

GLOBALOG — Automatic, Accurate, Individual Calculations of Cosmic Radiation Exposure of Flight Crew Members

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With the European Council Directive 96/29/EURATOM of 13 May 1996 it became mandatory for member state airlines to keep account of the exposure to cosmic radiation of each flight crew member. With the background as an Airline Pilot, Aircraft Performance Engineer, part of the Flight Operations Management in three different airlines Peer Wollenberg knows exactly how airline flight operations work and has used this experience to create a concept that calculates the accurate dose for a particular flight using the radiation strength minute-by-minute taking the climb, cruise, and descent profile of the particular aircraft into consideration.— Using actual times for take-off and landing, solar flares - with their peaks of radiation and Forbush decreases - are included in the dose, which is distributed to all crew members on a particular flight, creating exact and individual accounts for the crew members showing

- (1) dose for each flight
- (2) accumulated dose for the lifetime
- (3) accumulated dose for the calendar year
- (4) accumulated dose for the last 12 months
- (5) accumulated dose since the crew member in question declared herself pregnant

— everything made available online to each individual shortly after the conclusion of the flight. The assumptions for the concept will be explained and the accuracy demonstrated. Of particular interest for airline managers in the audience is a description of how the concept is carried out without the interference of airline personnel: once implemented everything works automatically! — including mandatory reports.- One of the obligations emphasized by the directive is to “*inform the workers concerned of the health risks their work involves*”. Many airlines neglect this requirement, fearing the reaction from the crews. A completely unnecessary fear as demonstrated by the description of a typical crew reaction.