For over a decade, scientists have recognized that East Asian monsoon rainfall is significantly greater in a summer after an El Niño. Until now, however, there was no known mechanism by which to explain how El Niño could affect climate in an eastward direction and at such a distance. Synthesizing a variety of data sets, including satellite measurements of outgoing long-wave radiation, Wang et al. constructed the following sequence of events. Positive feedback between the atmospheric Rossby waves and SST can maintain the anticyclonic anomaly over the Philippine Sea (PSAC). This anomaly is the mechanism by which the warming in the eastern Pacific during an El Niño impacts the East Asian summer monsoon rainfall two to three seasons later. In the presence of the mean northeasterly trades, the ocean to the east of the PSAC cools as a result of increased total wind speed that induces excessive evaporation and entrainment. The cooling, in turn, suppresses convection and reduces latent heating in the atmosphere, which excites westward-propagating, descending Rossby waves that reinforce the PSAC.