

FEDERAL SPACE AGENCY  
LAVOCHKIN ASSOCIATION

"LUNA-GLOB" AND "LUNA-RESOURCE" SPACECRAFT

*V. Khartov, E.Korchagin, V.Dolgoplov, A.Komarov*



March 31, 2011



# "LUNA-RESOURCE" MISSION



## FUNDAMENTALS

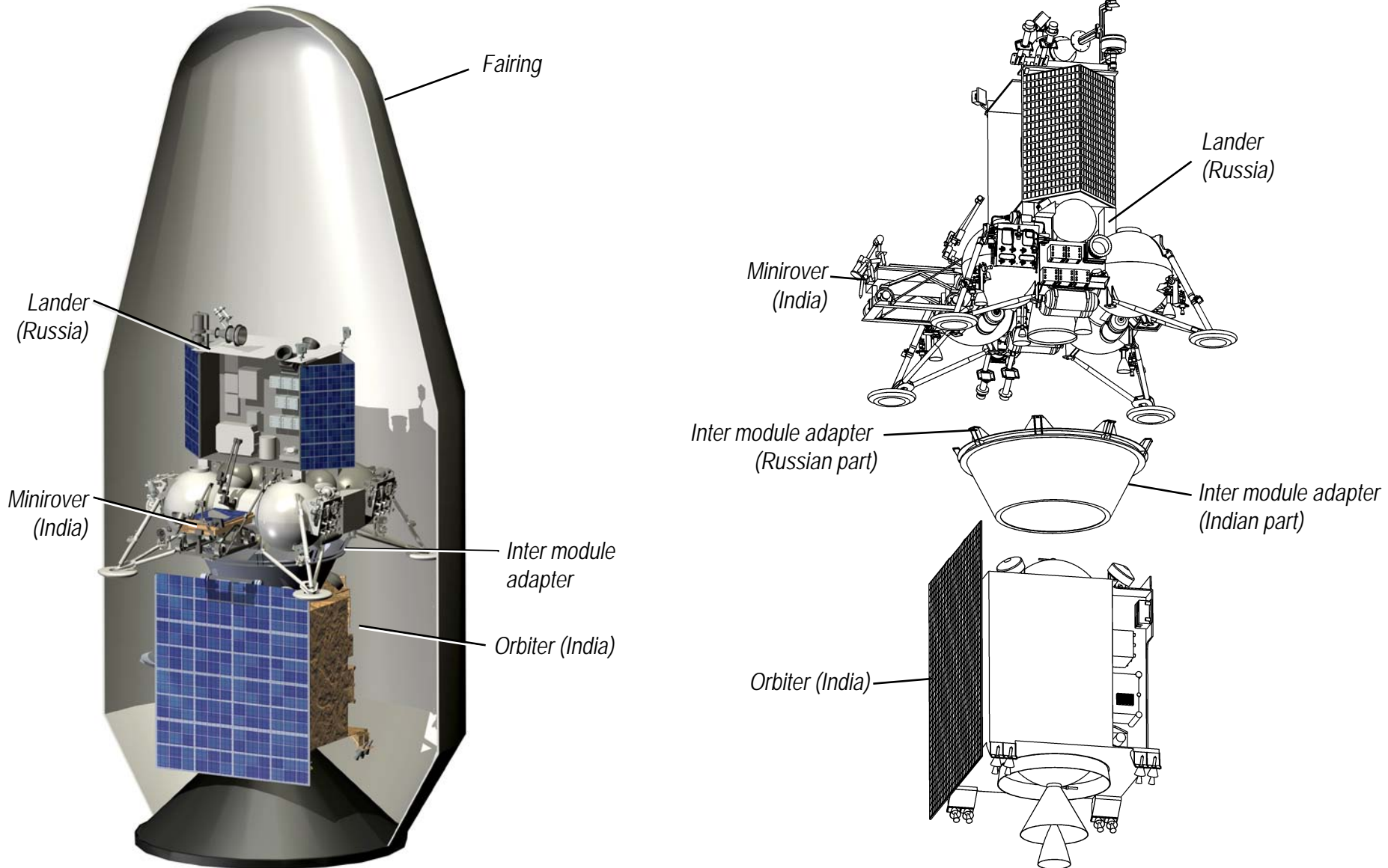
1. Main scientific goal – contact investigations in the South Pole area of the Moon.
2. Launcher – GSLV Mk-II (India).
3. Mission elements/ integrated spacecraft:
  - orbiter "Chandrayaan-2" (India);
  - lander with stationary surface station (Russia) and minirover (India);
  - inter module adapter (Russia, India).
3. Launch of the integrated spacecraft – September 2013, Satish Dhawan Space Centre (SDSC), SHAR (India).
4. Parking orbit provided by the launcher – near-Earth orbit ( $H_p=170$  km,  $H_a=37\ 000$  km,  $i=44^\circ$ ).
5. Injection into the Lunar transfer trajectory – provided by the orbiter "Chandrayaan-2".
6. Concept of communication:
  - lander - Earth communication – direct (X-band);
  - minirover – Earth – via lander (S-band).
7. Mission duration – 1 year.
6. Initial mass of the lander – 1 260 kg, including:
  - lander with stationary surface station – 1 210 kg;
  - scientific equipment – 35 kg;
  - minirover – 15 kg.



# "LUNA-RESOURCE" MISSION



## INTEGRATED SPACECRAFT

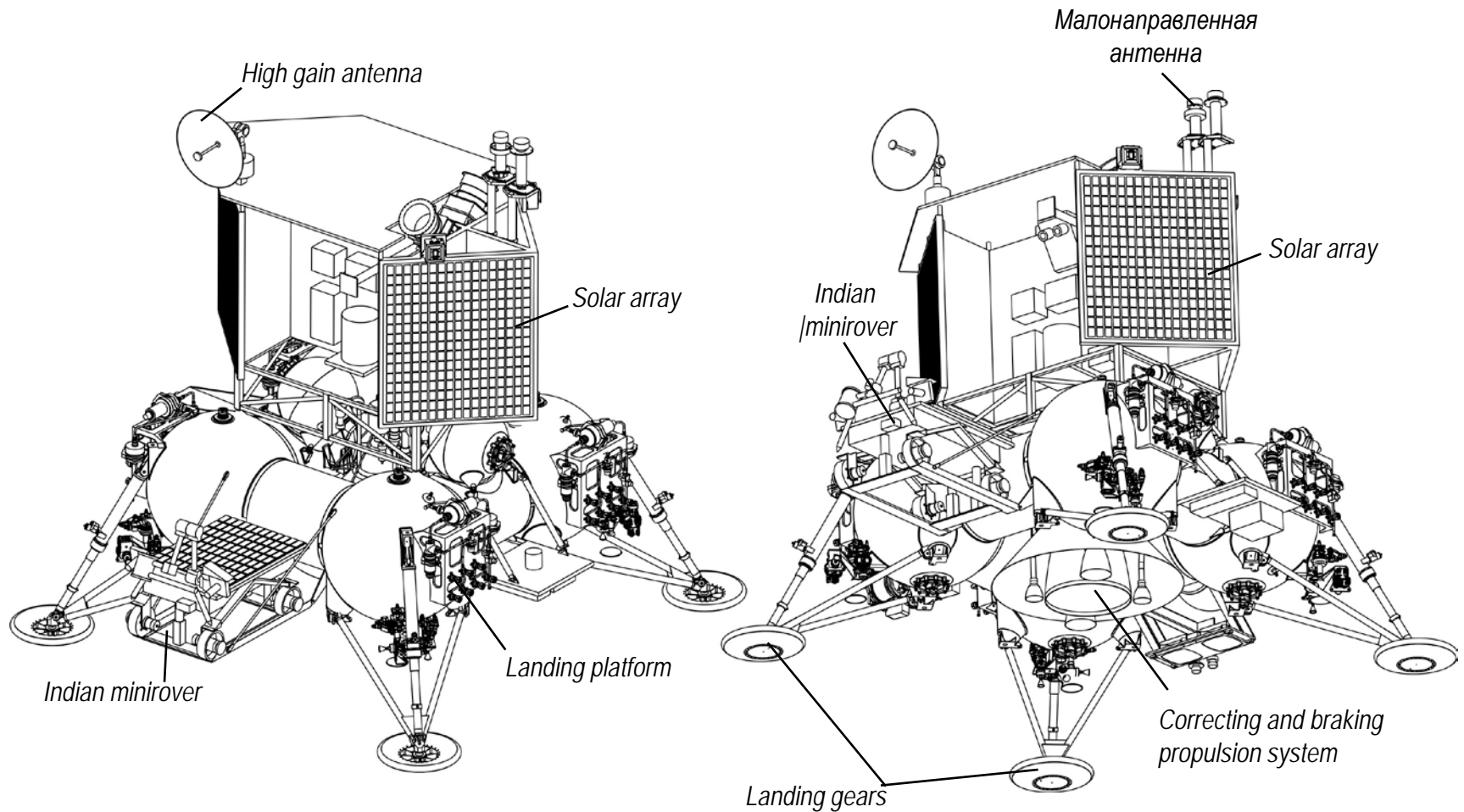




# "LUNA-RESOURCE" MISSION



## LANDER

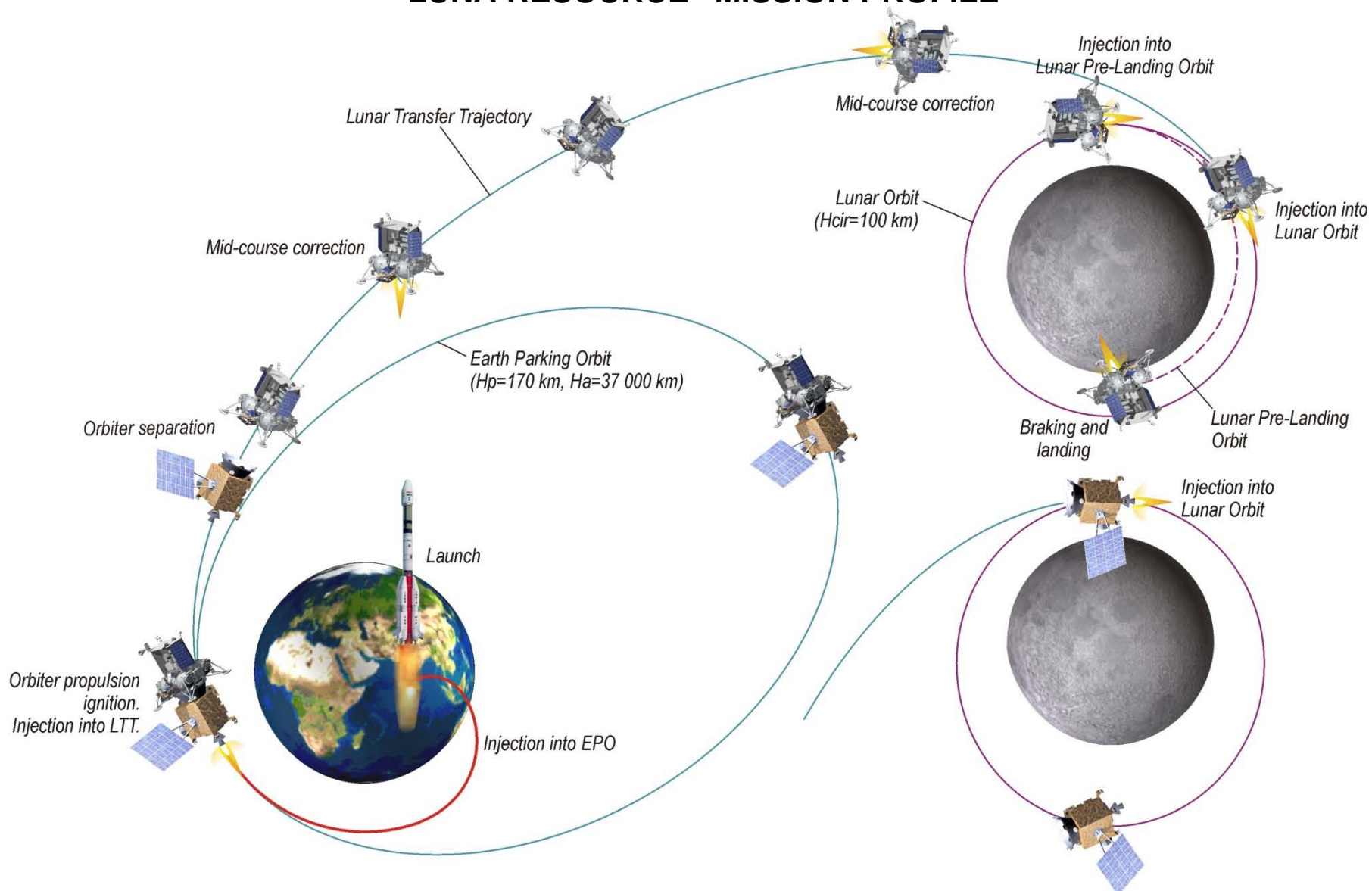




# "LUNA-RESOURCE" MISSION



## "LUNA-RESOURCE" MISSION PROFILE





# "LUNA-RESOURCE" MISSION



## "LUNA-RESOURCE" LANDER DESCENT PROFILE

