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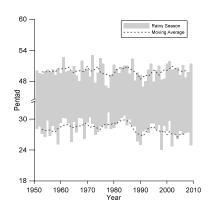


Fig. 1 Variation in regional averaged annual start dates and end dates of the rainy season in East Asia. Dash curves are the 5-year moving averages.

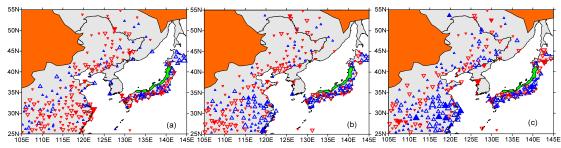




Fig. 2 Spatial distribution of the trends of annual start dates (a), end dates (b), and lengths (c) of the rainy season during 1951–2009 (Negative values mean advance for (a) and (b) or decrease for (c), and positive values mean delay for (a) and (b) or increase for (c). Filled triangles mean that the trends are statistically significant at the 95% confidence level.

- Climatological feature and long-term change of start and end dates of rainy season over East Asia are examined. A standard of 4mm/day precipitation in a pentad (climatology) or consecutive pentads (climate change) is applied to define the rainy season.
- Start and end dates of rainy season in the region as a whole insignificantly advanced, and the duration insignificantly increased from 1951 to 2009.
- The rainy season began earlier in China but later in Korea and Japan, and withdrew earlier at latitudes north of 35°N and southwest China, but delayed in the Yangtze–Huaihe River Basins. The duration slightly reduced in Russian Far East and in northern and western China, and significantly decreased on the Korean Peninsula and southern Hokkaido Islands, but it obviously increased in the Yangtze–Huaihe River Basins.