Referee comment on "Intra-event evolution of elemental and ionic concentrations in wet deposition in an urban environment" by Thomas Audoux et al.

This study tried to estimate the mechanism implied in the wet deposition through monitoring the evolution of the chemical composition of wet deposition during rainfall events in Paris region. They found the intra-event observation of each precipitation is useful to reveal the predominant role that affect wet deposition. Overall, this is a nice piece of paper with clear objectives and methods. Before considering publication in ACP, major revisions should be made. Some comments and suggestions are listed as follows:

Major comments:

1. In this paper, the authors collected eight rainfall events. However, only 4 events can be used to discuss the scavenging mechanism. They also notice that the scavenging mechanism varied case by case and cannot conclude as a general conclusion due to little cases. The authors are encouraged to add some discussion on how to improve the “successful monitoring rate” in the future.

2. The discussion section should be reorganized, which now seemed a little messy. For example, section 4.2 and 4.3 can be improved and concluded several findings.

3. In calculated WR, how about the impacts of air pollutants transport on it? They also noticed several cases were influenced by intrusion of mineral dust from northern Africa. They should compare the WR case by case and make a conclusion. Besides, in the first fraction of rainfall, the wind-swept effects should also be considered.

Specific comments:

1. P4, L131. Please accurate describe at which fraction or time the sampling is stopped.

2. P6, L200 and L225. WR was calculated at R2, R3 and R8. However, mechanism was choose as R1, R2, R3 and R8. It is confusing.

3. P7, L208. Please clarify the details on “once a constant level is reached”, especially in quantified criterion.

4. P8, L255. “do not seem to be correlated with rainfall depth nor rainfall rate (Table 1)”. It seems doesn’t make sense. The total rainfall depth should be correlated with the total wet deposition fluxes.