



P O L S A

Polish Space Agency

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- ✦ Polish Space Agency (POLSA) is a national governmental agency, established in 2014.
- ✦ POLSA is under Ministry of Economic Development, Labour and Technology.
- ✦ POLSA is involved in preparing Polish National Space Programme, seeking to build a system of tools for supporting Poland's space sector and increasing Poland's role in the international space economy.

- ✦ Poland is **European Space Agency (ESA)** Member State since 2012.
- ✦ Polish contribution to ESA programs is 39 mln EUR and additionally for mandatory activities is almost 8 mln EUR.
- ✦ Polish main area of interest in the ESA is science programs (PRODEX), Space Safety, Earth Observation and Telecommunication Programs.
- ✦ Polish institutes have proven capabilities in the field of space science derived from great astronomy heritage: historical (Kopernik, Heweliusz) and recent (Wolszczan, Paczyński).
- ✦ The Polish space sector is consisting of a few global companies representations and about 30th small businesses. They specialize in space mission subsystems, sensors & satellite data.
- ✦ Polish companies have experience in small satellites development:
 - **Lem** – Space Science; launched 2013,
 - **Heweliusz** – Space Science; launched 2014,
 - **KRAKSat** – Scientific/Technology Demonstrator; launched 2019,
 - **Swiatowid** – Earth water/air monitoring spacecraft; launched 2019).
- ✦ Poland is a part of **EU SST** (European Space Surveillance and Tracking Consortium). Poland has ~20 active sensors and continue developing the national SST network. POLSA runs **National Space Safety Operations Center**. We work to join **Inter-Agency Space Debris Coordination Committee (IADC)**.
- ✦ **National Earth Observation System** is under development. We already use Copernicus data and plan to have national satellite constellation.

- ✦ Curiosity Mars rover - **Vigo Systems**
 - infrared detectors in probe spectrometer.
- ✦ Mars Insight Lander - **Astronika**
 - drilling mechanism.
- ✦ NASA IMAP mission to study the heliosphere - **CBK-PAN** – scientific instruments, i.e. a photometer (GLOWS).
- ✦ Rosetta mission – **CBK-PAN**
 - penetrator mechanism MOPUS.
- ✦ POLAR & POLAR-2 missions – **NCBJ**
 - crystals for gamma detector & data analysis.
- ✦ Probe-3 mission – formation flying of multiple spacecraft – **GMV, N7 Space**
 - software development.
- ✦ ATHENA mission – **SENER, Thales Alenia Space, Astronika, and Mikolaj Kopernik Astronomical Centre**
 - mechanism and subsystems.
- ✦ Moreover, Polish entities have cooperated with ROSCOSMOS via collaboration between ESA and Russia and the common space missions and programs of ESA and ROSCOSMOS, such as:
 - EXOMARS** and **LUNA-Resurs 27** (as Leonardo subcontractor).