Improving CLM4.5 Simulations of Land–Atmosphere Exchange during Freeze–Thaw Processes on the Tibetan Plateau

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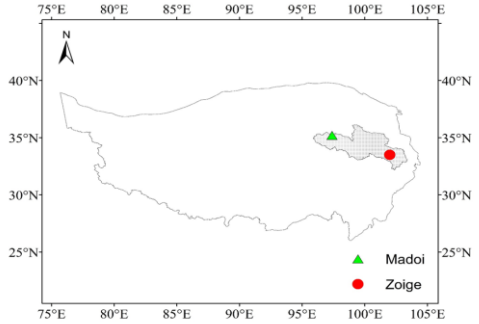
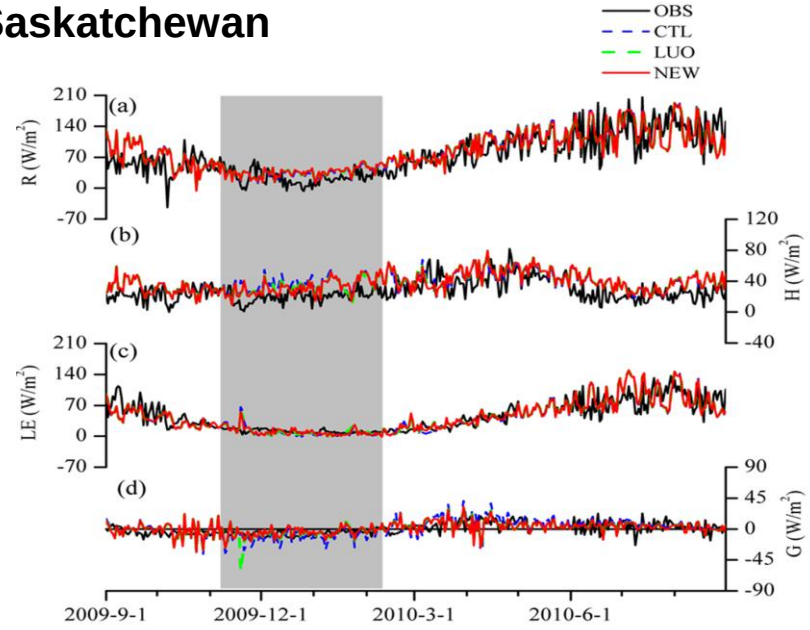
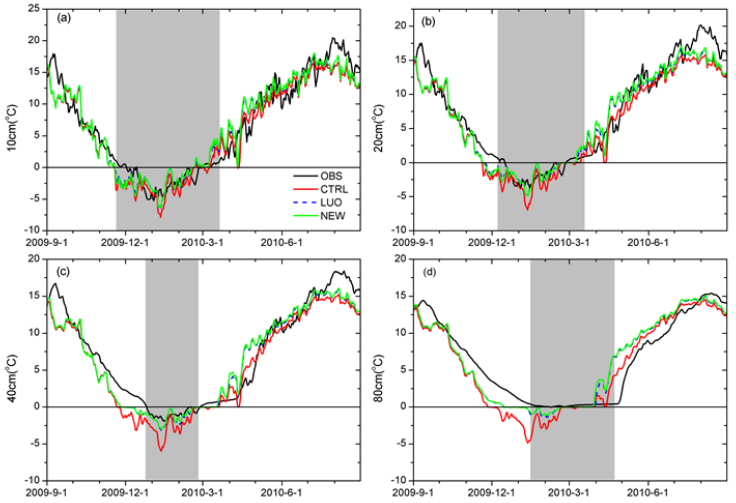
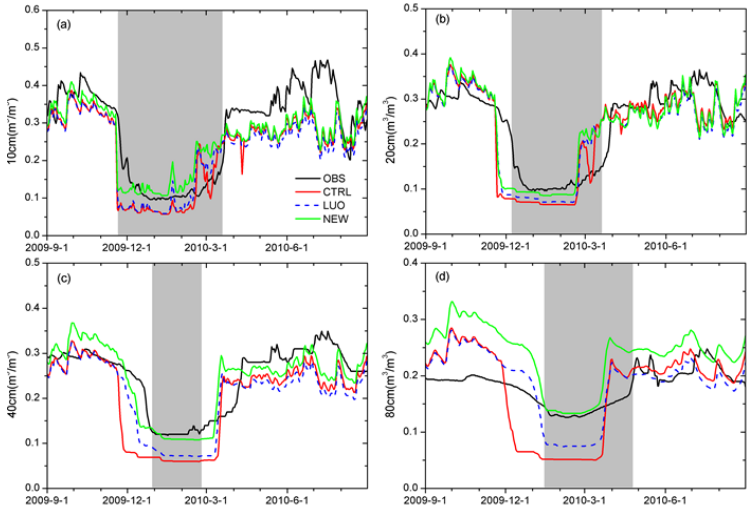
An improved soil parameterization scheme that considers organic matter and thermal conductivity was introduced into CLM4.5.







Soil temperature



Soil moisture

- **Improved soil temperature simulation and decreased cold biases.**
- **The water holding ability was higher than that in the original experiment.**
- **The net radiation, latent heat flux and soil surface heat flux simulations were also much improved.**