

Interactive comment on “Screening the ESA ATSR-2 World Fire Atlas (1997–2002)” by B. W. Mota et al.

B. W. Mota et al.

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GENERAL COMMENTS

- 1.The screened data will be available from the RETRO WWW page, Datasets Section (<http://retro.enes.org/datasets.php>). Mention to this will be included in the paper.
- 2.Further comments on the usefulness of the data for emissions analyses will be provided.

SPECIFIC/TECHNICAL COMMENTS

- 3.Reference date will be corrected.
- 4.The list of papers that have used the WFA will be converted to a Table.

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5.Both links were checked on 26.11.05 and both were active.

6.We were unable to find a published paper reporting monthly, or even trimester ENSO index data, for the period of analysis. We searched the AMS journals, the Int. J. Climatology, Climate Research, Climate Dynamics, and Theoretical and Applied Climatology.

7.Incomplete data means that there is a variable number on 512km x 512km image frames missing from the analysis, on a given day. Missing data means that not a single frame was processed for that day, at the global scale. This explanation will be incorporated in the text.

8.Between February and May 2001, the average registration accuracy dropped to 10km. Since June-July 2001, geolocation accuracy is 2-3km. Prior to February 2001, geolocation accuracy was 1-2km. This information will be added to the text.

9.The global-level accuracy of the MODIS land cover product has been estimated at $71.6 \pm 0.25\%$. GLC 2000 global accuracy assessment is in progress. Preliminary results for forests in Russia yielded an R^2 of 0.92 between official statistics and the GLC2000 forest area. For South-America, the R^2 values for the relationship between the areas of forest, natural non-forest vegetation, and agriculture areas, and the corresponding reference data were 0.97, 0.59, and 0.89. In Africa, Mayaux et al., obtained an R^2 value of 0.89 for forest area, compared to 18 Landsat reference scenes.

10.The reference to the Landsat quick-look images and their source will be moved to this page, as recommended. The main source of data, the Smithsonian Institution's Global Volcanism Program's data is an electronic update of Simkin, T., and Siebert, L., 1994, Volcanoes of the World: Geoscience Press, Tucson, Arizona, 349 p. See also Jones, A., Siebert, L., Kimberly, P., and Luhr, J.F. (2000) Earthquakes and Eruptions: Temporal and spatial display of earthquake hypocenters, seismic-wave paths, and volcanic eruptions, v. 1.0 (CD-ROM). Smithsonian Institution, Global Volcanism Program, Digital Information Series, GVP-2.

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11. The large clusters are highly unlikely to be actual vegetation fires because they occur only extremely sporadically (e.g. once or twice during the entire period), excessive size (several hundred kms, and thousands of counts) and very short duration (e.g. 1-2 days). They sometimes appear as lines that cross over the ocean. A new figure will be included, illustrating some of the cases of totally implausible geometry.

12. This is a misunderstanding. We're not talking about boreal fires. We're saying that most fire counts occur during the boreal (i.e. northern hemisphere) summer. This includes the boreal and temperate fires of the northern hemisphere, mainly from June-September, but also the fires in southern hemisphere Africa, the Amazon and cerrado savannas of South America, and in tropical Australia.

13. Because the number of errors captured by the land cover filter has a seasonal trend. They increase when the land surface is hotter. It is the land cover filter that contributes with the seasonal trend to the joint LC (set intersection sign) FI filter.

14. It will be clarified.

15. We say that "All acquisition/processing errors are located in the northern hemisphere, at relatively high latitudes." We do not know their cause, and therefore are unable to speculate why they tend to appear at the locations observed.

16. See answer above.

17. Table 2 displays fire counts captured by each filter, regardless of whether they were also captured by other filters or not. In Table 3 we quantify the degree of overlap between different filters. The information in these two tables is not redundant.

18. This is why you need Table 3 separate from Table 2. Table 3 shows that the seasonality in the gas flares data of Table 2 is an artefact, resulting mostly from the overlap of the gas flares filter with the land cover filter (LC "set intersection sign" FI). This will be better explained in the text.

19. We believe this figure is useful. Due to the extreme spatial concentration of errors, it

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is hard to locate the major clusters, as displayed in Figure 5b. The spatial interpolation of the data shown in Figure 7 highlights the location of these major clusters.

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 4641, 2005.

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