Comparative analysis of land surface parameters on three typical underlying surfaces over the Tibetan Plateau

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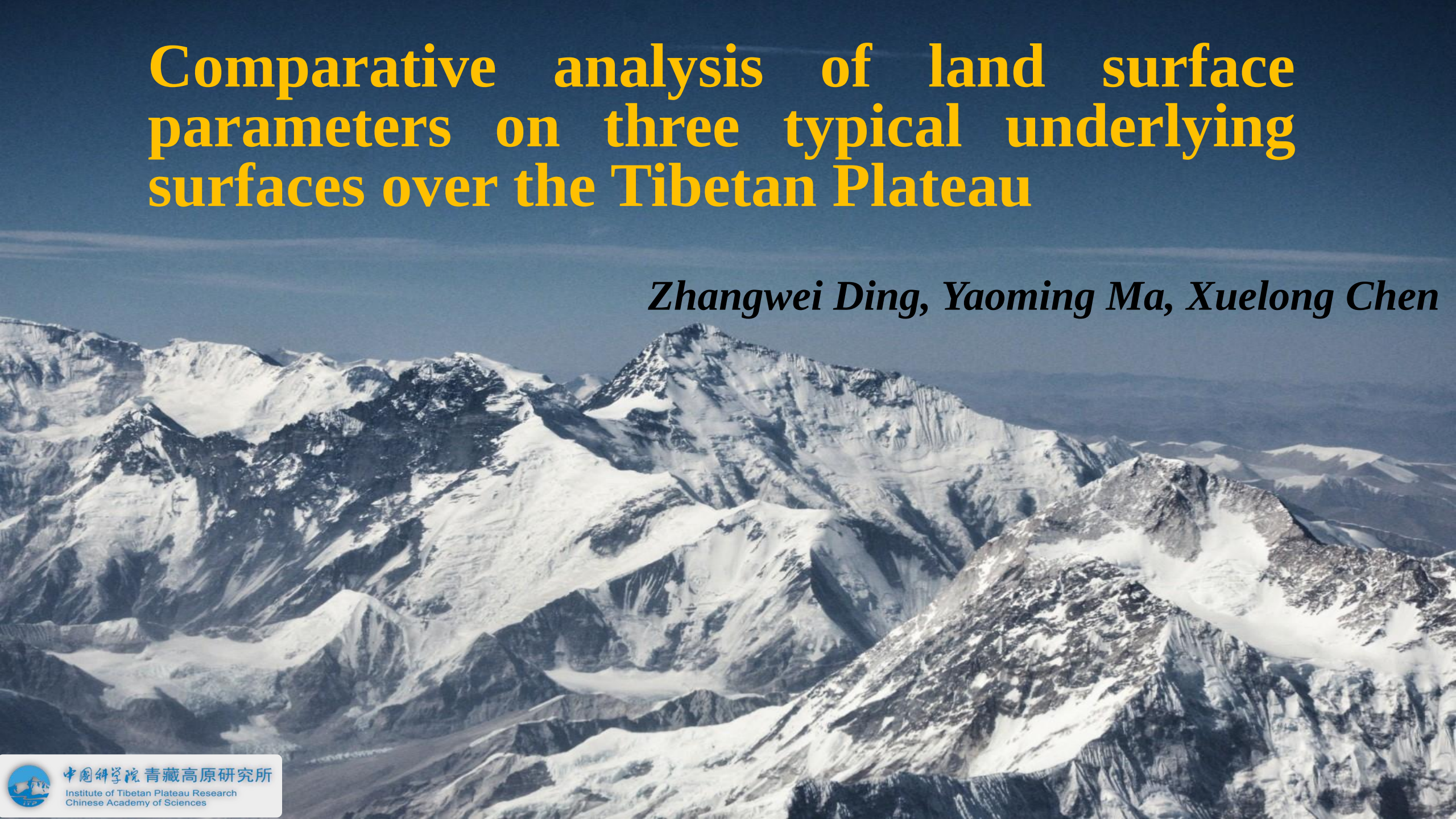

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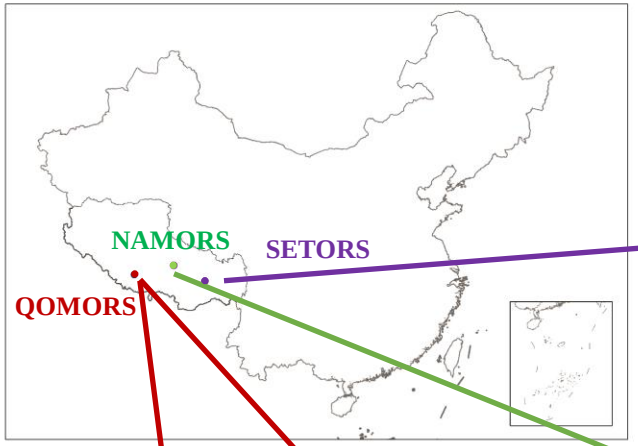
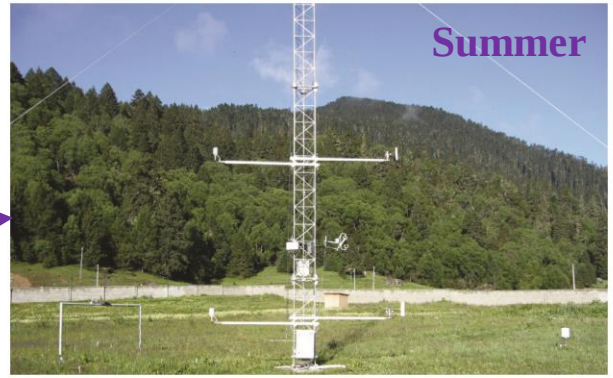
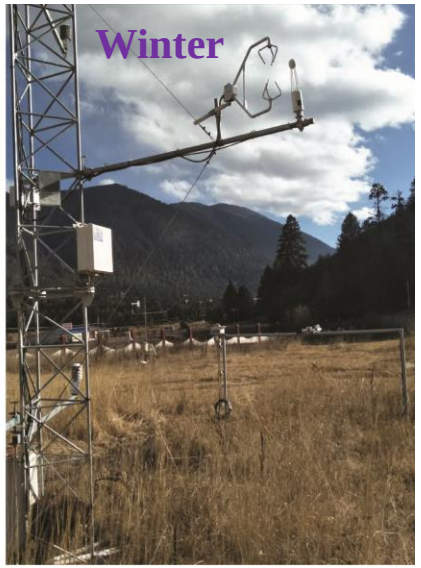
Field sites

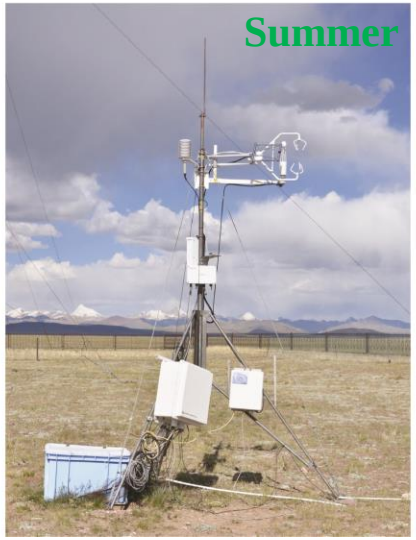




Dense alpine grassland

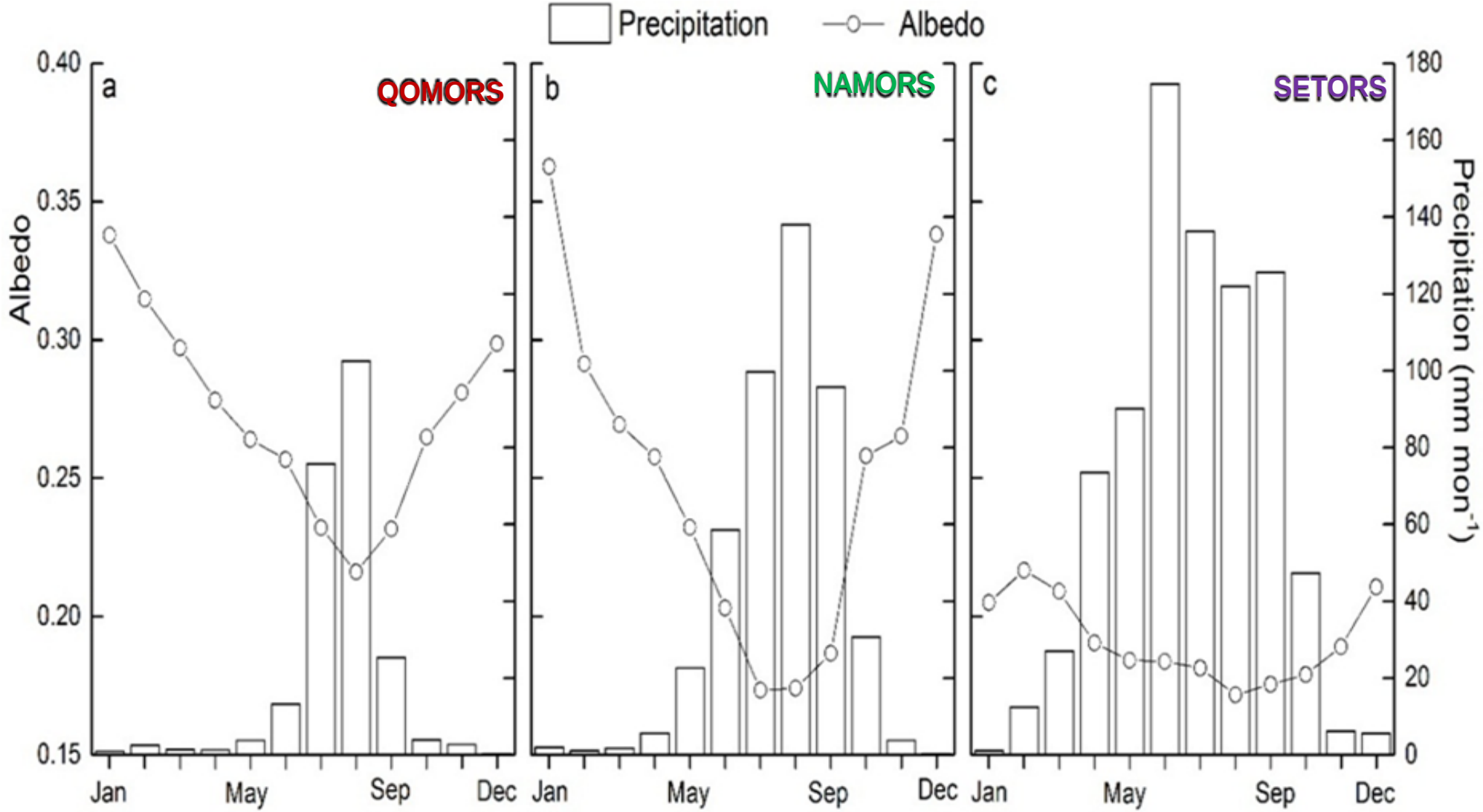


Bare soil



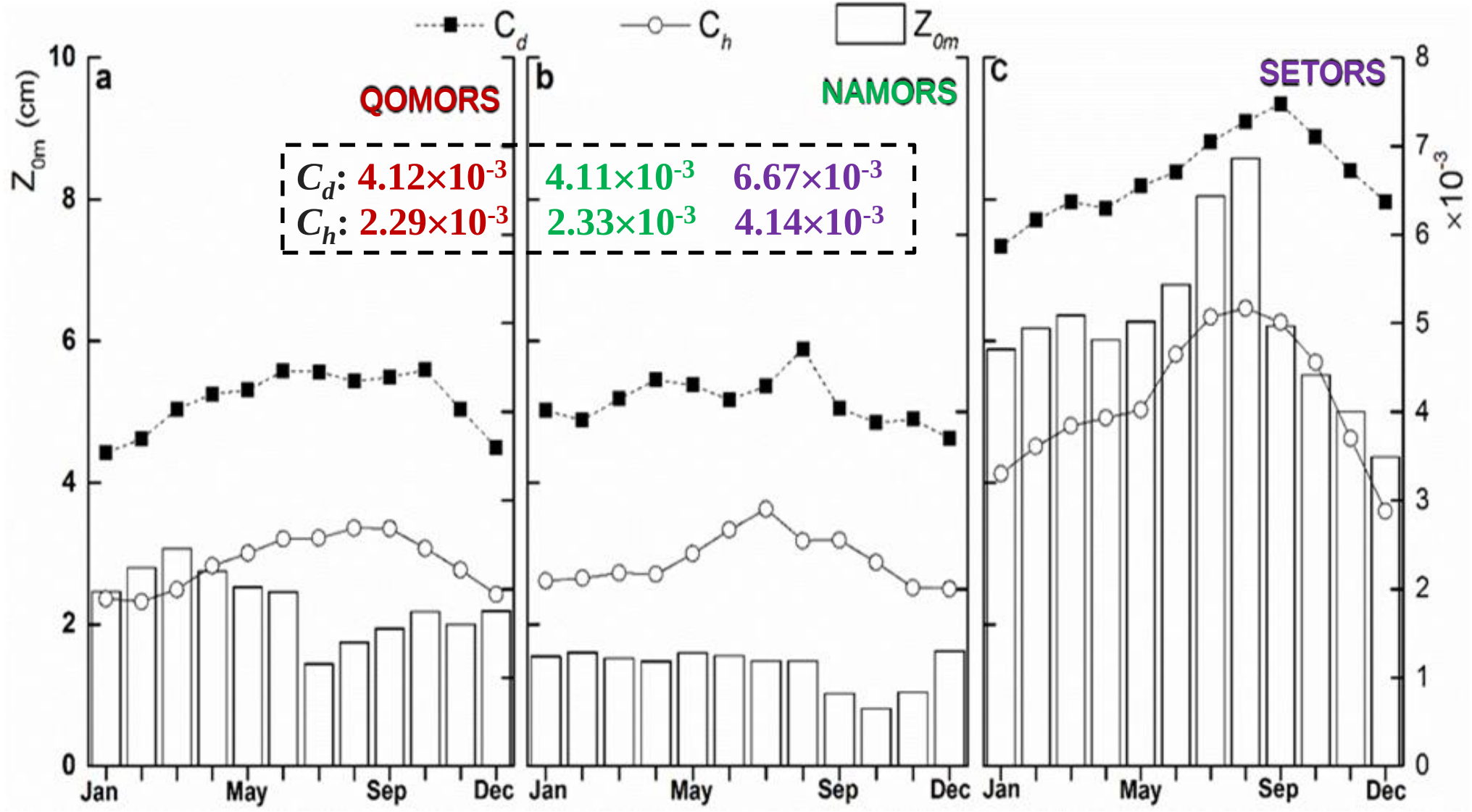
sparse alpine meadow

Seasonal variations in total monthly rainfall and surface albedo for the 2007-2012 for (a) QOMORS; (b)NAMORS; and (c) SETORS

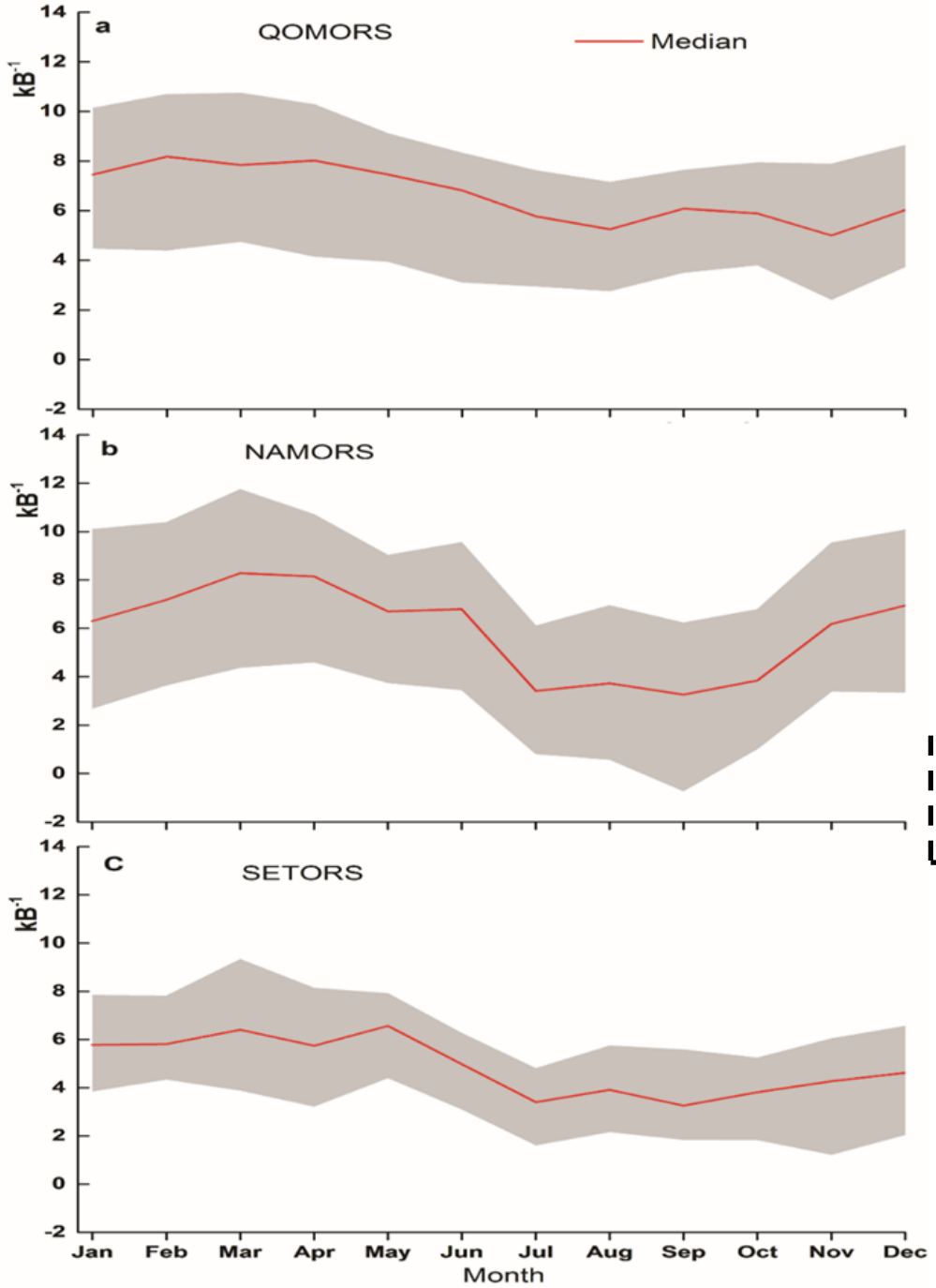


Albedo: 0.27(QOMORS) 0.24(NAMORS) 0.19(SETORS) (annual mean)

Mean monthly surface roughness length for momentum, turbulence transfer coefficients for momentum and sensible heat flux for the 2007-2012



Z_{0m}: 2.29cm(QOMORS) 1.39cm (NAMORS) 6.52 *cm* (SETORS)



Mean annual cycles of κB^{-1} based on averaging six calendar years, *i.e.*, 2007–2012 for (a) QOMORS; (b) NAMORS; and (c) SETORS. The red line represents the median diurnal cycle, with the shaded region indicating the 25th and 75th percentile for each month.

***kB*$^{-1}$: 6.65(QOMORS) 5.89(NAMORS) 4.88(SETORS)**
(annual mean of median value)

Conclusions

- Annual mean surface albedo and Z_{0m} were 0.27 and 2.29 *cm*, 0.241 and 1.39 *cm* and 0.19 and 6.52 *cm* over bare soil, naturally sparse alpine meadow and dense alpine grassland, respectively.
- The yearly average C_d & C_h under neutral condition were 4.12×10^{-3} and 2.29×10^{-3}, 4.11×10^{-3} and 2.33×10^{-3} and 6.67×10^{-3} and 4.14×10^{-3}, respectively.
- Median values of κB^{-1} averaged over multiple years are 6.65, 5.89 and 4.88, respectively.