

Interactive comment on “New analysis software for Viking Lander meteorological data” by O. Kempainen et al.

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Received and published: 16 November 2012

Peer-review of GI-2012-29, “New analysis software for Viking Lander meteorological data” by O. Kempainen et al.

General comments

This article describes an automated re-calibration, restoration and analysis system for the original Viking Lander raw temperature measurement data now in store at the Finnish Meteorological Institute. It is usable on any Linux platform with a Fortran 90 compiler, unlike the original NASA system, which was run on partly manual parameter input and assembler-level code on now extinct computers. The system description of this “Updated Linux-based Toolbox” (ULT) for its future application by any user is

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a rather technical but extremely useful part of the article. The ULT section is fortunately followed by examples for the VL temperatures, and comparisons with the T-data presently available at the PDS for both VL-1 and VL-2. The annual temperature curves reveal, for instance, that some VL-2 data tapes have been lost, perhaps permanently. Hence combination of ULT and PDS data may give the best results, depending on the application though. When available, the new ULT data appears to agree closely with PDS data, but is much more complete, the time resolution being at times 2 s.

This is not a fully scientific paper, but it offers an extremely valuable toolbox and some intriguing first results. Similar ULT work with the Viking wind data is now ongoing at FMI. Together with the high-resolution ULT temperature and the PDS pressure and temperature data for more than three Martian years these will produce a treasure chest for future Martian research.

The figures are quite illustrative.

Specific comments

The authors have responded to all my rapid access review comments adequately, so I do not have much to add here. Perhaps at p. 808 line 27 they could add a sentence asking for anyone who would know about the lost VL data tapes to report to them as soon as possible. On p. 810 line 3 they might add ..the MIDDAY temperature. . .

The title might specify “temperature data” instead of “meteorological” as the pressure data is not discussed and the wind data is not yet available through ULT, I understand.

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 2, 801, 2012.