Rubidium as THE Radioactive Minimal Standard - v2
sgm, 2018/AUG/30

detector: CAJOE version GMj3 (with external GM-tube)
background/cosmic-ray: 0.14046(r)μSV/hr, 48 hour s.p.
BG/c-r + Rb: 0.1433μSV/hr, 92.13(r) hour s.p.
=> Rb(1g): 0.00283(r)μSV/hr
=> $7.05*10^{-6}$ = f_n*, *fraction of nuclei of a **solid sample***, such as a cube of Rb with a GC-GM tube on one face, observed disintegrate
*based on reported** 670Bq/g<=>402μSV/hr
counting ALL nuclei in 1g
NOTE: this is for β-decay ONLY
f_n will be *different* for α and γ
**https://en.wikipedia.org/wiki/Rubidium

A few days ago, God inspired this brief article, but she wants ***me*** to take credit because of her core attribute, humility. I had two genuine candidates on my somewhat lengthy list: ^{87}Rb and ^{115}In. The latter is 96% unstable with half-life approximately 10^{14}. I purchased some, very inexpensive, and attempted to accurately measure its activity. “Impossible.” The reason is the ***fact*** its activity level is ***below*** that of cosmic rays, 82 CPM. You’d have to be in a lead-walled room with walls ***several meters thick*** of lead – to minimize cosmic rays – to the point they’d become negligible. I should have said several ***hundred*** meters thick. O.O Which is why I used the word “impossible” above.

Now, ^{87}Rb is down to 28% unstable BUT half-life is ONLY 10^{10}. O.O which means it’s actually ***measurable!*** The activity level is 92 CPM stated at the beginning of the article (version 1); the title is ***longer*** in characters than lines-of-text within. Now I know FOR SURE she doesn’t waste ANYthing.

“one two, tickle my shoe..
three four, close the door..
what are we waiting for?!”