

The New York Times



A Blog About Energy and the Environment

For Frequent Fliers, a Radiation Risk in the Skies

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Despite recent concern about whether airline passengers get a potentially dangerous dose of radiation from the new security scanners at the airport checkpoints, the real risk is after you board the plane, according to two new publications.



The first is an effort by the federal government to knock down concerns about the “backscatter” X-ray machines that the Transportation Security Administration is planning to use as a primary screening tool at airports around the country. Unlike diagnostic X-rays that doctors send through the body, these go through the clothes and bounce back, so the machine can create an image of the traveler under the clothing. [...]

The second publication explains that flying in an airplane also involves a radiation dose — in this case from the sun and the stars. A paper that will appear in the December issue of the *Employee Responsibilities and Rights Journal*, a peer-reviewed publication, argues that travelers who fly 85,000 miles a year or more should be classified as radiation workers.

At airliner altitudes, exposure to radiation from the sun and the stars can be hundreds of times higher than on the surface of the earth, where the atmosphere filters out radiation. “Airline crew members flying long-haul high-altitude routes receive, on average, greater exposures than the typical radiation workers in ground-based industries where radioactive sources or radiation producing machines are used,” write the authors, Robert J. Barish, a medical radiation expert, and Stephan Dilchert, an assistant professor at the business school at Baruch College of City University of New York.

In fact, business frequent fliers “may easily exceed the allowable levels of exposure that are enforced as a matter of law for medical and industrial facilities where radiation is encountered,” the paper said, citing estimates of dose from the Federal Aviation Administration.

Classifying employees as radiation workers would allow their continued exposure to higher limits. But this would also require that the exposure be monitored and that employees receive information on the estimated risks.

Flying round trip from New York to Tokyo seven times a year would put a passenger or crew member at the limit enforced at industrial sites, the authors said.