TWENTE_POSTER22..

http://www.icec25-icmc2014.org/; http://indico.cern.ch/event/244641/authors
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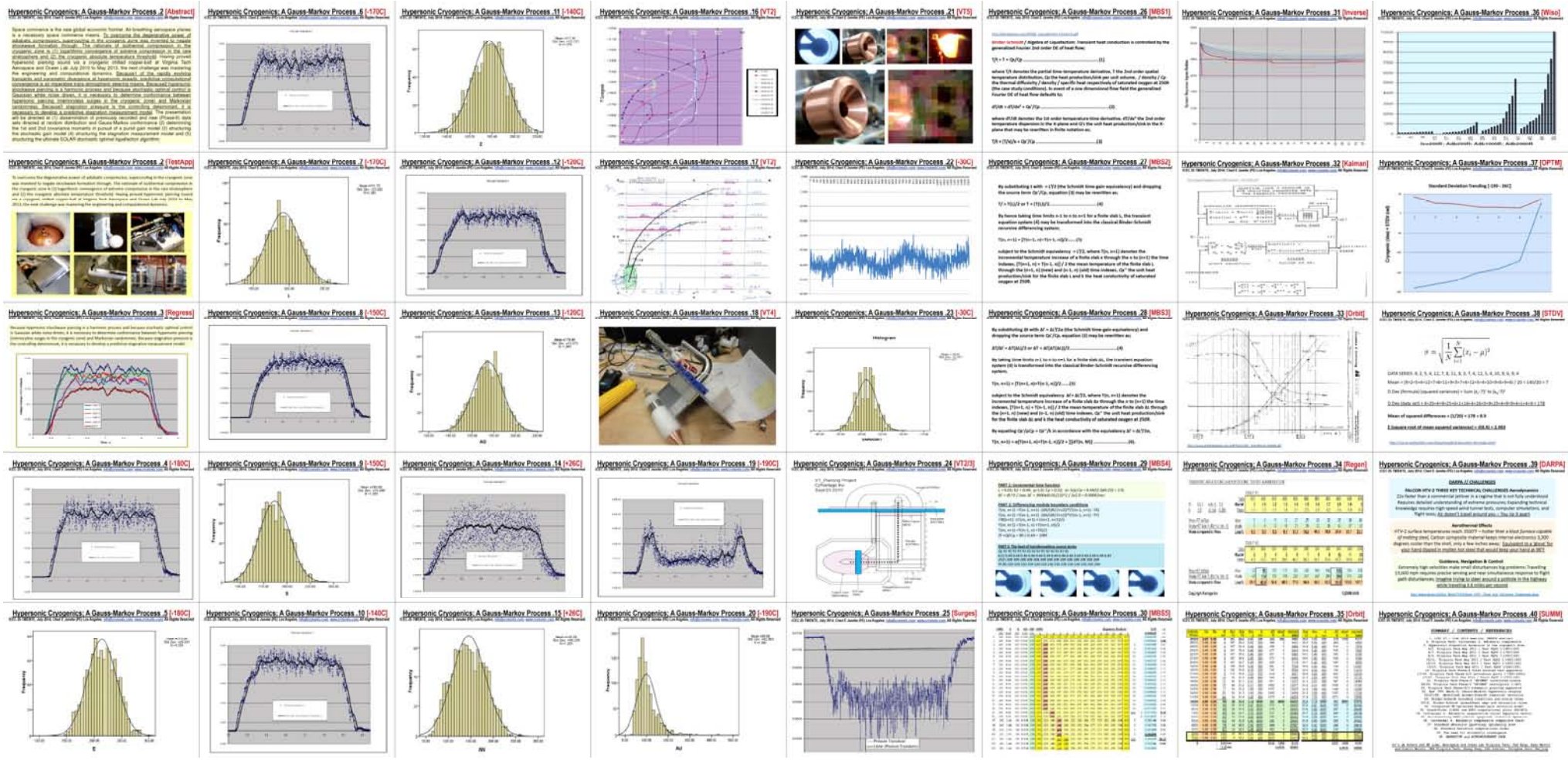

ABSTRACT: Space commerce is the new global economic frontier. Air-breathing aerospace planes is a necessary space commerce means. To overcome the degenerative power of adiabatic compression, supercooling in the cryogenic zone was invented to negate shockwave formation through. The rationale of isothermal compression in the cryogenic zone is (1) logarithmic convergence of extreme compression in the rare stratosphere and (2) the cryogenic absolute temperature threshold. Having proved hypersonic piercing sound via a cryogenic chilled copper-ball at Virginia Tech Aerospace and Ocean Lab July 2010 to May 2013, the next challenge was mastering the engineering and computational dynamics. Because of the rapidly evolving transients and parametric divergence at hypersonic speeds, predictive computational convergence is an imperative trans-atmospheric steering means. Because hypersonic shockwave piercing is a harmonic process and because stochastic optimal control is Gaussian white noise driven, it is necessary to determine conformance between hypersonic piercing (memoryless surges in the cryogenic zone) and Markovian randomness. Because stagnation pressure is the controlling determinant, it is necessary to develop a predictive stagnation measurement model. The presentation will be directed at (1) dissemination of previously recorded and new (Phase-6) data sets directed at random distribution and Gauss-Markov conformance (2) determining the 1st and 2nd covariance moments in pursuit of a purist gain model (3) structuring the stochastic gain model (4) structuring the stagnation measurement model and (5) structuring the ultimate SOLAR stochastic optimal liquefaction algorithm. The presentation comprises PART "A" (items 1/2) (white noise) and PART "B" (items 3/4/5) (stochastic liquefaction algorithm) as independent platforms.