

Manuscript: 20 years evolution for the DORIS permanent network, from its initial deployment to its renovation

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Comments from Editor: Pascal Willis

p.3 You may want to put all French words in italics

p. 3 Groupe de Recherches en → Groupe de Recherche de

p. 3 of the International DORIS Service (IDS) (Tavernier et al. 2002; 2005) → from the DORIS Pilot Experiment (Tavernier et al. 2002) to the International DORIS Service (IDS) (Tavernier et al. 2005).

p. 3 in the introduction, you may want to mention the major scientific applications of the DORIS (precise orbit determination, real-time geodesy and geodphysics) and provide a few references, providing citation from different groups. See some suggestions on IDS Web page: [http://ids.cls.fr/html/report/peer-reviewed\\_journals.html](http://ids.cls.fr/html/report/peer-reviewed_journals.html). These would provide a better background to the readers.

p. 4 sea level change studies. For the same reasons, please provide proper references on this topic as well. Here are some suggestions:

Douglas BC (1991) Global sea level rise. *J Geophys Res Oceans* 96(C4):6981-6992.

Peltier WR, Tushingham AM (1989) Global sea-level rise and the greenhouse effect, Might they be connected? *Science* 244(4906):806-810.

Cazenave A, Dominh K, Ponchaut F, Soudarin L, Cretaux JF, Le Provost C (1999) Sea level changes from TOPEX-Poseidon altimetry and tide gauges, and vertical crustal motions from DORIS. *Geophys Res Lett* 26(14):2077-2080.

Cazenave A, Nerem RS (2004) Present-day sea level change, Observations and causes. *Rev Geophys* 42(3): art. RG3001.

p. 8 is CEIS an acronym? Explicit

p. 9 weather station. You may want to add for completeness that most groups if not all choose not to use these corrections but to estimate these corrections from the data themselves. Here is a recent articles summarizing the capability of the DORIS system to monitor the tropospheric correction:

Snajdrova K, Boehm J, Willis P, Haas R, Schuh H (2006) Multi-technique comparison of tropospheric zenith delays derived during the CONT02 campaign. *J Geod* 79(10-11):613-623, DOI: 10.1007/s00190-005-0010-z

p. 10 the “expected 10 cm accuracy” never existed except in the very first simulations before the system existed. The first results showed sub-decimeter level accuracy very rapidly. Please confirm.

p. 10 Willis et al. 2005 makes the reader think that IGN is the only group to obtain cm accuracy results. Provide some other references from other groups, at least for the LEGOS analysis center. Here is a suggestion:

Cretaux JF, Soudarin L, Cazenave A, Bouille F (1998) Present-day tectonic plate motions and crustal deformations from the DORIS space system. *J Geophys Res Solid Earth* 103(B12):30167-30181.

p.11 is SOREP an acronym?

p. 19 Tavernier et al. 2005; submitted → Tavernier et al. submitted

p. 19 Sorsdal results. An article on this exact topic was considered for the Special Issue from Jean-Jacques Valette. You may want to contact him and ask about the exact status of his manuscript, and eventually cite it in your own paper.

p. 19 proper reference to TIGO may be added if available. Please check

p. 20 high altitude satellite → higher altitude satellite

p. 23 Tavernier 2005 → Tavernier et al. 2005

p. 25 chapter 7.2 → section 7.2

p. 26 centring or centering?  
(check all occurrences)

p. 27 Le bail submitted. For your information and for completeness, there is also another paper on a similar topic in the same issue

Williams SDP, Willis P (submitted) DORIS network, error analysis of weekly station coordinates. *J Geod*, same issue.

p. 27 machined or engineered?

p. 29 reference to DMA transformations could be added, if possible from peer-reviewed article.

p. 29 Hugentobler et al. 2001 is not in alphabetical order in the list of references

p. 32 Pearlman 2002 → Pearlman et al. 2002

p. 33 not yet installed → planned for 2006?

p. 34 main reason ... significant failure rate. Some other causes may also have large impact (maneuvers, absence of distribution of data by CNES for several months at start of observation, satellite or telemetry failure, loss of almost all 1990-1992 data, etc.). Please confirm, even if you don't need a detailed analysis in the document, assumption must be verified.

p. 36 to 39 some references are not in the format of Journal of Geodesy (Pearlman is OK, Pavlis is not as well as several others). Please check the exact format.

p. 37 Moore ... J Geod → J Geodyn  
(Geodynamics and not Geodesy)

p. 41 1 figure per page is easier for the publisher (Springer-Verlag)

p. 41 Fig 4 Need to indicate station name and acronym?

p. 41 and others. There are probably too many figures. You may want to select 2 or 3 most meaningful examples in the article and add another electronic supplement to put the rest of them.

p. 47 Figures 29, 30 and 33 to 35 may not be needed in the article. Same for 37

p. 50 larger symbols may be needed + mention electronic supplement in legend

p. 52 could figures 39 and 40 be combined?

p. 53 Mention electronic supplement in legend.

p. 54 collocation table. You may want to add the epoch when this list was established.