Cosmic Radiation (PCAire)

Dear Colleague,

This July, Air Canada’s Corporate Safety, Environment and Quality team in collaboration with Flight Operations and In-Flight Service (IFS), is pleased to launch a new cosmic radiation dose management system, powered by PCAire© Inc. This system is designed to allow flight crew and cabin crew the opportunity to identify individual cosmic radiation exposure levels based on their schedule.

Why launch an application with PCAire?

Predictive Code for AIRCrew Radiation Exposure (PCAire) Inc. is a Canadian company recognized worldwide for its implementation of a radiation exposure monitoring system. After a decade of research, PCAire offers reliable services through recognized scientific principles. The team includes scientists and researchers specializing in cosmic radiation dosimetry and its ongoing study.

What is the PCAire Application?

The application is web-based (www.aircanada.pcaire.com) and designed to allow all onboard crew to identify their own individual levels of cosmic radiation exposure.

How does PCAire calculate the cosmic radiation exposure dose?

PCAire scientists flew a radiation detector on hundreds of flights all over the world. Analysis of this data resulted in the development of coded algorithms that can accurately predict the radiation levels during jet aircraft flight, including periodic events such as solar flare activity. For each flight, the codes take into account the date, time, and flight path. The results are summed and recorded in your dose profile.

How does PCAire know my individual cosmic radiation exposure level?

Air Canada’s schedule, flight plan data and actual Netline crew information are imported into the PCAire application by a PCAire manager to determine individual exposure levels on the 15th of each month.
How do I access PCAire?

The PCAire system can be accessed via www.aircanada.pcaire.com or via ACaeronet under My Safety > PCAire. Please use your ACaeronet username. Your password will consist of your day and year of birth (e.g. employee’s password born on May 2, 1980 is 021980). As soon as you access the system, you will be able to change the password to one of your choosing.

What should I look for?

Human radiation dose levels are measured in millisieverts (mSv). The maximum recommended annual dosage is 20 mSv. The annual dosage of Air Canada crew members typically falls between less than 1.0 and up to 6.0 mSv. As per due diligence, the intervention dose level is 6 mSv. An intervention dose level is the level at which a remedial action is taken. It is recommended that you contact your local manager to discuss options to reduce cosmic radiation exposure should you approach this level.

To find out your personal dose, log on to PCAire and select ‘Dose Report’. Here you will see your accumulated dose for last month and the past 12 months.

What is Air Canada’s role?

Air Canada will ensure that the information is accessible to all flight crew on the PCAire website by the 15th of each month. Managers will be available to discuss options to reduce cosmic radiation exposure should you approach the intervention dose level.

Feedback

We encourage you to use this new system and contact your manager if you have any questions or comments.

Please visit the links section of the PCAire website at www.aircanada.pcaire.com for an in-depth user guide, an Air Canada Q&A document and a FAQ provided by the PCAire scientist team regarding cosmic radiation.

Sincerely,

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