

**EXPOSURE TO COSMIC RADIATION:
A DEVELOPING MAJOR PROBLEM IN RADIATION PROTECTION**

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Cosmic radiation at ground altitudes is usually a relatively minor contributor to human radiation exposure, producing a global collective dose equivalent that is about 10 percent of the total from all natural sources. However, more than a million people living at high altitudes receive annual dose equivalents in excess of 5 mSv. In recent years, there has been increasing concern about the exposure of aircraft flight crews and passengers, for whom annual dose equivalents of up to several mSv have been estimated. Recent EML results indicate the presence of an important high-energy neutron component at jet aircraft altitudes, perhaps producing dose equivalents of the order of 0.1 mSv/h at high latitudes. Finally, space agencies have been long concerned with the potential exposures of astronauts, especially from the rare massive solar flare events. As more people venture into space, this source of human radiation exposure will become increasingly important.

Available data on these aspects of cosmic radiation exposure will be reviewed, along with current and anticipated future research activities that may yield an improved assessment of the problem. The question of how such exposures might be controlled will be addressed, but not answered.