



Third Pole Environment Programme: A new base for the study of atmosphere-land interaction over heterogeneous landscape of the Tibetan Plateau and surrounding areas

Yaoming Ma

Institute of Tibetan Plateau Research, Chinese Academy of Sciences, 18 Shuangqing Road, Beijing 100085, China, e-mail: ymma@itpcas.ac.cn

Centered on the Tibetan Plateau, the Third Pole area stretches from the Pamir and Hindu Kush in the west to the Hengduan Mountain in the east, from the Kunlun and Qilian mountain in the north to the Himalayas in the south, covering over 5000km² with an elevation higher than 4000m. As a unique geological and geographical unit, the Third Pole area dramatically impacts the world's environment and especially controls climatic and environmental changes in China, Asia and even in the Northern Hemisphere. Supported by the Chinese Academy of Sciences and some international organizations, the Third Pole Environment Programme (TPEP) is now implementing. TPEP is focusing on the land-surface processes and environment over the plateau and surrounding areas, with an emphasis on atmosphere-land interaction. Firstly the background of the establishment of the TPEP, the establishing and monitoring plan of long-term scale of the TPEP and five comprehensive observation and study stations will be introduced. Then the preliminary observational analysis results, such as the characteristics of land surface fluxes partitioning ("imbalance", diurnal variation, inter-monthly variation, inter-yearly variation and vertical variation etc), air temperature, pressure, air humidity, wind speed and wind direction, the structure of the Atmospheric Boundary Layer (ABL) will also be shown.