Department of Computer Sciences
Purdue University
West Lafayette, IN 47907
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Two "Most Wanted" numbers from the wanted lists issued with Page 118 were factored on Page 120. NFS@Home factored 5,386+ by the Special Number Field Sieve. Dodson found a 56-digit factor of 2,932+ by the Elliptic Curve Method. (On Page 105, # 5505, he had found a 59-digit factor of this number.) Then Batalov and Dodson finished the 144-digit composite cofactor of 2,932+ by the General Number Field Sieve.

Four "More Wanted" numbers from the wanted lists issued with Page 118 were factored on Page 120. NFS@Home factored 3,569− and 6,347+ by SNFS. Dodson factored 2,1822L by ECM. Dodson found a 60-digit factor of 11,263− by ECM. Then Batalov and Dodson finished the 149-digit composite cofactor of 11,263− by GNFS.

Three "Smaller-but-Needed" numbers were factored on Page 120. Edwards and King factored 5,418+ by GNFS. Batalov, Dodson and King factored 3,610+ by GNFS. Silverman and the group mersenneforum factored 2,1870L by SNFS.

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. NFS@Home is a group led by Greg Childers.

There were three new champions for factoring Cunningham numbers on this page. Recall that a champion is one of the best two records in its class. The C287 of 2,997+ split in # 6002 is a new champion (second place) for Special Number Field Sieve by size. The C182 of 2,1099+ split in # 5993 was a new champion (second place) for General Number Field Sieve by size for a short time. It was removed when the C184 of 2,1040+ in # 6001 became a new champion (second place) for General Number Field Sieve by size. A list of recent champions is enclosed.

The first holes done on Page 120 are in # 5989, # 5992, # 5997, # 5998, # 6015, # 6017 and # 6018. The second holes done on Page 120 are in # 5990, # 6000 and # 6014. The third holes done on Page 120 are in # 6005 and # 6006. The fourth holes done on Page 120 are in # 5995 and # 5999. The fifth holes done on Page 120 are # 5994 and # 6001.

The smallest new factor reported on Page 120 has 52 digits. See # 5986. The largest number factored on Page 120 has 353 digits. See # 5987.

See the URL `http://www.prothsearch.net/fermat.html` for Wilfrid Keller's list of all known Fermat factors. Recently, new factors were found for F_{1201}, F_{17} and F_{42}.

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