

Report on the Europa Lander Workshop

February 9-13th, 2009
IKI, Space Research Institute
Moscow, Russia

K. P. Hand, JPL/Caltech

Overview

- Approximately 40-60 participants
- Numerous scientists from the Russian Academy of Sciences
- Several scientists who have published recent scientific work pertaining to Europa (e.g. Oleg Kuskov and Victor Kronrod)
- Good JPL and APL representation

Technical Status of Russian Europa Lander

- Self-contained Russian built and launched craft consisting of a Viking-style lander and an orbiter
- Focus of the mission is the lander
- Orbiter will have some scientific instrumentation but the primary objective for the orbiter is as a communications relay
- Proton rocket with an upper-stage 'Breeze-M' booster is expected to be the launch vehicle

'Expected' heritage for Russian Europa Lander

- Lavochkin Association is responsible for building most of the Russian robotic probes
- The 'electrorockets' for descent are apparently under development at Lavochkin and are, in some form, being used for the Phobos-Grunt mission.
- The landing stage propulsion system will be developed and tested as part of the Russian 'Luna-Glob' mission slated for 2012.

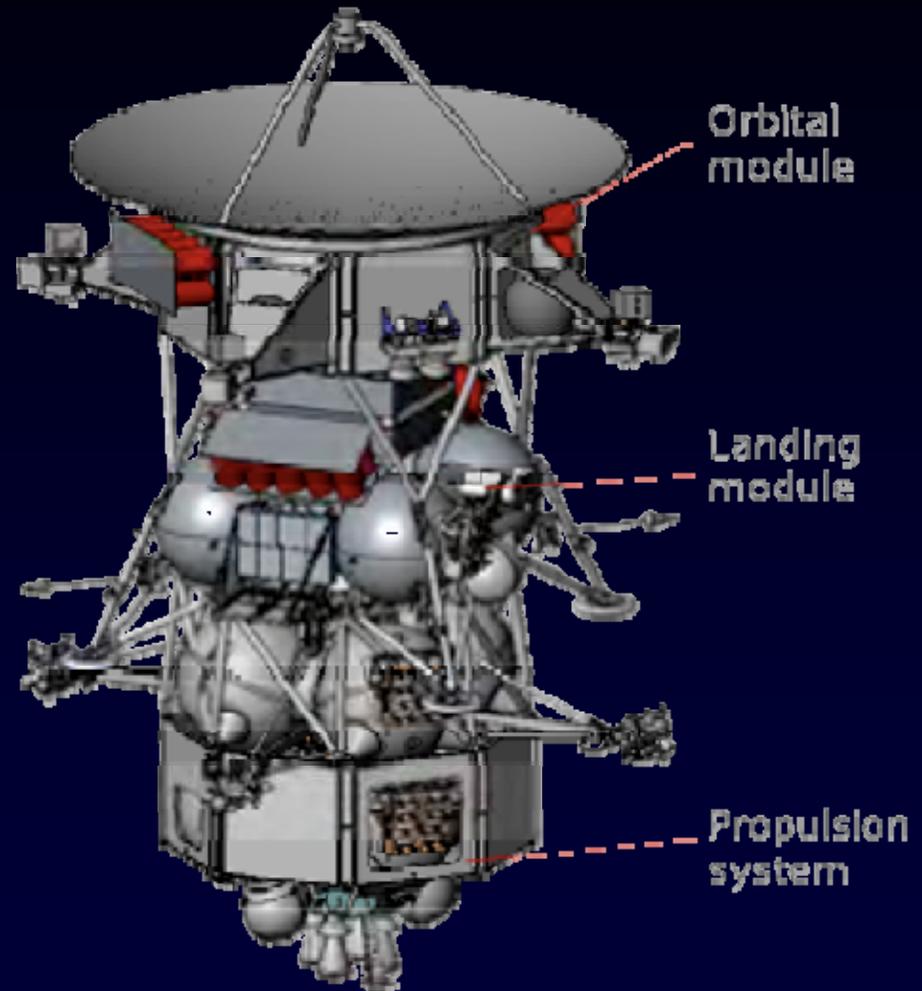
Phobos-Grunt

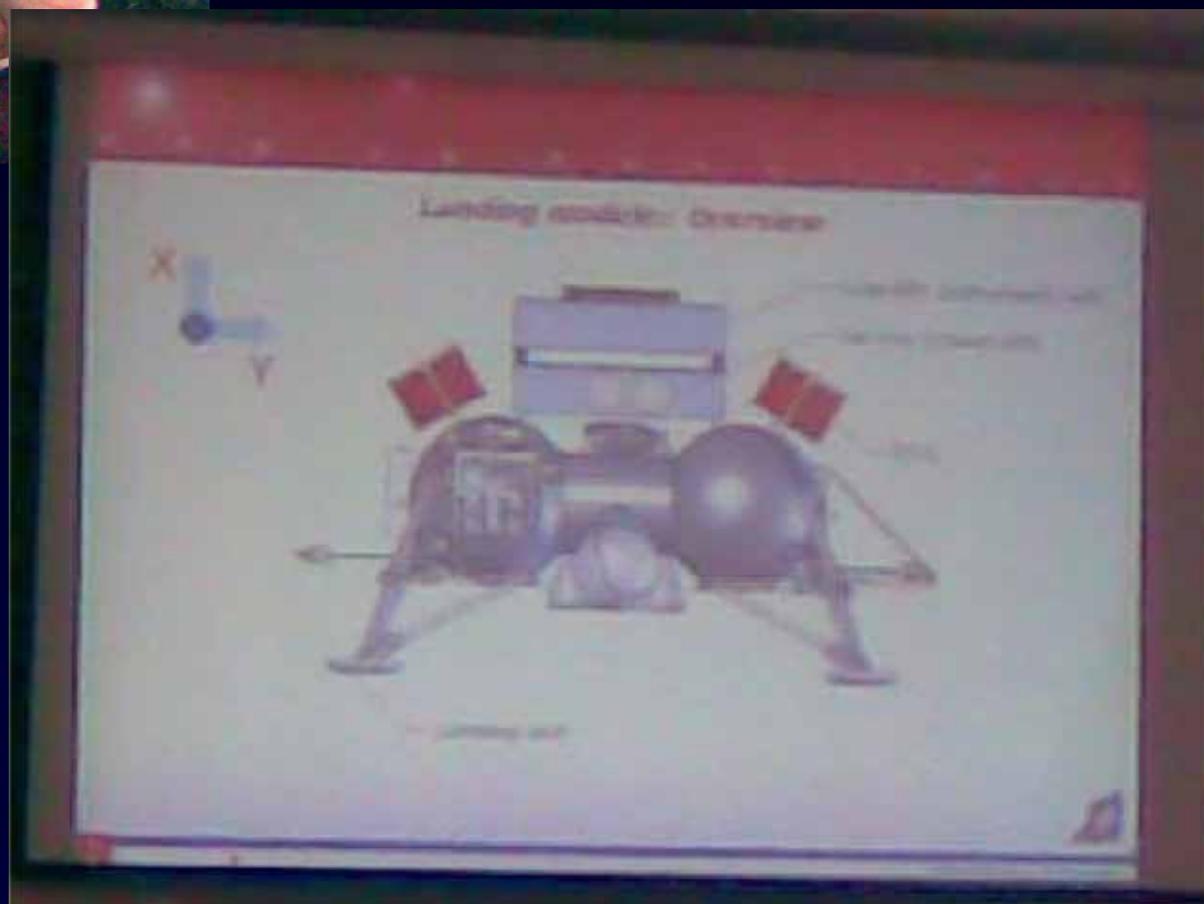
- Launch Oct. 2009 (?)
- Sample return from Phobos (~200 g)
- Payload
 - Gas Analytic Package
 - Gamma Spectrometer
 - Neutron Spectrometer
 - IR Spectrometer
 - Laser TOF Mass Spectrometer/SIMS
 - Thermal Sensor
 - Long-wave penetrating Radar
 - Seismometer
 - TV cameras
 - VIS Spectrometer
 - Dust counter
 - Plasma Science Package
 - Solar sensor
 - Ultra Stable Oscillator



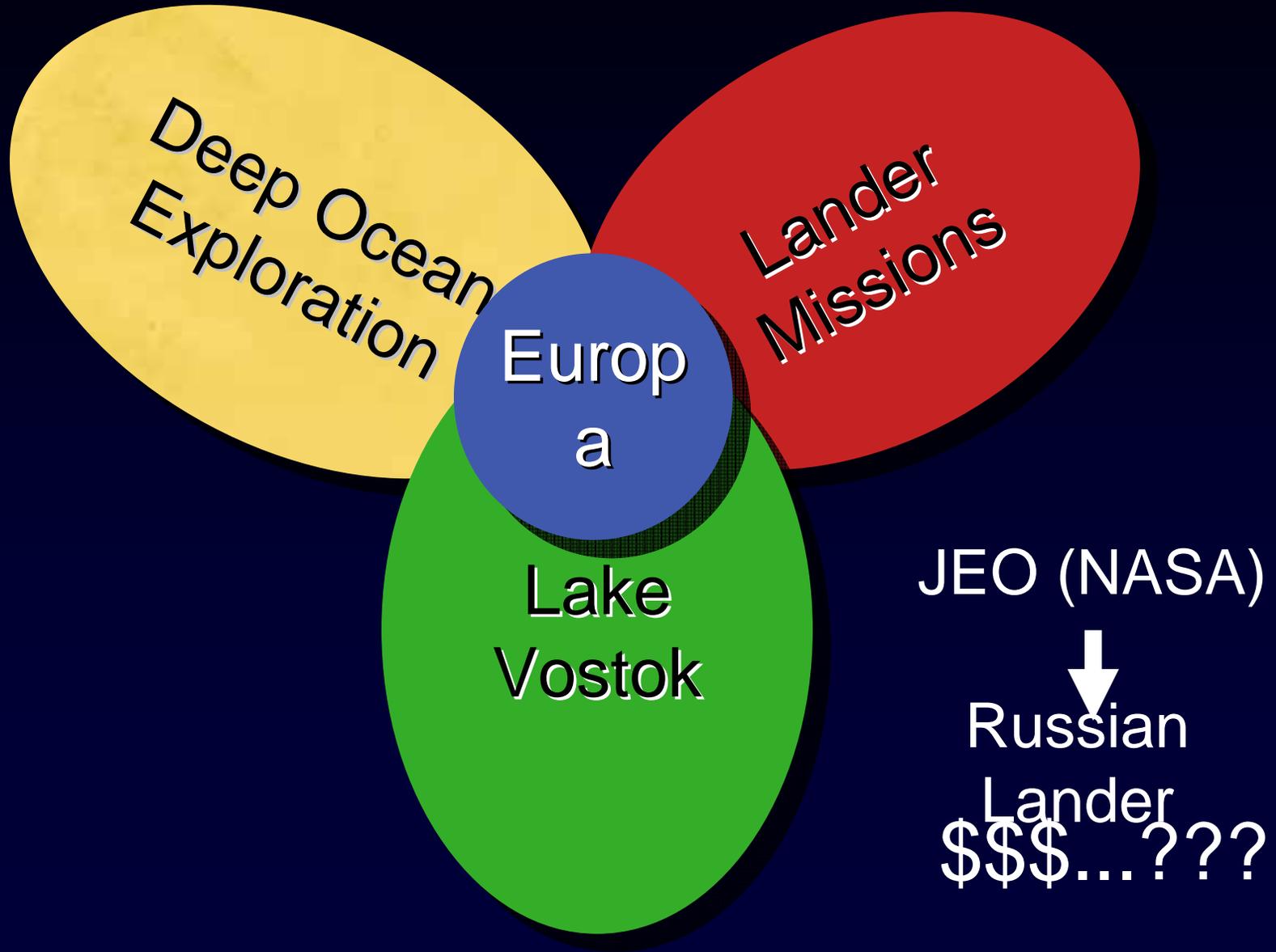
Envisioned lander

- 550 kg dry mass on surface of Europa
- 50-70 kg instrument payload
- Launch 2017 (realistically...2020-2030)
- No funding currently allocated





Planetary Priority for Russian Science & Engineering



Relevant Websites:

Workshop Homepage:

<http://www.iki.rssi.ru/conf/2009elw/>

Full PDF with abstracts:

[http://www.iki.rssi.ru/conf/2009elw/abstract_book_elw.p
df](http://www.iki.rssi.ru/conf/2009elw/abstract_book_elw.pdf)

[List of Participants:](#)

<http://www.iki.rssi.ru/conf/2009elw/participants.pdf>