Spec Ref	Topic	TAP episode	comments
5.3.2	quarks, strangeness, charm, topness, bottomness;	540-4	Strangeness only
	weak interaction and two types of eta decay	534-5	
	neutrinos, antineutrinos, leptons	533, 534	
5.3.3	nature, penetration and range of $ lpha $, $ eta $ and $ \gamma $	510	
	$A = \lambda N$, $A = A_0 e^{-\lambda t}$ and $N = N_0 e^{-\lambda t}$	515	
	half-life, $\lambda t_{\%} = 0.693$;	515, 516	
	radioactive isotopes in smoke alarms & dating	509	
5.3.4	$\Delta E = \Delta mc^2$	525	used in calculation of binding energy only
	binding energy and binding energy per nucleon	525	
	induced nuclear fission & chain reactions	527	
	fission reactor & uses of nuclear fission	528	Reactor only
	environmental effects of nuclear waste	527	Brief discussion only
	nuclear fusion	528	
	the core of stars		No ref
5.4.1	X-rays and their production	530	Diffraction etc, but no method of production
	photoelectric effect, Compton Effect and pair production	502	Not Compton effect
	intensity, $I = I_0 e^{-\mu x}$	511-4	
	use of X-rays in imaging, barium meal, CAT scanner		No ref
5.4.2	use of medical tracers	527-1	Very brief mention
	a gamma camera		No ref
	positron emission tomography (PET);	534-2	
	magnetic resonance, Larmor frequency, resonance, relaxation times;		No ref
	MRI scanner & use in diagnosis		No ref
	need for non-invasive techniques in diagnosis		No ref
	Doppler effect to determine the speed of blood.		No ref