Earth-Moon-Earth (EME) enthusiasts around the world continue to show grit with the 29th annual, 2007 ARRL International EME Competition. Advances in weak signal reception, communications software and operating ability are pushing this competition and its participants to new heights.

Good science is the very essence of EME contesting — as much good science as one can muster with a large dose of concentration and gusto. High scores come to those who put all they have into listening for weak signals in the noise for hours on end to dig out that next log entry. One’s hope of contact quantity is secondary to signal strength and quality. Many EME contesters log fewer unique call signs in the entire event than a small HF station in just an hour or two on 20 meters in an HF contest!

Participation offers the ultimate climate for honing one’s operating skills and ability, communications apparatus and stamina. Yet the ARRL International EME Competition has something to offer everyone with interests in weak signal communications. Categories are available from the big gun CW and SSB diehard, to the single antenna QRP digital newcomer, on all bands from 50 MHz to light.

Entrants can participate at levels from the single operator, mixed mode and assisted classes attractive to the EME newcomer to the most intense and historical sense of EME — the prestigious single operator, analog category. There are categories for multiple operators, digital-only enthusiasts and more, described in the online contest rules.

The 2007 competition was held on the last weekends of September, October and November — each 48 hours long.

September was for 2304 MHz and up. The October and November weekends were for 50 through 1296 MHz. All three segments are entered by the all-band competitor.

The results yielded 183 log entries, a total of nine new logs over 2006 with some big scores. Only single-band 222 MHz had no entries this year. Nearly 10,100 contacts were completed — up more than 30% from nearly 7200 last year, apparently due to the increase in digital, mixed mode and assisted entries.

First and second overall highest scores were achieved by two veterans of the EME community. The highest overall score goes to the K1JT team with a score of 4,253,400 points in the Multi-Op All-Band Mixed Mode. Second place overall goes to Alex, RU1AA, who used both analog and digital modes exclusively on 144 MHz to achieve 2,618,700 points. The top scorers in all categories are shown in Table 1. (The complete score listings, including several very close races can be found at www.arrl.org/contests/results/.)

In the 144 and 1296 MHz analog categories activity was often brisk, with the big guns working many smaller stations on CW. The Assisted categories, gaining popularity, were also very competitive. There were new stations trying SSB EME, too. In October, for instance, many signals could be found on both 144 and 1296 MHz as these bands continue to show high occupancy. Also of increasing interest are 2304 MHz and up, with an enlarging population on 13 cm.

EME contesting can be a reality to anyone able to construct the hardware and station infrastructure for enjoying weak signal operating at its finest. Many hams seem awed and intimidated by EME communications — in part due to photographs of fantastic antennas, marvelous high power amplifiers and such. The Web site results of several leading stations in the online version of this article show that complexity of EME need not be extreme. In fact, a single Yagi, 150 W station with a reasonable receive system sensitivity, along with some understanding of EME, may compete on 444 MHz — the mainstay band. Many compete on 144 MHz as it is the quickest and most affordable way to get “on the moon.” Personally, I have enjoyed 2 meter EME going on two decades.

The results show several “baseline” markers for 144 MHz EME success with a modest station. I consider these to consist of four long Yagis (see photo on page 5), a kW at the antenna and the best receiving system you can achieve. At this level of participation there will be few stations you cannot work. Granted, a modest station cannot complete a contact with the instant ability of a big gun, but it can compete! Smaller stations can work the big guns, too. Got 6 meters and up? Try the ARRL International EME.