

WORDPLAY IN ASTRONOMY

MARK ISAAK
Sunnyvale, California

No area of study creates more new names than astronomy. The USNO B1.0 database includes about a billion stars, and the Guide Star Catalog II will contain about two billion stars and galaxies when it is done. Unfortunately for logologists, though, the vast quantity of names requires that virtually all of them be formed by conventional rules with no room for creativity. Most astronomical names are simply combinations of letters and numbers indicating their location and/or time of discovery. Still, there is leeway in many places for astronomers to show their sense of humor in their selection of names. Here are some stories that I, a layman, have encountered in my following of astronomical news.

Comets are named after their discoverers. Other newly discovered objects in the solar system start with a provisional name consisting of an ever-increasing arbitrary number, the year of discovery, and an arbitrary letter combination. Sometimes, though, these nondescript names leave their mark. The first trans-Neptune object, (15760) 1992 QB1, served as the source for the name “cubewano” (from QB1), which applies to the class of such objects.

There are about 150,000 discovered asteroids, but only about 15,000 have been named beyond their provisional names. The guidelines are relatively loose—do not be offensive; do not use political names from someone dead less than 100 years; do not sell names. Because of the quantity, the name is accompanied by a number, assigned sequentially. They range numerically from 1 Ceres to (at last count) 99942 Apophis; alphabetically from 20813 Aakashshah (for Aakash Shah, a 2004 Intel International Science and Engineering Fair winner; it also happens to be a pyramid word) to 2098 Zyskin (for a Russian astronomer). The 9000th asteroid is named HAL, after the HAL 9000 computer from *2001: A Space Odyssey*.

Asteroids 1227 through 1234 are named 1227 Geranium, 1228 Scabiosa, 1229 Tilia, 1230 Riceia, 1231 Auricula, 1232 Cortusa, 1233 Kobresia, 1234 Elyna. (All are plant genera, except 1231 is for the plant species *Primula auricula*, and Ricea is named for amateur astronomer Hugh Rice.) The initials spell out G. Stracke, a German astronomer who had requested that no planet be named after him.

There are also 30439 Moe, 30440 Larry, 30441 Curly, and 30444 Shemp.

In browsing the blog of the Annals of Improbable Research, I came across a tidbit from Oct. 19, 2004 calling attention to the following article: Alan W. Harris and Alan W. Harris, “On the revision of radiometric albedos and diameters of asteroids,” *Icarus* 126: 450-454 (1997).

The article includes the following footnote:

1. Since the authors' contributions to this work were equal, the order listed is alphabetical. And yes, the middle names are both "William".

Ralph Alpher, with his PhD advisor George Gamow, planned a paper calculating the proportions of hydrogen, helium, and heavier elements expected from the Big Bang. Gamow humorously suggested that the eminent physicist Hans Bethe be added as an author so that the author list would read Alpher, Bethe, Gamow, a play on the first three Greek letters. The paper was published as Alpher, R. A., H. Bethe, G. Gamow, 1948. "The origin of chemical elements." *Physical Review* 73: 803. Appropriately, this issue was dated April 1.

Gamow wrote later, in his book *The Creation of the Universe*,

Dr. Bethe, who received a copy of the manuscript, did not object, and, as a matter of fact, was quite helpful in subsequent discussions. There was, however, a rumor that later, when the alpha, beta, gamma theory went temporarily on the rocks, Dr. Bethe seriously considered changing his name to Zacharias.

The close fit of the calculated curve and the observed abundances is shown in Fig. 15, which represents the results of later calculations carried out on the electronic computer of the National Bureau of Standards by Ralph Alpher and R. C. Herman (who stubbornly refuses to change his name to Delter.)

Alpher, however, resented the inclusion of Bethe's name on the manuscript, thinking it would overshadow his contribution.

It is believed that stars are born in clouds of gas and dust which go through a stage known as an "evaporating gaseous globule" or e.g.g. It is no coincidence that the prototypical e.g.g. was discovered in the Eagle Nebula.

The universe is mostly dark matter. From its gravity we know it is there, but we do not know what it is. One hypothesis is that the dark matter consists of Weakly Interacting Massive Particles, or WIMPs. Later came a competing hypothesis that the dark matter consists of large bodies of normal cold matter, called MAssive Compact Halo Objects, or MACHOs.

The Holy Grail of cosmology is a Grand Unified Theory, commonly abbreviated GUT. It has been pointed out, though, that in Greek, the "th" of "theory" is a single letter, so a better acronym would be GUTH. Despite the prestige of the cosmologist who made this observation, Alan Guth, the suggestion has not caught on.

Finally, a word-related story from physics. Professor Jack H. Hetherington was warned by a colleague that a journal editor was likely to return manuscripts that used “we” and “our” in single-author publications. Rather than undertake the tedious job of revising his manuscript, he simply added a co-author, his Siamese cat Chester, sired by Willard. For more legitimacy, he added two more initials, F. D. (from *Felix domesticus*), and published the paper as: J. H. Hetherington and F. D. C. Willard, 1975. Two-, three-, and four-atom exchange effects in bcc ^3He . *Physical Review Letters* 35: 1442-1444. Other papers contain references to “FDC Willard, private communication” or contain an acknowledgment to him for helpful discussions.

A Crossword Documentary

Crosswords and the people who do them are the subject of the documentary “Wordplay” which premiered at the Sundance Film Festival the weekend of Jan 21-22. The film uses the career of Will Shortz, puzzle editor of the New York Times crossword, as its focus: his love of puzzles as a boy, his creation of an undergraduate major in Enigmatology, and his subsequent career including the editing of puzzle magazines and the hosting of the American Crossword Puzzle Tournament each year in Stamford, Connecticut (for another view of this tourney, read *Crossworld*, reviewed in the February 2006 Word Ways).

Crosswords have captured the attention of many notables. Clinton relates how the Times Crosswords would give him a moment to relax and take his mind off his White House job. Mike Mussina (pitcher for the New York Yankees) worked on the Times crossword while in the bullpen. “The Daily Show” host Jon Stewart is seen working the Times crossword, shouting “Come on, Shortz! Bring it!” Shortz said the film has left him pleasantly puzzled at how crosswords resonate emotionally with people: “Crosswords are such a cerebral thing, you don’t expect it to have so much emotional connection with people. But this movie is funny, you laugh a lot, there are touching moments, people crying. It’s exciting. You usually don’t associate crossword puzzles with excitement, but every time I watch this movie—and I’ve seen it four times—every time I watch it, my hands get clammy and I start to sweat.”

(adapted from an Associated Press story, Jan 24 2006)