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One "Most Wanted" number from the wanted lists issued with Page 128 was factored on Page 129. Womack factored 2,947+ by the Special Number Field Sieve. This was the largest SNFS factorization performed on equipment entirely owned by the factorer. This number, 2,947+, was the last Cunningham number $b^n \pm 1$ with $b^n < 10^{290}$ to be factored. About 27 numbers with $b^n < 10^{300}$ remain.

One "More Wanted" numbers from the wanted lists issued with Page 127 were factored on Page 129. Batalov, Dodson, Bai and Wagstaff factored 5,421+ by the General Number Field Sieve. Two "More Wanted" numbers from the wanted lists issued with Page 128 were factored on Page 129. Propper found a small factor of 3,617+ by the Elliptic Curve Method and then finished the composite cofactor by GNFS. Bos, Kleinjung and A Lenstra factored 2,1093− by Coppersmith's "Factorization Factory" variation of SNFS .

One "Smaller-but-Needed" number was factored on Page 129. Batalov, Bai and Wagstaff factored 2,2466L by SNFS.

New wanted lists are enclosed.

Extensions to bases 5 and 7 have been added to the regular tables.

ECMNET means Paul Zimmermann, Alex Kruppa, Torbjörn Granlund, Michel Quercia, Witold Grabysz, Vilmar Trevisan and many helpers who use the GMP-ECM program of Kruppa and Zimmermann.

There were ten new champions for factoring Cunningham numbers on this page. Recall that a champion is one of the best two records in its class. The P139 of 2,1129− in # 6285 was a new champion (second place) for largest penultimate factor. The P146 of 2,1109− in # 6302 was a new champion (first place) for largest penultimate factor. The C327 of 2,1129− split in # 6285 was a new champion (first place) for the Special Number Field Sieve by size. It was soon replaced by the C331 of 2,1153− in # 6287. This number was replaced by the C355 of 2,1193− in # 6297. The numbers 2,1081−, 2,1129−, 2,1153−, 2,1159− and 2,1193− each reigned as champion (first place) for the Special Number Field Sieve by difficulty, with the last two of these being the current champions. A list of recent champions is enclosed.

The first holes factored on Page 129 are in # 6273, # 6274 and # 6276. The second holes factored on Page 129 are in # 6279, # 6283, # 6301 and # 6302. The only third hole factored on Page 129 is in # 6296. The fourth holes factored on Page 129 are in # 6282 and # 6284. No fifth holes were factored on Page 129.

The smallest new factor reported on Page 129 has 58 digits. See # 6299. The largest number factored on Page 129 has 355 digits. See # 6297.

See the URL `http://www.prothsearch.net/fermat.html` for Wilfrid Keller's list of all known Fermat factors. Several new factors were found recently.

No new Mersenne primes have been found since the last page. The current largest known prime is $2^{57885161} - 1$. See the URL `http://primes.utm.edu/primes/` for Chris Caldwell's database of the largest known primes (updated hourly).

See the URL `http://homes.cerias.purdue.edu/~ssw/cun/index.html` for the online Cunningham book. The full text is available as an ebook at: `http://www.ams.org/publications/ebooks/ebooks` .

According to the September, 2014, AMS Notices, Marvin Wunderlich died on September 27, 2013. Marv contributed to the Cunningham Project by factoring many numbers using the Continued Fraction Method in the 1970s.

Please send me any address changes.

Keep the factors coming!

Sam Wagstaff