

## Summary

We analyzed the modulation parameters of galactic cosmic ray transport in the heliosphere retrieved from GCR anisotropy for solar cycles 18-23 and parts of 17 and 24, covering the period 1937-2018. Fig. 1 presents the timeline of parameter  $\alpha$  for IC Cheltenham for 1937-1977, MT Nagoya for 1971-2017, details please see in [6-7] and MT Hobart for 2007-2018 [8].

We found that the ratio  $\alpha$  of mean free paths normal and parallel to mean IMF  $B$  is polarity dependent at Earth orbit with higher values for periods around solar minima for positive polarity ( $A>0$ ) than for negative ( $A<0$ ). Timeline of modulation parameter  $\alpha$  for more than 7 decades, exhibits a slight  $\sim 11$ -year and dominant  $\sim 22$ -year variation and has a strongly polarity dependent character with the considerable enhancement in the minimum epoch of solar activity for  $A>0$  IMF magnetic polarity.

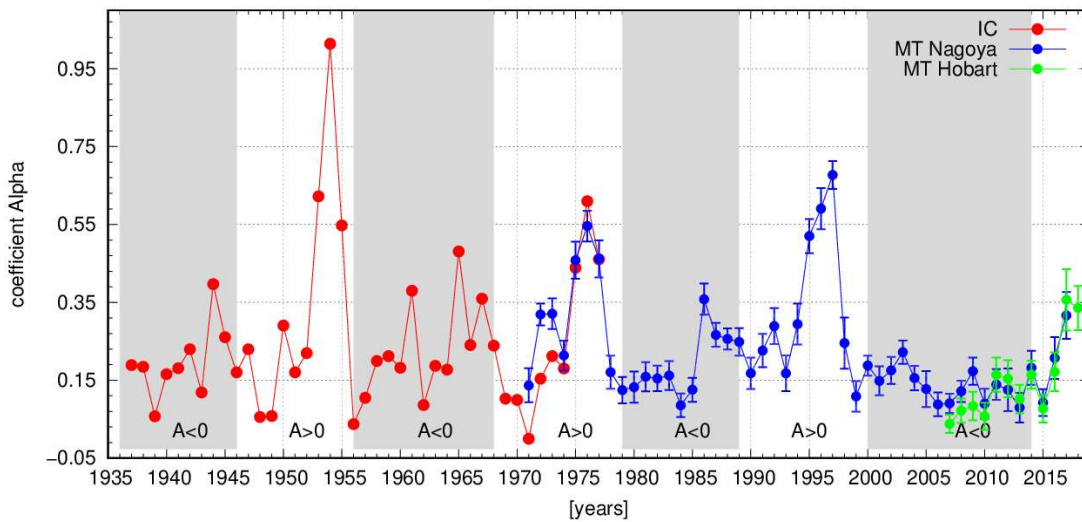


Fig. 1. Yearly  $\alpha$  for IC Cheltenham, MT Nagoya and MT Hobart data for 1937-2018, for solar cycles 18–23 and parts of 17 and 24.