LETTERS

An excellent article, but...

Mr. Mork's excellent article, "A User's View of Charge Coupled Device Imaging" (Spring 1992), contained an unfortunate factual error, which was then compounded by a mathematical error. I refer to his report on page 66 of the frequency of the world's record laser QSO as "7.5×10^{14} Hz (7.5 teraHertz)." Since Tera (and yes, it should be capitalized) represents 10^{12}, the frequency listed should, of course, have been 750 THz.

Only that was not the frequency KY7B and WA7LYI actually used for their record shot. Seven-hundred and fifty THz is just at the boundary of visible and ultraviolet light (see **Figure 1**), and the contact used visible light. I know, because I've seen the videotape, and the signal was surely visible to my eye, which doesn't respond to 750 THz. Besides, "they observed a beam spread of 250 feet at the detector," so the signal must have been visible.

Helium Cadmium lasers can operate in several modes, and can produce both visible and ultraviolet outputs. The most common of these devices (produced by Omnichrome, Liconics, and Nihon Dempa Kojyo Co. Ltd., among others) produce signals at 325 nm (a frequency of 923.1 THz) and 441.6 nm (which corresponds to 679.3 THz). This latter frequency corresponds to blue visible light, and since the laser beam in the videotape appeared blue to my eye, I suspect this mode was being utilized.

I am aware of no HeCd laser which operates at or near 750 THz, although that's close to the answer you get if you calculate the geometric mean of the blue and μV HeCd modes. There is an interesting "white light laser" produced by Nihon Dempa Kojyo, which produces 40 mW of output distributed between the wavelengths of 533.7 nm, 537.8 nm, and 635.nm. Taken together, these spectral components appear quite white. The highest ouput power HeCd of which I am aware comes from Omnichrome, and puts out 150 mW of decidedly blue light. I'd like to get my hands on two of those for a record attempt!

Dr. H. Paul Schuch, N6TX
Professor of Electronics
Pennsylvania College of Technology
Williamsport, Pennsylvania