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Three "Most Wanted" numbers from the wanted lists issued with Page 111 were factored on Page 112. Batalov and Dodson factored 3,509+, 6,304+ and 10,241+, all by the Special Number Field Sieve.

Nine "More Wanted" numbers from the wanted lists issued with Page 111 were factored on Page 112. Batalov and Dodson factored 2,1642L, 5,347−, 5,346+, 6,314+ and 11,233+, NFS@Home factored 5,353+, 6,316+ and 6,317+, and Womack and Dodson factored 12,256+, all by the Special Number Field Sieve.

Three "Smaller-but-Needed" numbers were factored on Page 112, all by the General NFS. Buhrow factored 2,1103+, Schindel factored 2,1766M and CADO factored 2,1105−.

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. Mersenneforum is a group with a section interested in factoring. See http://www.mersenneforum.org . CADO is a group led by Alex Kruppa. NFS@Home is a group led by Greg Childers.

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 C228 of 12,256+ split in # 5739 was a new champion (second place) for Special Number Field Sieve by SNFS Difficulty. A list of recent champions is enclosed.

The first holes done on Page 112 are in # 5734, # 5737, # 5740, # 5742, # 5744, # 5747, # 5748, # 5753, # 5758 and # 5760. The second holes done on Page 112 are in # 5746, # 5754 and # 5759. The third holes done on Page 112 are in # 5749 and # 5756. The fourth holes done on Page 112 are in # 5733, # 5736 and # 5739. The fifth holes done on Page 112 are in # 5735 and # 5755.

The smallest new factor reported on Page 112 has 52 digits. See # 5733. The largest number factored on Page 112 has 268 digits. See # 5743.

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

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