Exercise 11: Activation

Beginners' FLUKA Course

Exercise 11: Activation

❑ copy the solution of Exercise 5 (**ex5.inp**) into a new directory (**ex11**), name it **ex11.inp** and open it using FLAIR

❑ add irradiation profile of three irradiation periods of 7 days each, separated by 4 days of shutdown

❑ adjust intensity during each period: 10^5 protons per second

❑ consider two cooling periods: one hour and one month

❑ add scoring of specific activity in Bq/cm^3 in the aluminum and lead cylinders of the target for both cooling periods with USRBIN and with RESNUCLE and convince yourself that they give the same results

❑ calculate dose equivalent rate for both cooling periods using the conversion coefficients for effective dose (identifier 'EWT74', selected with the AUXSCORE card), around the target with USRBIN (R-Φ-Z) R:0..10cm in 100 bins, Φ 1 bin, Z:-5..15cm in 200 bins, X=0, Y=0cm

❑ kill electromagnetic cascade in the prompt particle cascade