ANTIPARTICLES AND CONSERVATION LAWS

Prof. Stephen Sekula (4/27/2010) Supplementary Material for PHY 3305 (Modern Physics) Harris, Ch. 12.5-12.7

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Data from the Wilkinson Microwave Anisotropy Probe (WMAP) - 7 years of data

This map shows the variation in microwave energy corresponding to temperature differences of ±200 microKelvin











http://atlas.web.cern.ch/Atlas/public/EVTDISPLAY/events.html

GAMMA-RAY LARGE AREA SPACE TELESCOPE

Exploded View: One of Forty-nine Towers

4-96

10 Layers of 0.5 rad Length Converter (pb)12 Layers of XY Silicon Strips

── Gamma Rays

— Positrons/Electrons



The Dark Energy Survey camera a 500 MPix camera, highly red sensitive. Goals: map galaxy clusters and spatial distribution of clusters and discover 2000 supernova at high redshift. Building at Fermilab, deploying in Chile.

The future: Large Synoptic Survey Telescope (LSST)



Goal: map dark matter and supernovas by scanning the Southern Sky twice per week using a 16 Gpix camera. Over 10 years, it will accumulate 60 PB of data.

NEXT TIME

• Review and summarize the course