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Four "Most Wanted" numbers from the wanted lists issued with Page 104 were factored on Page 106. NFSNET″ factored 2,779+ and 5,317−. Kruppa et al. factored 3,499+. T. Womack factored 7,263−. All were factored using the Special Number Field Sieve.

Five "More Wanted" numbers from the wanted lists issued with Page 104 were factored on Page 106. NFSNET″ factored 5,323−, 6,283− and 6,284+. Silverman factored 2,1582L. Those four numbers were factored using the SNFS. Finally, B. Dodson used the Elliptic Curve Method to factor 6,292+.

Three "Smaller-but-Needed" numbers were factored on Page 106. S. Irvine used the General Number Field Sieve to factor 7,623M and 7,380+. P. Leyland factored 2,1798M, also by the GNFS.

New wanted lists are enclosed.

The factorization of 3,499+ completes the base 3 tables for all exponents below 500.

CWI means Peter Montgomery, Herman te Riele and Willemien Ekkelkamp 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` .

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. Kruppa, Silverman, Leyland, Bahr, Franke and Kleinjung factored 3,499+ and found it had a 113-digit penultimate factor, setting a new record (second place) for that category. A list of recent champions is enclosed.

The first holes done on Page 106 are in # 5535, # 5538, # 5549, # 5551, # 5552, # 5557, # 5558, and # 5562. The second holes done on Page 106 are in # 5541 and # 5543. The only third hole done on Page 106 is in # 5540. The only fourth hole done on Page 106 is in # 5547. The fifth holes done on Page 106 are in # 5544, # 5545 and # 5560.

The smallest new factor reported on Page 106 has 48 digits. See # 5532. The largest number factored on Page 106 has 238 digits. See # 5557. This is the first time that the largest number factored on a Cunningham page was done by the NFS.

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

See the URL `http://www.utm.edu/research/primes/largest.html` for Chris Caldwell's list of all of the largest known Mersenne primes. 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