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All ten "Most Wanted" numbers from the wanted lists issued with Page 107 were factored on Page 108. NFSNET″ factored 2,788+, 6,298+, 7,271− and 12,227+. Irvine and Littin factored 10,232+. Silverman factored 2,776+. Mersenneforum, Womack and NFSNET″ factored 3,512+. Mersenneforum and Womack factored 2,821−. Davis factored 7,268+. Buhrow factored 2,799+. All were factored using the Special Number Field Sieve except 10,232+, which was done by the General Number Field Sieve.

Two "More Wanted" numbers from the wanted lists issued with Page 107 were factored on Page 108. Davis factored 3,506+ and NFSNET″ factored 10,241−. Both were factored using SNFS.

No "Smaller-but-Needed" numbers were factored on Page 108.

New wanted lists are enclosed.

The factorizations of 2,776+, 2,788+ and 2,799+ on this page complete the work on all numbers $2^n \pm 1$ with $n \le 800$.

CWI means Peter Montgomery, Herman te Riele, Willemien Ekkelkamp and Andrey Timofeev at the Centrum voor Wiskunde en Informatica in Amsterdam. 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. NFSNET″ is a group of factorers lead by Richard Wackerbarth and Paul Leyland. They are supported in the sieving effort by Bruce Dodson (Lehigh U), Jeroen Demeyer (U Gent) and Greg Childers (Cal State Fullerton), as well as the contributions of a number of additional volunteer sievers. See their URL `http://www.nfsnet.org` . Mersenneforum is a group with a section interested in factoring. See `http://www.mersenneforum.org` .

There was one new champion for factoring Cunningham numbers on this page. Recall that a champion is one of the best two records in its class. The C165 of 6,383+ split in # 5604 was a new champion (second place) for the General Number Field Sieve. A list of recent champions is enclosed.

The first holes done on Page 108 are in # 5606, # 5609, # 5612, # 5615, # 5619, # 5625, # 5626, # 5628, # 5629, # 5630 and # 5631. The second holes done on Page 108 are in # 5621, # 5622 and # 5627. The third holes done on Page 108 are in # 5613 and # 5620. The only fourth hole done on Page 108 is in # 5603. No fifth hole was done on Page 108.

The smallest new factor reported on Page 108 has 51 digits. See # 5605. (Factors in # 5608 and # 5602 also had 51 digits, but were larger.) The largest number factored on Page 108 has 268 digits. See # 5605. (The number factored in # 5602 also had 268 digits, but was smaller.)

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

See the URL `http://primes.utm.edu/primes/` for Chris Caldwell's database of the largest known primes (updated daily). No new Mersenne primes have been found since $2^{32,582,657} - 1$.

See the URL `http://www.cerias.purdue.edu/homes/ssw/cun/index.html` for the online Cunningham book. The full text is available at the AMS web site: `http://www.ams.org/online_bks/conm22` .

Please send me any address changes.

Keep the factors coming!

Sam Wagstaff