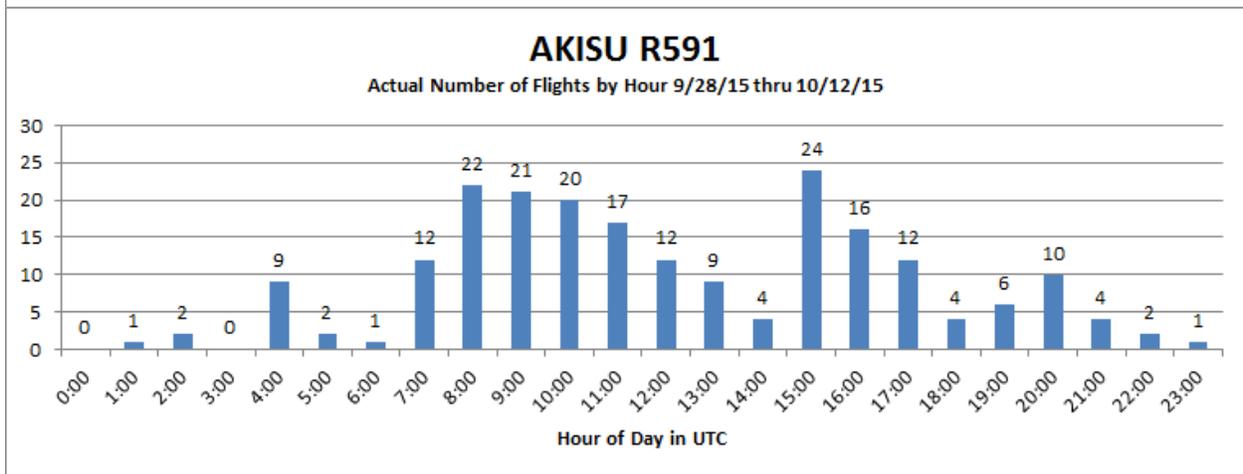
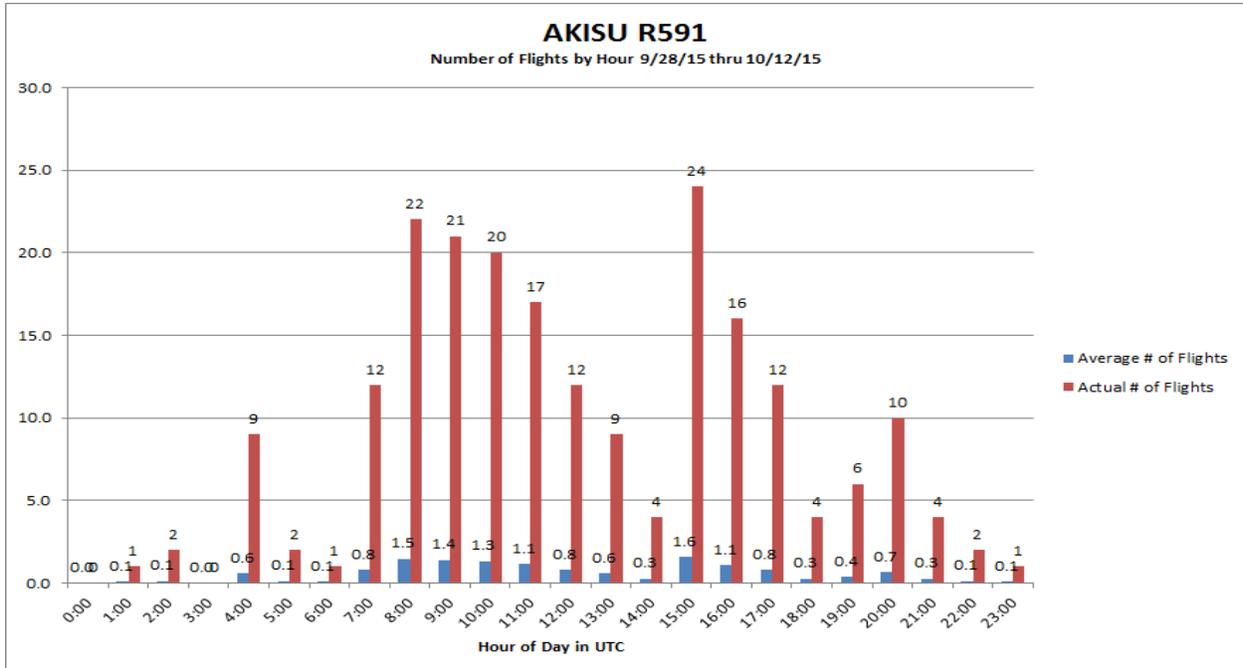
Attachment 3 - PASRO A590

Note: A590 is a unidirectional (eastbound) ATS Route. The graphs below represent eastbound traffic only.



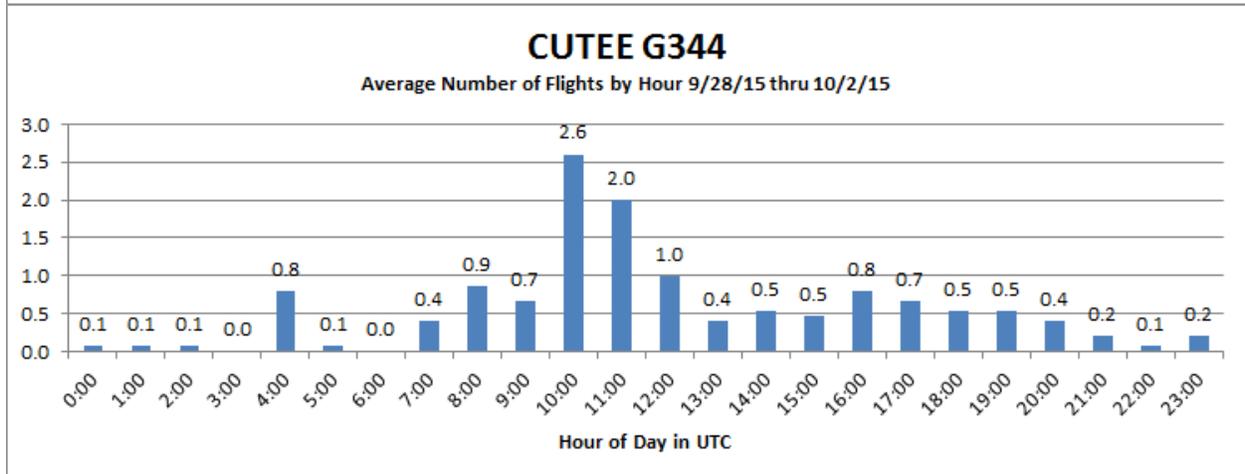
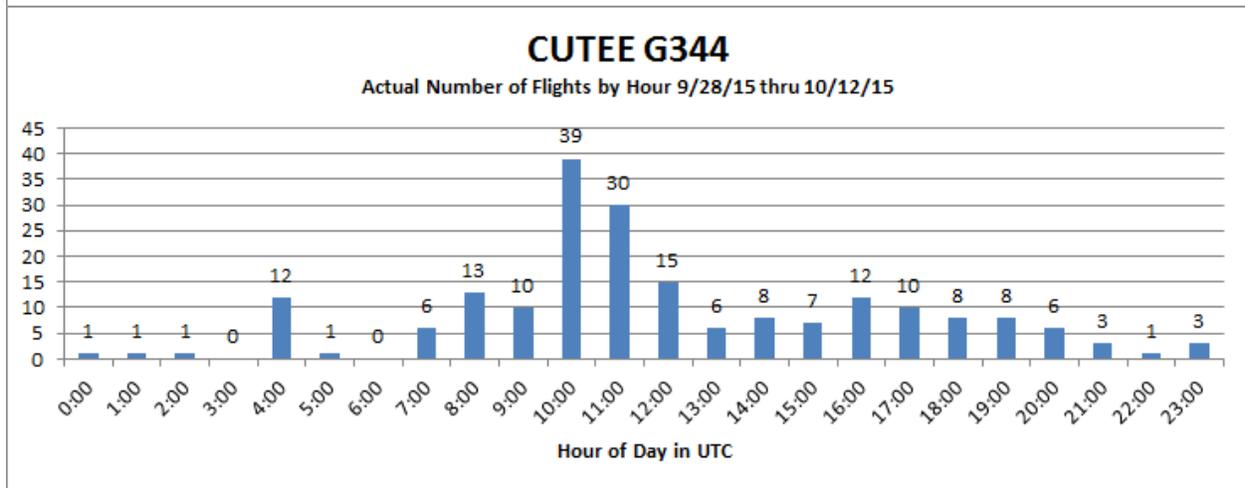
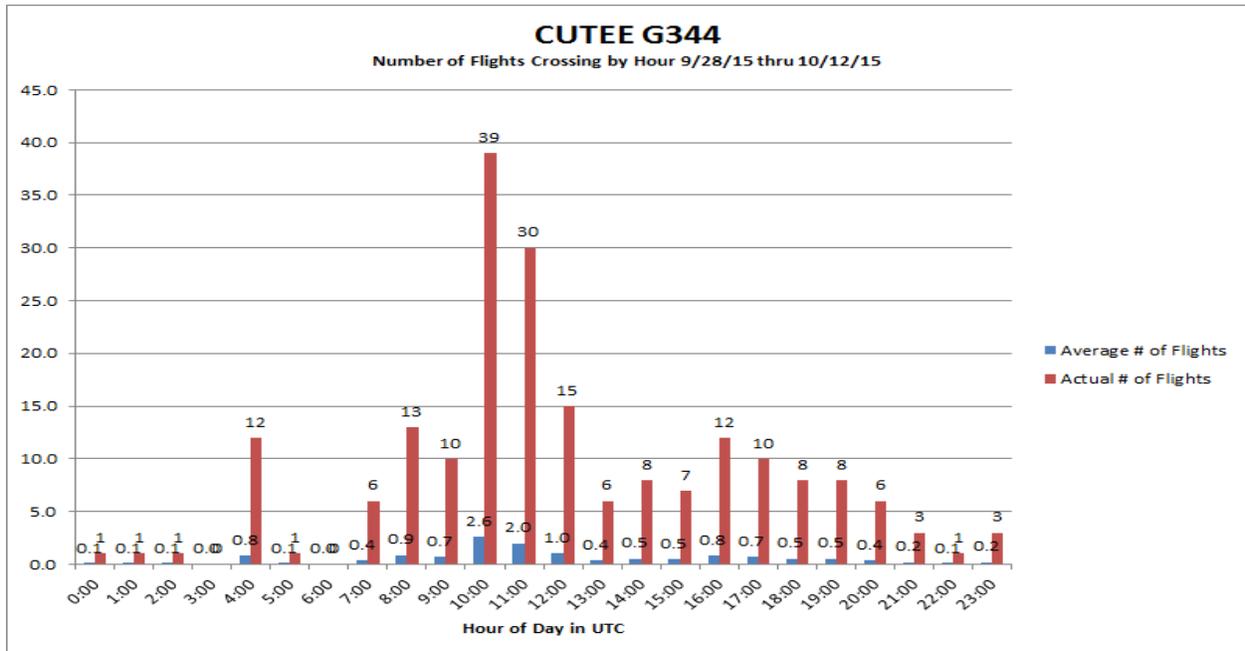
Attachment 4 – AKISU R591

Note: R591 is a charted unidirectional (eastbound) ATS Route. However, by agreement with Fukuoka Air Traffic Management Center (Fukuoka ATMC), daily westbound Pacific Organized Track System tracks can be generated using R591. The graphs below detail only the eastbound usage. Westbound traffic using R591, during the entire data collection period, was less than 5.



Attachment 5 – CUTEE G344

Note: G344 is a charted unidirectional (eastbound) ATS Route. However, by agreement with Fukuoka Air Traffic Management Center (Fukuoka ATMC), daily westbound Pacific Organized Track System tracks can be generated using G344. The graphs below detail only the eastbound usage. Westbound traffic using G344, during the entire data collection period, was less than 5.



Attachment 6 – West and Eastbound Traffic

These graphs compare the total westbound and eastbound traffic crossing the RJJ/PAZA FIR boundary by hour.

