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Title: Ozone reservoir layers in a coastal environment—A case study in southern Taiwan

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General comments :

The summary (Section 4) is concise and complete. However, should this summary be somewhat modified to more appropriately become the “Conclusion” of the manuscript ?

The scientific methods are clearly outlined. However the presentation of the results/ discussion e.g. section 3.2, can be improved for greater clarity and readability. Appropriate paragraphing (instead of long uninterrupted texts) can be considered, and unnecessary repetitions should be avoided wherever possible.

The language can be further improved to be correct, fluent and precise. Language specialists may help.

Specific comments :

The “Abstract” has left out the important role of the sea breezes --- “the ozone reservoir layers” are actually caused by the inflow of afternoon sea breezes.

Section 2.3 : This late autumn (November) ozone episode may probably be an emerging trend in photochemical pollution in the last decade or so as a result of climate change, as ozone episodes normally occur in summer. It is up to the authors as to whether to write a few lines on summer situations as compared with this autumn event.

Section 2.3/Section 3.2 : Does this weak anticyclonic condition favour the generation of sea breezes which ultimately lead to the formation of the ozone reservoir layers ?

Section 3.3 : Is this relatively high contribution (over 50 %) by ozone of the previous day also found in other research studies locally or elsewhere ?

Technical corrections, typing errors etc include the following :

p.1721 line 11-12 : However, an observation-based method has not yet been **used** to analyze

p.1724 : 2.3 : Synoptic weather and surface ozone levels in Taiwan during 8–11 November **2006**

p.1725 line 3 :air stations of **the** Taiwan Air Quality Monitoring Network..... (TAQMN).

p.1725 line 15 : Figure 5a plots the time-height relationship of each **of** the ozone soundings and the corresponding

p.1726 line 8 : ...the daily evolutions of the ozone reservoir layers were quite similar on the three nights

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p.1727 line 1 : The possible cause of the elevated ozone depletion will be discussed later **in section 3.2 (?)**.

p.1730 line 20 The descending in altitude of the daily ozone reservoir layer in stage II.....

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p.1733 line 13 : The ozone in a daily mixing layer comprises ozone carried over from the preceding day and that produced on the current day.

p.1737 line 13 : This result follows from the fact that most of the ozone produced daily was

Deleted: produced

p.1738 line 5 : Very similar patterns of ozone reservoir layer evolutions are found in three consecutive nights **of the 8-11 November 2006 episode**.

p.1739 line 15 : Furthermore, ozone distributions within the ozone reservoir layers are expected to be far from being uniform

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