

Pluto and plutonium — any connection?

by Nick Kollerstrom M.A.

Uranium 238 Uranium 239 Neptunium 239 Plutonium 239

The above series shows the stages in the formation of plutonium from naturally-occurring uranium, and that three extra-heavy metals have been named after the outer planets. They belong to the seventh period, the last period containing the heaviest elements, of the periodic table, all of whose elements are radioactive. The above series shows a transmutation, that is the changing of one element into another. So large are the nuclei that all seven of the possible electron shells are occupied. The seventh period of the periodic table is thus occupied with elements that are in a state of perpetual disintegration.

Time was when alchemists dreamed of transmuting a few grams of gold, and spent a whole lifetime in pursuit of this aim. Now one ton is created every year in Britain of an unnatural, man-made element. But whereas gold is the most perfect and noble of metals, plutonium is surely the most terrible element in existence, of which atom bombs are made. About ten pounds, or a grapefruit-sized lump of plutonium makes a bomb. An awesome and one cannot but feel rather hellish transmutation takes place inside all of Britain's nuclear power stations in which the above reaction turns uranium fuel into plutonium. And then what happens to it?

Pluto — we digress now — was god of the Underworld. At least for astrologers, Pluto represents sudden and disruptive energies, the 'bomb in the basement'. Their views on Pluto seem to be to a considerable extent derived from the unleashing of nuclear power soon afterwards. The planet Pluto was predicted in 1919 and discovered in 1930. In 1932 artificial transmutation began, with neutron bombardment of atomic nuclei. Atomic energy was first unleashed in 1938. The new metal plutonium was recognised and named after the new planet in 1941.

Without taking too seriously specific associations between the other planets and these extra-heavy elements, one cannot deny that Pluto as underworld god presides appropriately over plutonium. It is a powerful metaphor.

As befits its infernal character, reactor-grade plutonium will ignite spontaneously if exposed to the air, and so has to be surrounded by nitrogen all the time. When the staff of Windscale went on strike, the army had to be called in to ensure that the nitrogen supplies to the plutonium store were maintained, otherwise it would have caught fire. And airborne plutonium is the most dangerous form as it can then be inhaled: its toxic dose in the body is measured

