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IMRC

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(with even more help from others than usual)

More on the Scofflaws Found through RSD



Smog Check histories of high emitters in L.A. as of Sept 2008

- 25,073 vehicles whose VIN could be identified from the plate were detected as “high emitters” by Remote Sensing Devices 1/2007 - 4/2008
- 20,095 of the 25,073 vehicles had Smog Check records within January 1998 - August 2008
- 19,099 vehicles had passed a Smog Check within two years before the RSD measurement

Conclusions last September

- “High emitters” have much higher than typical fail rates on Smog Check, but seemingly not far above the rates expected for the age and mileage of the vehicles.
- High emitters have histories of more and worse fails, but seemingly not far above the patterns given the age and mileage of the vehicles.
- High emitters are mostly pre-OBD II (1996) vehicles.
- High emitters were disproportionately tested at a few locations, with enforcement problems.

New information

- All RSD records and details of measurements, for 2,924,192 records with recognizable plates
- 1,392,024 distinct plates
- 1,297,226 with Vehicle Identification Number (217,024 more than deduced previously)
- CA DMV registration histories for 60 million vehicles (once a year for ten years)
- Junked and salvage histories for 8 million vehicles (overnight DMV requests)

Example of identifying a plate

057TXS (Washington)

April 19, 2007 at 14:13

Speed = 41.29 mph

Nov. 29, 2007 at 8:19

Speed = 25.69 mph



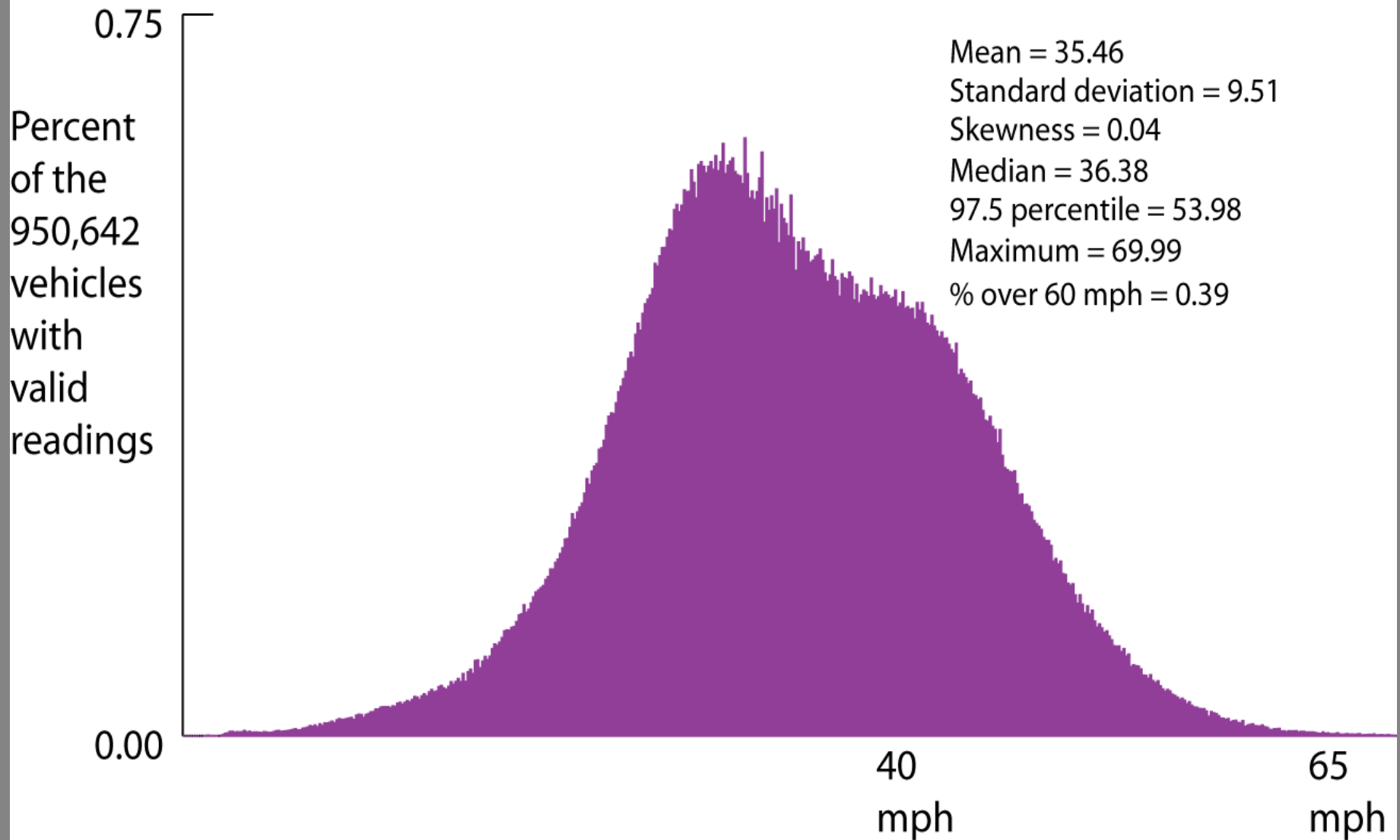
Possible delayed re-registration

	Identified as CA plate	Possible CA plate	Unlikely CA plate	Identified as other state
Distinct plates	1,291,831	56,739	37,432	5,746
% appeared at least once between 7:00-9:00 or 16:00-18:00	34.84	29.63	39.80	30.28
% with measurements at least 60 days apart	2.01	2.32	3.94	6.91
% with measurements at least 60 days apart and during rush hour	1.16	0.18	0.23	0.40
% "high emitter"	2.97	2.63	2.61	2.84

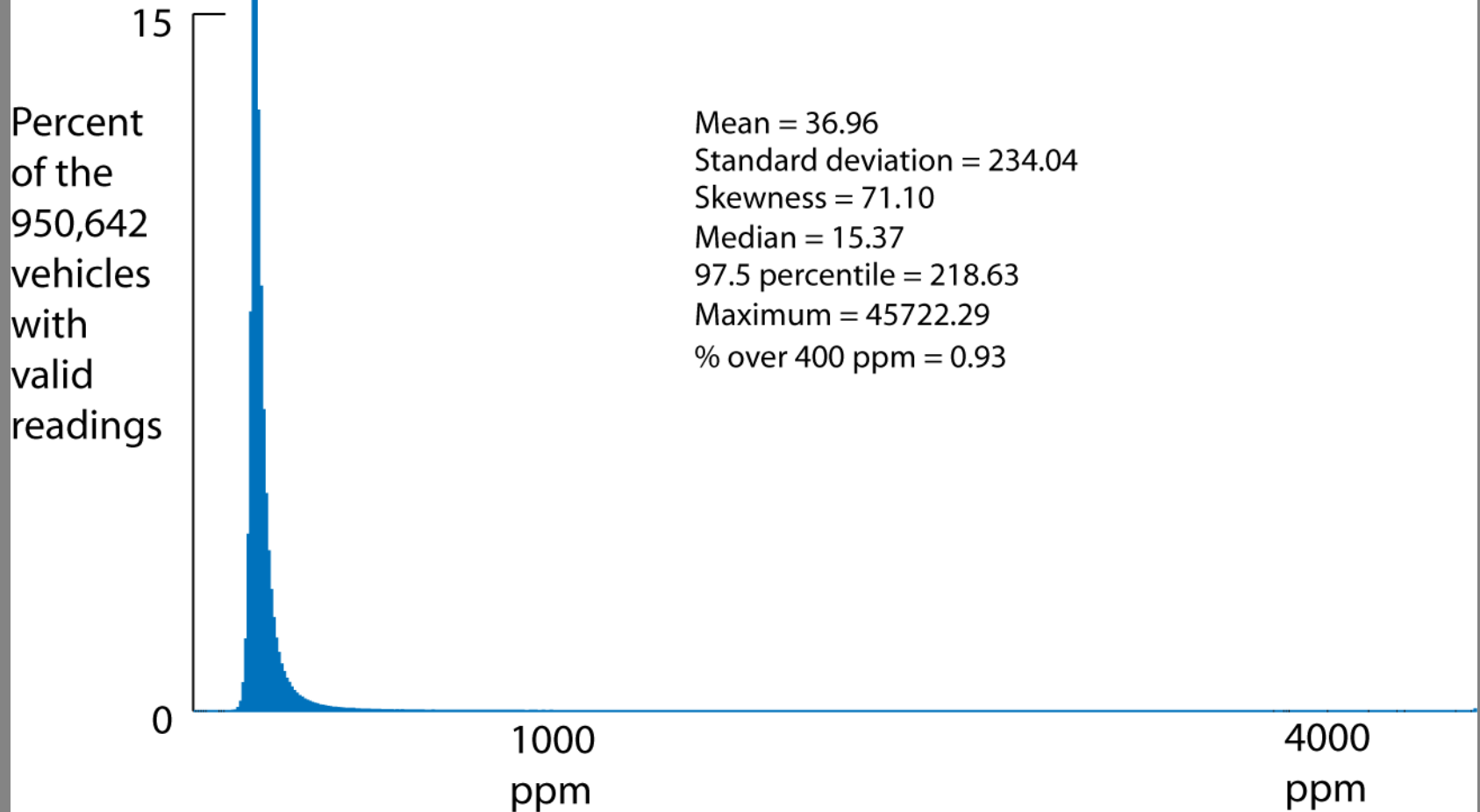
Subsets of the readings

- 950,642 plates with at least one set of valid readings
- 911,913 plates with at least one set of valid readings and VIN deduced

Vehicles' speed by RSD observation



Vehicles' HC reading by RSD observation



The highest HC reading

3NHW134

F25YRE71746

'69 Ford

Sept. 18, 2007 at 8:41

Speed = 32.66 mph

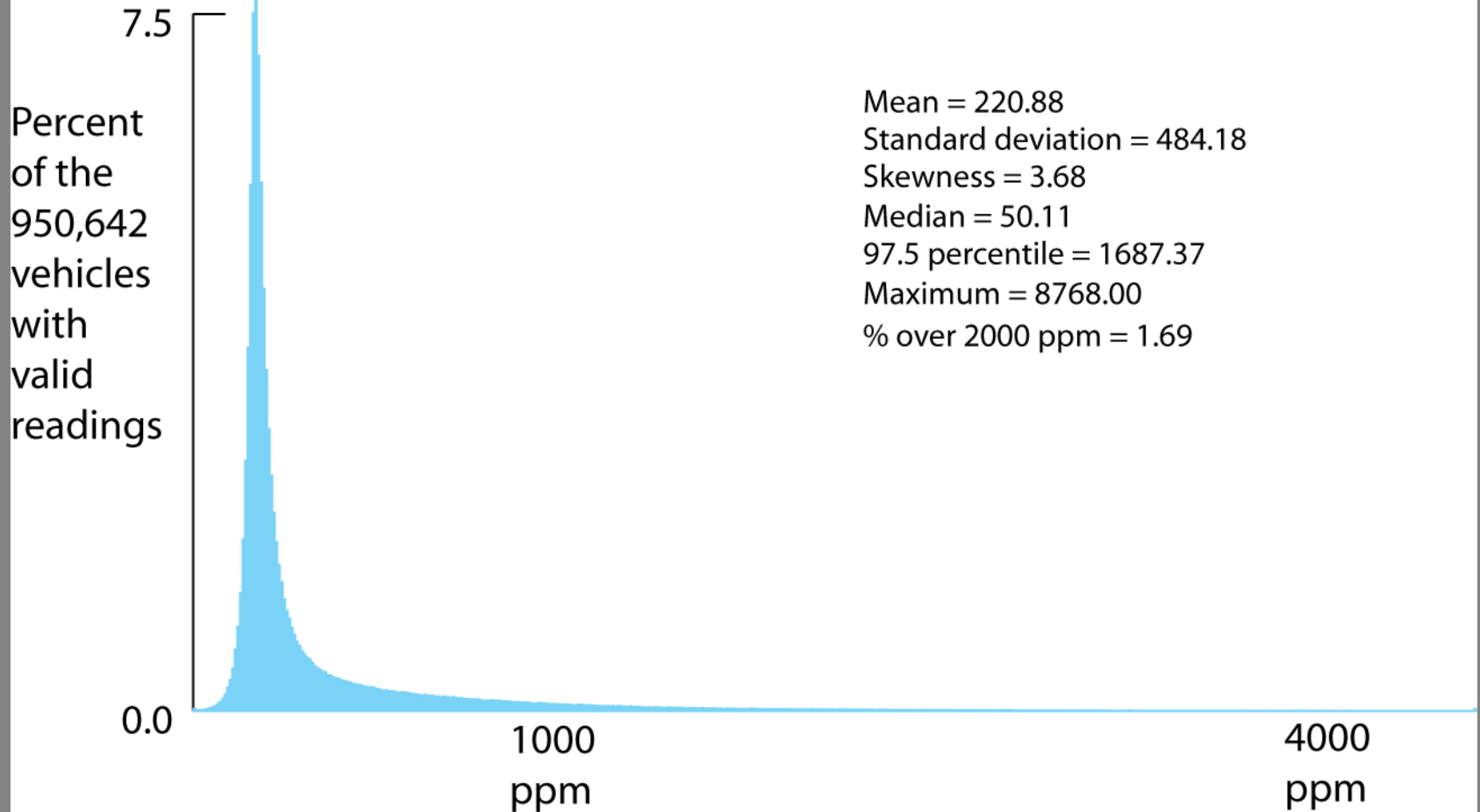
HC = 45722.29 ppm

NOx = 7098.83 ppm

Smoke = 2.79



Vehicles' NOx reading by RSD observation



The highest NOx reading

1090132

1T7YU4F2761166965

'06 Thomas

March 8, 2007 at 13:44

Speed = 25.97 mph

HC = 105.00 ppm

NOx = 8768.00 ppm

Smoke = 0.08



A very high smoke reading

4DED853

1HGED3654KA044158

'89 Honda

May 9, 2007 at 7:17

Speed = 31.81 mph

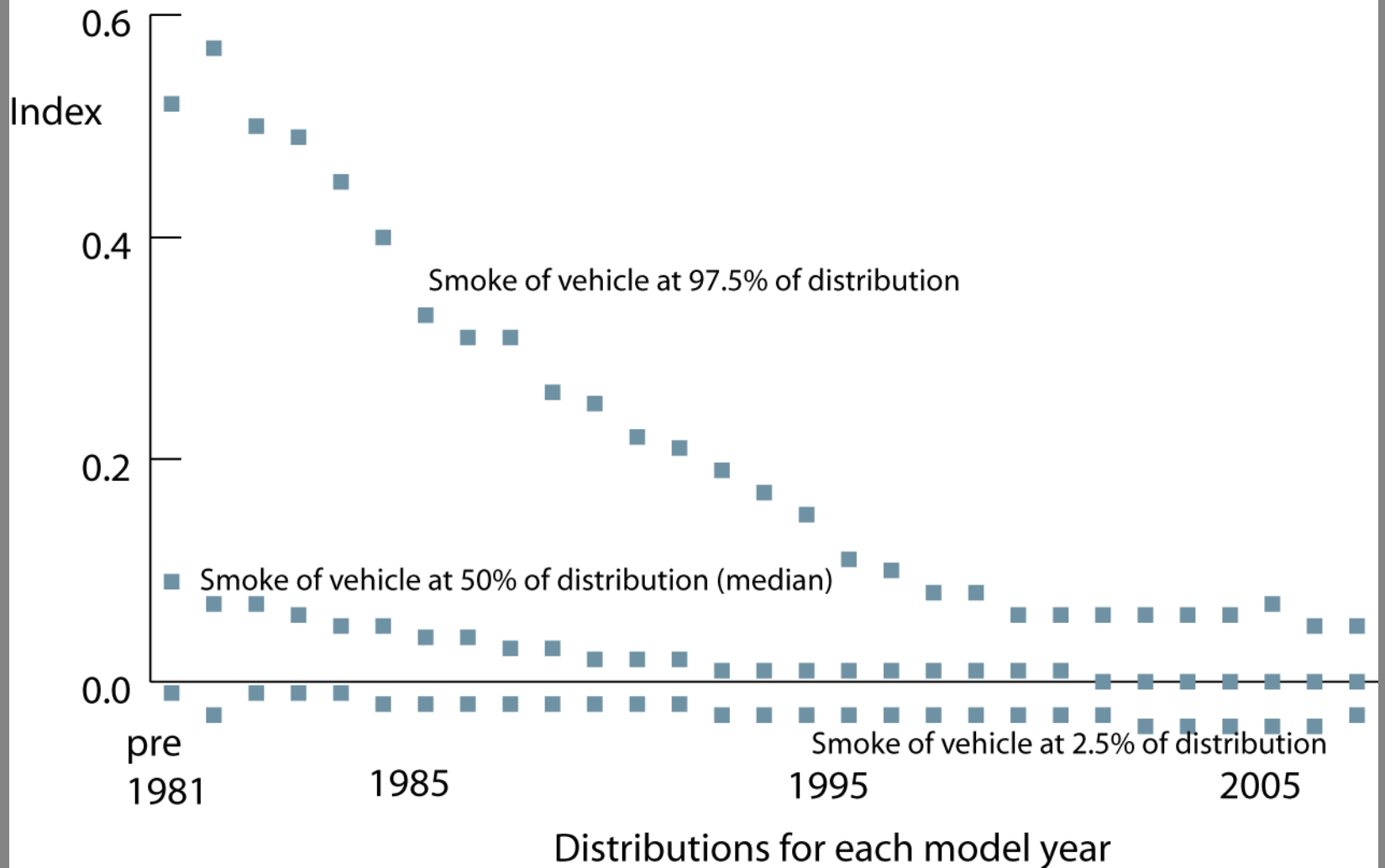
HC = 7014.17 ppm

NOx = 179.65 ppm

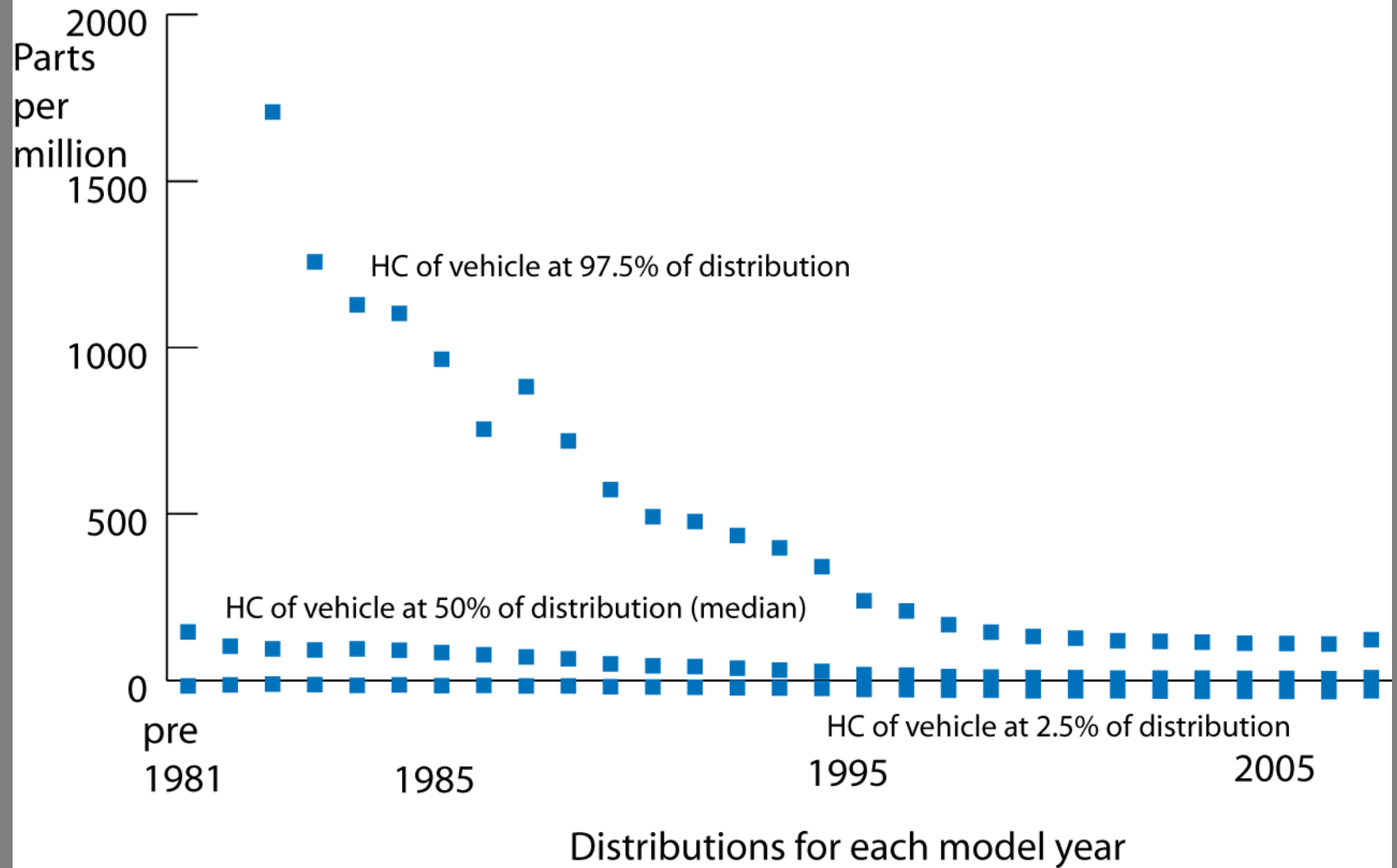
Smoke = 5.4300



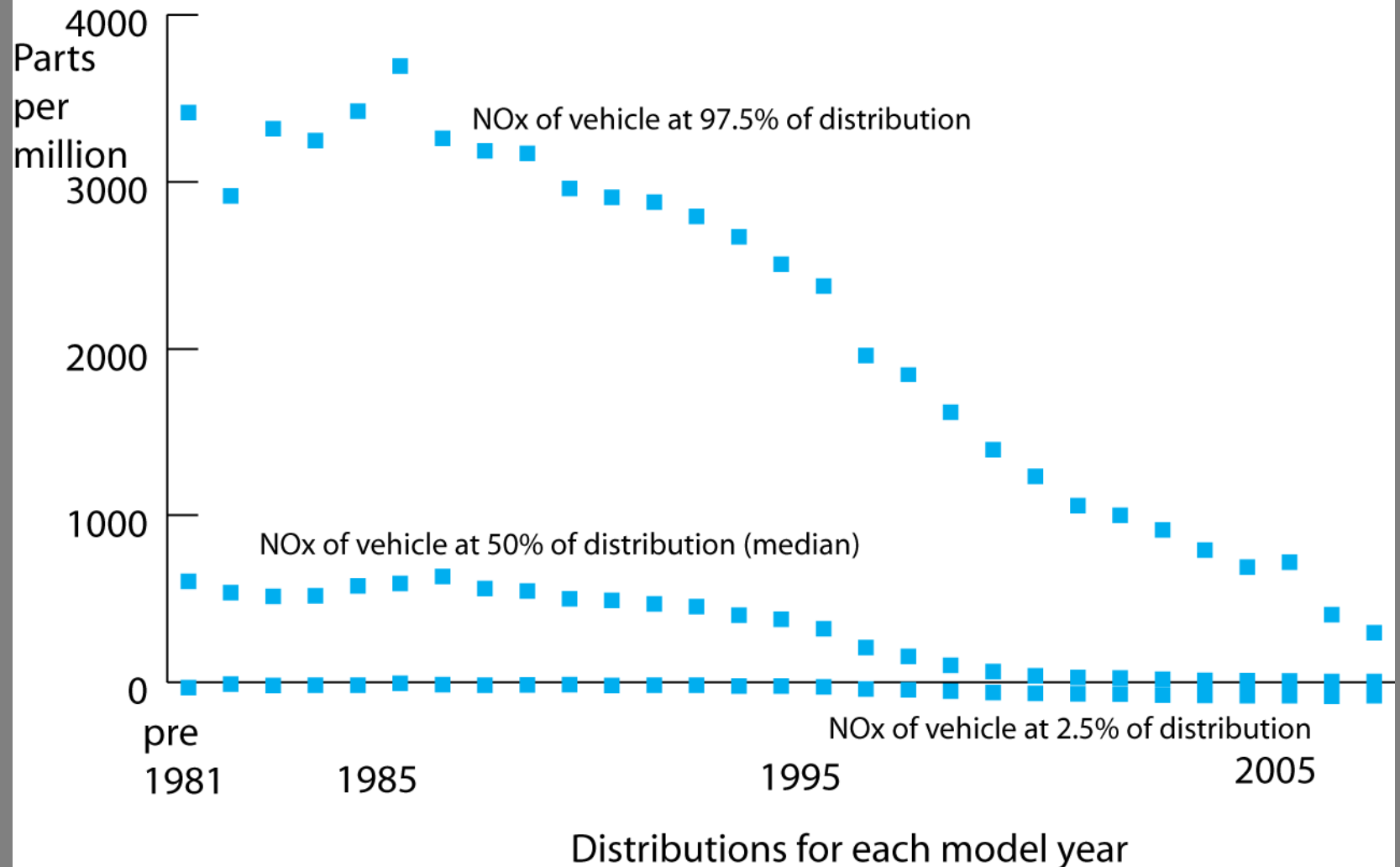
Smoke measurements by model year



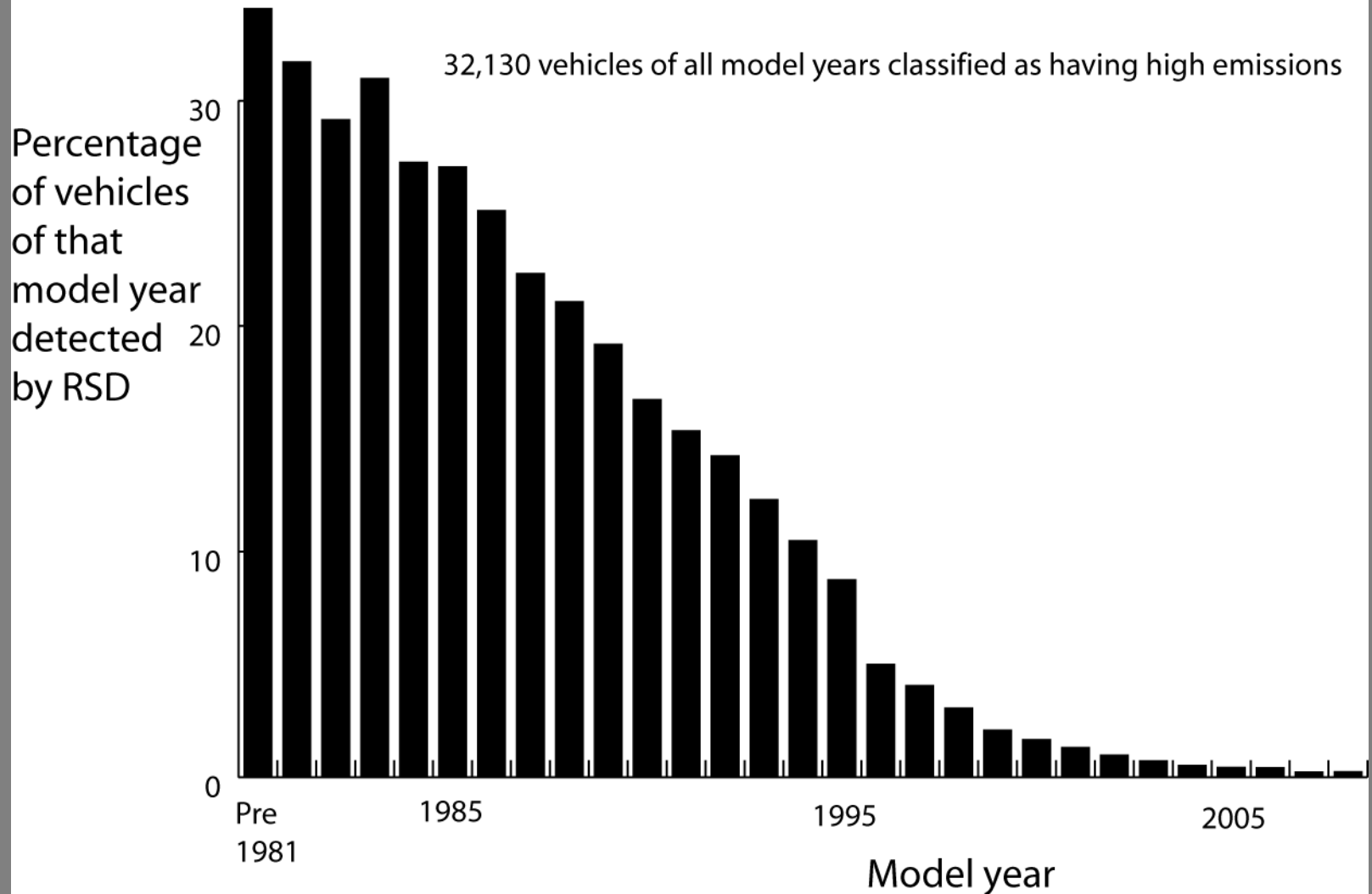
HC measurements by model year



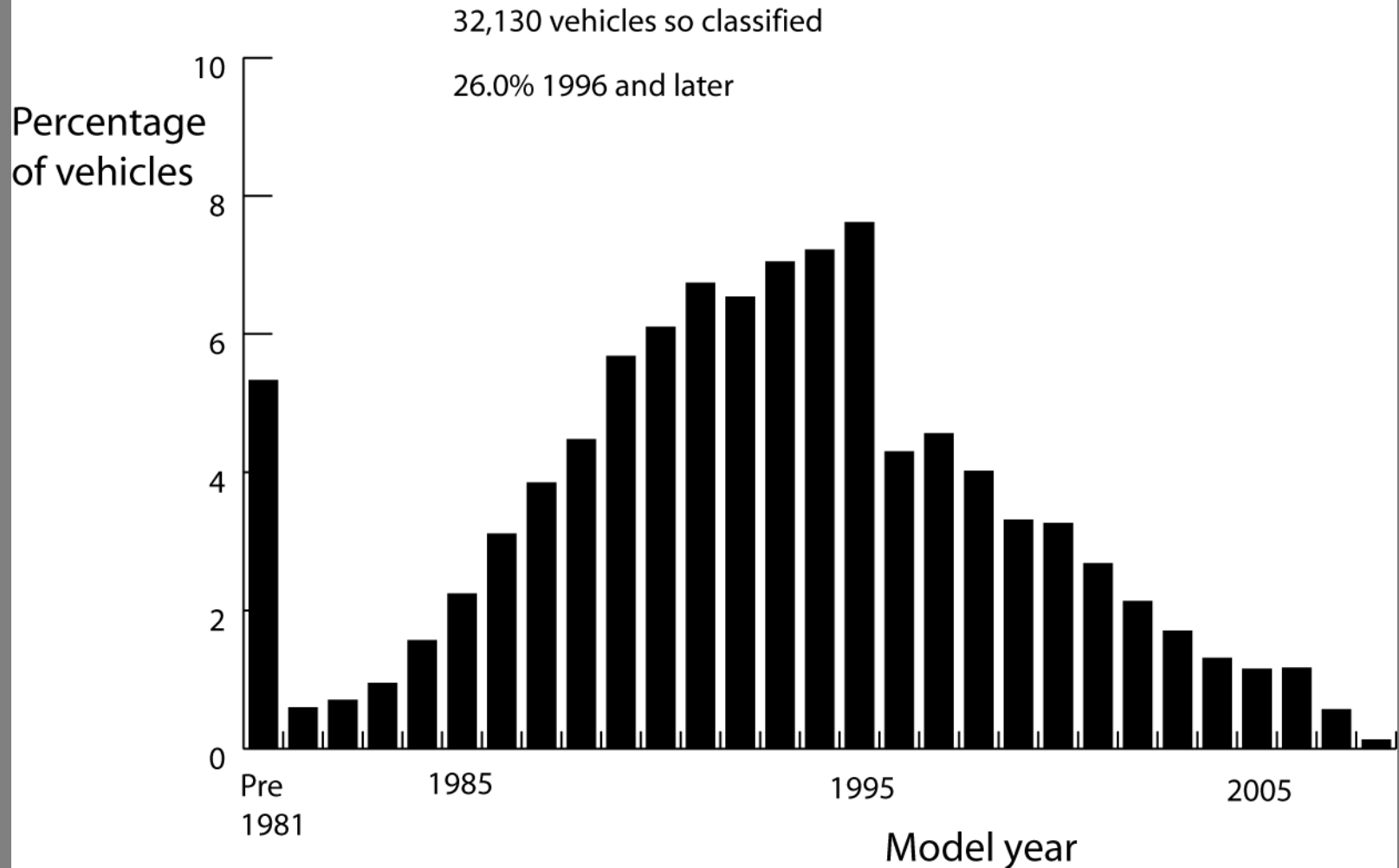
NOx measurements by model year



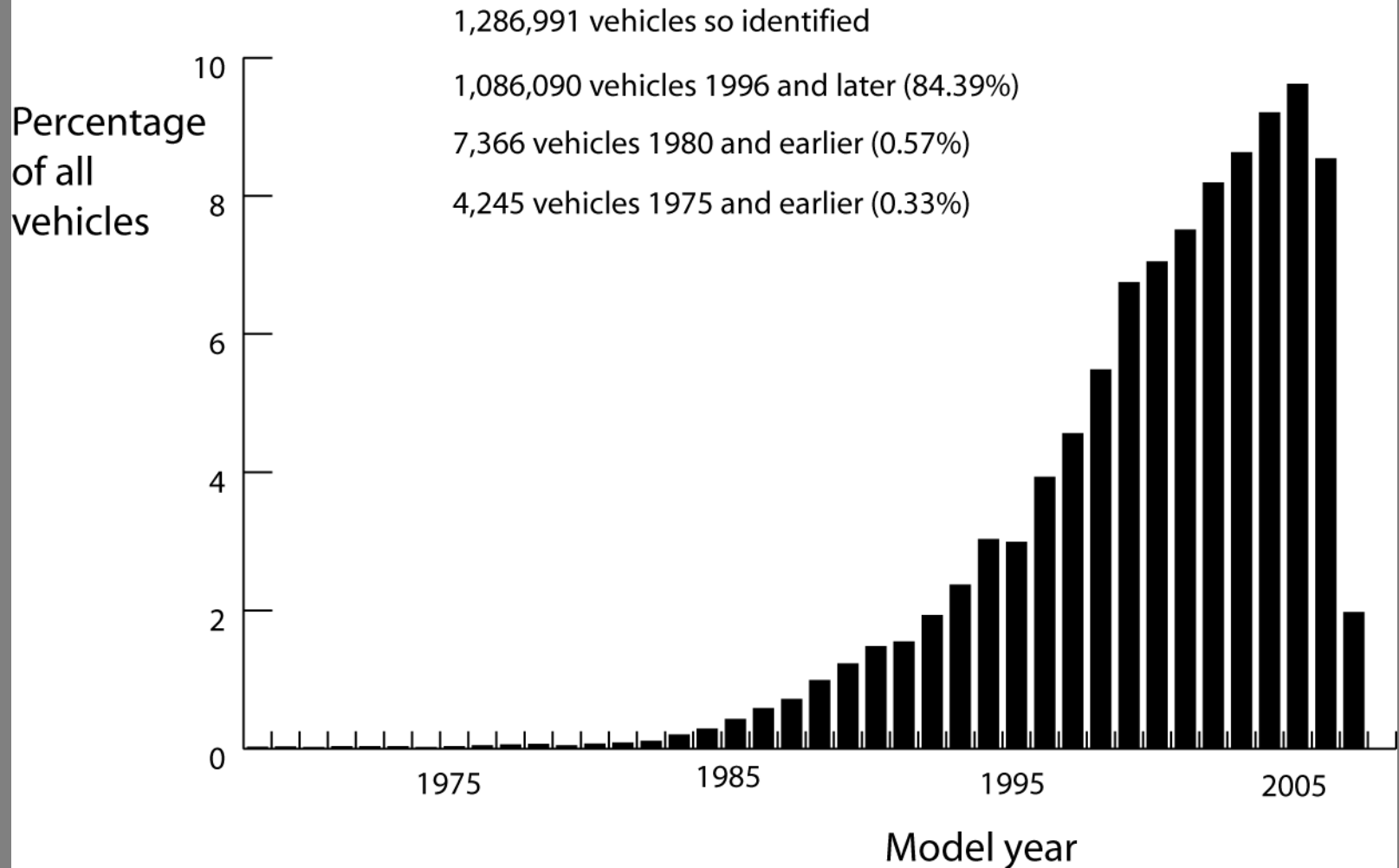
High emissions by model year



Age distribution of detected high emitters



Age distribution of all vehicles with VINs



Dubious registration status

- 1,998 vehicles detected by RSD were registered as Planned Non-Operation in April 2007 and again in April 2008
- 48,007 vehicles have some question about their registration (3.73% of vehicles identified)
- Of these questionable registrations, 1,009 were for vehicles 1975 model year or earlier (23.76% of the early vehicles identified)
- Of these questionable registrations, 41.75% had been junked or issued a salvage certificate
- Of these questionable registrations, 5.82% were high emitters

More on “junked” vehicles

- Among the 1,286,991 vehicles observed by RSD and converted to a VIN, 56,920 have been “junked” or issued a salvage certificate (4.40%)
- Among these “junked” vehicles, 35.22% have a dubious registration
- Among the 20,047 “junked” vehicles with dubious registration, 1,508 were high emitters (7.57% of the 20,047)
- Among the 32,038 “high emitters” with VINs, 3,761 had been “junked” (11.74% of high emitters)

Conclusions Now

Among the million vehicles identified by RSD:

- Several thousand out-of-state vehicles should have re-registered in California.
- Several thousand did not have current operating registration.

Among the tens of thousands of vehicles identified as high emitters:

- Several thousand are exempt as pre-1976.
- Several thousand have returned from the dead.