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## ***Interactive comment on “On a report that the 2012 $M = 6.0$ earthquake in Italy was predicted after seeing an unusual cloud formation” by J. N. Thomas et al.***

**J. N. Thomas et al.**

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On a report that the 2012  $M = 6.0$  earthquake in Italy was predicted after seeing an unusual cloud formation J. N. Thomas, F. Masci, and J. J. Love

Dear Prof. Malamud,

We have prepared a new version of the manuscript nhe-2014-126. We have revised the manuscript taking into account the comments of Anonymous Referees #1 and #2. Attached are the point-by-point replies to their comments.

Sincerely, Jeremy N Thomas

C2774

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Response to Reviewers:

Anonymous Referee #1

General comment: In addition, the authors could have pointed out that data claimed to be precursory to earthquakes should show a demonstrable causal relationship to earthquakes at the times of these earthquake. One way to do this is to show that coseismic changes in these data relate to distance from these earthquakes and the source mechanisms of the earthquakes. Note that the major energy is released during earthquakes not before earthquakes. If coseismic changes that scale with earthquake mechanisms and distance do not occur, it is unlikely that these data have any physical relationship to subsequent earthquakes.

Thank you for the suggestion. We added a paragraph in the Discussion and Conclusion section discussing the lack of co-seismic changes.

[1] P5890, L22: Replace “which” with “that”

Done

[2] P5891, L17: Replace “What is interesting, however, is that 30 days later there was an  $M = 6.0$  earthquake on 20 May 2012 (epicenter  $44.80^{\circ}\text{N}$ ,  $11.19^{\circ}\text{E}$ ).” with “What is interesting is that a  $M = 6.0$  earthquake occurred 30 days later on 20 May 2012 in northern Italy (epicenter  $44.80^{\circ}\text{N}$ ,  $11.19^{\circ}\text{E}$ ).”

Done. With some wordsmithing.

[3] P5894, L18: Replace “which” with “that”

Done

[4] P5898, L6: Replace “Press et al., 1992” with “Press et al., 1996” as per references.

Done.

[5] P5902, Fig 2: Suggest scaling size of dots representing earthquakes with the en-

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ergy of the earthquakes. Note that a M6 has energy 30 times greater than that of a M5.

Done. Thank you for the suggestion. Please see the new Figure 2.

Anonymous Referee #2

(a) The first paragraph of Section 2, could be slightly more explicit. It states that they accessed the same infrared satellite images that Guangmeng and Jie acquired, but it would be helpful to let the reader know the resolution of these images and the repeat time, along with the criteria by which you decided to select an image. The movies do help.

Done. Thank you for the suggestion.

(b) Could you have a table of the final list of 'linear' clouds chosen, with their attributes? This is just a suggestion, but would parallel Table 1.

Done. Thank you for the suggestion. Please see the new Table 1.

(c) It would be helpful to have another figure (along with subsequent discussion) included, showing a graph that includes both the EQs from Table 1 and each instance of the clouds.

Done. Thank you for the suggestion. Please see the new Figure 3.

(d) Rather than immediately go into a 'discussion', I'd suggest another section before this, which is the statistical analysis.

We decided to add more details regarding our statistical analysis, but we kept this in the Discussion and Conclusion section. We want to keep the paper as concise as possible, thus we would prefer not to add a new section.

(e) [Very minor: Make the red dot an Figure 2 another shape, so that not only 'colour' distinguishes the two types of dots].

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Instead of changing the shape, in Figure 2 we scaled areas of the circles with the approximate earthquake energy.

(f) Consider adding high-resolution version of Figure 1 to the supplementary material, as it will be hard in the final version for the paper to see these well. This is just a suggestion.

Images in Figures 1 have the same resolution of the original satellite images (72 pixels/inch). Therefore, we cannot provide an high-resolution version of this figure. We added the jpeg of Figure 1 to the supplementary materials.

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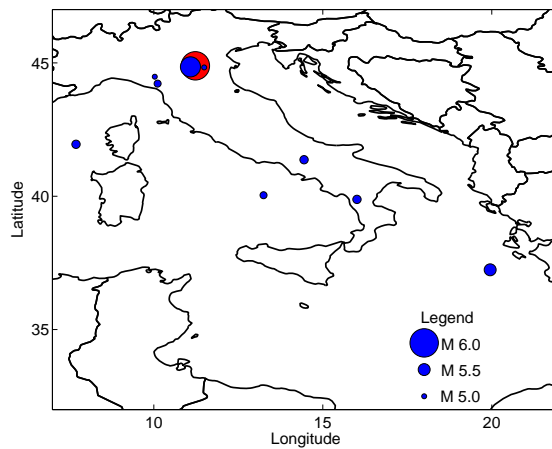
Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 5889, 2014.

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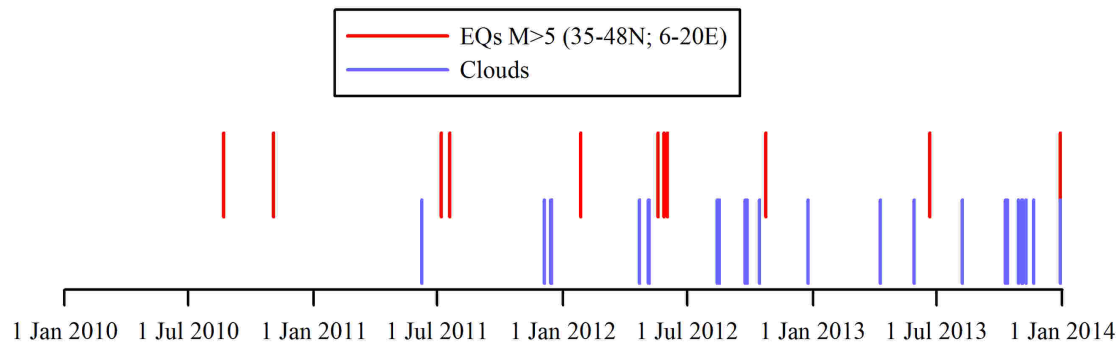
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**Fig. 1.** New Figure 2 in manuscript.

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**Fig. 2.** New Figure 3 in manuscript.

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