

# The Preliminary Program of the Second Russian - European Summer Space School

## Future Space Technologies and Experiments in Space

---

### 28.06 - Monday

- 9.00-10.00 Registration of participants.  
Opening Ceremony: greetings, introduction of participants.
- 10.00-10.45 **Presentation 1.** International cooperation programs of the Samara Rocket Space Centre 'TsSKB-Progress' (TsSKB).
- 10.45-11.00 Break.
- 11.00-12.00 **Presentation 2.** Microgravitational space platforms 'Foton-M/Bion-M': performance and possibilities (TsSKB).
- 12.00-13.00 **Presentation 3.** The Foton/Bion projects at ESA: past, present, and future (ESA/ESTEC).
- 13.00-14.00 Lunch.
- 14.00-15.00 **Presentation 4.** YES2 project to-day: results and future program (Delta-Utec).
- 15.00-16.00 **Lecture 1.** Satellite radio-navigation and its application in YES2 project.
- 16.00-16.15 Break.
- 16.15-17.15 **Presentation 5.** Place of Samara in the Russian cosmonautics (visit SSAU aerospace museum).
- 17.15-18.00 General participants meeting.

### 29.06 - Tuesday

- 9.00-10.45 Mini-conference of YES2 students : statement and results.
- 10.45-11.00 Break.
- 11.00-13.00 Mini-conference of YES2 students : statement and results (continue).
- 13.00-14.00 Lunch.
- 14.00-16.00 Workshop explanation, teams set-up and work identification and planning.
- 16.00-16.15 Break.
- 16.15-18.00 Workshop on groups.

### 30.06 - Wednesday

- 9.00-10.45 Workshop on groups.
- 10.45-11.00 Break
- 11.00-13.00 Workshop on groups.
- 13.00-14.00 Lunch.
- 14.00-16.00 Workshop on groups.
- 16.00-16.15 Break.
- 16.15-18.00 Workshop on groups.

### 01.07 - Thursday

- 9.00-10.00 **Lecture 2.** Orbital movement and tether deployment.
- 10.00-11.00 **Lecture 3.** Aerodynamics of recoverable capsules.
- 11.00-11.15 Break.
- 11.15-12.15 **Lecture 4.** Dynamics of recoverable capsule outside atmosphere and on the stage of attitude control in an atmosphere.
- 13.15-13.15 **Lecture 5.** The stabilized movement of a recoverable capsule in an atmosphere and dispersion of trajectories.
- 13.15-14.00 Lunch.
- 14.00-15.00 **Presentation 6.** The program of SSAU space experiments.
- 15.00-17.00 Meeting with Russian Space Agency and European Space Agency officials.
- 17.00-17.15 Break.
- 17.15-18.00 **Presentation 7 (by Russian cosmonaut).**  
Manned space flights and experiments in space.

### 02.07 - Friday

- 9.00-10.00 **Lecture 6.** Thermal flows at movement in an atmosphere.
- 10.00-11.00 **Lecture 7.** Thermal design issues for Foton-M
- 11.00-11.15 Break.
- 11.15-13.00 Workshop on groups.
- 13.00-14.00 Lunch.
- 14.00-16.00 Workshop on groups.
- 16.00-16.15 Break.
- 16.15-18.00 Teams status presentations.

### 03.07 - Saturday

Social program.

### 04.07 - Sunday

Social program.

### 05.07 - Monday

- 9.00-10.45 Briefing and Workshop.
- 10.45-11.00 Break.
- 11.00-13.00 Workshop: planning of tests.
- 13.00-14.00 Lunch.
- 14.00-18.00 Visit SSAU laboratories.

### 06.07 - Tuesday

9.00-17.00 The day of visit Rocket Space Center "TsSKB-Progress".

Visit schedule:

- visiting of "Soyuz" rocket plant;
- visiting of TsSKB museum;
- lunch;
- meeting with administration of RSC;
- presentation of YES2 mission;
- presentation of "Foton" mission simulation.

### 07.07 - Wednesday

- 9.00-10.45 Workshop on groups.
- 10.45-11.00 Break
- 11.00-13.00 Workshop on groups.
- 13.00-14.00 Lunch.
- 14.00-16.00 Workshop on groups.
- 16.00-16.15 Break.
- 16.15-18.00 Workshop: tests set-up.

### 08.07 - Thursday

- 9.00-10.45 Workshop on groups (tests).
- 10.45-11.00 Break
- 11.00-13.00 Workshop on groups (tests).
- 13.00-14.00 Lunch.
- 14.00-16.00 Workshop on groups (tests).
- 16.00-16.15 Break.
- 16.15-18.00 Workshop on groups (tests).

### 09.07 - Friday

- 9.00-10.45 Workshop on groups.
- 10.45-11.00 Break.
- 11.00-13.00 Workshop on groups.
- 13.00-14.00 Lunch.
- 14.00-16.00 Final teams presentations.
- 16.00-16.15 Break.
- 16.15-18.00 Closing ceremony.

### 10.07 - Saturday

The "Fotino" capsule drop test in the country.

### 11.07 - Sunday

Departure of participants

### Subjects of groups:

Group 1: Recoverable capsule (FOTINO): design, manufacturing and testing .

Group 2: Foton located YES Deployer (FLOYD): mechanical, thermal and electronics issues .

Group 3: Mechanical and Data Acquisition Support System (MASS): electronics, instrumentations and radio-navigation .

Group 4: Tether system control and YES2 mission safety.