



French Scientist Sylvain Guiriec Receives Prestigious NASA Award

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The 2017 Exceptional Scientific Achievement Medal from the National Aeronautics and Space Administration (NASA) was awarded to Sylvain Guiriec “For contributions in understanding the nature of gamma-ray bursts via spectral studies and establishing them as standard candles and thereby as unique cosmological probes.” This prestigious NASA medal is awarded to individuals for exceptional scientific contributions toward achievement of the NASA mission or whose efforts have resulted in a key scientific discovery of fundamental importance.

Sylvain Guiriec was born in 1978 in Brest, France. In 2002 – 2003, he obtained a Masters degree in Material Sciences as well as an Engineering degree in Atomic and Molecular modeling and simulation, and computational structural analysis and design from the *Institut Supérieur des Matériaux* du Mans, France. He worked for two years as a young researcher at the Oak Ridge National Laboratory, USA, and at the Universitat Politècnica de Catalunya, Spain, where he studied radiation damage for the nuclear research field. In 2004, he obtained a Masters degree in Astrophysics, Planetology and Space Sciences & Techniques from Paul Sabatier University, France, and majored in Space Sciences & Techniques at the *Institut Supérieur de l’Aéronautique et de l’Espace* (SUPAERO), France. He received his PhD in Astrophysics in December 2007 from the Montpellier II University, France. His thesis was both theoretical and instrumental: (i) he studied the theoretical aspects of GRBs and made predictions of observability with the NASA Fermi Gamma-ray Space Telescope (Fermi), and (ii) he participated to the integration and tests of the Fermi/Large Area Telescope (LAT), for which he developed an algorithm for suppressing its proton background.



After the launch of Fermi mid-2008, Sylvain Guiriec joined the National Space Science and Technology Center, USA – associated to the NASA Marshall Space Flight Center, USA – with a 3-year postdoctoral

position at the University of Alabama in Huntsville, USA. His main efforts focused on the observational analysis of GRBs, leading to the discovery of the first clear evidence for photospheric emission in their prompt emission. He also worked on Magnetars, Solar Flares and Terrestrial Gamma-ray Flashes. From 2011 to 2016, Sylvain Guiriec worked at NASA Goddard Space Flight Center, USA, first as a fellow of the NASA Postdoctoral Program and then as an Assistant Research Scientist affiliated with the University of Maryland, College Park and the Center for Research and Exploration in Space Science & Technology, USA. In 2015, he received the Young Scientist Prize in Astrophysics from the International Union of Pure and Applied Physics (IUPAP) for his “insightful and innovative contributions towards understanding the nature of Gamma Ray Burst (GRB) prompt emission, in particular the establishment of multi-component spectra, and the discovery of a new Peak Energy – Luminosity relation showing that GRBs can be used as standard candles and thereby as unique cosmological probes.” Since 2016, Sylvain Guiriec is an Assistant Professor of Astrophysics at the George Washington University, USA, and a Research Scientist at NASA Goddard Space Flight Center.