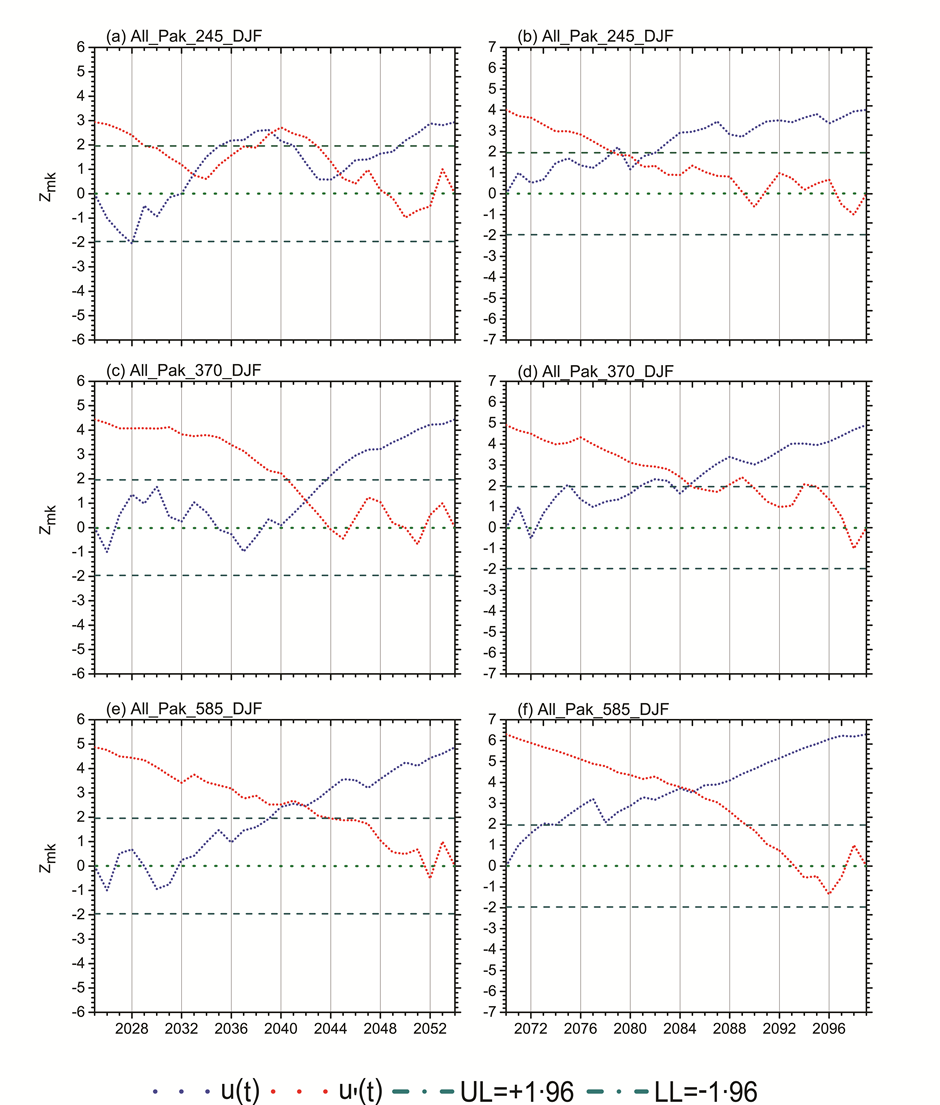
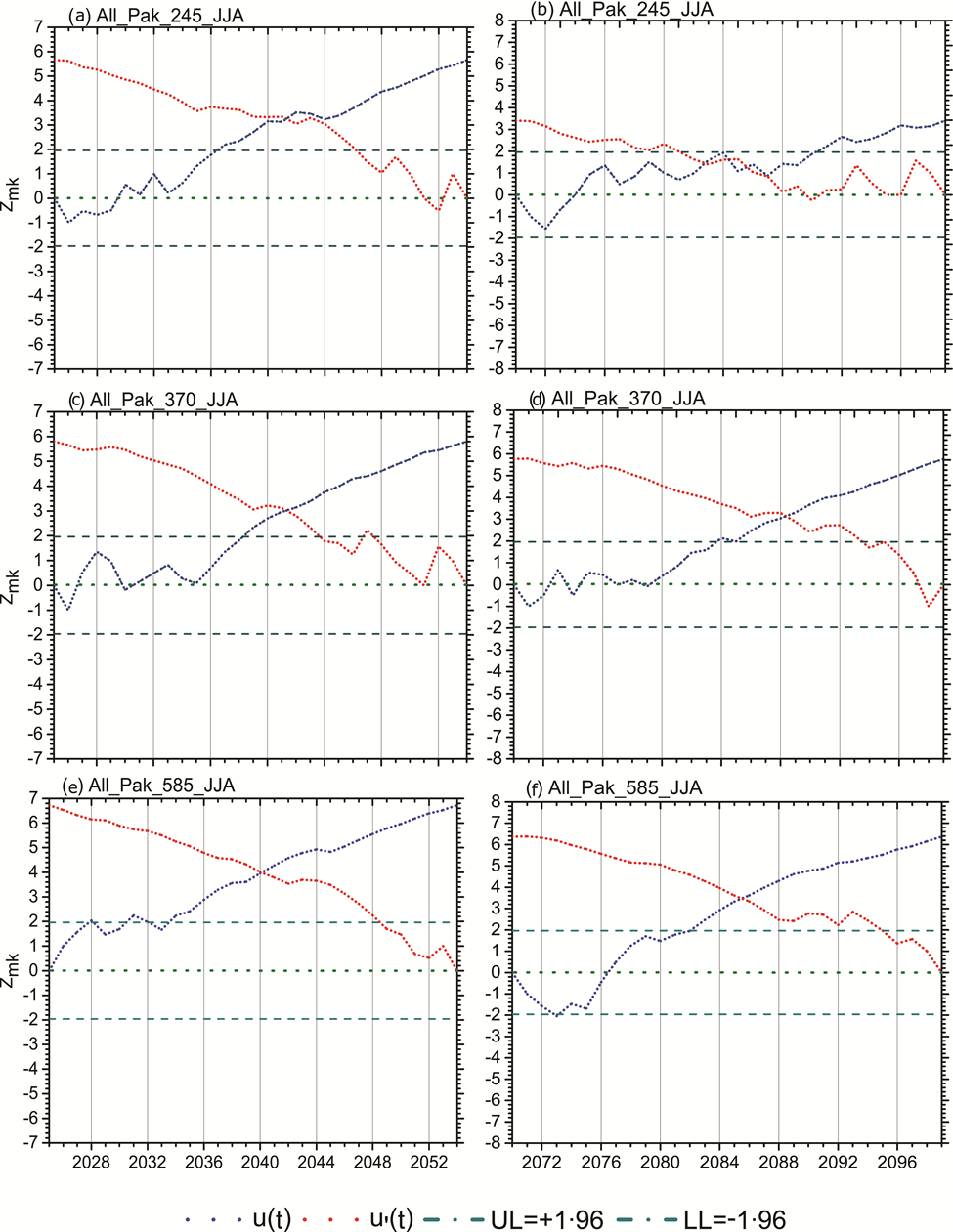
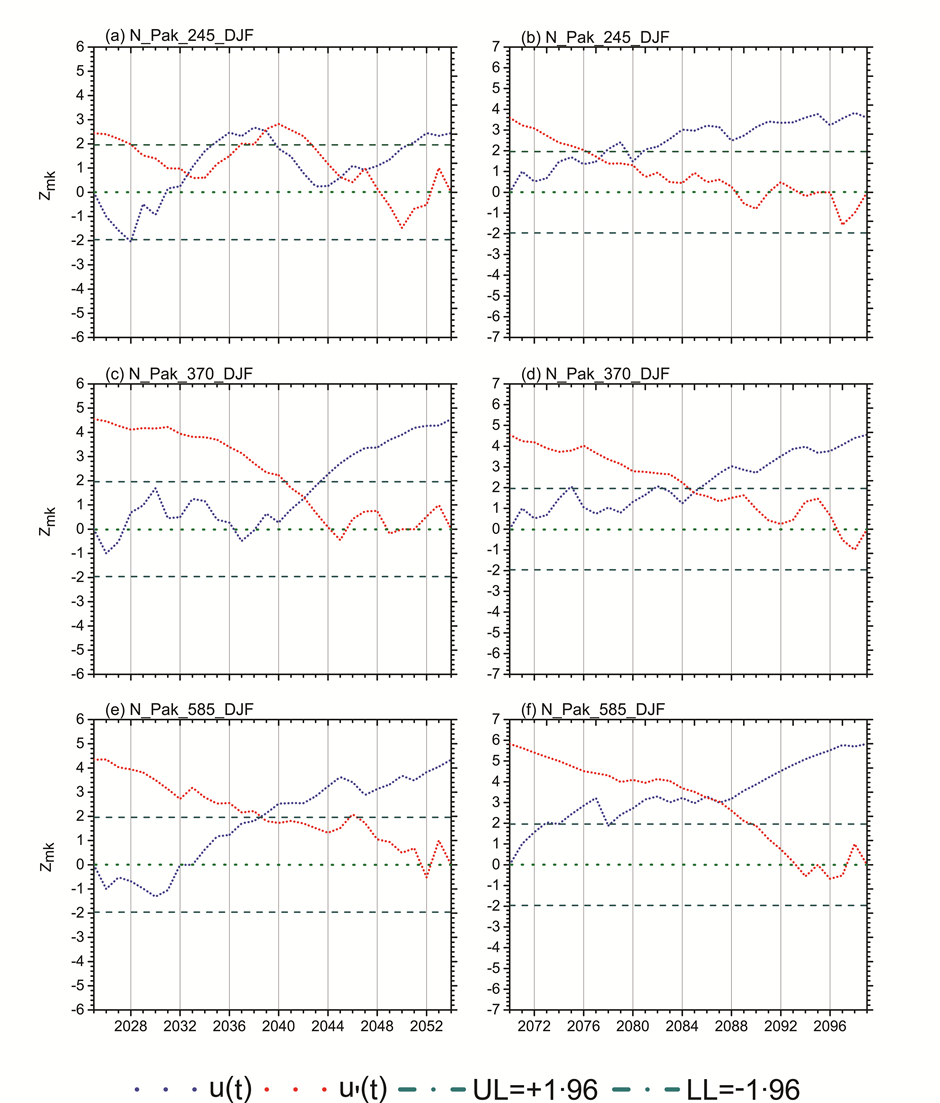
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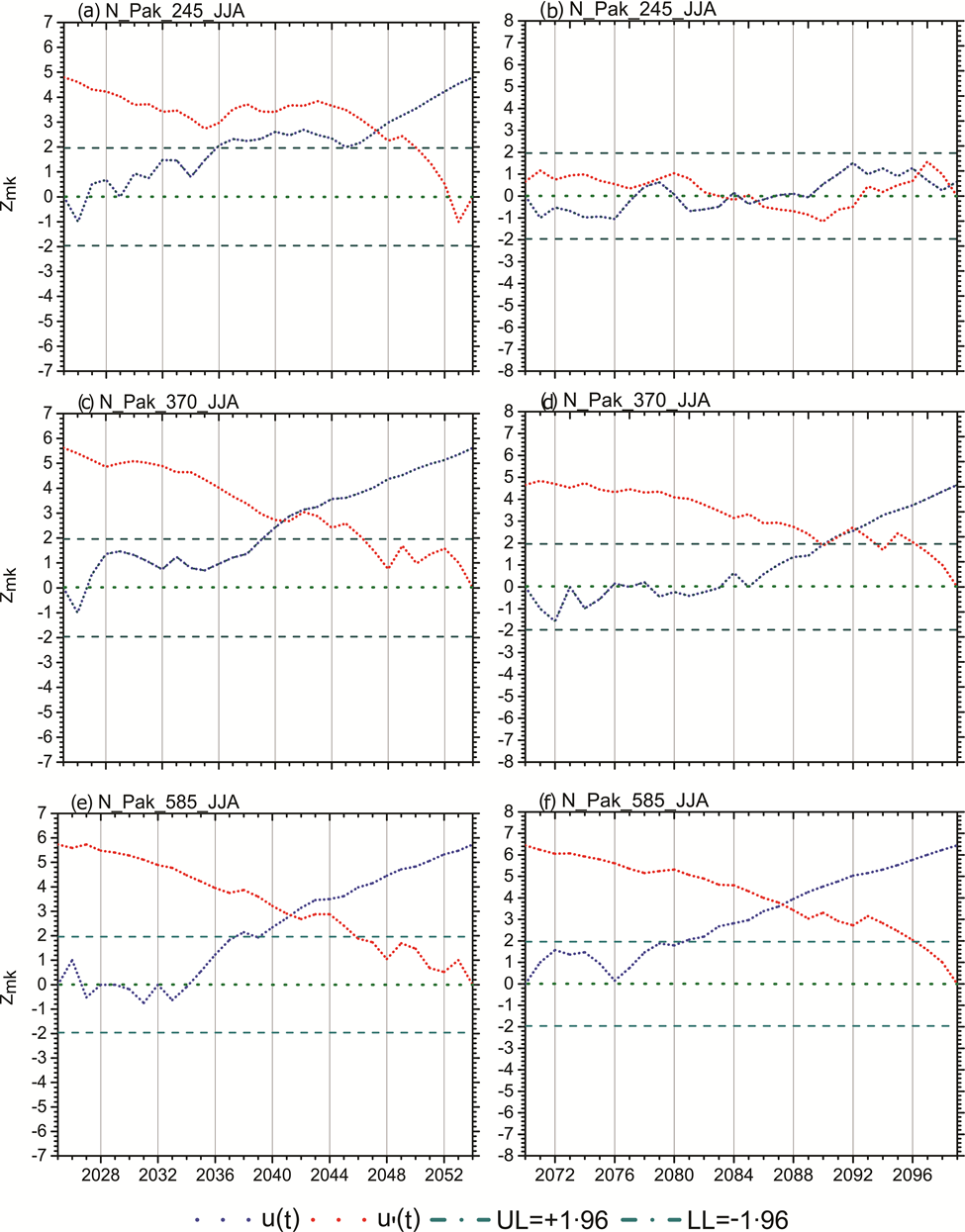
**Figure S1.** Temporal abrupt changes in DJF season trend for surface mean temperature trends for 2025-2054 and 2070-2099 time periods over Pakistan. Blue color line defines the progressive series while the red one identifies retrograde series for the change (intersection) detection at 95% confidence level (viridian color lines).



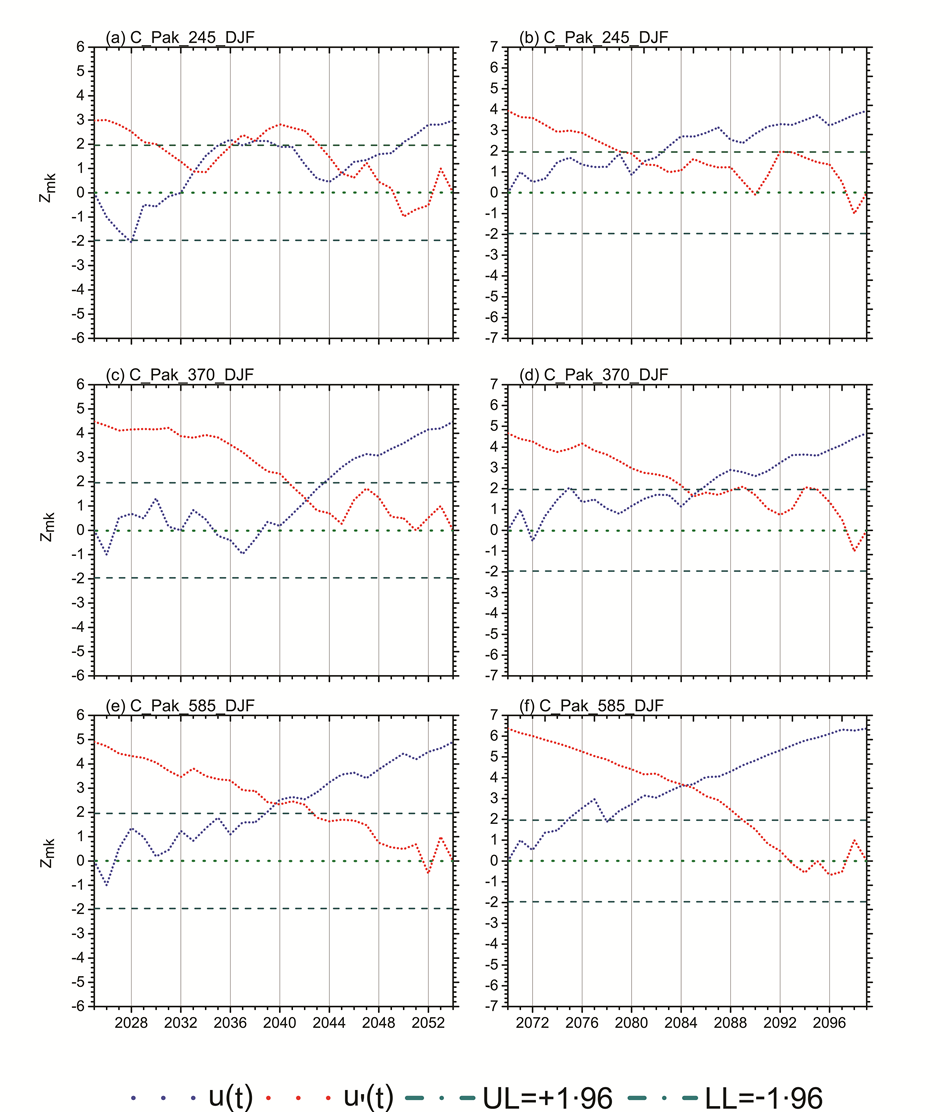
**Figure S2.** Temporal abrupt changes in the JJA season trend for surface mean temperature trends for 2025-2054 and 2070-2099 time periods over Pakistan. The blue color line defines the progressive series, while the red one identifies retrograde series for the change (intersection) detection at a 95% confidence level (viridian color lines).



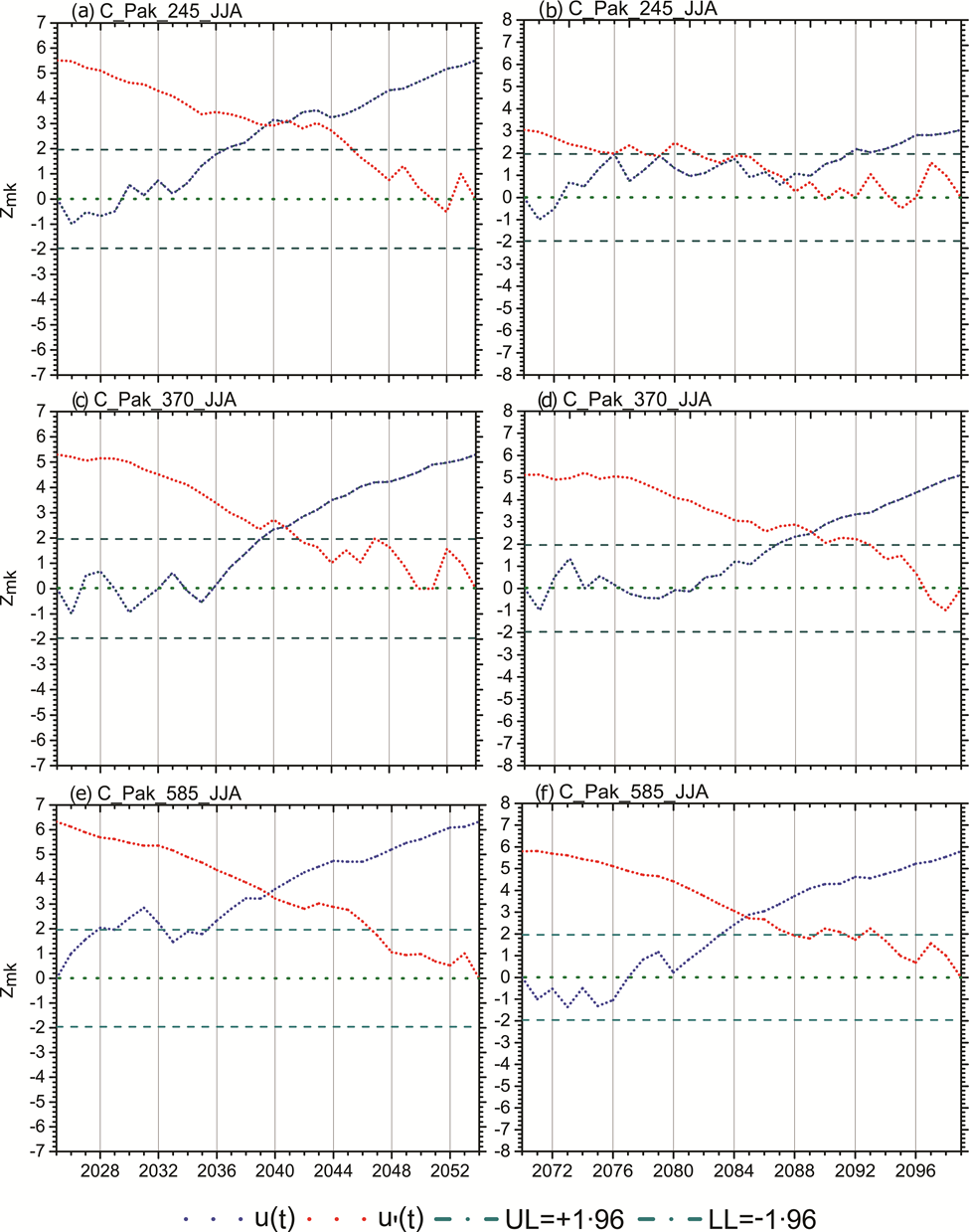
**Figure S3.** Same as **S1**, but for Northern Pakistan.



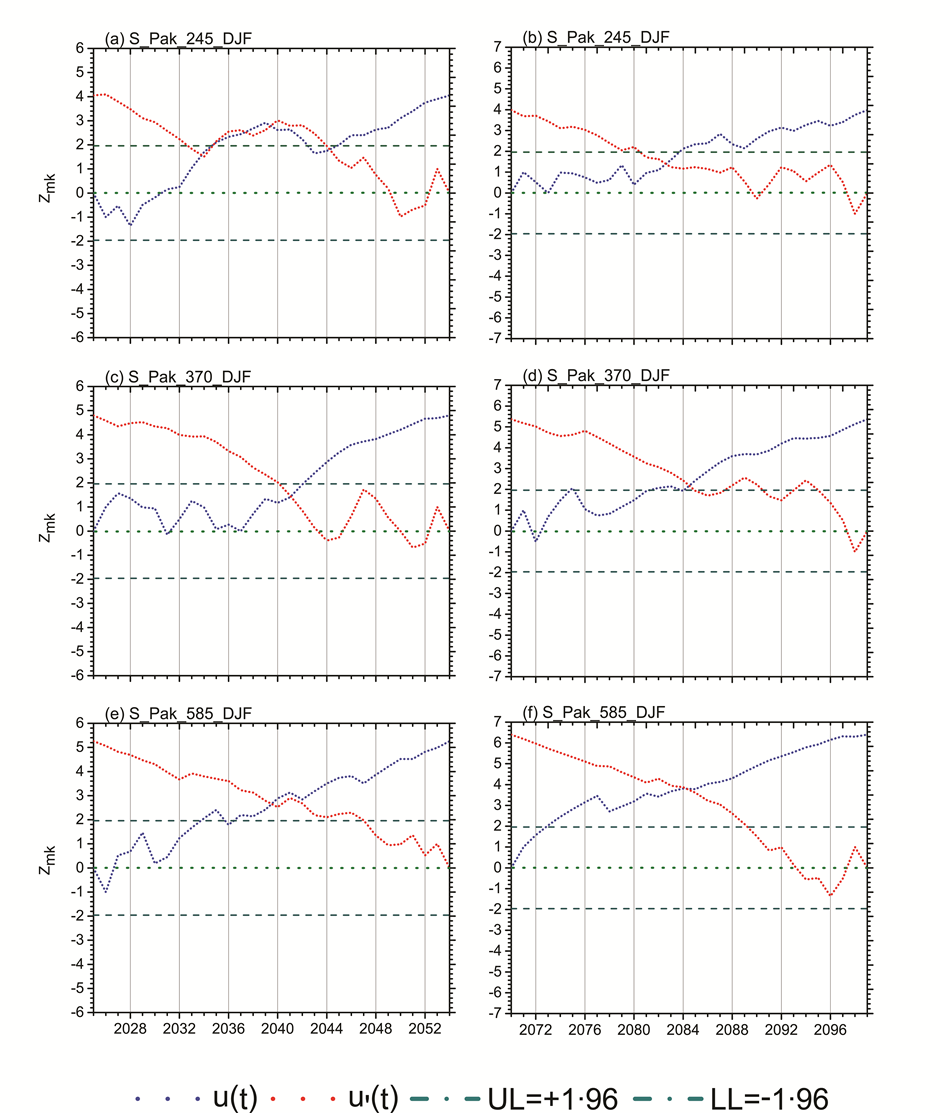
**Figure S4.** Same as **S2**, but for Northern Pakistan.



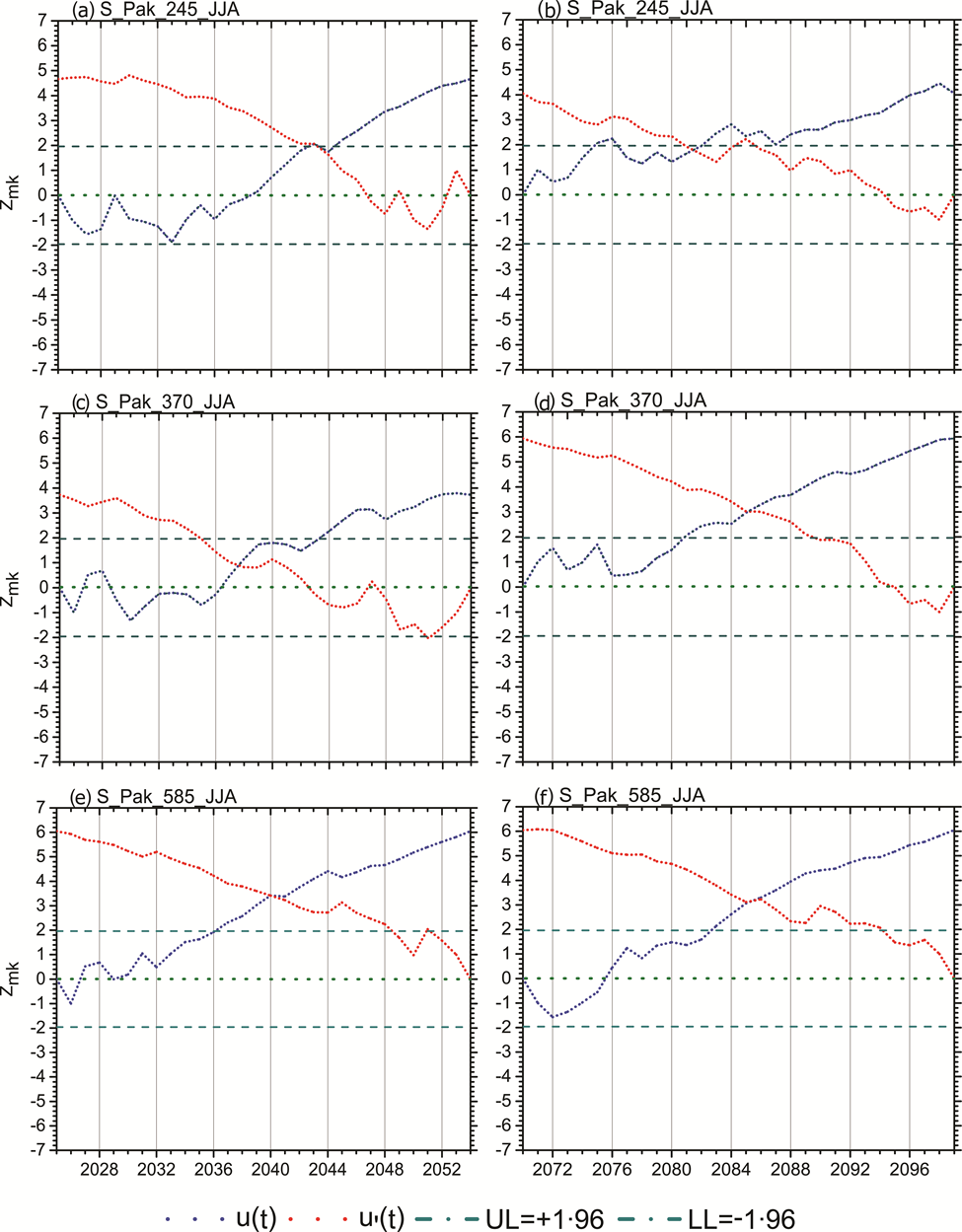
**Figure S5.** Same as figure **S1**, but for Central Pakistan



**Figure S6.** Same as figure **S2**, but for Central Pakistan



**Figure S7.** Same as figure **S1**, but for Southern Pakistan



**Figure S8.** Same as figure **S2**, but for Southern Pakistan