

THE 1959 CLASS REFLECTION

Any one of a number of momentous national and international events occurring during our 1955-1959 college student years are worthy of emphasis, but a singular extraordinary shocker was the surprise successful launching of the USSR twenty-four inch diameter spherical orbiting satellite sputnik 1 on 4 October 1957. Although a momentary undeniable achievement, F&M students mirrored the grudging admiration of a previously apathetic stunned American public. The scientific community was jolted from comfortable complacency into frenetic catch up activity to close the space exploration gap. Not since the World War II Manhattan atom bomb project were there such superhuman multidiscipline efforts costing billions focused on a single objective. In relatively quick succession came the selection of first generation astronauts, suborbital and orbital flights, and a constellation of successful space exploration missions culminating in fulfilling President Kennedy's later daunting challenge of a manned lunar landing. Secondary results include remarkable advances in multiple disciplines and unforeseen limitless future frontiers. A second event is chosen because it is all but forgotten. In 1955 two Swedish scientists, Tjio and Levan, published their discovery that the normal human haploid genome consists of 46 chromosomes, 22 pairs of autosomes plus

two sex-determining chromosomes. Since the 1920s humans were thought to have 48 chromosomes. After publication of their conclusive findings, several researchers from around the world wrote to the authors to confess that they also found 46 chromosomes but dismissed this observation because it was contrary to “established knowledge.” Not since Gregor Mendel’s 19th century pea plant observations had there been a greater contribution to genetics. The ensuing half century plus has seen the introduction of the Denver classification system, definition of genetic medical abnormalities, cancer research and forensic legal applications.

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