COMPLETE EXPOSITION OF NON-PRIMES GENERATED FROM A GEOMETRIC REVOLVING APPROACH BY $8 \times 8$ SETS OF RELATED SERIES, AND THEREBY *AD NEGATIVO* EXPOSITION OF A SYSTEMATIC PATTERN FOR THE TOTALITY OF PRIME NUMBERS

STEIN E. JOHANSEN
INSTITUTE FOR BASIC RESEARCH, DIVISION OF PHYSICS,
PALM HARBOR, FLORIDA, USA
AND
NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY,
DEPARTMENT OF SOCIAL ANTHROPOLOGY, TRONDHEIM, NORWAY
STEIN.JOHANSEN@SVT.NTNU.NO

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Abstract. We present a certain geometrical interpretation of the natural numbers, where these numbers appear as joint products of 5- and 3-multiples located at specified positions in a revolving chamber. Numbers without factors 2, 3 or 5 appear at eight such positions, and any prime number larger than 7 manifests at one of these eight positions after a specified amount of rotations of the chamber. Our approach determines the sets of rotations constituting primes at the respective eight positions, as the complements of the sets of rotations constituting non-primes at the respective eight positions. These sets of rotations constituting non-primes are exhibited from a basic 8×8-matrix of the mutual products originating from the eight prime numbers located at the eight positions in the original chamber. This 8×8-matrix is proven to generate all non-primes located at the eight positions in strict rotation regularities of the chamber. These regularities are expressed in relation to the multiple $11^2$ as an anchoring reference point and by means of convenient translations between certain classes of multiples. We find the expressions of rotations generating all non-primes located at same position in the chamber as a set of eight related series. The total set of non-primes located at the eight positions is exposed as eight such sets of eight series, and with each of the series completely characterized by four simple variables when compared to a reference series anchored in $11^2$. This represents a complete exposition of non-primes generated by a quite simple mathematical structure. Ad negativo this also represents a complete exposition of all prime numbers as the union of the eight complement sets for these eight non-prime sets of eight series.

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We start out with a recapitulation of an excerpt (with some linguistic adjustments and added with one inserted paragraph for the sake of clarity) from the article by Johansen (2006: 127-9) presented as lecture at 18. Workshop in Hadronic Mechanics at University of Karlstad, Sweden, June 2005, regarding the first of two methods announced by the article to disclose the generative pattern of prime numbers: