

Passage of research internship by undergraduates (SPIID-2) at the Baikonur cosmodrome

32 undergraduates of the Department of Space Technics and Technology, students of the SPIID program (1,5 years) underwent a research internship on the basis of the International Space School named after V.N. Chelomey in the city of Baikonur since March 23, 2018 to April 1, 2018.

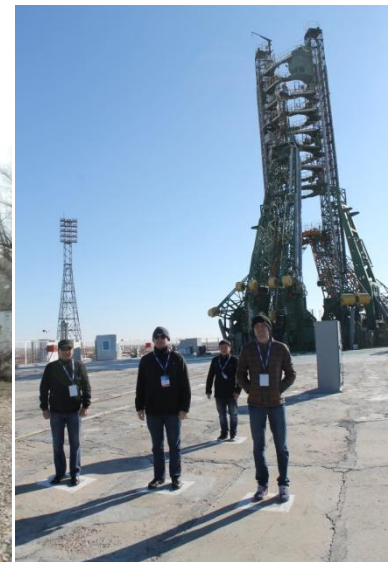
According to the internship program, undergraduates of the department "Space technics and technology" with the head of the training Kalmanova D.M. arrived at the International Space School named after V.N. Chelomey, after which they visited the Space Cosmic Museum of the International Space School, got acquainted with the laboratories of rocket modeling, space modeling and robotics. A briefing was conducted on the visit of the Baikonur cosmodrome (assembly and testing complexes of LV and spacecraft, ground launching complexes, measuring points, filling stations, technical positions, etc.), as well as the training sessions of the school's director, Honored Teacher of the Russian Federation Shatalov D.V. on projects of aerospace education "Space astronomy", astronomical observations of the starry sky and planets: Venus, Mars, Saturn, Jupiter, the Moon.



A consultation was held with the teachers of the ISS (International Space School) named after V.N. Chelomey and MAI (Moscow Aviation Institute). Practical training in the International Space School V.N. Chelomey on projects of aerospace education "Baikonur conducting", "Lessons from Space", "Cosmic Modeling". Launches of rocket models. Lectures of teachers and specialists from the ISS, MAI, "JV(Joint Venture) Baiterek ", " Kazakhstan Garysh Sapary "on cosmonautics. Practical training in the International Space School V.N. Chelomey by specialization: 1) Spacecraft; 2) Microprocessors and microprocessor systems. Consultation with the teachers ISS them V.N. Chelomey and MAI.



The students visited space missile complex of RTSS - Energia-Buran, the SMC of the H-1 lunar rocket, the Soyuz-FG SMC 11A511 rocket. Visit to the assembly and testing building of the LV 11A511 - Soyuz-FG (LV N-1 and 11K25 Energia) - comp.112-1, as well as the assembly and testing site of the 11A511-Soyuz-FG booster rocket - MIC comp.121-1. 251- landing complex OK "Buran" - airfield " Yubileiny "



The landing complex of OK "Buran" was examined at the airfield "Yubileiny". Launch Complex of the SR "Energia" – UCSS (universal complex stand start) pl. 250. Inspection of the SC SR "Energia" - UCSS - pl. 250.

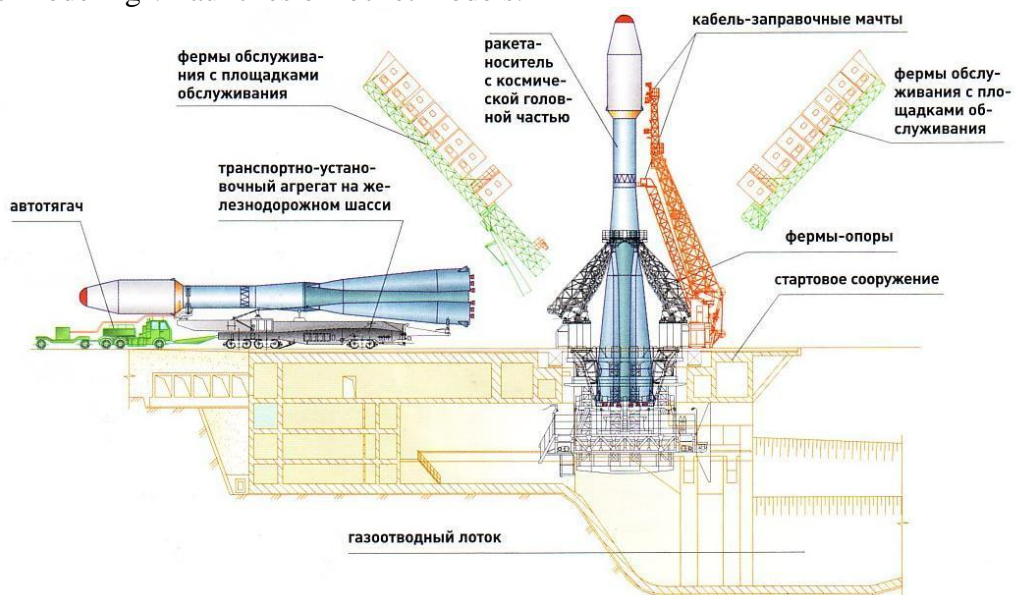


They visited the spacecraft "Soyuz-FG" - "Gagarin start", as well as the launch pad 17P31-5 (pl.1) "Gagarin start", within the framework of which the monument of the First

satellite was visited at the Gagarin launch (pl. 1). and the historical MIK pl.1A, where preparations were made for the launch of the First Satellite and the First Cosmonaut of the Earth Yu.A. Gagarin. The magisters saw a helicopter pad and an IP-1 on the pl. 18 - measuring point 1 of the cosmodrome (a historical exhibition of radio antennas of various types and different generations), after which lecturers and consultations on the themes of the master's project were conducted by the teachers of the ISS named after V.N. Chelomey.



Visiting by undergraduates MIK TPC "SOYUZ - MS" and TGC "Progress - MS". Visit to the workplace to check the tightness of spacesuits from the crew of cosmonauts before the flight to MIK building MIK 254-1. Practical training in the International Space School. V.N. Chelomeya on projects of aerospace education "Baikonur conducting", "Lessons from Space", "Cosmic Modeling". Launches of rocket models.



Technical complex SMC "Proton - M", filling station - neutralization station (ZNS) 11G141. Visit to the filling and neutralizing station 11G141 (pl. 91A, room 101-1-room for refueling spacecraft and the Republic of Belarus, the room for the dispensers "O" and "N", the receiver room, the room for the pneumatic panel "O", units 11G426, 11G427. ISS named after V.N. Chelomey and MAI.



Visit to the SK8P882K of the Proton-M rocket, Pl.81 and Pl.84 (the remote command post of the AUCP facility 84-1, the compressor center facility 84-10). Practical training in the International Space School. V.N. Chelomeya on projects of aerospace education "Space astronomy", astronomical observations of the starry sky and planets: Venus, Mars, Saturn, Jupiter, the Moon. Consultation with the teachers ISS them. V.N. Chelomey and MAI.



Visit to the assembly and testing building - MIK RN "Soyuz-2.1a" -building pl. 31-40. A visit to the launch complex of the Soyuz-2.1a launch vehicle - 17P31-6 (SK pl.31). Visit to the MIK of the Zenit rocket, building 42-1. Consultation, Training, Lectures.

ВИРТУАЛЬНАЯ МОДЕЛЬ САУ ДВИГАТЕЛЯ



Visit to the Museum of Cosmonautics GDK pl.10. Visiting historical and memorial places of the city of Baikonur: the monument to the space rocket Soyuz, the monument to the combat intercontinental ballistic missile 15A15, the monuments to academicians: Koroleva, Yangel, Chelomey, Glushko, Barmin, Ryazansky, Kuznetsov, the Science-Space monument in honor of the Soviet-American space flight Apollo-Soyuz, a monument to the dead missile testers (24.10.1960, the R-16 ICBM), laying flowers at the monument to the dead rocket testers of the pl. № 10.



Visiting the Cosmonauts Training Center of the CAO Yu.A. Gagarin pl.17. Visit the hotel "Cosmonaut". Conference hall of the hotel "Cosmonaut".



Based on the results of the research internship, the undergraduates compiled the main theses on the chapters of the master's project, some illustrative material was collected for the text of the master's project. Results of an internship in cosmonautics and a cycle of practical training in cosmonautics at the Baikonur Cosmodrome and in the International Space School for undergraduates of the Department of Space Technics and Technology of the Faculty of Physics and Technology of the ENU named after L.N. Gumilev.

After the delivery and protection of the graduation papers, solemn presentation of the certificates and diplomas to participants of the internship and a cycle of practical cosmonautics classes at the Baikonur Cosmodrome and the International Space School took place. And also awarding diplomas winners of the competition for the project "Space Modeling".

Head of Research Internship,
senior lecturer of the department
"Space technics and technology"
Kalmanova D.M.