

# How Much Meat for Dinner?

Extract from BCAM  
Irradiation at Saclay

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# Safety Factors

The document called:

*ATLAS Radiation Tolerance Criteria for Electronic Components*

Assumes the following rule:

If  $A$  is a useful safety factor to insure us against uncertainty  $X$ ,

and  $B$  is a useful safety factor to insure us against uncertainty  $Y$ .

then  $AB$  is a useful safety factor to insure us against uncertainties  $X$  and  $Y$  together.

Why not:  $\square + \square$  or  $\square \oplus \square$  ?

# How Much Steak for Dinner?

You invite 3 guests for a steak dinner  
You usually eat 250 g of steak yourself  
Nobody should go hungry  
How much steak should you buy?

Uncertainty	Factor
You sometimes eat twice as much as at other times	2
You once saw a friend eat three times as much as you after the same day's exercise	3
A guest once brought two uninvited friends	3
Some steak has 20% water added	1.2

$$250 \text{ g} \times 4 \times 2 \times 3 \times 3 \times 1.2 = 21.6 \text{ kg}$$