



Recent Trends in Key NAS Performance Metrics

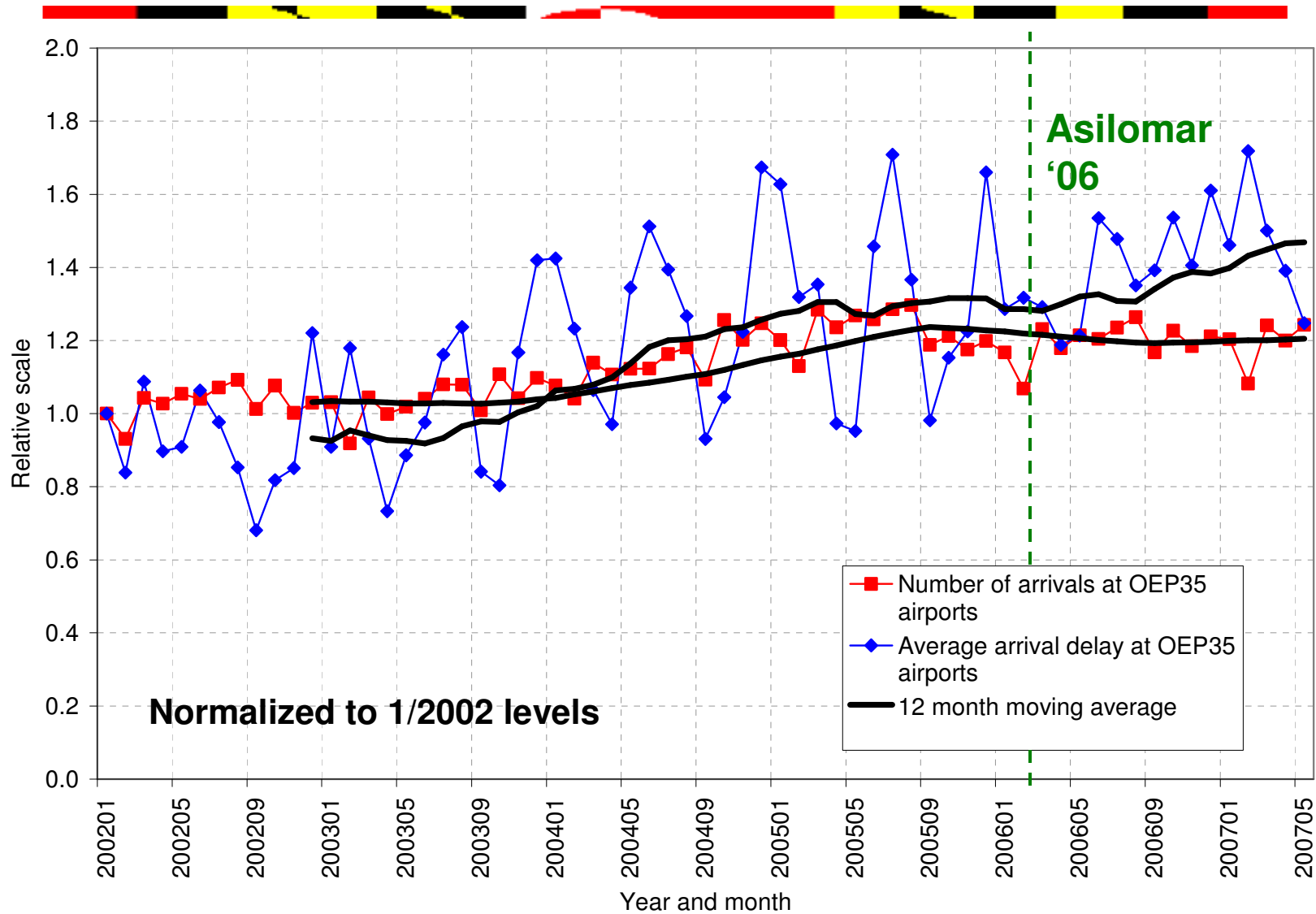


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October 3, 2007



Demand vs. Delay

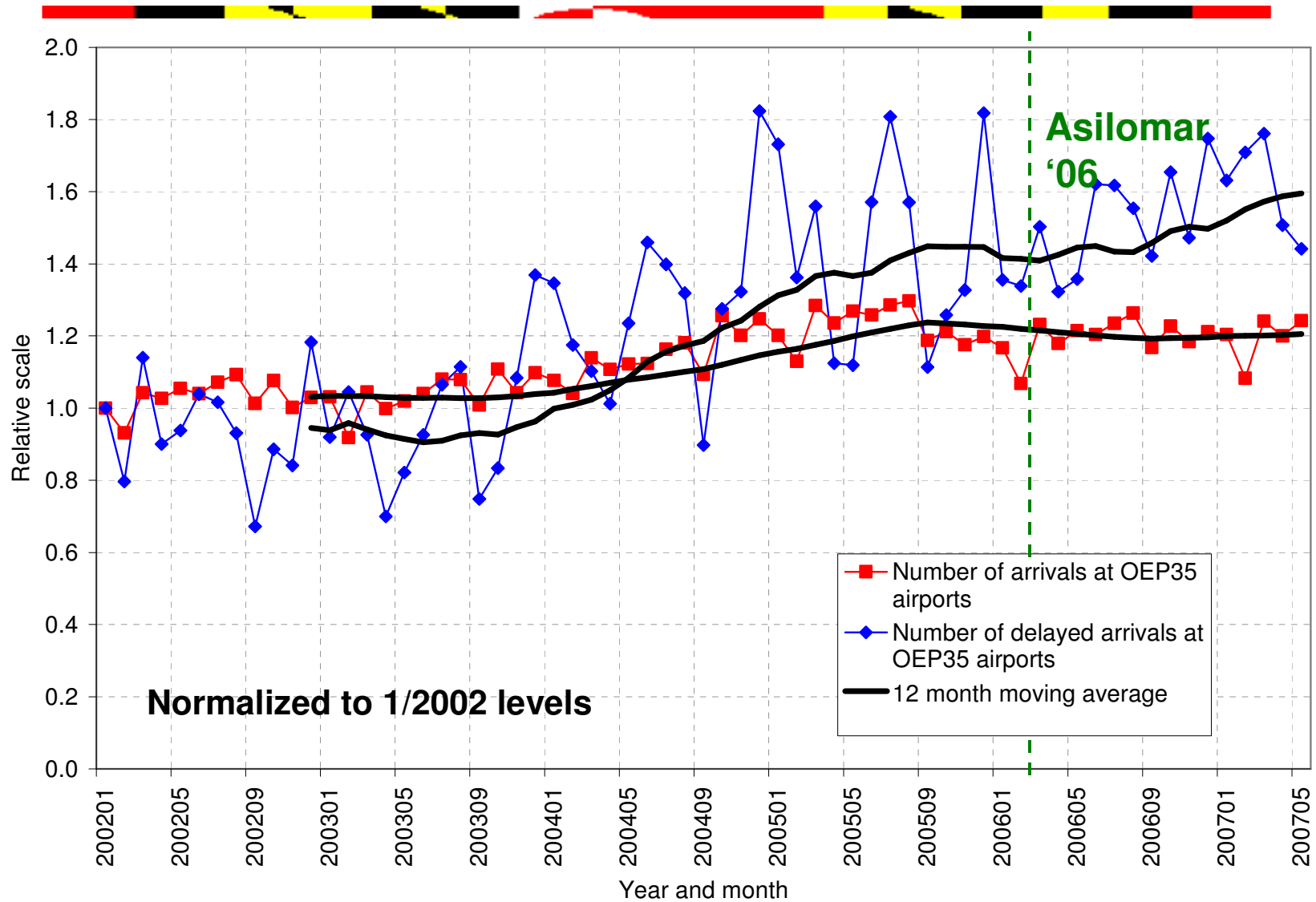


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Source: ASPM Analysis database, 1/2002 – 5/2007



Demand vs. Delay

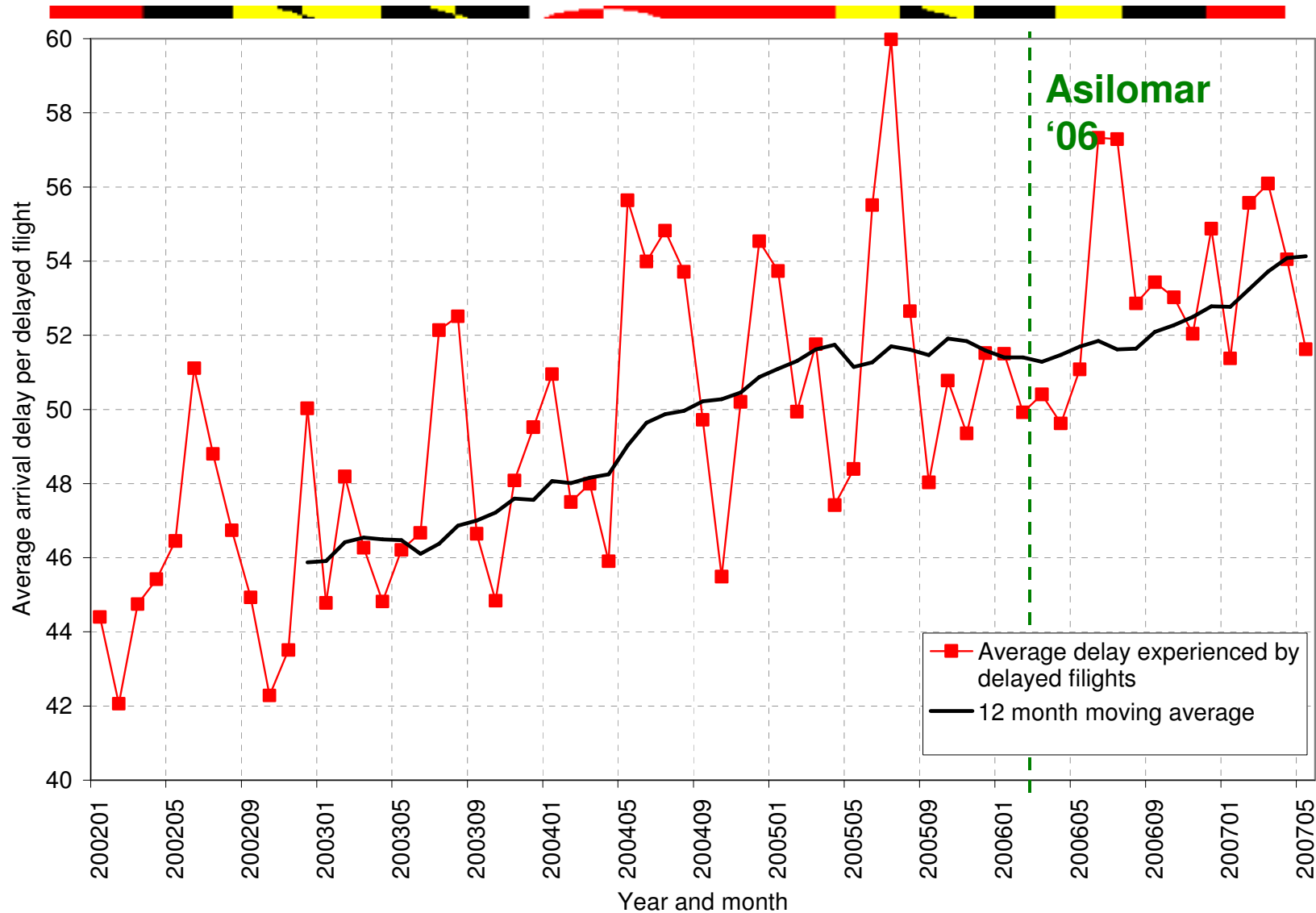


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Source: ASPM Analysis database, 1/2002 – 5/2007



Delay Minutes per Delayed Flight

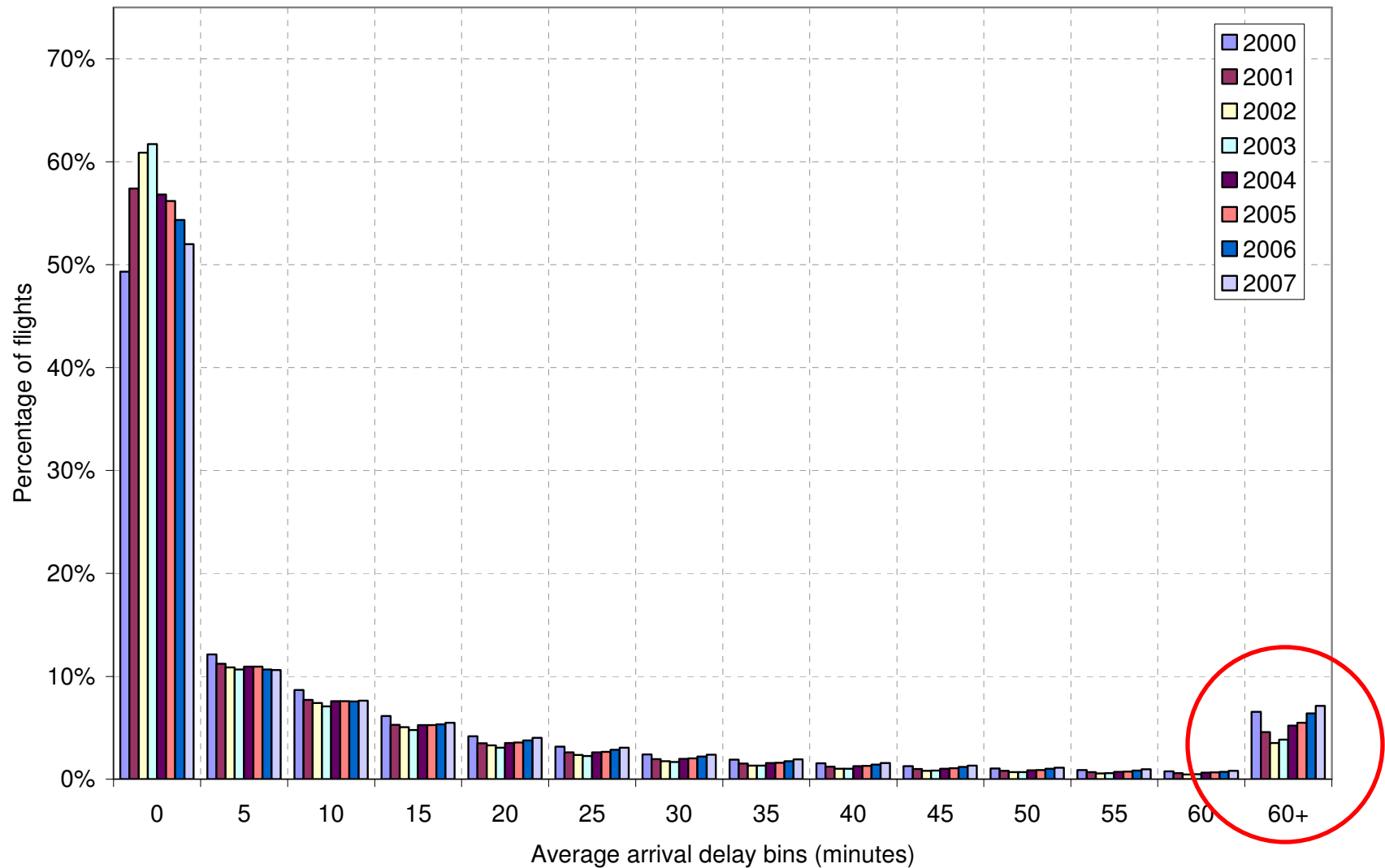


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Source: ASPM Analysis database, 1/2002 – 5/2007



Arrival Delay Distribution

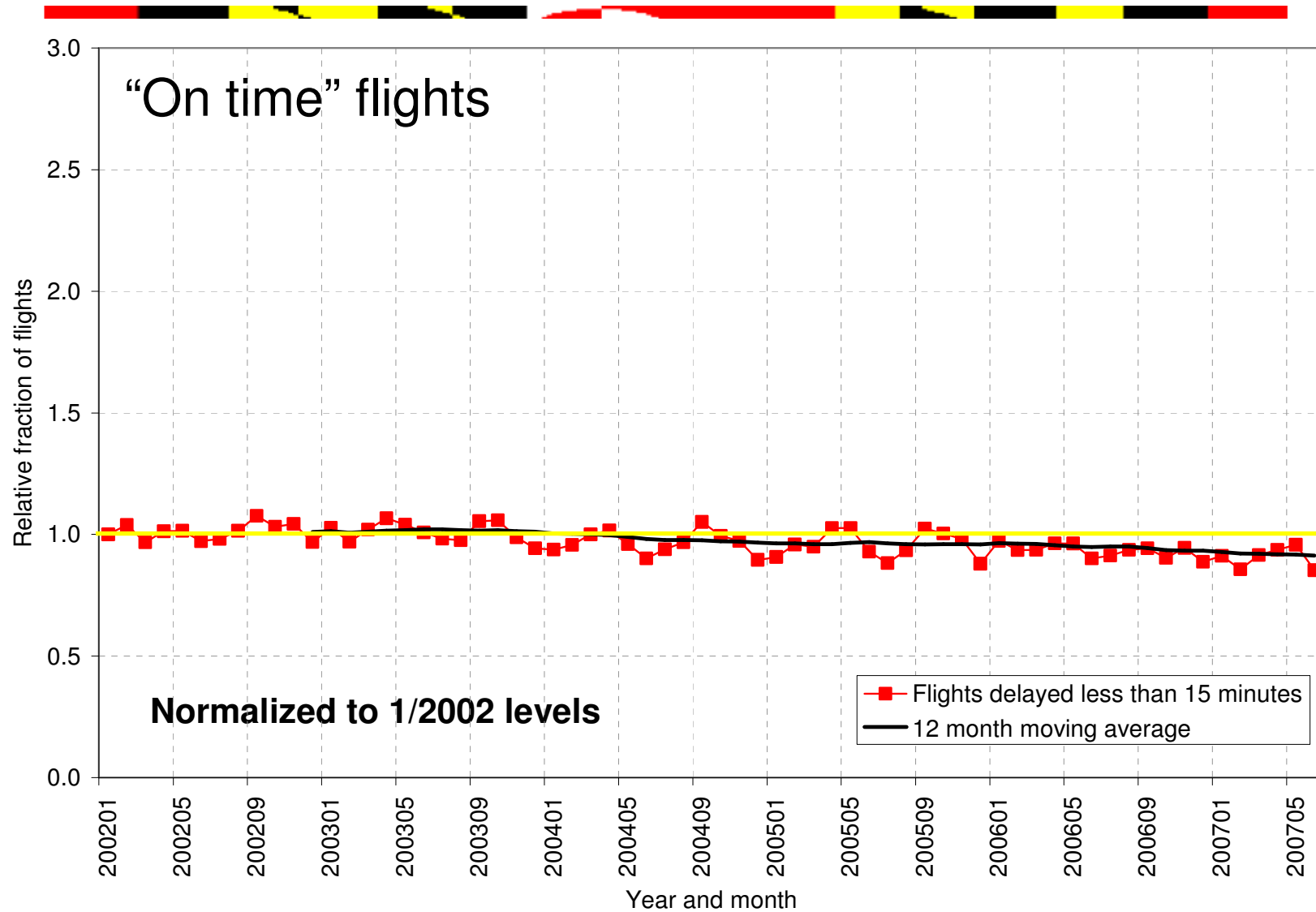


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Source: BTS On-Time Performance database, 1/2000 – 5/2007



On-Time Performance Trends

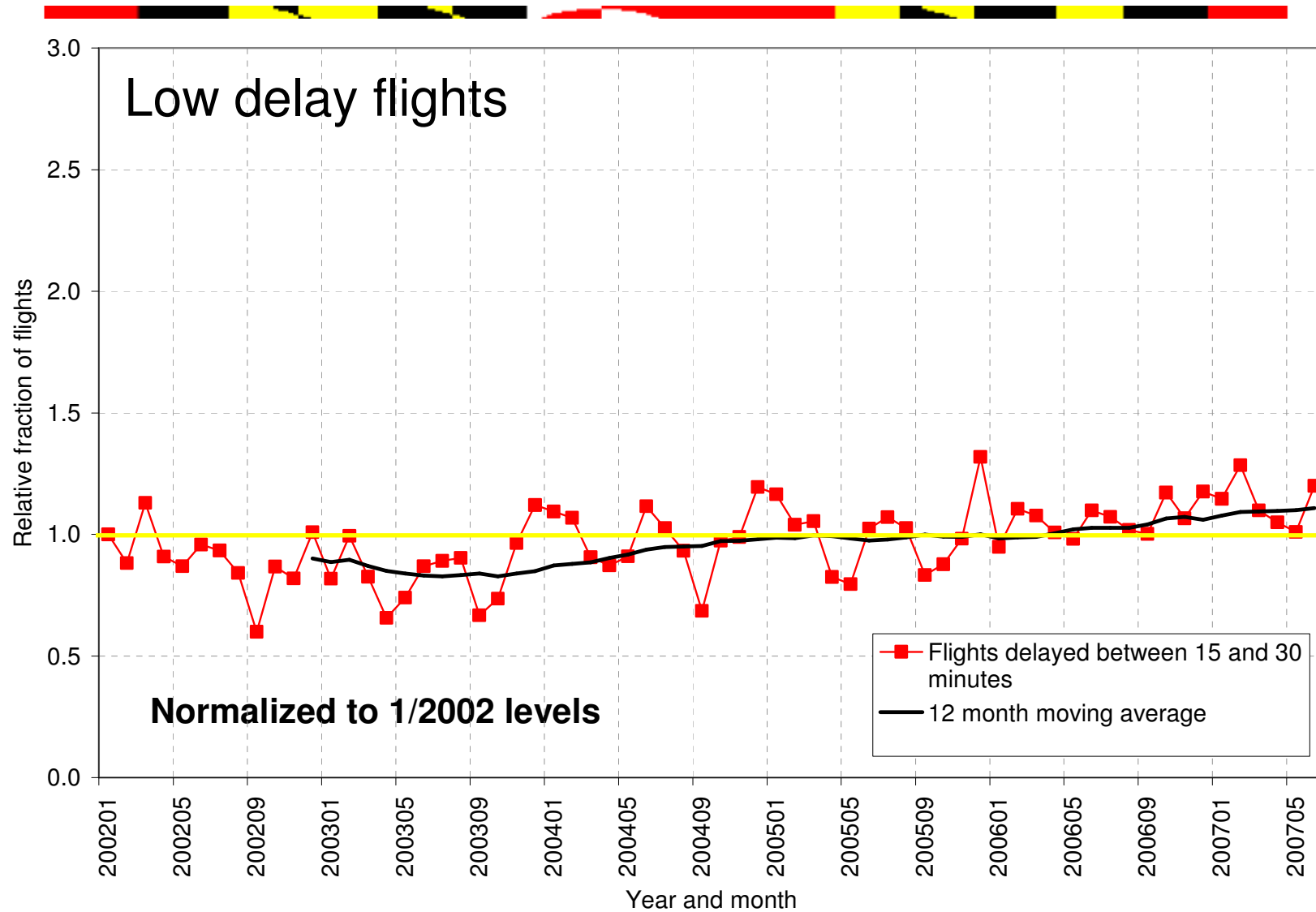


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Source: BTS On-Time Performance database, 1/2002 – 6/2007



On-Time Performance Trends

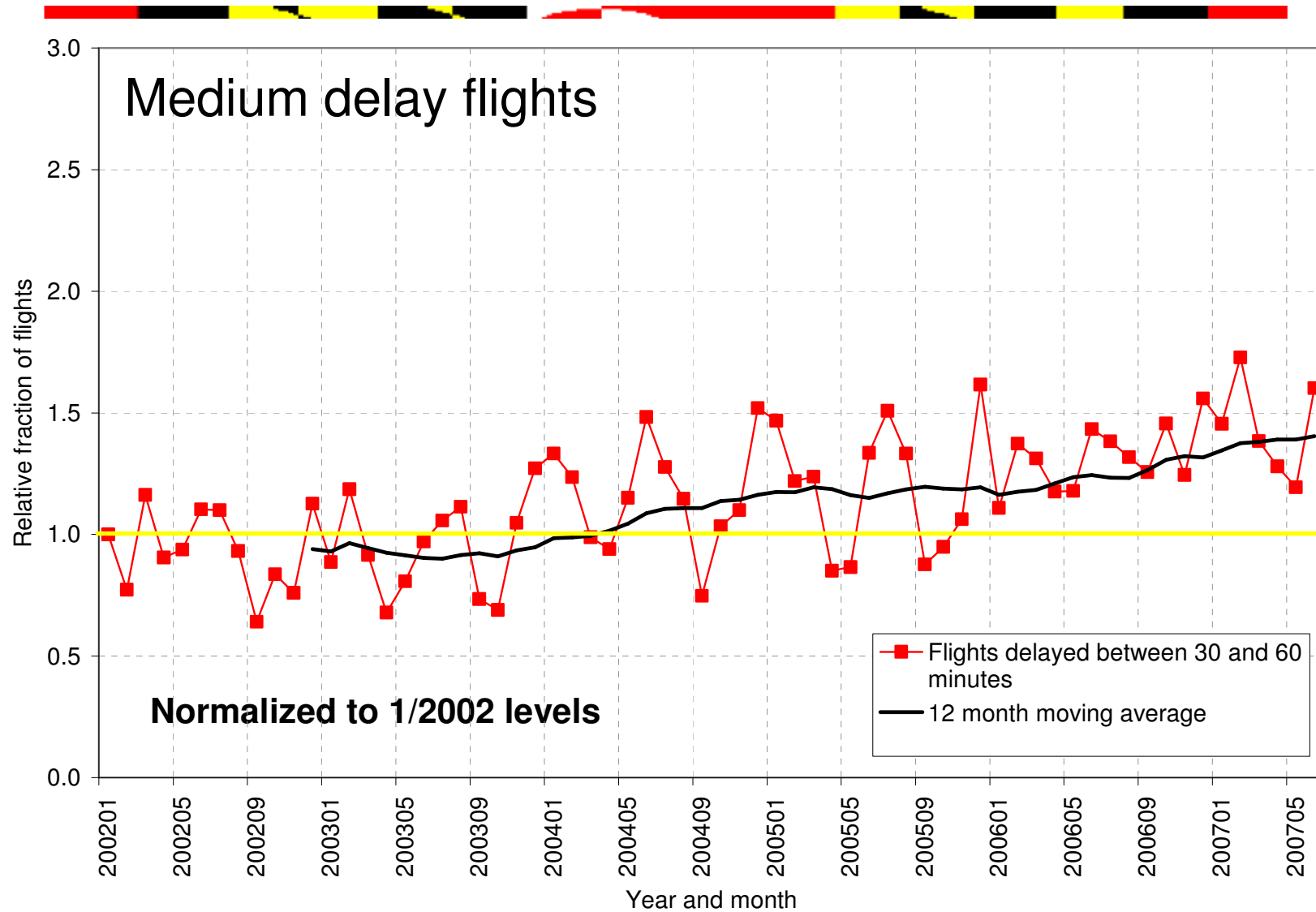


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Source: BTS On-Time Performance database, 1/2002 – 6/2007



On-Time Performance Trends

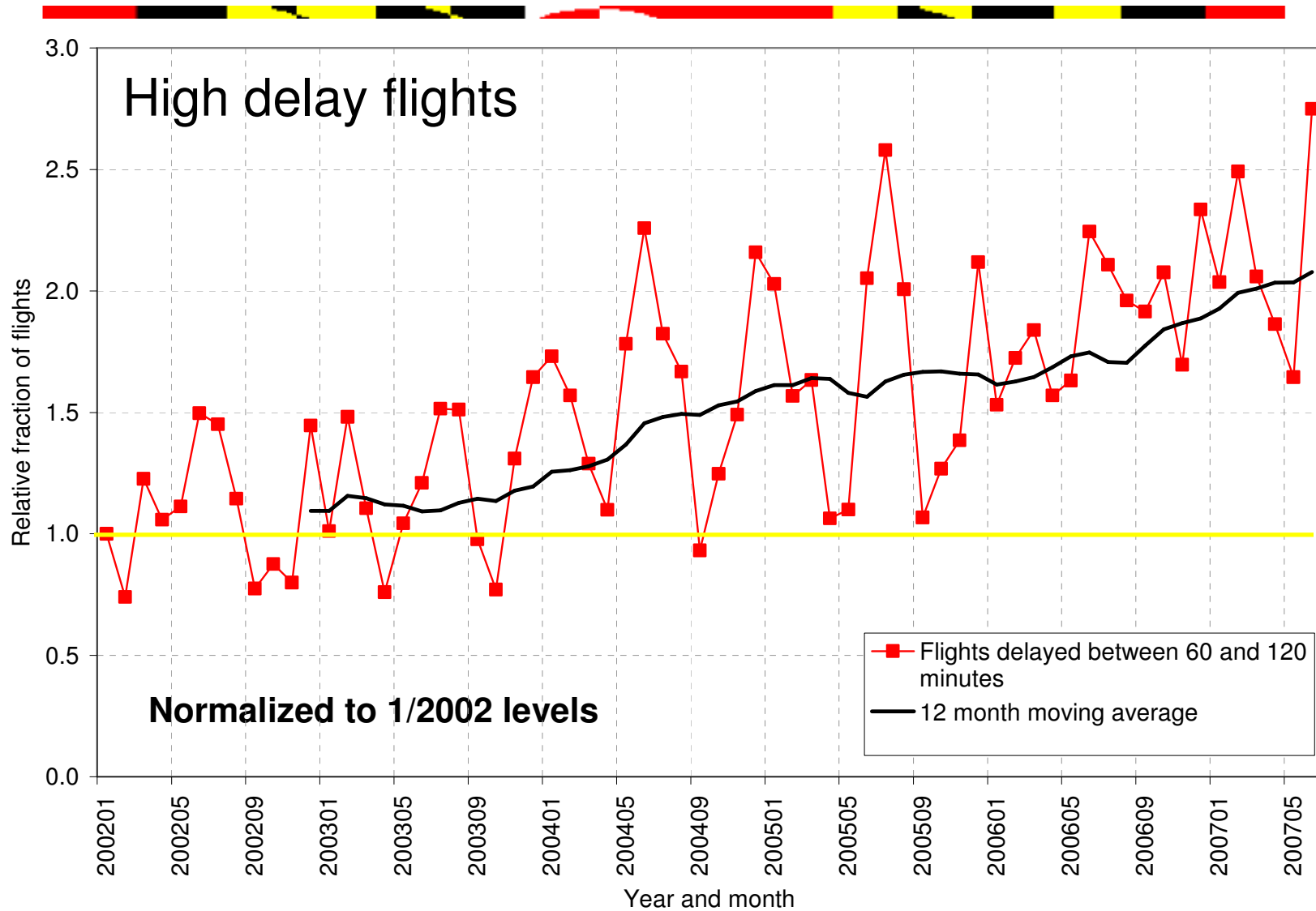


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Source: BTS On-Time Performance database, 1/2002 – 6/2007



On-Time Performance Trends

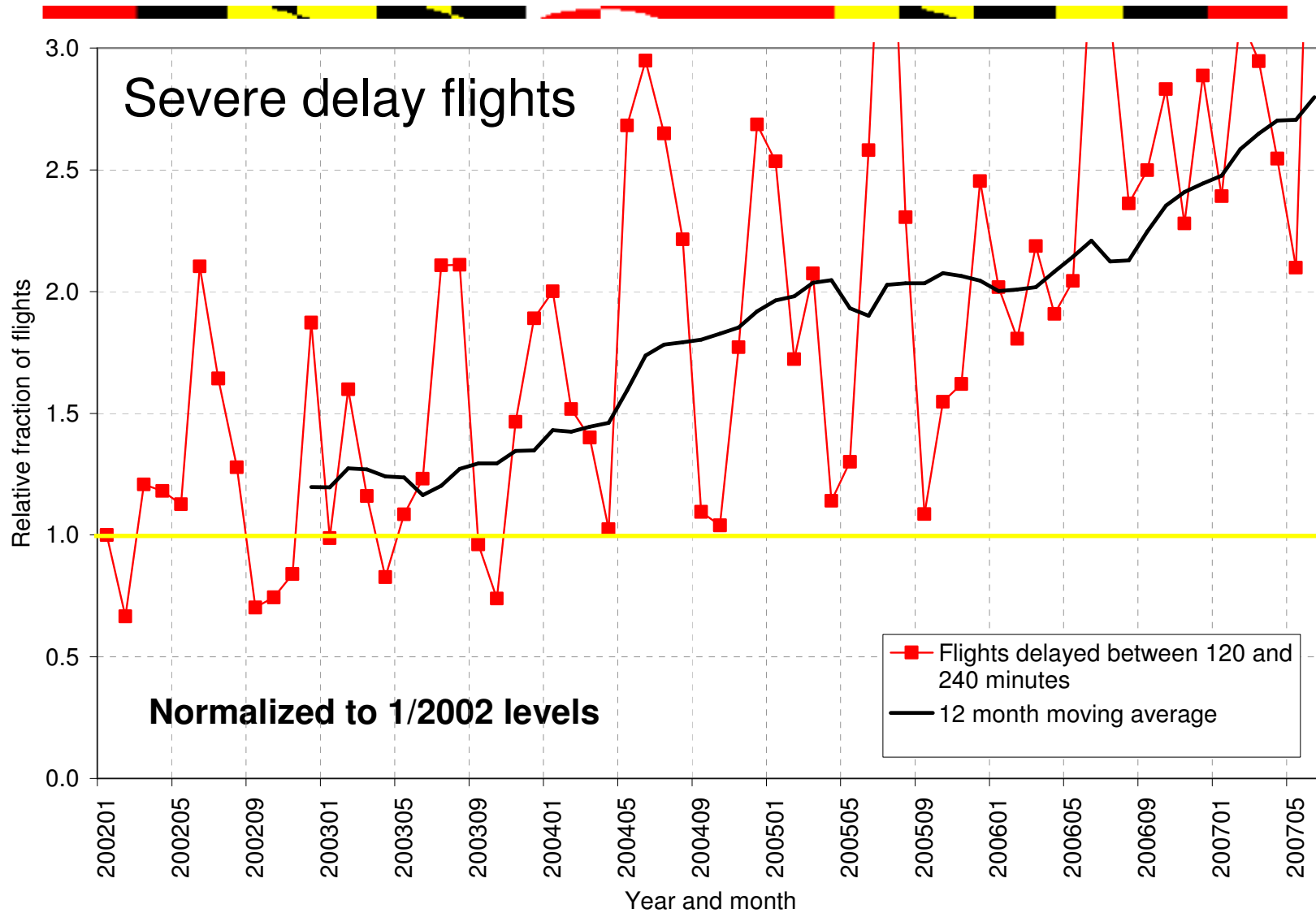


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Source: BTS On-Time Performance database, 1/2002 – 6/2007



On-Time Performance Trends

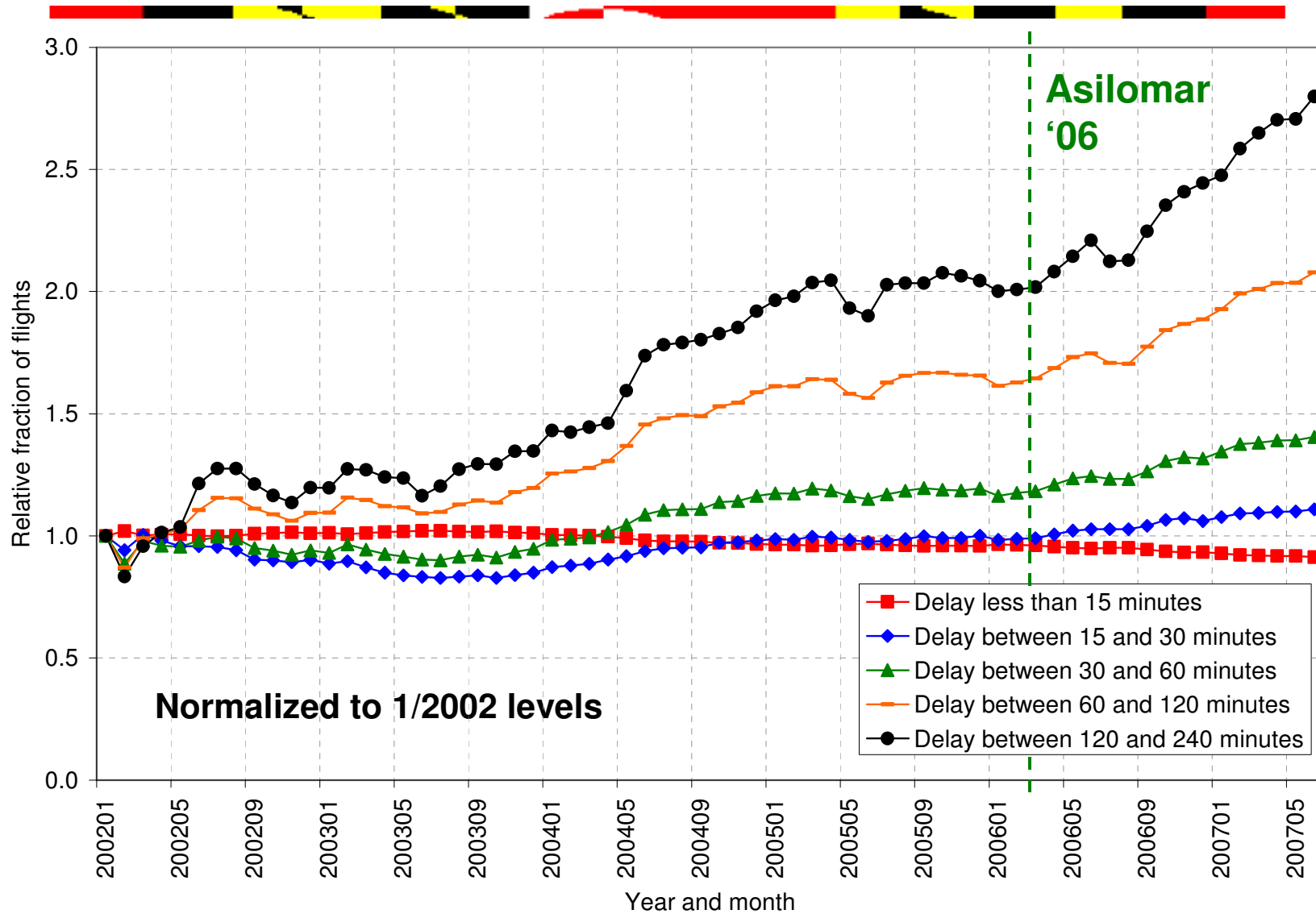


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Source: BTS On-Time Performance database, 1/2002 – 6/2007



On-Time Performance Trends

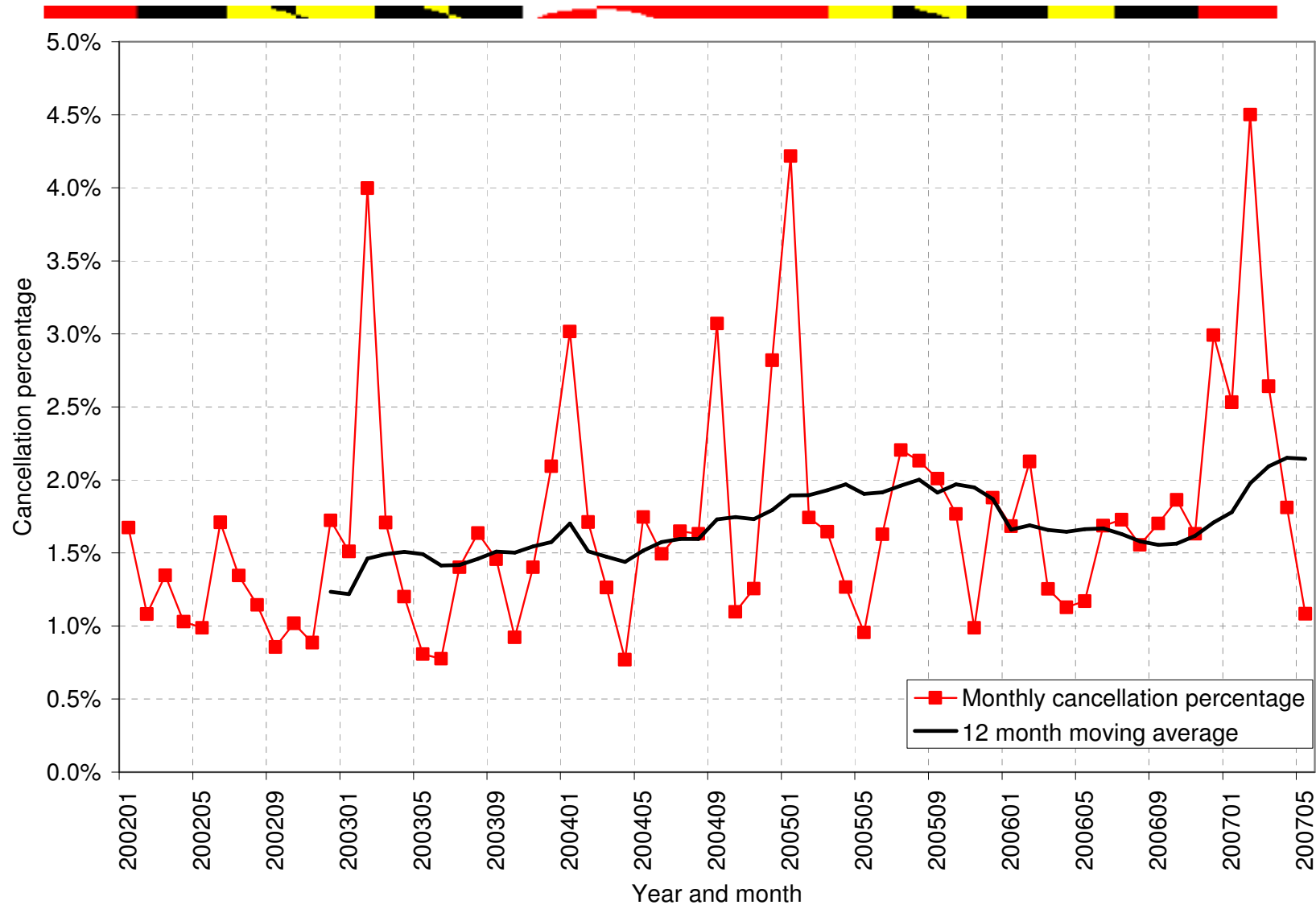


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Source: BTS On-Time Performance database, 1/2002 – 6/2007



Cancellation Trends

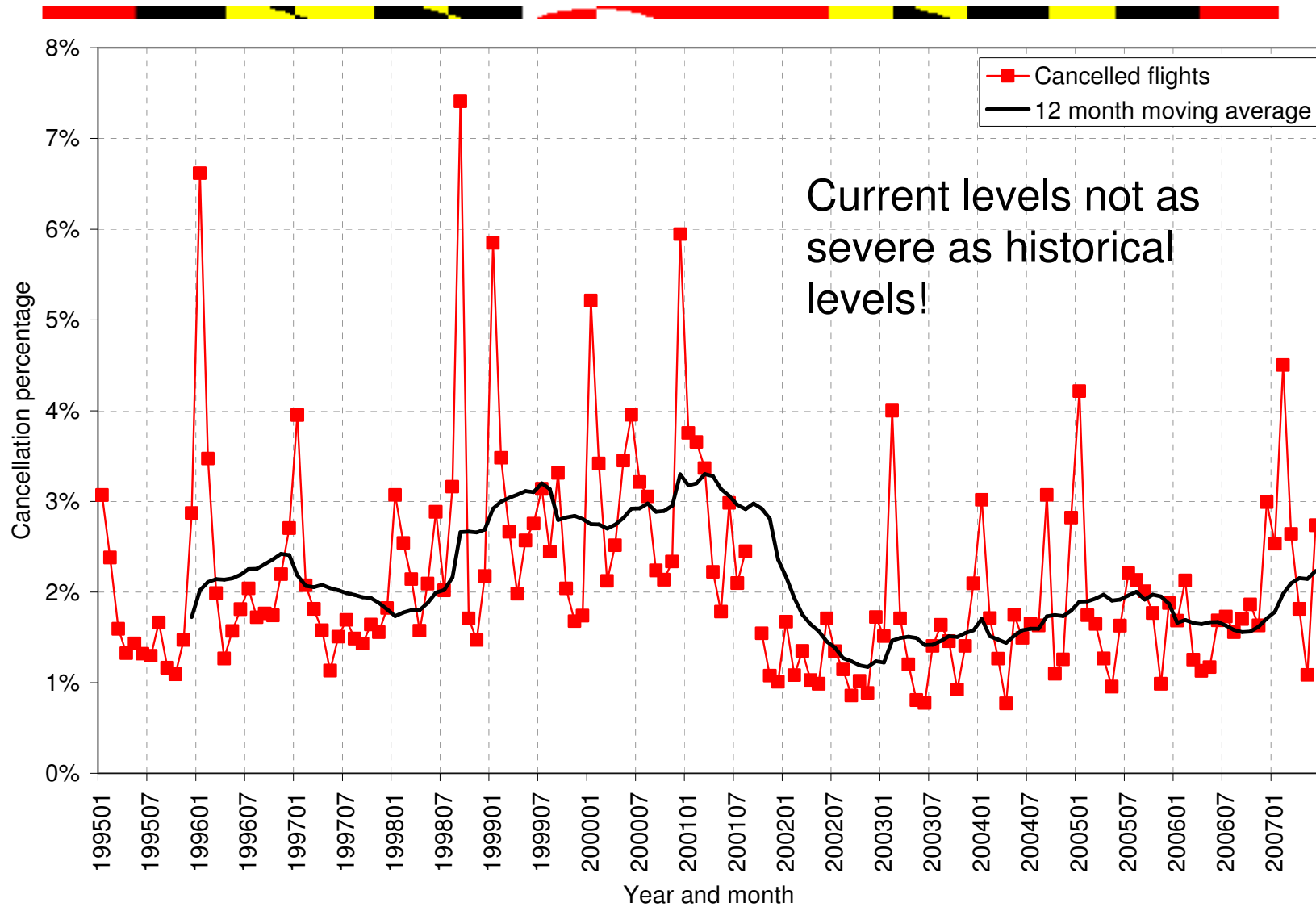


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Source: BTS On-Time Performance database, 1/2002 – 5/2007



Cancellation Trends

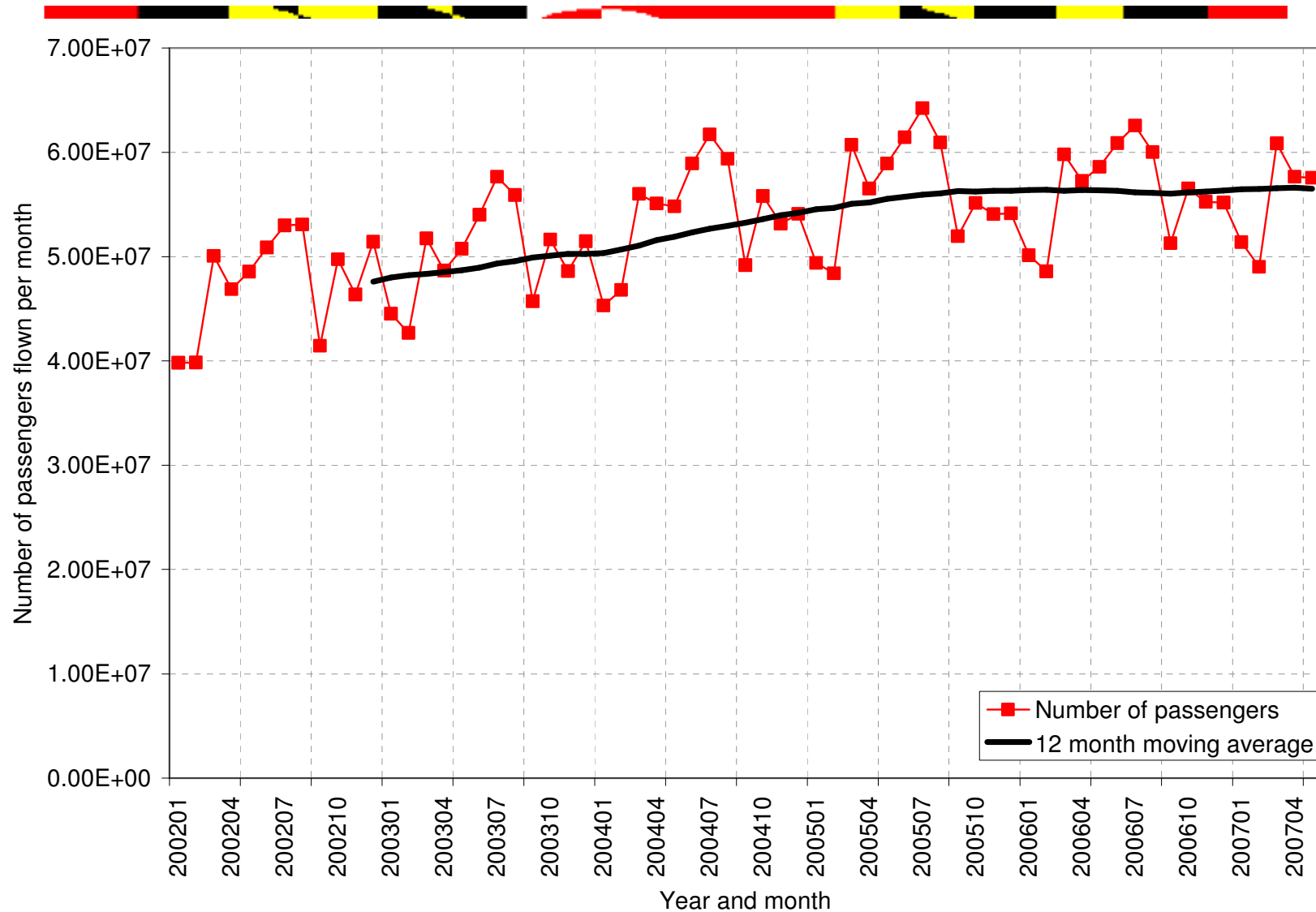


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Source: BTS On-Time Performance database, 1/1995 – 5/2007



Passenger Volume Trends

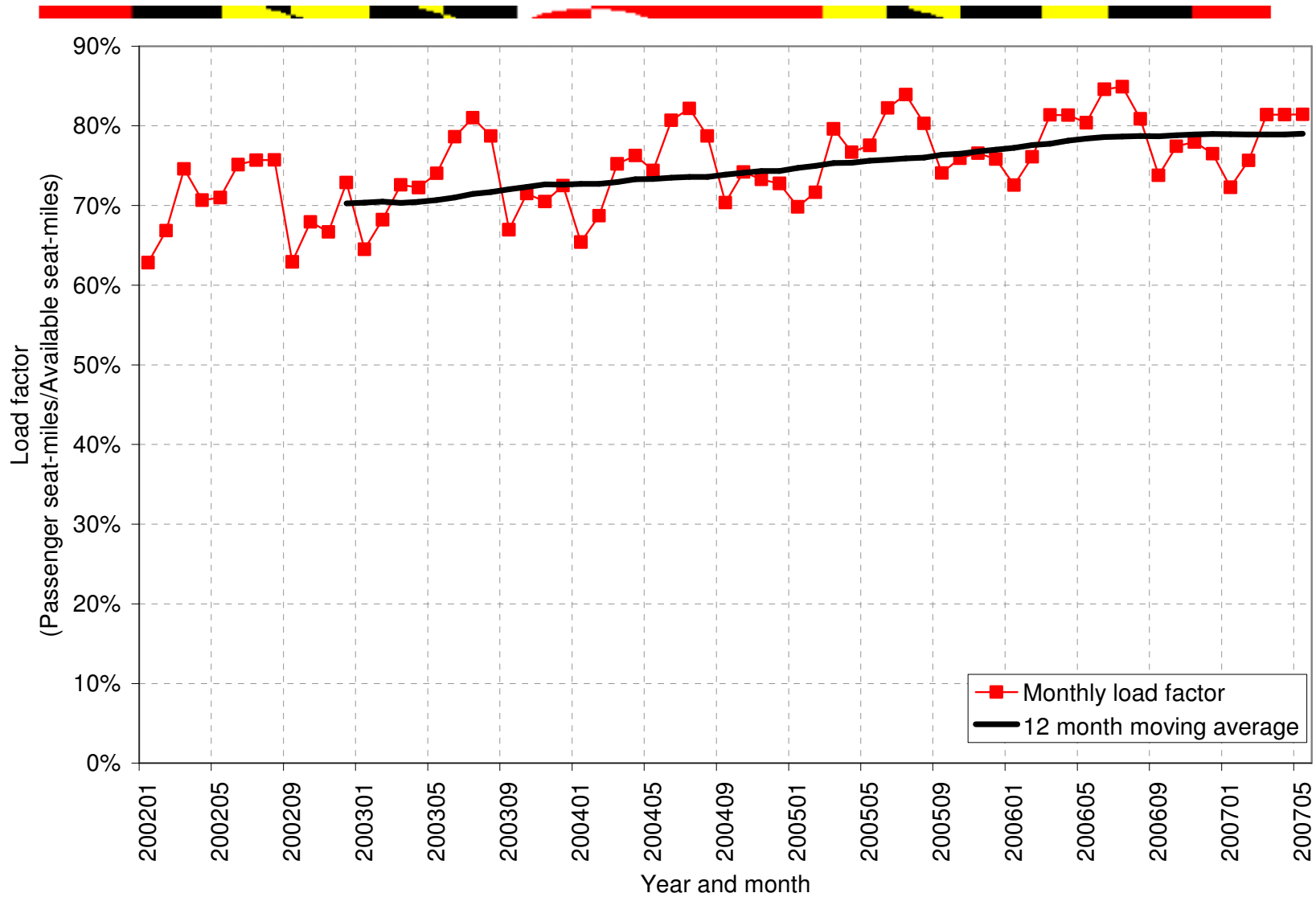


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Source: BTS T-100 Domestic Segment database, 1/2002 – 5/2007



Load Factor Trends

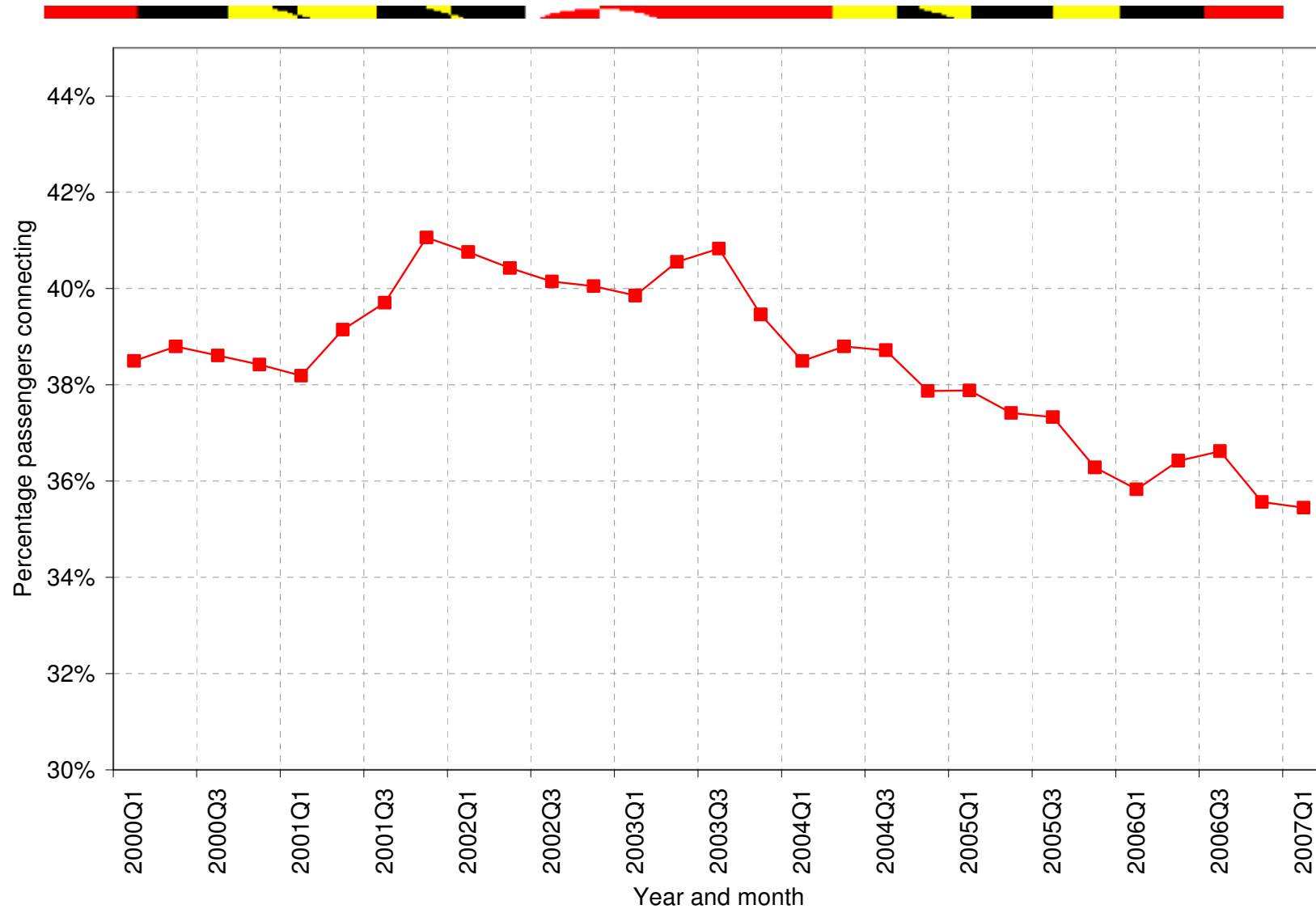


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Source: BTS T-100 Domestic Segment database, 1/2002 – 5/2007



Connecting Passengers

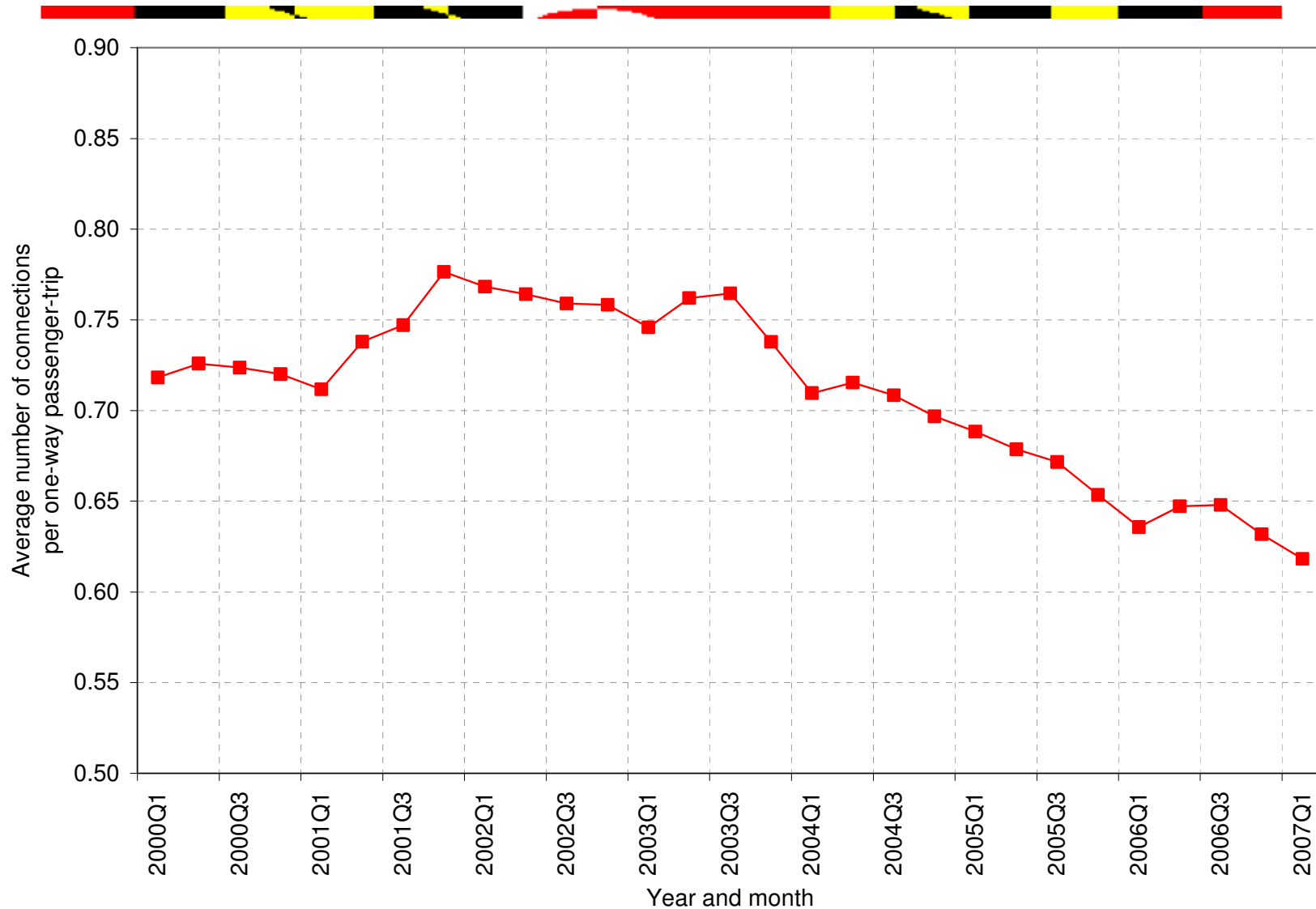


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Source: BTS Airline O&D Survey DB1b database, 1Q2000-1Q2007



Connecting Passengers



October 3, 2007

Source: BTS Airline O&D Survey DB1b database, 1Q2000-1Q2007



What are we missing?



- Aircraft size trends
 - Confounded with passenger volumes, load factor
 - Decreasing aircraft size, increasing passenger volume, increasing load factors all suggest larger numbers of potentially disrupted passengers, yet cancellations are back up this year
- Weather
 - Number and/or severity of weather events could be up
 - It would be nice to look at statistics normalized by weather, e.g. number of delayed flights per GDP flight or per GDP-hour, etc.
- Airports
 - Small number of congested airports operating on the edge of the cliff, but even this is just a 1st-order effect
 - Some of these airports (and perhaps others) are even more critical because they “spawn” delays elsewhere in the NAS



Conclusions



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- Average delay could be symptomatic of a more important underlying phenomenon
 - The entire delay distribution could be shifting to the right
 - This is more alarming when you consider the passenger effects that are masked in flight delay statistics
 - No obvious cause/effect relationship between extreme delays and cancellations
 - How should we be normalizing?
 - What are the network effects?