

Histogram on Recent Runs by EMPv5

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1 Description

This document presents histograms based on the most recent runs of a program under test, called *INC*, over its increasing task lengths.

2 Experiment Notes

Table 1 provides a short description of our experimental runs, on which the following histograms are based.

Machine	Task Length (sec)	Description	Experiment Period
sodb9	INC1~INC1024	Each run with 300 samples	2017-02-09 ~ 2017-02-10 / 2017-02-12 ~ 2017-02-19
sodb10	INC2048	A run of 300 samples	2017-02-12 ~ 2017-02-20
sodb12	INC4096	A run of 300 samples	2017-02-12 ~ 2017-02-27
sodb12	INC8192	Two runs, each with 40 samples	2017-01-16 ~ 2017-01-20 / 2017-01-25 ~ 2017-01-29
sodb12	INC16384	Two runs, each with 40 samples	2017-01-05 ~ 2017-01-13 / 2017-01-29 ~ 2017-02-06

Table 1: Notes on experiment runs used for histograms

Now we show histograms of elapsed time (ET) and process time (PT) of *INC*.

3 Histograms

This section exhibits histograms on the EMPv5 data obtained when the task length of INC increases from 1 second to 2048 seconds. The detailed description of the base data are from Table 1.

3.1 ET

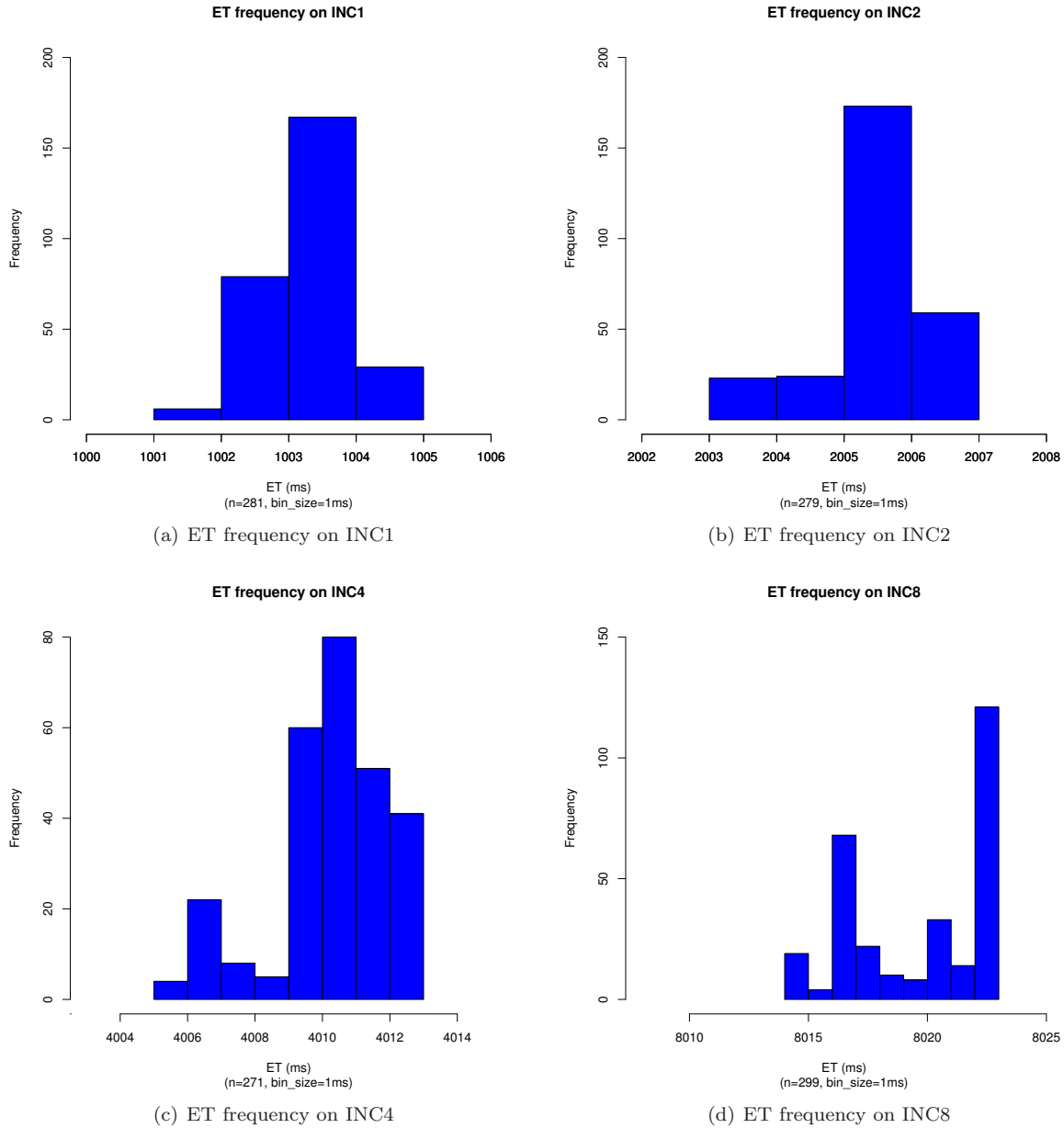
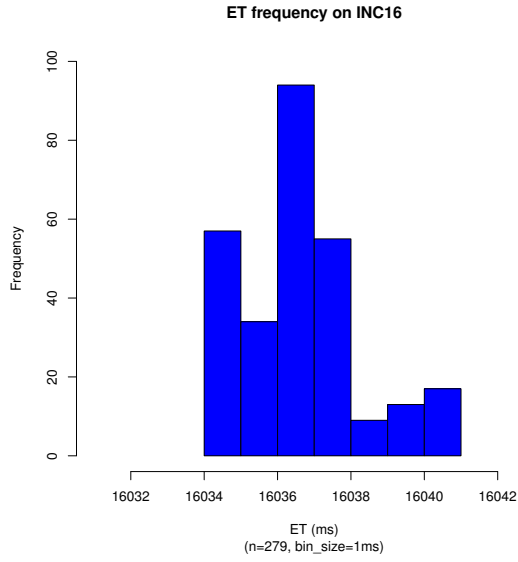
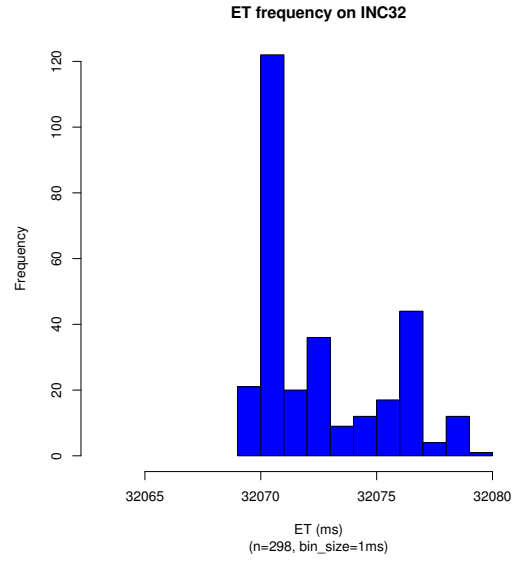


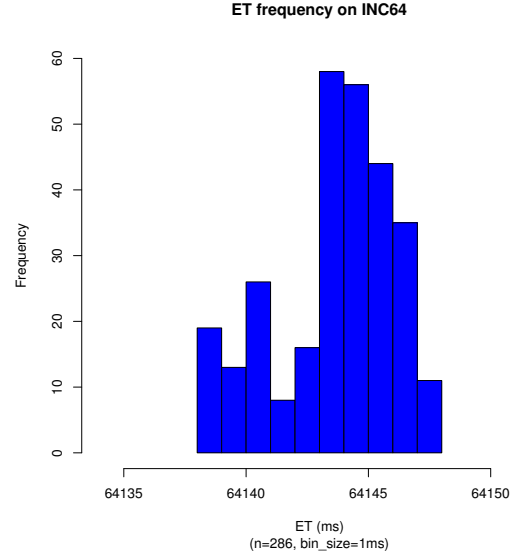
Figure 1: ET Histograms of INC1 ... INC8



(a) ET frequency on INC16

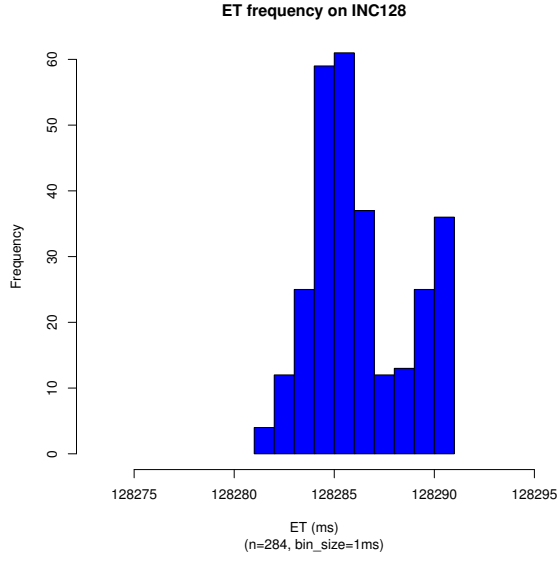


(b) ET frequency on INC32

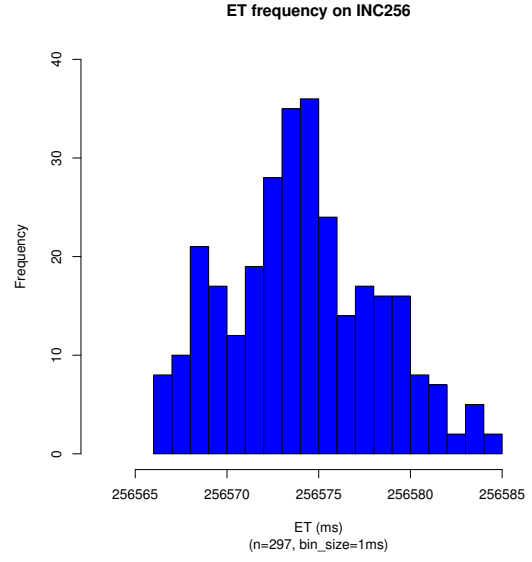


(c) ET frequency on INC64

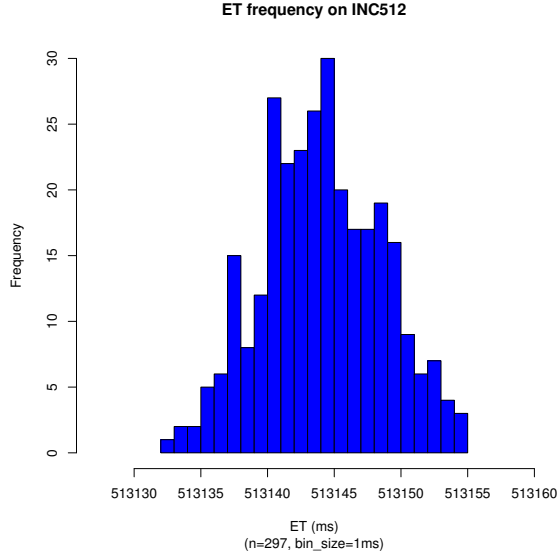
Figure 2: ET Histograms of INC16 ... INC64



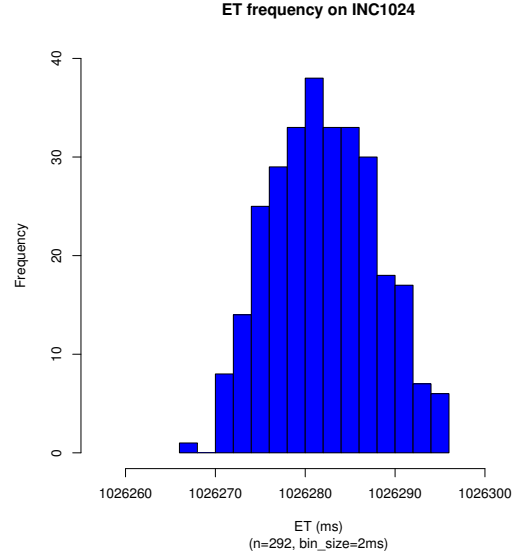
(a) ET frequency on INC128



(b) ET frequency on INC256

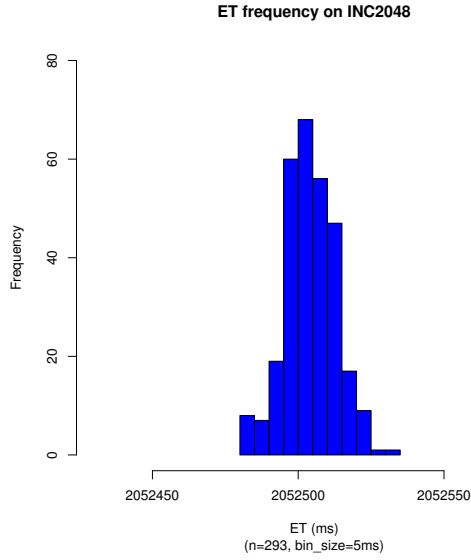


(c) ET frequency on INC512

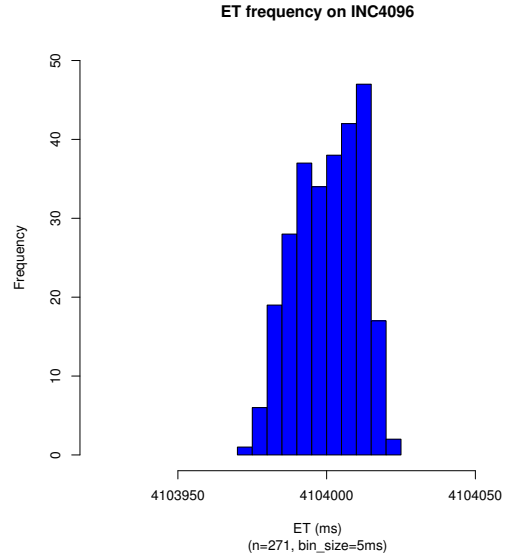


(d) ET frequency on INC1024

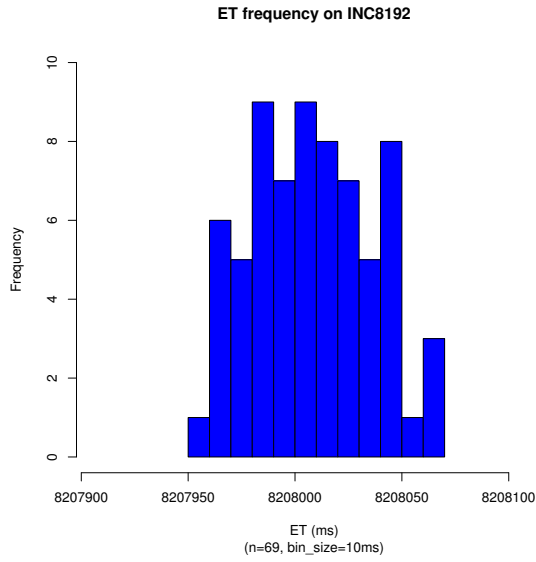
Figure 3: ET Histograms of INC128 ... INC1024



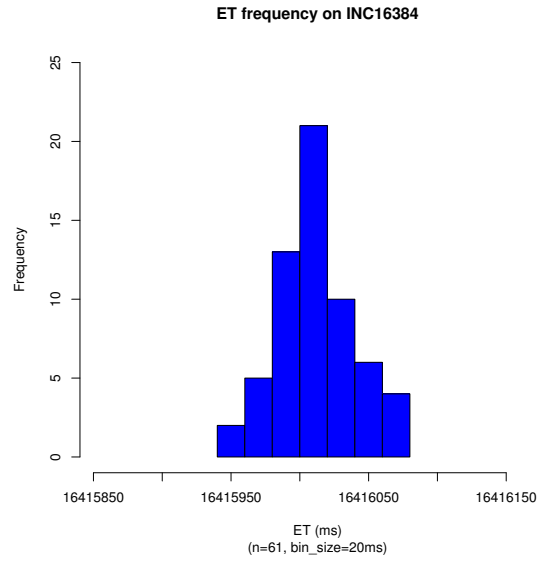
(a) ET frequency on INC2048



(b) ET frequency on INC4096

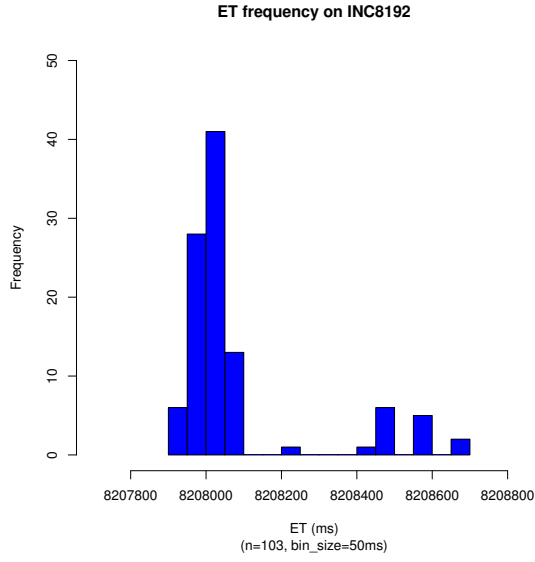


(c) ET frequency on INC8192

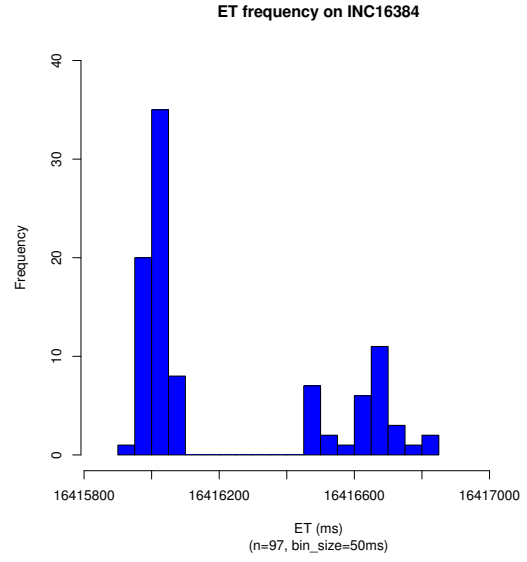


(d) ET frequency on INC16384

Figure 4: ET Histograms of INC2048 ... INC16384



(a) ET frequency on INC8192



(b) ET frequency on INC16384

Figure 5: ET Histograms of INC8192... INC16384 [combined with 2015's run]

3.2 PT

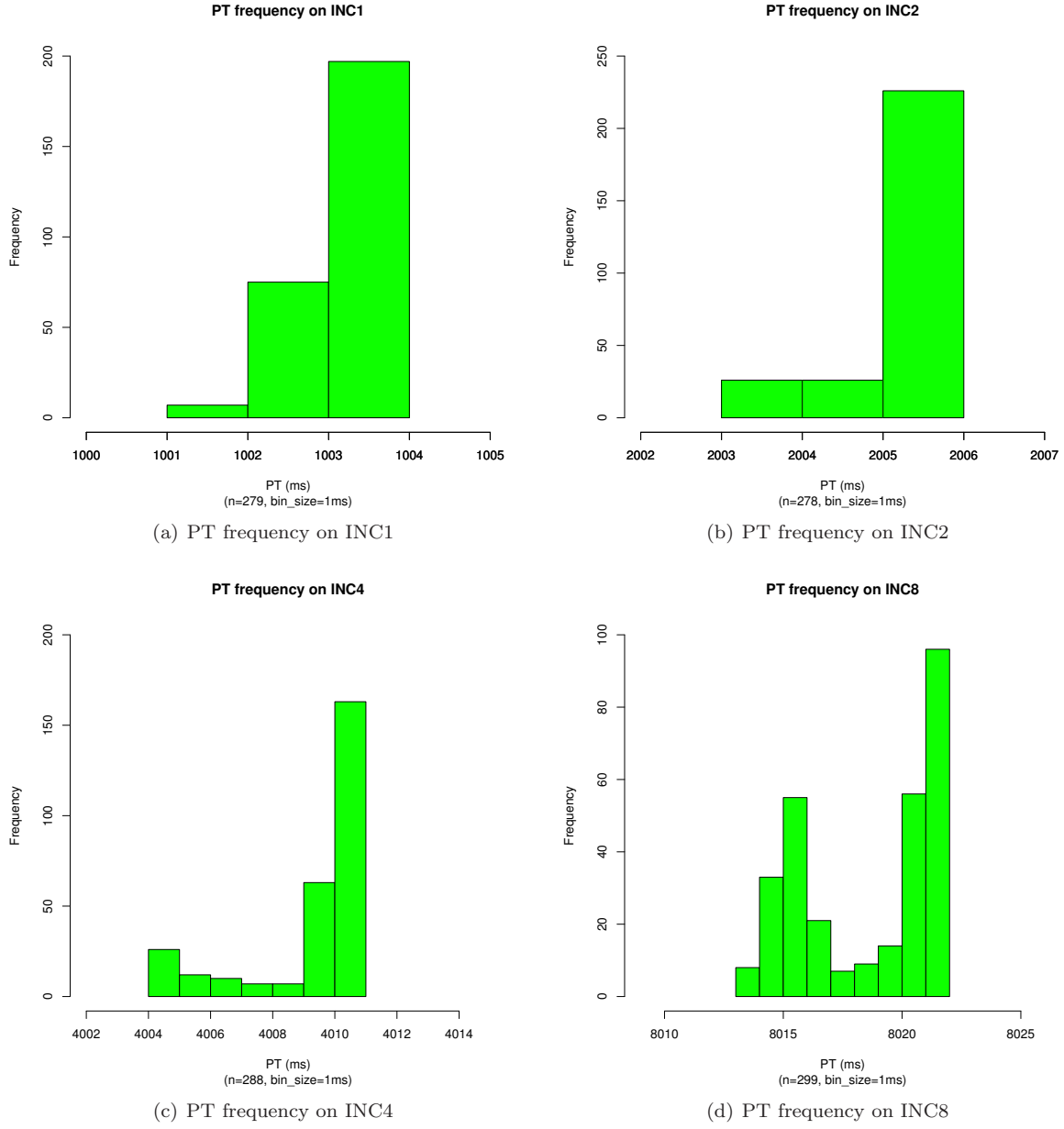
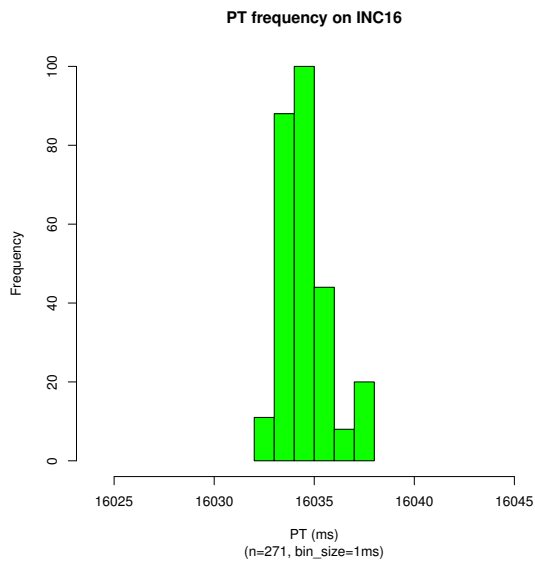
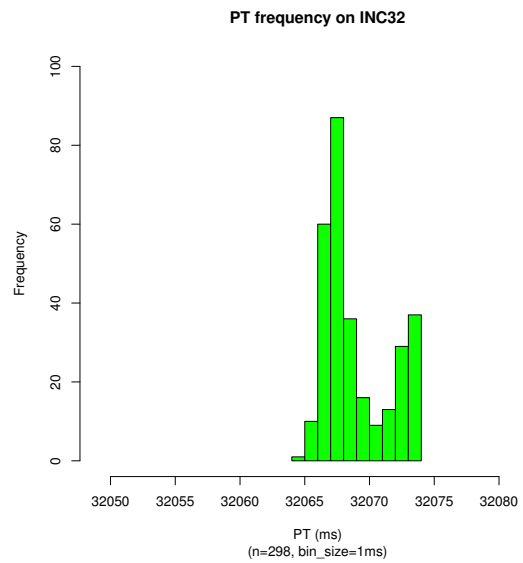


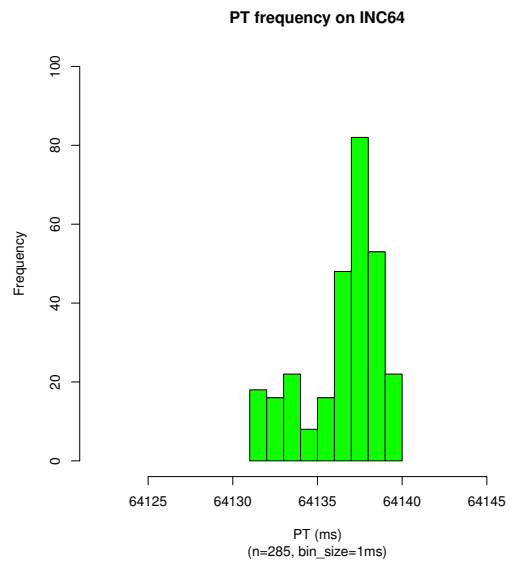
Figure 6: PT Histograms of INC1 ... INC8



(a) PT frequency on INC16

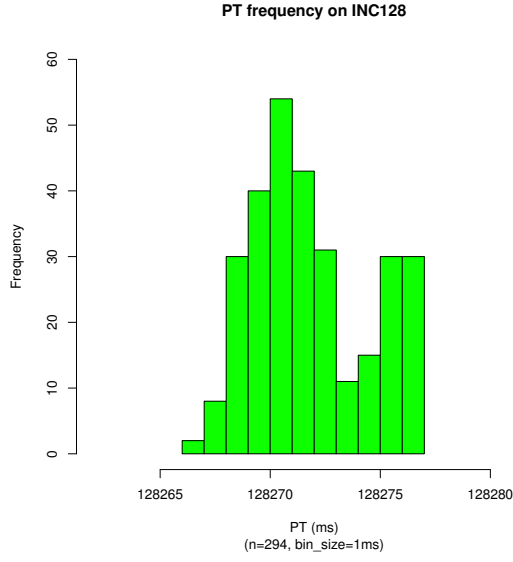


(b) PT frequency on INC32

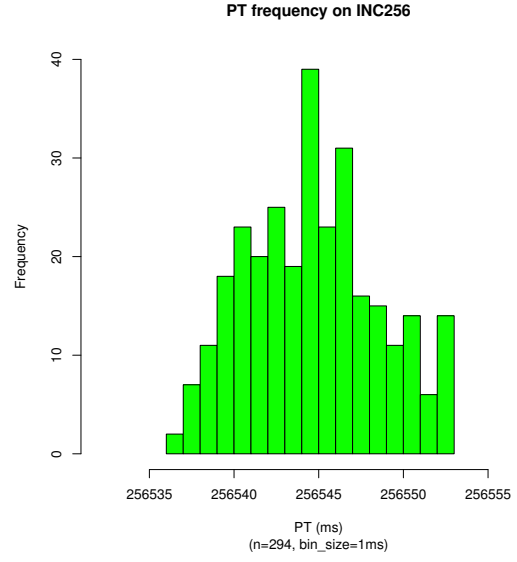


(c) PT frequency on INC64

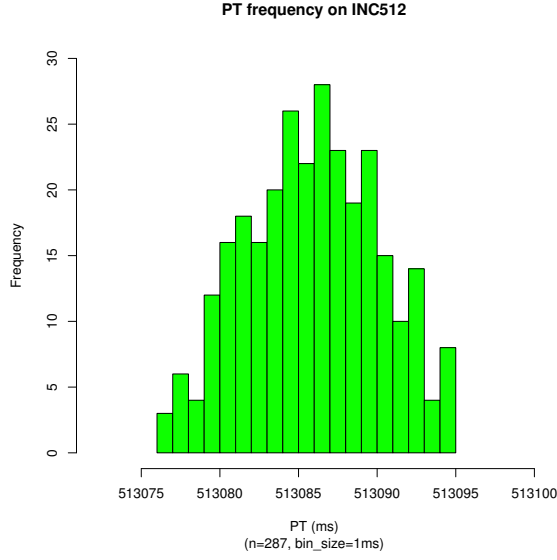
Figure 7: PT Histograms of INC16 ... INC64



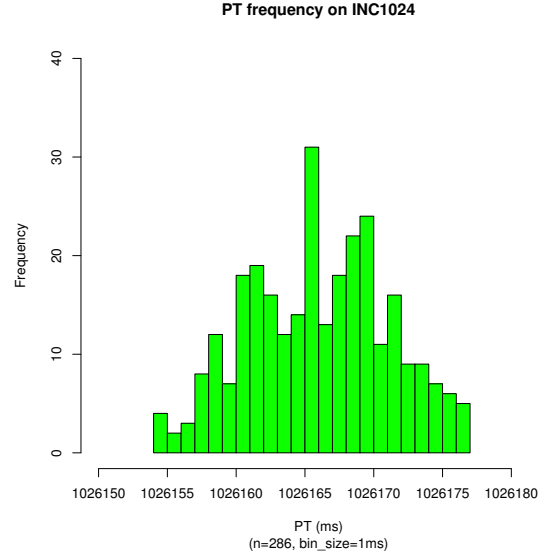
(a) PT frequency on INC128



(b) PT frequency on INC256

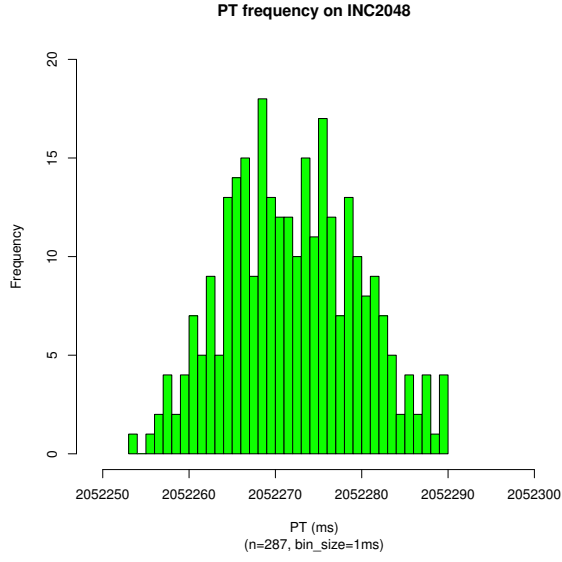


(c) PT frequency on INC512

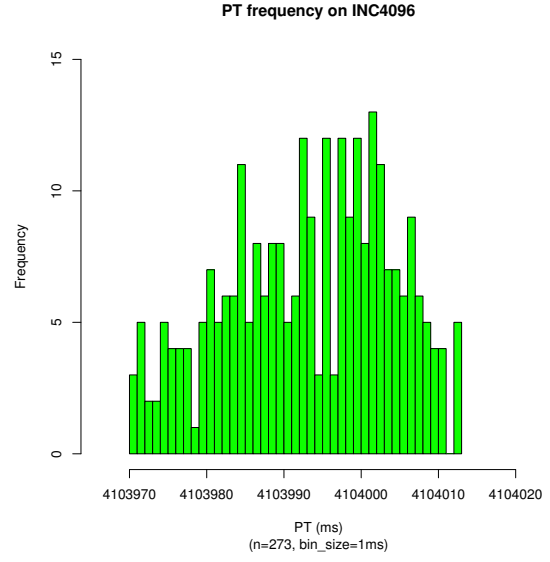


(d) PT frequency on INC1024

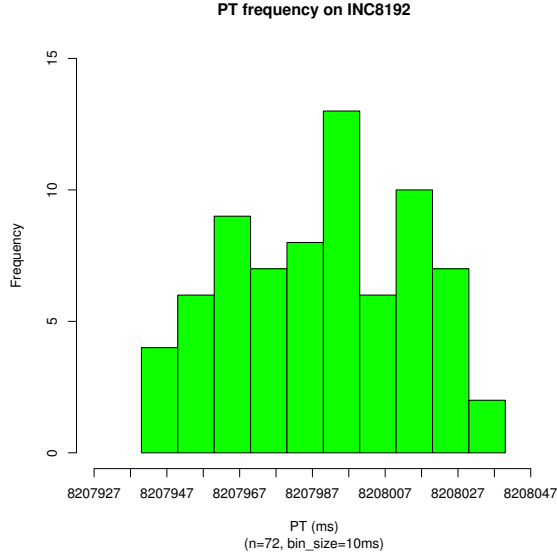
Figure 8: PT Histograms of INC256 ... INC1024



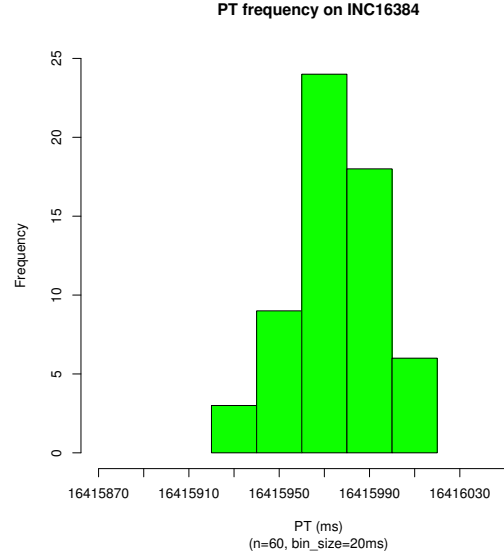
(a) PT frequency on INC2048



(b) PT frequency on INC4096

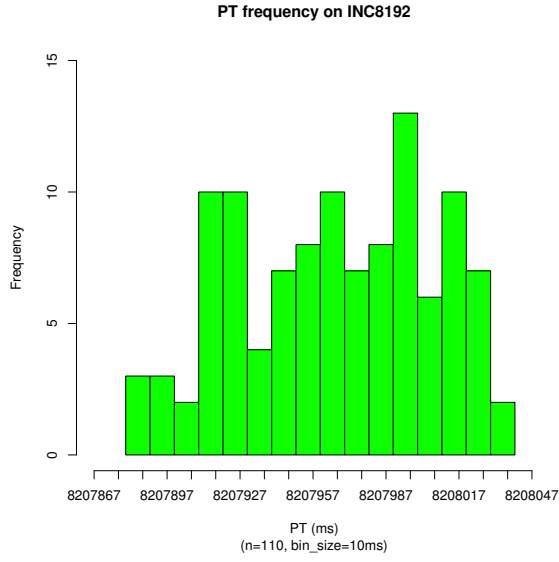


(c) PT frequency on INC8192

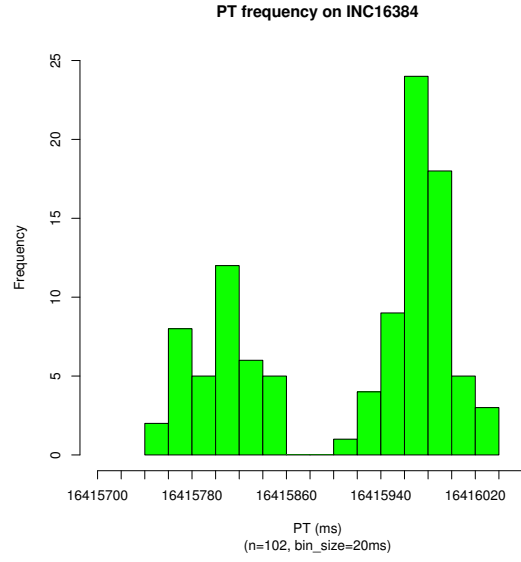


(d) PT frequency on INC16384

Figure 9: PT Histograms of INC2048 and INC16384



(a) PT frequency on INC8192



(b) PT frequency on INC16384

Figure 10: PT Histograms of INC8192 and INC16384 [combined with 2015's run]