Intra-and-Inter Hemisphere Forcing of the Northwest Australian Summer Monsoon over Late Quaternary Time Scales

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The northern Australian summer monsoon is an integral part of the wider Asian-Australian monsoon regime and provides pathways through which forcing states can be transferred between the two hemispheres. We present the results of two AOGCM experiments that explore the forcing controls and associated circulation responses at 115 ka and 13 ka – times of Southern Hemisphere low latitude isolation high (low), respectively - and relate these to the available stratigraphic findings. Our results demonstrate that inflow into the monsoon region of northwestern Australia and controls of monsoon activity are related to both cross-equatorial flow emanating from the East Asian winter monsoon and forcing from the middle-latitudes of the Southern Hemisphere.