The Macro Model of the Inequality Process and the Surging Relative Frequency of Large Wage Incomes JOHN ANGLE, Inequality Process Institute, Maryland, USA — Particles are randomly paired in the Inequality Process (IP), a particle system scattering a positive quantity, wealth. Each particle has a parameter, ω, the fraction of wealth lost in a loss whose probability is 0.5. The stationary distribution of the wealth of particles with ω_ψ is approximated by a Γ pdf, the IP's macro model, with shape and scale parameters expressed in terms of ω_ψ. The model's dynamics are driven by the product, $\tilde{\omega}_t \mu_t$, where $\tilde{\omega}_t$ is the harmonic mean of the ω's in the population at time t and μ_t, the population mean of wealth at time t. This Γ pdf model fits the annual distribution of annual wage income in the U.S. 1961-2003. These data also confirm that the time-series of scalar statistics of wage income that labor economists think are produced by the U.S. distribution of wage income being "hollowed out" (bimodal), the increasing dispersion of wage income and the surging relative frequency of large wage incomes, are produced by the distribution being stretched over larger wage incomes, as implied by the IP's macro model when $\tilde{\omega}_t \mu_t$ increases. The IP's macro model includes wage income distribution dynamics into statistical mechanics. To appear in The Econophysics of Markets and Business Networks.

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