

Comments upon the use of radar in Ocean Village Marina

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Unfortunately, we live in an age in which we are so risk-averse that the mere fact that something “sounds a bit like” something else is enough to lead the ignorant to assume that it must be dangerous.

That, I believe, is the fundamental problem here. The fact that we are dealing with “radiation” means that people assume we are dealing with the same stuff that killed thousands of people at Hiroshima and Nagasaki, rather than anything more akin to the stuff that floods out of a domestic lightbulb when we switch it on.

The lightbulb comparison is a valid one that might go some way towards addressing people's greatest fears. People don't think “*Oh dear, radar waves might cook me*” because they can see how unreasonable that is in the face of the evidence: rather they think they are going to suffer radiation sickness; or cancer; or will start turning green, glowing in the dark and giving birth to two-headed armless babies.

My argument against this is that yes, we know that very very very high frequency radiation can cause molecular changes - that is how it causes (and cures) cancer. Lower down the spectrum, we know that UV radiation in sunlight can cause skin cancer (or promote the rapid healing of some skin conditions). But the radiation from normal domestic lightbulbs at about 100th the frequency of UV has never been accused of being carcinogenic. So the demarcation line between dangerous and non-dangerous radiation must be somewhere between UV and visible light. The energy you might receive from a small marine radar is roughly the same order of magnitude as from a lightbulb at a similar distance, but is at about a ten thousandth of the frequency, so in this respect at least, it is even less “dangerous”.

If people are intent upon not listening, the heating “problem” is more difficult to deal with, purely because it does have some (admittedly limited) basis in scientific fact. One counter-argument to this is that if you could keep your hand in boiling water for twenty minutes or so, it would come out cooked. But you could swim in water at 20 degrees for hours on end without cooking. Similarly, the fact that intense microwave energy might cook you, does not mean that very low intensity microwaves could achieve the same result, no matter how long your period of exposure lasts. Another way of looking at it is to come back to the light bulb analogy: although you can burn yourself on a lightbulb, you don't get burned just by sitting in the same room as one!