



## **Are you flying through a solar particle event?** (and why to avoid doing so, especially when pregnant)

When you fly, you are exposed to elevated levels of radiation from our sun and other stars because you are closer to them and less protected by the atmosphere.

About two or three times a year, the radiation emitted by our sun increases dramatically. This is called a **solar particle event (SPE)**. A SPE can emerge within a few hours and can last anywhere from a few hours to a few days. The radiation levels will be particularly intense on high altitude and high latitude flights.

Health physicist Dr. Rob Barish recently noted that if a pregnant crewmember flies during a single SPE, then the fetus may exceed the maximum radiation dose recommended by expert agencies in both the US and Europe. The risks of exposure to excessive radiation for the baby include childhood cancer, mental retardation, congenital malformations, and growth restrictions, as well as miscarriage.

Although airlines can opt to be notified by the **Space Environment Center** at the start of significant SPEs, they are under no obligation to inform pregnant crewmembers or passengers.

If you want to know if you are scheduled to take a flight during a SPE, you can **get online and check real-time solar activity data** on a website maintained by the Space Environment Center at

[http://sec.noaa.gov/rt\\_plots/pro\\_3d.html](http://sec.noaa.gov/rt_plots/pro_3d.html)

You will want to check as close to your flight as possible, such as just before you leave for the airport.

If the green line on the graph is elevated above the line that is marked "10 to the zero", then a SPE that may be of health significance - especially if you are pregnant - is underway.

You can also sign up to get free email notifications of these events from the Space Environment Center.

**For more information, visit AFA's radiation and reproductive health pages via <http://ashsd.afacwa.org>. Click on the "health" tab on the left side of your screen. Or contact AFA's Judith Murawski: [Judith@AFAsattle.org](mailto:Judith@AFAsattle.org) or 206-932-6237.**