

Interactive comment on “Counteractive effects of regional transport and emissions control on the formation of fine particles: a case study during the Hangzhou G20 Summit” by Ying Ji et al.

Anonymous Referee #2

Received and published: 30 July 2018

Review of the manuscript entitled “Counteractive effects of regional transport and emissions control on the formation of fine particles: a case study during the Hangzhou G20 Summit” by Ying Ji et al. submitted for possible publication in the ACP

Comments: The subject is appropriate to ACP. This manuscript presents the results of an intensive field campaign conducted with focus on aerosol chemistry and gaseous precursors from 15 August to 12 September, 2016, to evaluate the effect of temporary emissions control measures on air quality during the 2016 G20 Summit held in Hangzhou, China. The results show that the concentrations of fine particles were reduced during the intense emission control stages mainly because of the decreases

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of secondary organic aerosols via the suppression of daytime peak SOC formation. They also found that the effect of long-range transport on the air quality of Hangzhou was ubiquitous and that unexpectedly high NO_x concentrations were observed during the control stage when the strictest restriction on vehicles was implemented, owing to the contribution from upstream populous regions such as Jiangsu and Shandong provinces. The results are interesting and useful. Therefore, I recommend clearly the acceptance for publication of this manuscript after minor revisions. Several editorial comments for improving the information content and presentation of the paper are listed as follows: 1. L 22: It should be “contributions” instead of “contribution”, 2. L52: It should be “air pollutant emissions” instead of “air pollutants emissions”. There are many other English grammar errors in the text part. Please fix them when you revise your manuscript. 3. Lines 46-56: About the background and study of air pollution during the Hangzhou G20 summit, some results have been published. Regarding impact of effectiveness of short-term emission control schemes on air quality in Hangzhou during the 2016 G20 Summit, the paper of Li et al (Li P, Wang L, Guo P, et al. High reduction of ozone and particulate matter during the 2016 G-20 summit in Hangzhou by forced emission controls of industry and traffic. *Environ Chem Lett*, 15:709–715, DOI 10.1007/s10311-017-0642-2) has done significant work. The authors should cite this paper. 4. Lines 95-96: Before line 96, it will be good to add a paragraph as background to summarize the current status of air pollution study in Hangzhou such as the paper of Yu S, Zhang Q, Yan R, et al. Origin of air pollution during a weekly heavy haze episode in Hangzhou, China[J]. *Environmental Chemistry Letters*, 2014, 12(4):543-550.

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2018-646, 2018.

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