Jonathan Bayless* (baylessj@husson.edu) and Dominic Klyve. New bounds and computations on prime-indexed primes.

If the prime numbers are listed in increasing order, then the prime-index primes are those which occur in a prime-numbered position in the list. In 2009, Barnett and Broughan established a prime-index prime number theorem analogous to the standard prime number theorem. We improve and generalize their result with explicit bounds, bound the sum of reciprocals of prime-index primes, and present empirical results on prime-index prime versions of the twin prime conjecture and Goldbach’s conjecture. (Received September 17, 2013)