PROCEEDINGS OF SCIENCE

The *Fermi* Large Area Telescope: 9 years of on-orbit performance

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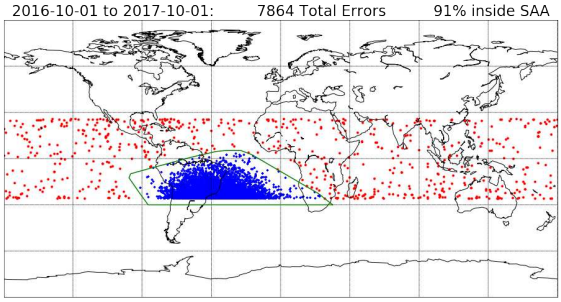
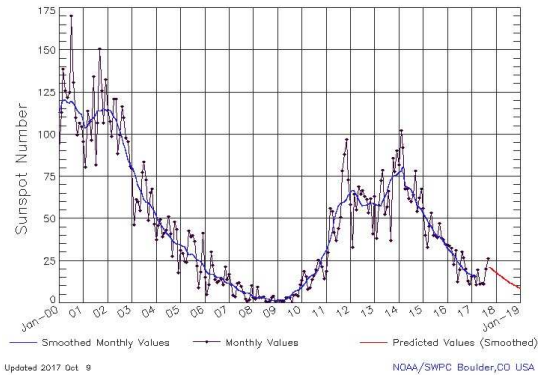
on behalf of the *Fermi* Large Area Telescope Collaboration

The *Fermi* Large Area Telescope (LAT) has been successfully operating in low Earth orbit almost continuously since its initial turn-on on 24 June 2008, for over 9 years. We present details of the current performance of the LAT detector and data acquisition sub-systems, together with long-term trends of key performance measures, and assess the expected performance in continued future operation. We also discuss the current and future status of the ground-based control, monitoring and data processing for the LAT.

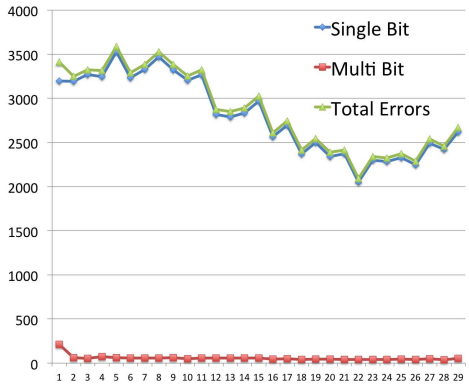


Left: Memory errors in the LAT flight computers mostly occur as *Fermi* passes through the South Atlantic Anomaly (SAA).

Below: The time history of LAT memory error counts in 10 Msecond periods, reflecting the Solar Cycle.



Above: Solar activity history showing the latest 11-year Solar Cycle.



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