

## Additions and Corrections

**Structure of a 12-Vertex Arachno Carborane,  $\sigma$ -( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>)Co-( $\eta^5$ -C<sub>5</sub>H<sub>4</sub>)<sup>+</sup>-(CH<sub>3</sub>)<sub>4</sub>C<sub>4</sub>B<sub>8</sub>H<sub>8</sub><sup>-</sup>, an Analogue of B<sub>12</sub>H<sub>12</sub><sup>6-</sup> and C<sub>2</sub>B<sub>10</sub>H<sub>12</sub><sup>4-</sup>. Mechanisms of Carborane Fluxional Behavior and Metallocarborane Formation from the (CH<sub>3</sub>)<sub>4</sub>C<sub>4</sub>B<sub>8</sub>H<sub>8</sub><sup>2-</sup> Ion.**  
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The space group of the title compound given in the abstract of ref 2 is *R* $\bar{3}$  not *I* $\bar{1}$ .

The crystal structure of the title compound has been described by Grimes et al.<sup>2</sup> as triclinic, space group *I* $\bar{1}$ , *a* = 8.047 (3) Å, *b* = 37.05 (2) Å, *c* = 21.551 (9) Å,  $\alpha$  = 90.04 (6)°,  $\beta$  = 97.13 (8)°,  $\gamma$  = 89.94 (7)°, *V* = 6375 (3) Å<sup>3</sup>, *Z* = 12 (3 molecules/asymmetric unit). This structure, however, is actually rhombohedral, space group *R* $\bar{3}$ , *a* = 37.03 (2) Å, *c* = 8.047 (3) Å, *V* = 9557 Å<sup>3</sup>, *Z* = 18 (1 molecule/asymmetric unit). The triclinic vectors [1/2 -1/2 3/2], [-1/2 -1/2 -3/2], and [100] define the rhombohedral cell.

The original reflexion data ( $F_o^2 > 3(F_c^2)$ ) were obtained from the authors, reindexed, and merged in the *R* $\bar{3}$  setting. This yielded a total of 2372 unique reflexions in space group *R* $\bar{3}$  with an associated merging *R* factor of 0.02. The structure was successfully re-refined with this data set in space group *R* $\bar{3}$  (program SHELX,<sup>3</sup> full matrix least squares, two refinement blocks, anisotropic thermal parameters for non-hydrogen atoms, riding model

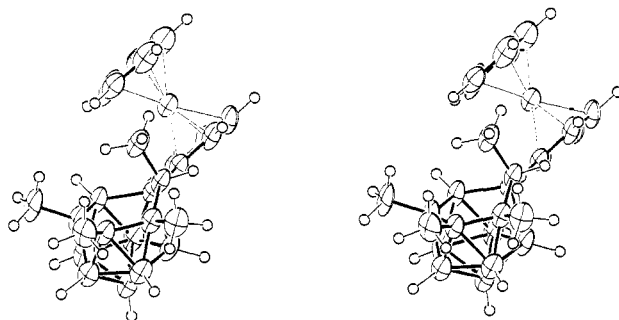


Figure 1.

for the hydrogen atoms), giving final values of *R* = 0.049, *R*<sub>w</sub> = 0.054 ( $R = \sum ||F_o| - |F_c|| / \sum |F_o|$  and  $R_w = (\sum w(|F_o| - |F_c|)^2 / \sum w|F_o|^2)^{1/2}$ ). Bond lengths and angles in the *R* $\bar{3}$  structure show no significant deviations from those reported for any of the three molecules in the asymmetric unit of the *I* $\bar{1}$  structure. Figure 1 is an ORTEP<sup>4</sup> drawing of the *R* $\bar{3}$  molecule.

**Supplementary Material Available:** Tables of atomic coordinates, thermal parameters and bond lengths (8 pages); a listing of observed and calculated structure factors (14 pages). Ordering information is given on any current masthead page.

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(2) Grimes, R. N.; Pipal, J. R.; Sinn, E. *J. Am. Chem. Soc.* **1979**, *101*, 4172.

(3) Sheldrick, G. M., 1976. SHELX76: Program for crystal structure determination, University of Cambridge, England.

(4) Johnson, C. K., 1965. ORTEP: Report ORNL-3794, Oak Ridge National Laboratory, Oak Ridge, TN.

## Computer Software Reviews

**VersaTerm-Pro. Version 1.00; 2/86.** Developed by Lonnie R. Abelbeck. Distributed by Peripherals Computers & Supplies, Inc., 2457 Perkiomen Avenue, Mt. Penn, PA 19606. List price \$295.00.

VersaTerm-Pro is a terminal emulator for the Macintosh, emulating the Tektronix 4014 and 4105, DEC VT100, and the DG D200, providing access to both text and graphics applications.

It has several advantages over the terminals it emulates. Operating on the Macintosh enables it to incorporate output into the Mac environment as well as to transfer text prepared on the Mac to a mainframe. Output can be printed directly from the Mac on a variety of printers, including the LaserWriter, a capability which the emulated terminals lack. It also stores text in a buffer so that it is possible to scroll the screen in order to view a past interaction with the mainframe.

Operation of the program is easy to learn if the user is already familiar with the Macintosh pull-down menu format. The manual is very well done, covering all aspects in great detail with numerous examples. Incorporated in the **About VersaTerm-Pro** under the **open apple** is a help file covering all the major commands discussed in the manual.

Phone communications are facilitated by the ability to preprogram up to eight numbers which can be dialed from a pull-down menu. In addition, there is an **Auto Redial** feature that facilitates linking to heavily used phone networks. The system queries the user before disconnecting, making it virtually impossible to accidentally hang-up.

To speed login and execution of frequently used commands, up to ten separate string macros with 128 or fewer characters can be stored (under a label which need not be the same as the string itself) and executed from a pull-down menu. While each command normally executes a carriage return, this feature can be over-ridden.

VersaTerm-Pro exploits the mouse to its best advantage for text editing. On a VAX mainframe running the VMS, the mouse can be used to highlight text and copy it to the Mac clipboard. The information then can be pasted into the document at a different location or into a separate application.

An even more powerful capability is to use the **EMACS** mouse to control the cursor in the EDT edit mode. A file called "edtini.edt" must first be created defining the control characters which shift the cursor. When in the EDT text editor, there are two mouse cursors which can be used. The standard cursor is for highlighting and copying text. If the **Option** key is depressed, the cursor switches to **Edit Cursor**. (The **Show Edit Cursor** option may be selected for continual use of this feature.) When the **Edit Cursor** is pointed to a different location from the screen cursor, VersaTerm-Pro calculates and sends the necessary number and types of control commands to shift the screen cursor. This is a real time saver for users of mainframe screen editors. In EDT, the backspace key sends the cursor to the beginning of the line. With the **Map BS-Del** setting, the backspace key acts as a delete key as in regular Macintosh operations.

For users of the Unix operating system, two files entitled **termcap** and **terminfo** are included. These provide a description of the standard VT100 as well as the VT102 insert and delete character.

Since VersaTerm-Pro emulates Tektronix terminals, graphic output can be viewed, stored, and manipulated as a standard Macintosh document. Using the **Auto 'Tek 4014' Entry** option under **Extras**, the terminal emulation can be set to switch from VT100 (which is most suitable for standard text uses) to the Tek 4014 when a graphic output is received. A particularly elegant feature is the saving in memory of the VT100