

THE AGILE EXPERIENCE

AGILE is an **important milestone** in the history of ASI engagement in High Energy Astrophysics.

Before AGILE

- **Balloons, Rockets:** Pioneering
- **COS-B, EXOSAT:** Italian contribution to ESA missions
- **BeppoSAX:** Italian mission with the participation of Dutch and SSD (ESA)
- **XMM/Newton, INTEGRAL, SWIFT:** Important contributions to ESA and NASA missions
- **PAMELA:** Mainly Italian and Russian mission

After AGILE

- **GLAST/Fermi:** Important Italian contribution to NASA/DOE mission
- **AMS:** Important Italian contribution to an international mission

All these experiments were completely successful

WHAT IS PECULIAR WITH AGILE

- First Small Scientific Mission all built in Italy with a cost saving approach, also by a large heritage from MITA-1 and BeppoSAX.
- All Italian Industry (Carlo Gavazzi Space, Alenia Space, Rheinmetal, Telespazio, Galileo Avionica, ecc.)
- Significant role of Scientific Institutions (INAF and INFN) in the design, building, testing and operations in orbit.
- Separation of Ground Segment and Users Segment with a relevant role of Institutes and ASDC (Heritage of SAX with improvement)
- Very good science with limited resources: Pulsars, Pulsar Wind Nebulae, Microquasars, SuperNova Remnants, Blazars and their variability, Short and long GRBs.
- Quick Science from Institutes and ASDC (Heritage from SAX and SWIFT)
- Culture of multifrequency observations (X and Gamma rays). Wise use of data from Cherekov telescopes. Good coordination with INTEGRAL. Network of small telescopes for blazars.
- TOOs with all satellites in activity (XMM, XTE, Spitzer, Suzaku and most SWIFT).
- Discovery of emission above 40 MeV from Terrestrial Gamma-ray Flashes.

WHICH FUTURE

The two years of data collected when AGILE was pointing contain a wealth of data that have been only partially exploited. We can foresee an intense scientific activity on these data.

Now, AGILE is spinning (from October 2009). This is a major change with respect to the nominal performance. Time and a considerable effort has been spent to exploit observations in spinning mode. In general, we can state that AGILE is covering a large fraction of the Sky (about 70% of the sky every day), even if with a reduced sensitivity. Some important results on transient sources have been achieved in this new configuration and even GRB localization with SuperAGILE seems possible.

An extension of one year of AGILE operations gives to AGILE Team the chance to continue to do good level science.