



A continuous monitoring of PM1 and TSP during demonstration resulting in vehicles' conjunction in the centre of Athens, Greece

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The city of Athens, Greece has been characterized as a multi traffic area from all the cities of the country during the last decades. Since 2001 the problem has increased dramatically. Actually the scientists have to deal with an enormous amount of vehicles (2,400,000) which moves continually in an area of 450 km². Government restrictions exist, but they are not sufficient for the moment and the problem remains. Several sporadic samples of PM in both sides of the road and especially in the middle of the road while cars are jammed in a main road of our city. In September 2006 a large demonstration was held in the center of Athens. The outcome of the demonstration was a blockage of traffic around the center of Athens. A main avenue of double direction and 4.800 m long leading from the seaside into the city was full of immobilized vehicles for 1.200 m. This trapped 435 private cars, 12 buses, 41 taxis (diesel emissions), 7 heavy trucks and 48 motorcycles, pass through every 17 minute, with a medium speed of vehicles 3 km/h. The phenomenon started at 15:35 L.T. and had a duration of 75 min. Two portable detectors were used. The total samples collected were divided in to three main categories: the free side roads, the immobilized side vehicles and the middle lane. Fifteen days later the demonstration was repeated. We had a continuous monitoring again at the same location and the same time, but in this case both sides had the cars running. This time, the medium speed of the vehicles was 60 km/h and 2.100 vehicles passed our location within one hour. The results of the analysis are very

impressive especially the paradox between the free lane and the middle lane.