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# OBSERVATIONS OF THE LOW EARTH ORBIT RADIATION ENVIRONMENT FROM MIR

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**Abstract**—Recent measurements of the high-energy charged particle environment with the Radiation Environment Monitor (REM) aboard the Russian Mir space station are presented. Ionizing dose rates in a silicon detector have been measured with two shieldings. The dose is mainly accumulated in two distinct areas, the South Atlantic Anomaly (SAA) and the region of closest approach to the magnetic poles. Whereas the radiation in the South Atlantic Anomaly varied little during 1995, large changes of the daily absorbed doses in the polar regions are observed. A comparison of REM doses with the NASA AP-8 and AE-8 radiation models revealed major differences. AP-8 tends to underestimate the average REM doses, whereas AE-8 overestimates REM doses, and rather describes the worst case. Copyright © 1996 Elsevier Science Ltd