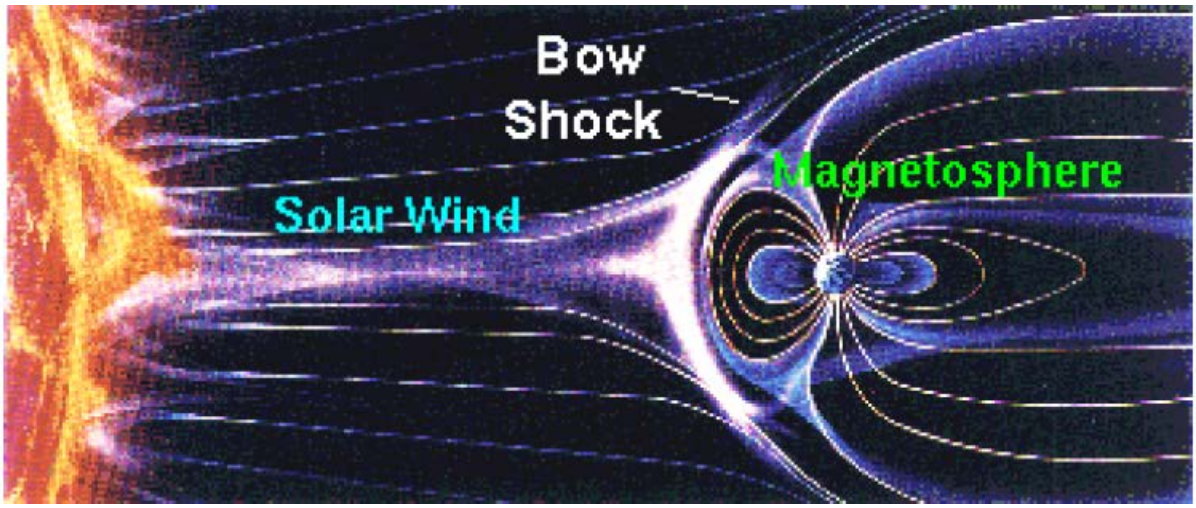
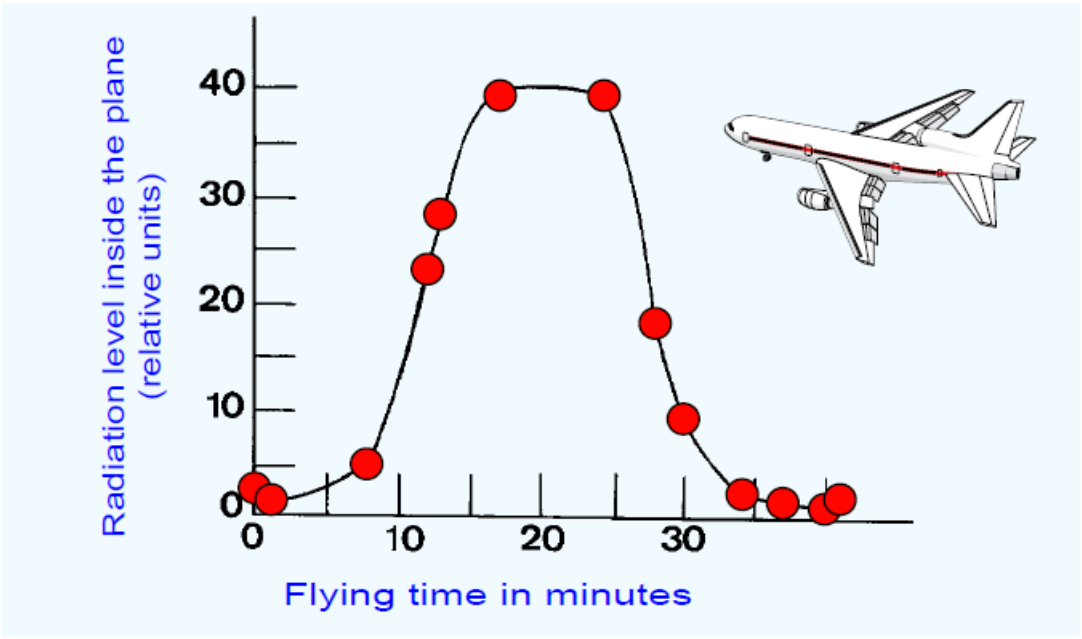
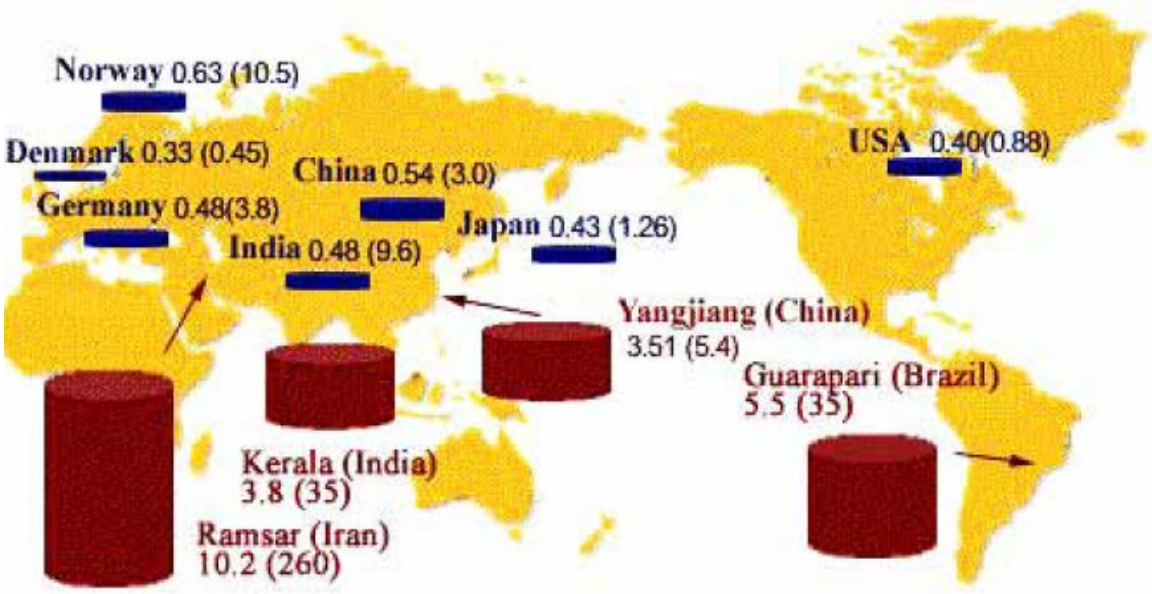

Bow
Shock
Magnetosphere
Solar Wind


Radiation level inside the plane
(relative units)
40
30
20
10
0
0
10
20
30
Flying time in minutes

	Isotop	$t_{1/2}$
α	Uran-238	4,47 milliarder år
β	Thorium-234	24,1 dager
β	Protactinium-234	1,17 min
α	Uran-234	245 000 år
α	Thorium-230	77 000 år
α	Radium-226	1600 år
α	Radon-222	3,82 dager
α	Polonium-218	3,05 min
β	Bly-214	26,8 min
β	Vismut-214	19,8 min
α	Polonium-214	0,164 millisekund
β	Bly-210	22,3 år
β	Vismut-210	5,01 dager
α	Polonium-210	138,4 dager
	Bly-206	Stabil


Norway 0.63 (10.5)
Denmark 0.33 (0.45)
China 0.54 (3.0)
USA 0.40(0.88)
Germany 0.48(3.8)
Japan 0.43 (1.26)
India 0.48 (9.6)
Yangjiang (China)
3.51 (5.4)
Guarapari (Brazil)
5.5 (35)
Kerala (India)
3.8 (35)
Ramsar (Iran)
10.2 (260)

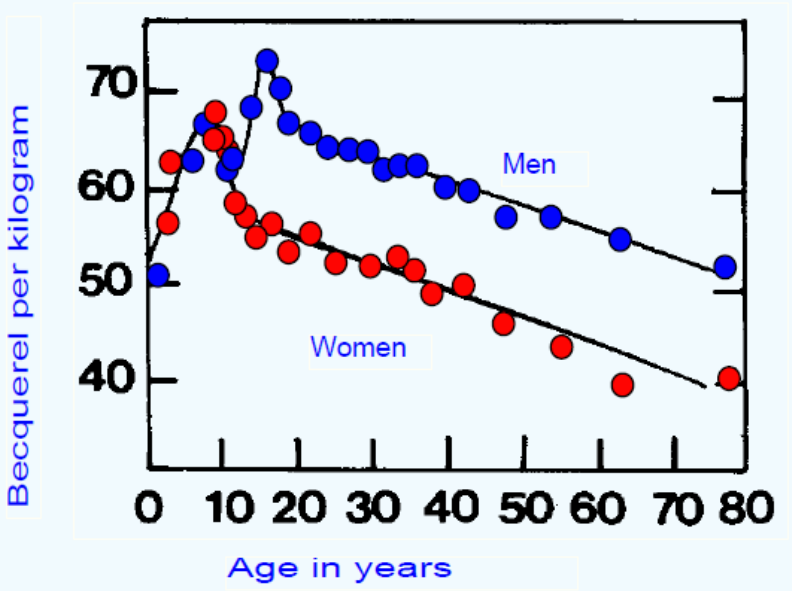
Guarapari Brasil

On the beach in Guarapari the radiation is stronger than in the city. On the beach you can get a whole body dose of 10 mGy in a week.

The picture to the right a couple on the beah with a Geiger counter.

Pripyat

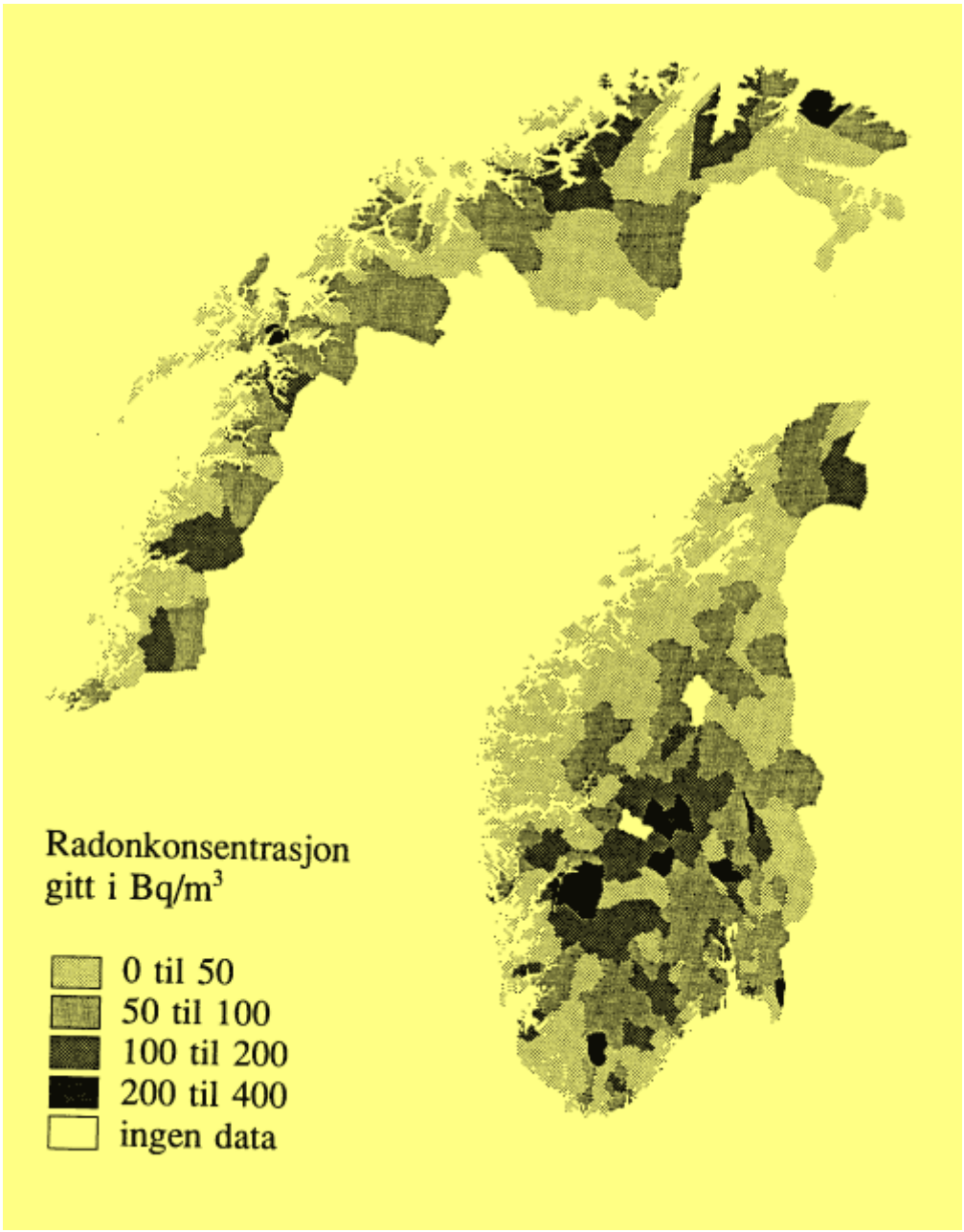
To the left is a picture of Pripyat, the city close to the Chernobyl reactor. The radiation level today is about 5 mGy per year.
It is interesting to compare the levels of radiation that people will encounter on vacation, and the levels of radiation not tolerated after Chernobyl. A week on the Guarapari beaches is equivalent with two years in Pripyat.



The concentration of potassium in the body varies with age and sex. Consequently the amount of K-40 (the abundance of the K-40 isotope is 0.0118%) varies in a similar way. In the figure the K-40 level is given as becquerel per kilo.

Indoor Radon values (UNSCEAR 2000)

Country	Average Bq m^{-3}	Maximum Bq m^{-3}
United States	46	
Canada	34	1720
China	24	380
India	57	210
Iran	82	3070
Denmark	53	690
Finland	120	20 000
Norway	**73**	**50 000**
Sweden	108	85 000
France	62	4690
Germany	50	10 000
United Kingdom	20	10 000
Australia	11	420



Figur 7.5: Radon i norske boliger. Verdiene angir kommunemiddelet for radon i inneluften, gitt i Bq/m^3. Målingene er gjennomført av Terje Strand og medarbeidere ved Statens strålevern.

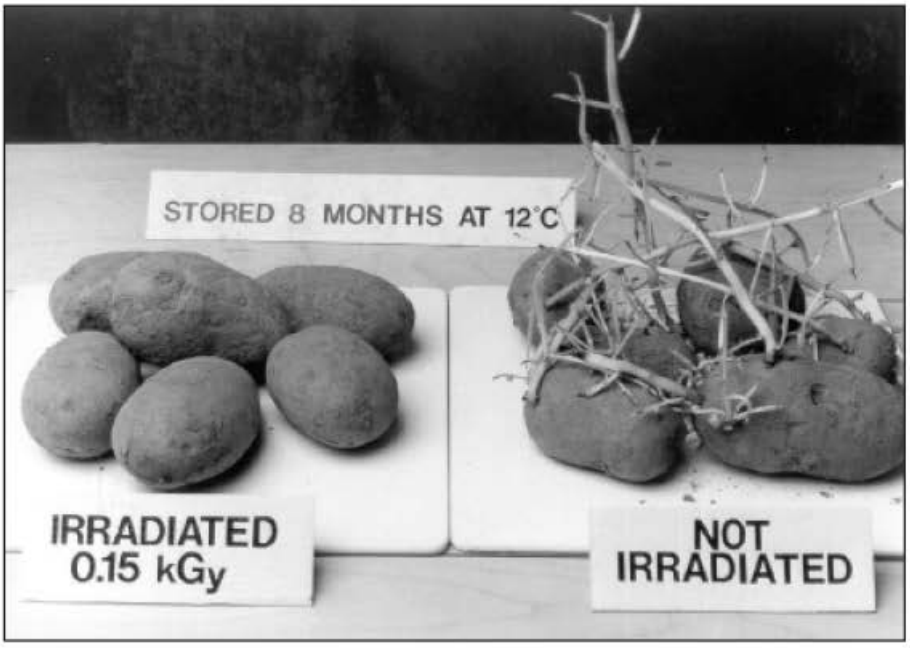


Figure 3. Irradiated (0.15 kGy) and non-irradiated potatoes stored for eight months at 12°C

Figure 2. Irradiated (2 kGy) and non-irradiated mushrooms stored for six days at 10°C