EXOMARS 2018: An International Co-operation for Searching Life on Mars *(abstract Nr IPPW2015-2204)*

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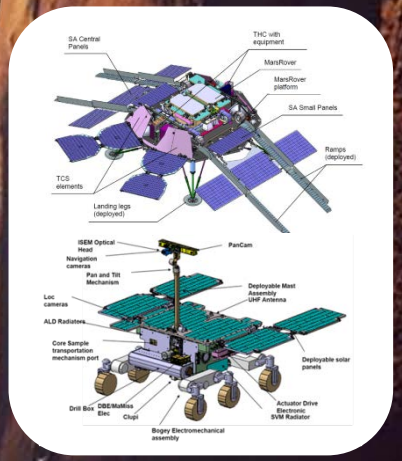
- *EXOMARS-2018 is a Joint ESA-Roscosmos 3-tons class mission*
- *Scientific objectives*
  - *exobiology*
  - *geology*
  - *Mars atmospheric research*
- *Mission:*
  - *Launch by Proton M/Breeze-M*
  - *Arrival on Mars: Jan. 2019*
  - *Landing area in lat range 5-deg S – 25-deg N*
  - *218 sols on-surface operations*

ESA-Roscosmos responsibility scenario

- *Carrier Module: ESA*
- *Rover Module: overall ESA responsibility*
  - *RHU provided by Roscosmos*
  - *2 scientific instruments provided by Roscosmos*
- *Descent Module: overall Roscosmos respons.*
  - *On Board Computer and SW provided by ESA*
  - *EDL GNC:*
    - ✓ *Overall co-responsibility*
    - ✓ *IMU and Parachute System (PAS) provided by ESA*
    - ✓ *Radar Doppler (RDA) provided by ESA (recurring EXM-2016)*
  - *UHF TLC System provided by ESA (recurring units from EXM-2016)*



The 2-tons class DM is characterized by the highest ballistic coefficient among the past and future missions to Mars based on ballistic entry;
to allow the safe EDL, a very complex Parachute System is to be developed, starting from the experience in the frame of the EXOMARS-2016 Mission