<u>Decay Properties (cont.)</u>

<u>Rare Decays:</u>

Within the Standard Model the top quark can decay to object other than a W and a b quark.

e.g

$$t \to Z + c, \gamma + c \text{ (or u)}$$
$$t \to WWc$$
$$t \to WZb \text{ (near threshold for } \mathrm{M_t} = 175\text{)}$$

Unfortunately, the SM branching ratio are extremely small $< 10^{-10}$.

Nonetheless, one can look for surprises: