SCIENCE NEWS®

The Weekly Newsmagazine of Science

This Week

Research Notes

Articles

Departments

Letters

BASIC problems

We are amused to read of True BASIC and the desires of John G. Kemeny to "see the language get around as widely as possible" ("A BASIC standard for digital dialects," SN: 12/24 & 31/83, p. 404). The reason the (old) BASIC is extended in so many ways is because as a programming language, it doesn't possess adequate control and data structures to write easily correct programs and programs longer than 15 or 20 lines. Significant programs written in BASIC are unreadable and thus hard to maintain, and most importantly are impossible to verify as correct, so that they are prone to containing errors throughout their lifetimes. Edsger Dijkstra, one of the world's renowned computer scientists, wrote that: "It is practically impossible to teach good programming to students that have had a prior exposure to BASIC: as potential programmers they are mentally mutilated beyond hope of regeneration."

So why bother reworking old dogs? The new BASIC standards perpetuate a notation and a language that cannot transcend its inherent, fundamental flaws. Outside Dartmouth most people use Pascal (SN: 12/1/79 p. 377; 9/24/73, p. 202), a simple language with sufficient control and data structures. to aid in teaching programming as a systematic discipline. Even the College Board Advanced Placement course in Computer Science has selected Pascal, helping spur its use in secondary schools.

Andy Mickel
Apollo Computer Inc.
Lincoln Fetcher
Minn-Ed-Computing Consortium
Minneapolis, Minn.

Cloud capsules

In reference to the article on Magellanic Clouds (SN: 12/17/83, p. 390), you may want to note the following:
1) It is the SMC Remnant and the Mini-Magellanic Clouds (not the SMC and the MMC Remnant);
2) the paper by Mathewson and Ford from the Tubingen symposium, a copy of which was sent me by Dr. Mathewson, refers only to 21-cm line observations of interstellar gas, while your article discusses mainly stars (though you do mention the use of two optical telescopes); and
3) the question of how the Magellanic Clouds were named seems more complicated than it is reported in your article or in my texts; the New York Times for 2/24/83 reported that "The 15th-century Portuguese navigators, as they neared the Cape of Good Hope, saw two 'shynynge white clouds ....' They called them Cape Clouds. A few decades later a historian, Antonio Pigafetta, named them for Fernando Magellan, who was then circumnavigating the world."

Jay M. Pasachoff
Director, Hopkins Observatory
Williams College
Williamstown, Mass.
*The report we used came through the Australian government and did deal with stellar velocities.
—Ed.*

Correction: In "Dioxin strategy announced by EPA" (SN: 12/24 & 31/83, p. 406), dioxin should have been described as an unwanted by-product of the manufacturing process for certain herbicides; 2,3,7,8-TCDD is not, as stated, a polymer of dioxin.