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One "Most Wanted" number from the wanted lists issued with Page 122 was factored on Page 123. Batalov and Dodson factored 7,326+ by the Special Number Field Sieve.

No "More Wanted" numbers from the wanted lists issued with Page 122 were factored on Page 123.

Seven "Smaller-but-Needed" numbers were factored on Page 123. Batalov and Dodson factored 3,608+, 3,616+ and 3,697− by the General Number Field Sieve. They also factored 3,1473M and 3,710+ by SNFS. Branger factored 3,732+ by SNFS. Wagstaff factored 3,713− by the Elliptic Curve Method.

The old wanted lists are enclosed with notations for numbers already factored.

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 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 C197 of 7,374+ split in # 6084 was a new champion for the General Number Field Sieve by size. Although the P72 of 3,713− in # 6093 was not a new champion, it is the third largest factor ever found by ECM and the only 72-digit one. A list of recent champions is enclosed.

The only first hole done on Page 123 is in # 6091. No second, third or fourth holes were factored on Page 123. The only fifth hole done on Page 123 is in # 6092.

The smallest new factors reported on Page 123 have 55 digits. See # 6099 and # 6113. (It is somewhat surprising that these factors did not come from the base 3 tables, which were extended at the beginning of Page 123, and which contain slightly easier numbers. Most entries on Page 123 come from the base 3 extensions.) The largest number factored on Page 123 has 294 digits. See # 6092.

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_m with $m = 2606$, 1246013 and 1494096.

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 will soon appear as an ebook at: `http://www.ams.org/publications/ebooks/ebooks` .

Please send me any address changes.

Keep the factors coming!

Sam Wagstaff