Abstract Submitted for the APR20 Meeting of The American Physical Society

Dark Matter and Surplus Quarks (for Baryons) Generated by Oblique Confinement of Quarks LEIF MATTSON, Department of Physics, University of Gothenburg, SE-412 96 Gothenburg, Sweden — For surplus quarks (and baryons) to emerge after Big Bang, a nonequilibrium binding and superconductor-like condensation of quark-antiquark pairs must occur before the electroweak (EW) symmetry breakdown (similar for leptons). As shown here, the formerly unknown dimensionless coupling to the Ginsburg-Landau like potential and the scale parameter in the EW theory then become microscopic functions of the massive quark and antiquark fields, thus defining the matter-antimatter asymmetry and the dark matter content in the Universe at correct orders of magnitude. Thereby also the number of free parameters in the Standard Model is reduced. Key words: Quark Confinement; Matter-Antimatter Asymmetry, Dark Matter; Black Holes; New Vacuum; Baryogenesis; Inflation; WIMPs.

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Date submitted: 13 Jan 2020 Electronic form version 1.4