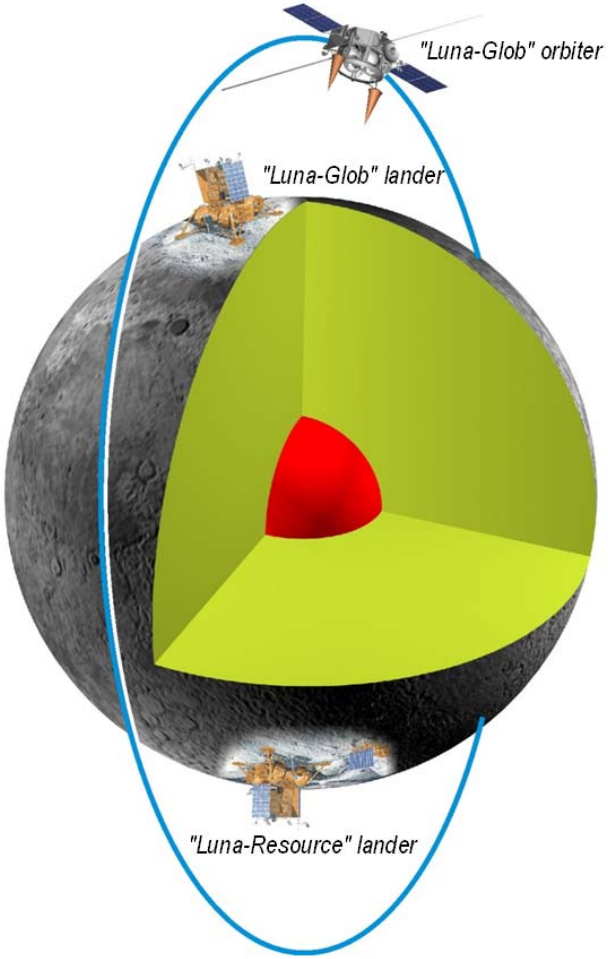


LUNA-GLOB

ORBITER

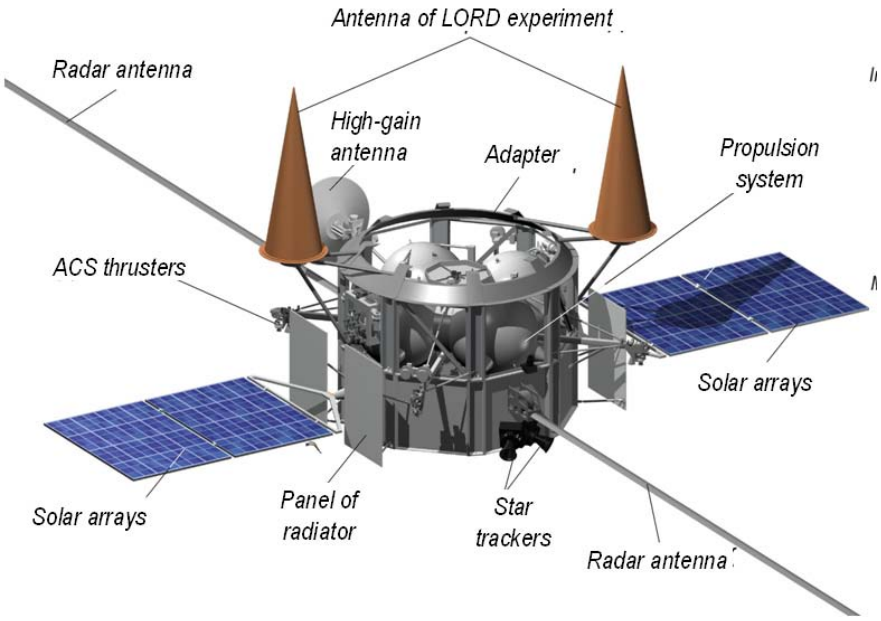
A.A. Petrukovich

IKI RAN

preview

LUNA-GLOB MISSION

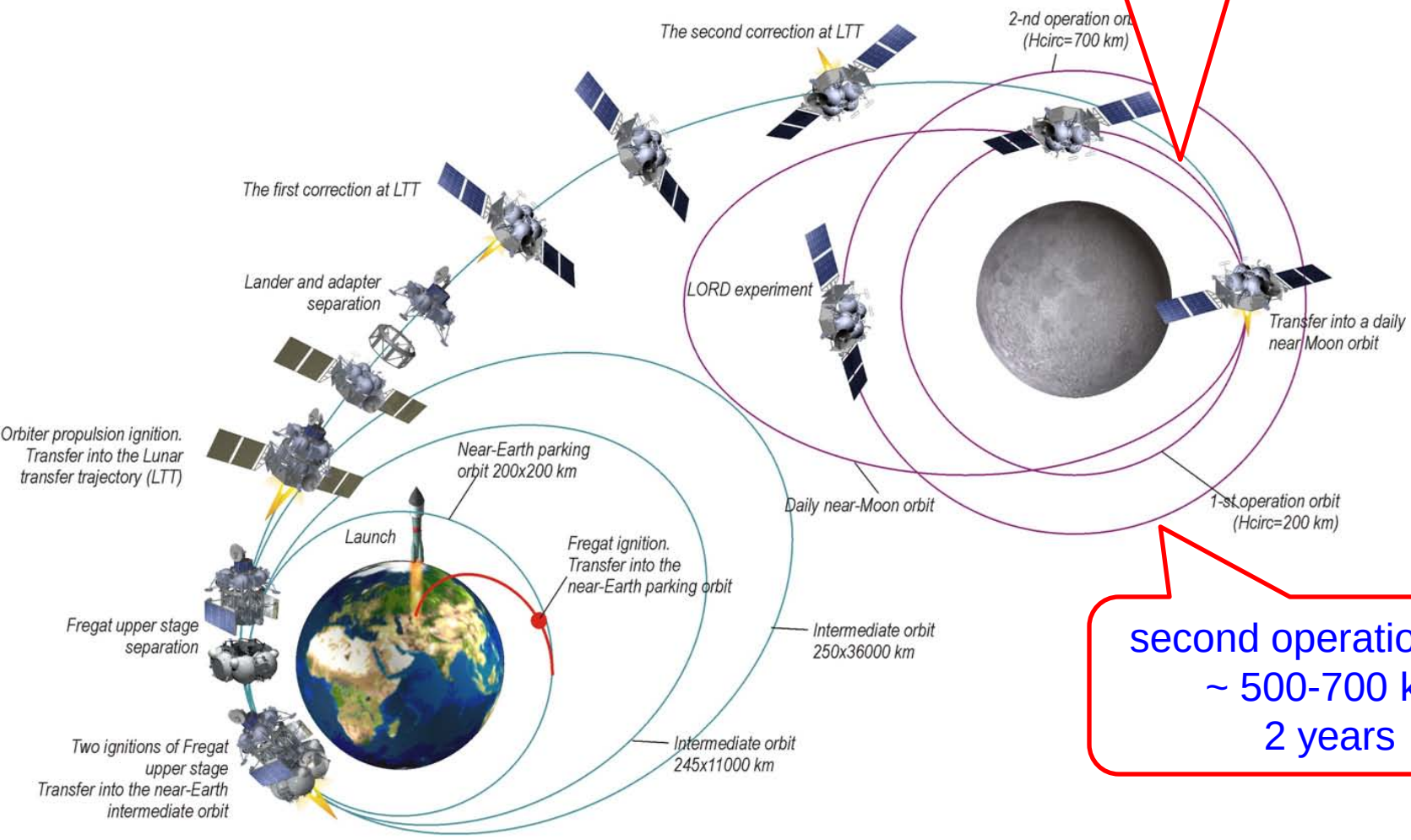
ORBITER



Launcher	"Soyuz-2/1b" Launcher "Fregat" upper stage
Launch year	2014
Spacecraft composition	• Orbiter • Lander
Spacecraft mass	2 967 kg
Orbiter mass	1 657 kg
Lander mass	1 260 kg
Lander communication with the Earth	Directly to the Earth
Mass of scientific equipment on the orbiter	120 kg
Mass of scientific equipment on the lander	50 kg

LUNA-GLOB ORBIT

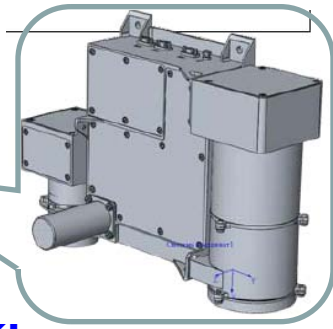
first operation orbit ~
100-150 km
1 year

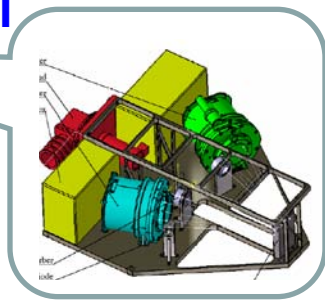


second operation orbit
~ 500-700 km
2 years

1. nadir-looking experiments

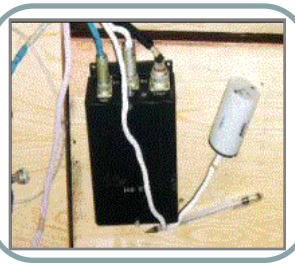
LGNS	neutron and gamma ray	**IKI RAN**
LEVUS	UV exosphere 30-150 nm with scanner	**France/Japan/IKI**
LUMIS	IR mapping 1-16 mkm	**IKI**
LSTK	stereo camera	**IKI**
RLK-L	radar 20 and 200 MHz	**IRE**

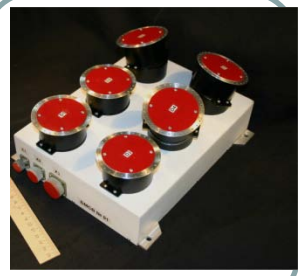




2. circumlunar plasma science

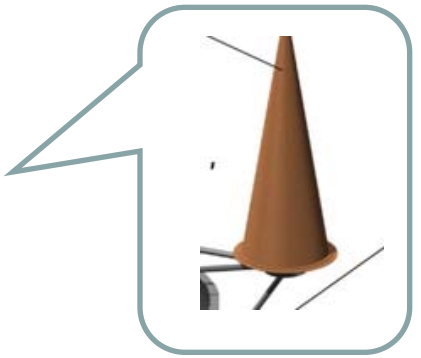
LPMS-LG	magnetometer DC field	**IKI RAN**
LEMI	electromagnetic waves magnetic fluctuations to 40 kHz	**Ukraine/Czech/IKI**
BMSW-LG	solar wind plasma flow direction, velocity, density	**Czech/IKI**
ASPECT-L	energetic particles ions and electrons 20-1000 keV	**Slovakia/IKI**
LINA	ions and neutral spectrometer major ion species 10-30 000 keV	**IKI/Sweden**





3. other

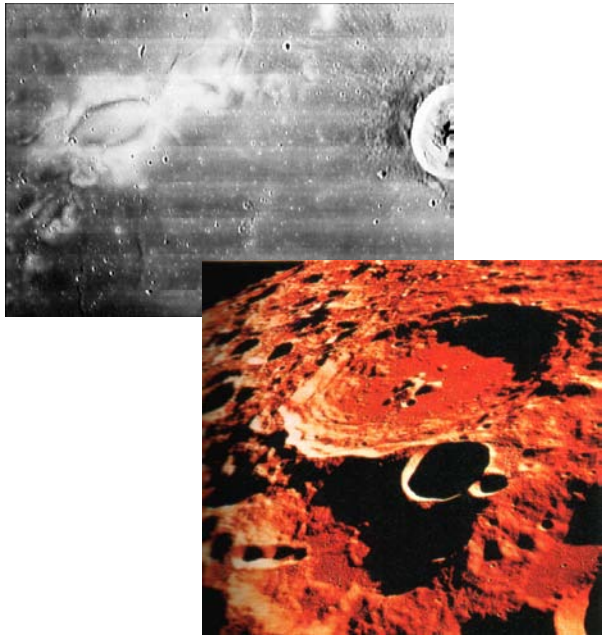
RLK-L	**radio receiver** high-precision orbit measurements	**IKI**
LORD	ultra-high energy cosmic rays moon as natural telescope	**FIAN**
METEOR-L	circumlunar dust	**GeoKhi**
SSRNI2	data management system	**IKI**

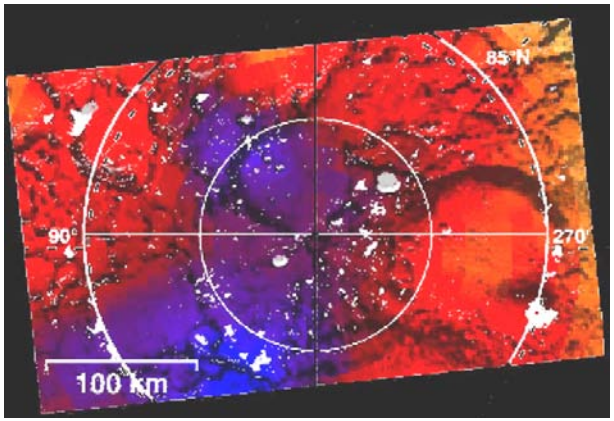


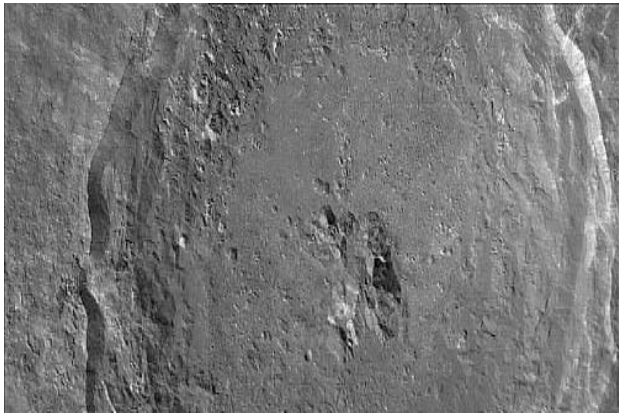
LUNA-GLOB ORBITAL SCIENCE

Moon surface science

- Topography (camera & radar)
- Subsurface structure (radar)
- Hydrogen rich regions (LGNS & LUMIS)
- Chemical composition (LGNS & LUMIS)
- Moon gravity field (radio)



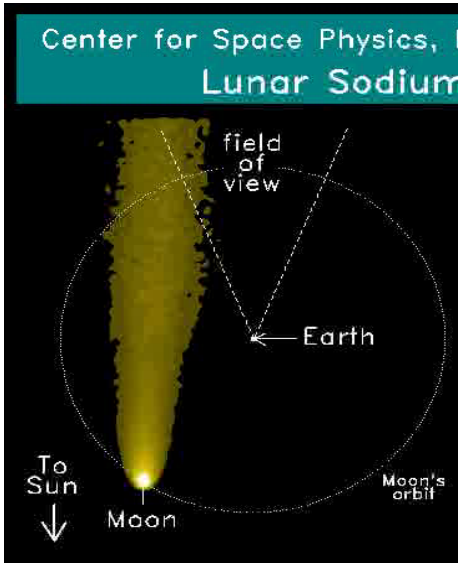


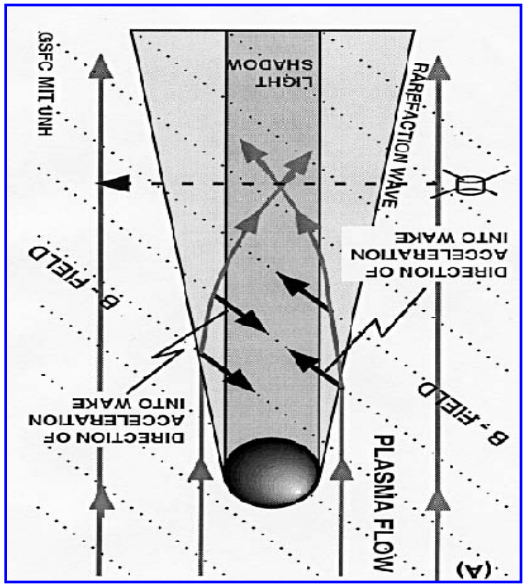


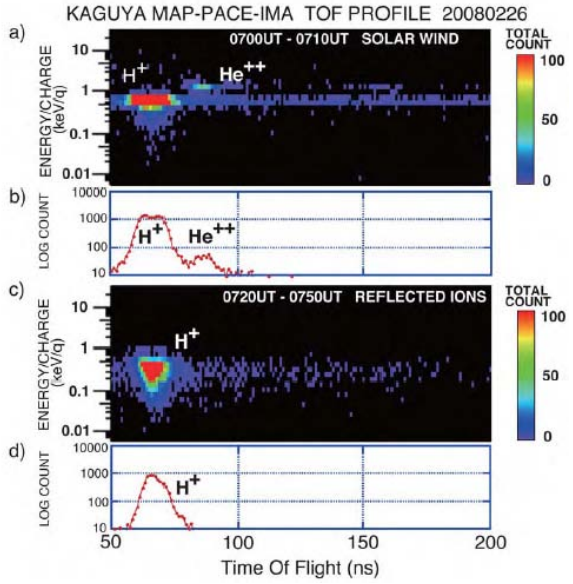
LUNA-GLOB ORBITAL SCIENCE

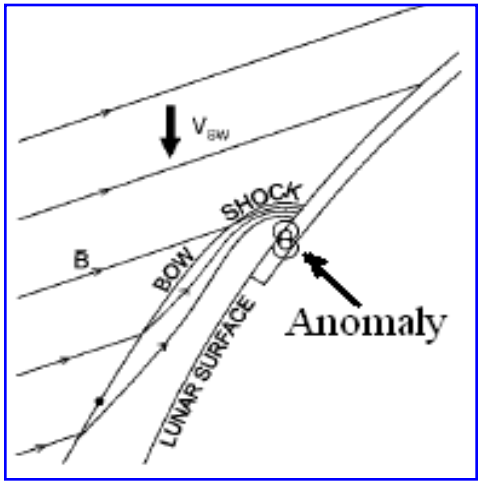
Circumlunar science

- Exosphere (LEVUS & LIMA)
- Solar wind – moon interaction
- Lunar magnetic anomalies
- Micrometeors (METEOR)









LUNA-GLOB ORBITAL SCIENCE

Other science

- Solar wind and magnetotail dynamics
- Ultra-high energy cosmic rays
- UV imaging of heliosphere