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The article deals with a brief review on creation of SC «Meteor», «Resource-O», «Elektro», «Meteor-M», «Universitetsky – Tatyana-2» in VNIIEM. Advanced development of SC of new generation: SC «Canopus-B», «Meteor-MP», «Ionozond», «Ionosphere», «Mikhail Lomonosov» is considered as well.

Key words: meteorological satellites, hydrometeorology and ambient monitoring, technogenic and extraordinary situations monitoring.

V.P. Khodnenko (FGUE «NPP VNIIEM»)

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A history of creation of first meteorological satellites – space electrotechnic laboratory «Omega», «Meteor-1», «Meteor-2», «Meteor-3» is presented. Original engineer solutions in structures of various satellites systems are brought.

Key words: SC «Meteor-1», «Meteor-2», «Meteor-3», meteorological satellites, meteorological systems.

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A history of creation of electrical equipment for spacecraft and launch vehicles is presented.

Key words: rotary converter, static converter, multiple contact relay, hysteresis-reluctance motors, synchro motors, direct current micromotors, noncontact direct current motors, flywheel motor, gyroforce stabilizer, solar batteries orientation system.

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A history on discovery of polar ionosphere elements called «polarization jet» (PJ) is considered herein. A review of publications dedicated to the problem of revealing and experimental confirmation of existence of polarization jet is maid.

Key words: SC «Meteor», polarization jet, polar ionosphere, auroral phenomenon, electric field, plasmas, course ionic sensor.

V.A. Sokolov, T.N. Galkina (FGUE «NPP VNIIEM»)

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A short review of history of development and manufacture of electrical equipment for control and protection systems for NPP equipped with WWER reactors is given in the article.

Key words: water pressurized reactor (WWER), electrical equipment, subsynchronous motor, control and protection system, power unit.

I.I. Desyatnikov (FGUE «NPP VNIIEM»)

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Stages of creation of «SKALA-mikro» design in context of history are considered in the article.

The system «SKALA-mikro» has characteristics providing a qualitative monitoring of NPP. The most significant moments of application of the design in power units of various NPP are given.

Key words: NPP power unit, «SKALA» system, «SKALA-mikro» system, «Karat» system, Leningradskaya NPP, Kurskaya NPP.

V.M. Dolkart (FGUE «NPP VNIIEM»)

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The article deals with a work on computing technics: electronic data processing machine «M-3», digital process control computer «VNIIEM-1», «V-3M». The usage of these machines in «SKALA» and «AIST» systems, on-board computers and other machines is discussed in the article.

Key words: electronic data processing machines, digital process control computers, NPP, spacecraft.