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One “Most Wanted” number from the wanted lists issued with Page 116 was factored on Page 117. NFS@Home factored 10,272+ by the Special Number Field Sieve.

Three “More Wanted” numbers from the wanted lists issued with Page 116 were factored on Page 117. NFS@Home factored 2,1766L, 2,1774M and 3,562+, all by SNFS.

Six “Smaller-but-Needed” numbers were factored on Page 116. Batalov and Dodson factored 5,865M and 2,2346L by the General NFS. Edwards and King factored 6,368+ by GNFS. Nair factored 7,396+, Muller and Thome (team Caramel) factored 2,2154M and Silverman and Leyland factored 2,1179+, all by SNFS.

Since so few Wanted numbers were factored, no new wanted lists are enclosed.

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. CADO is a group led by Alex Kruppa. NFS@Home is a group led by Greg Childers.

There were no new champions for factoring Cunningham numbers on this page. Recall that a champion is one of the best two records in its class. A list of recent champions is enclosed.

The first holes done on Page 117 are in # 5892, # 5903, # 5916 and # 5920. The second holes done on Page 117 are in # 5906 and # 5910. The third holes done on Page 117 are in # 5897, # 5898 and # 5899. The fourth holes done on Page 117 are in # 5891, # 5893 and # 5894. The fifth holes done on Page 117 are in # 5911 and # 5919.

The smallest new factor reported on Page 117 has 54 digits. See # 5908. The largest number factored on Page 117 has 281 digits. See # 5912.

See the URL <http://www.prothsearch.net/fermat.html> for Wilfrid Keller’s list of all known Fermat factors. Several impressive factors of $F_m = 2^{2^m} + 1$ with small m were found in the past year. The first factors of F_{14} and F_{22} were found, as were a sixth factor F_{12} and a third factor of F_{19} .

No new Mersenne primes have been found since the last page. The current largest known prime is $2^{43112609} - 1$. See the URL <http://primes.utm.edu/primes/> for Chris Caldwell’s database of the largest known primes (updated hourly).

See the URL <http://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