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An Amplified Standard Model ANTONIO COLELLA[1], IBM — The Standard Model (SM) is the gold standard but must be amplified to include the graviton, dark matter, and dark energy. Four independent theories were selectively amplified without sacrificing their integrities including: superstring, particle creation, Higgs forces, and spontaneous symmetry breaking. Amplifications of superstring theory included: 129 fundamental matter/force particles resided in Planck cubes as closed superstrings; and a super force doughnut physical singularity resided in a Planck cube, t = 0. Amplifications of particle creation included: An intimate relationship existed between particle creation time and particle's temperature (e.g., W^- at 10exp-12 s and 10exp15 K); matter creation began after inflation; by end of matter creation, only 22 permanent matter/force particles remained. Amplifications of Higgs forces included: Extremely high temperatures caused spontaneous symmetry breaking, not Higgs forces; matter particles and their associated Higgs forces were one and inseparable; sum of 8 Higgs force energies of 8 permanent matter particles was dark energy; and spontaneous symmetry breaking was bidirectional. These amplifications were summarized in An Amplified Standard Model figure.

[1]Reference: Home page www.antonioacolella.com, article A Two-Step Integrated TOE- Revision B, superstring pp. 2-7, particle creation pp. 9-10, Higgs forces pp. 12-13, spontaneous symmetry breaking pp.13-18.

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