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BIOGRAPHY

V V Apollonov is the leading specialist in the area of basic principles of creation and development of high power/energy laser systems and high power laser radiation interaction with matter. He has made an outstanding input into creation and development of new branches of science. He is the author of 1924 research publications which includes 19 books, 546 presentations, 954 articles and 148 patents.

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SUPER LONG CONDUCTIVE CHANNEL FOR ENERGY TRANSMISSION

For many years the attempts to create super long conductive channels were taken in order to study the upper atmosphere and to settle special tasks, related to the energy transmission. There upon the program of creation of "Impulsar" represents a great interest, as this program in a combination with high voltage high repetition rate electrical source can be useful to solve the above mentioned problems. It looks like as some kind of "renaissance of N Tesla ideas" for the days of high power lasers. The principle of conductive channel production can be shortly described as follows. The "Impulsar"- laser jet engine vehicle propulsion take place under the influence of powerful high repetition rate pulse periodic laser radiation. In the experiments the CO₂ laser and solid state Nd: YAG laser systems had been used. Active impulse appears thanks to air breakdown (<30km) or to the breakdown of ablated material on the board (>30km), placed in the vicinity of the focusing mirror-acceptor of the breakdown waves. With each pulse of powerful laser the device rises up, leaving a bright and dense trace of products with high degree of ionization and metallization by conductive nano particles due to the ablation process.