1   **Supplement of**

4   **Asian Summer Monsoon Anticyclone: Trends and variability**

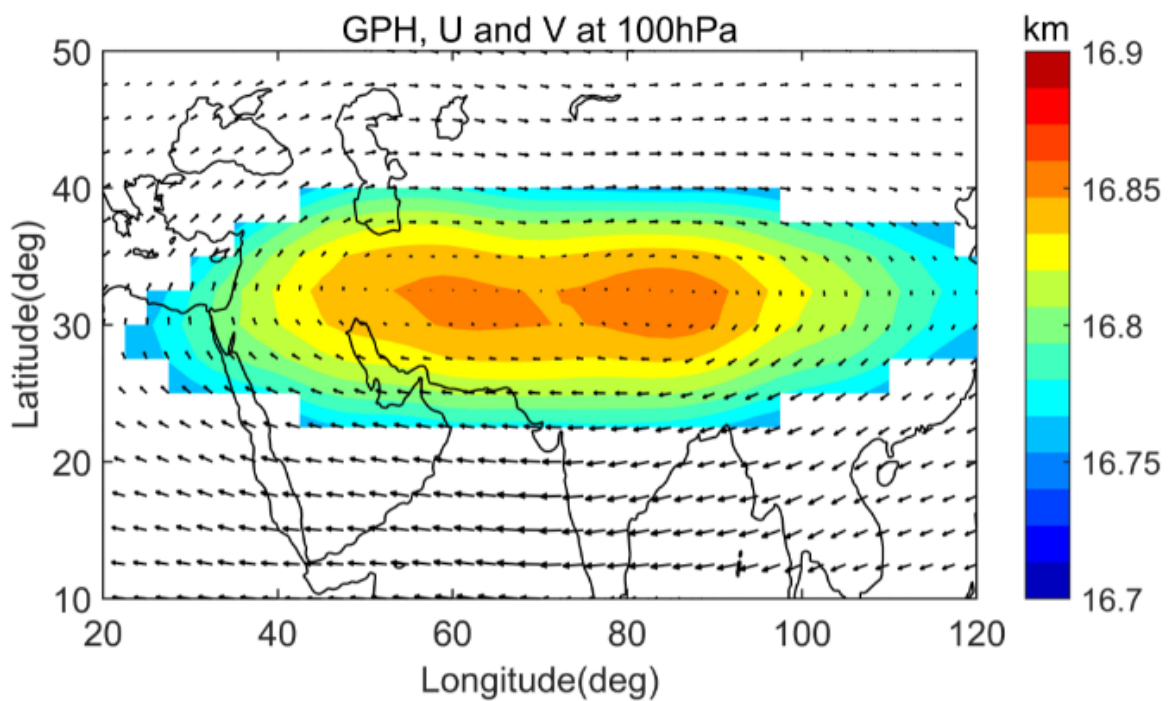
5   Ghouse Basha[1,] M. Venkat Ratnam[1] and P. Kishore[2]

6   [1]National Atmospheric Research Laboratory, Department of Space, Gadanki-517112, India.

7   [2] Department of Earth System Science, University of California, Irvine, CA, 92697, USA.

8   Correspondence to: Ghouse Basha (mdbasha@narl.gov.in)

9

10

11

12   Figure S1. The climatological distribution of GPH and wind vectors averaged during July and

13   August months from NCEP reanalysis data from the year 1948 to 2016.

14

15

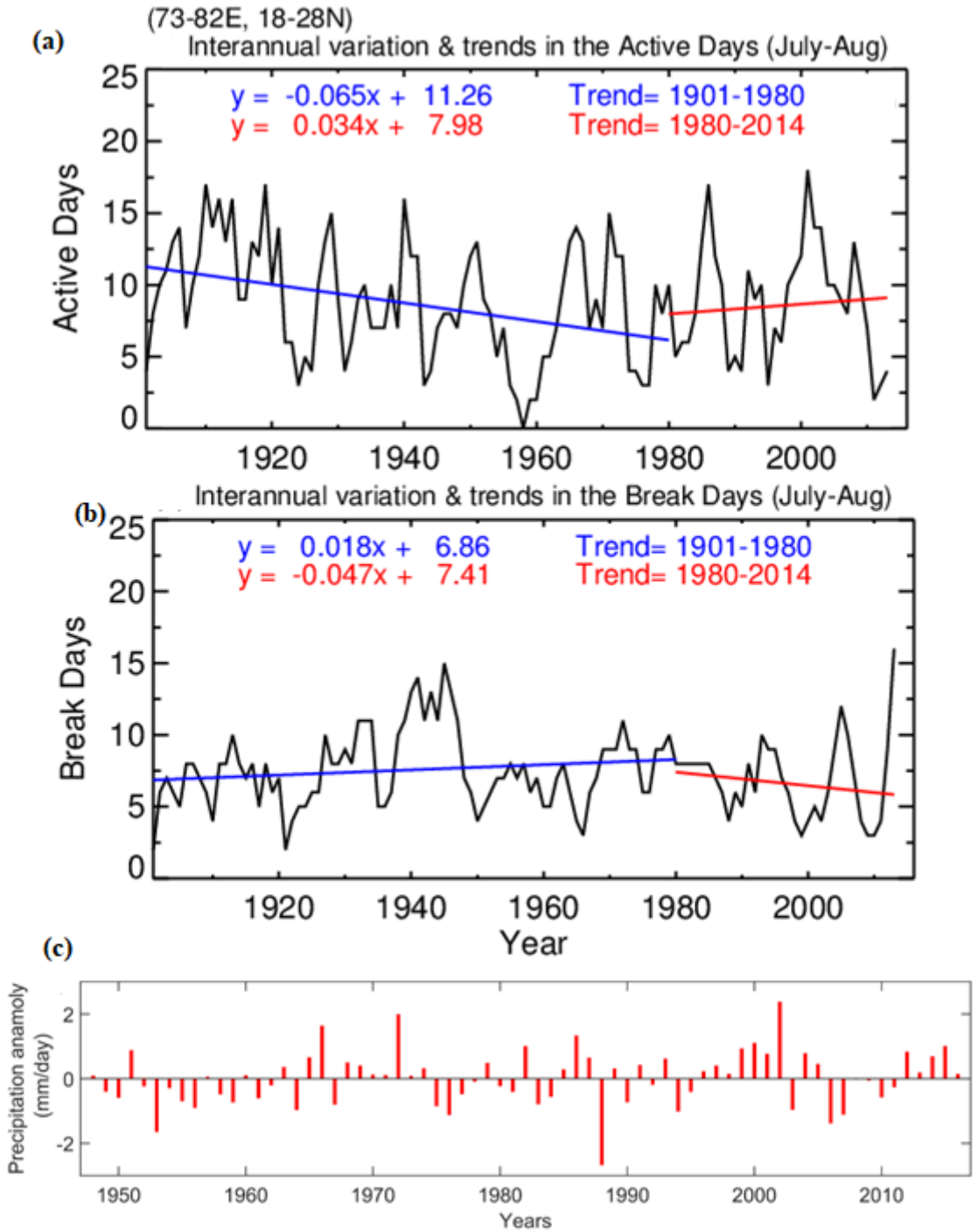
16

17

18

19

20

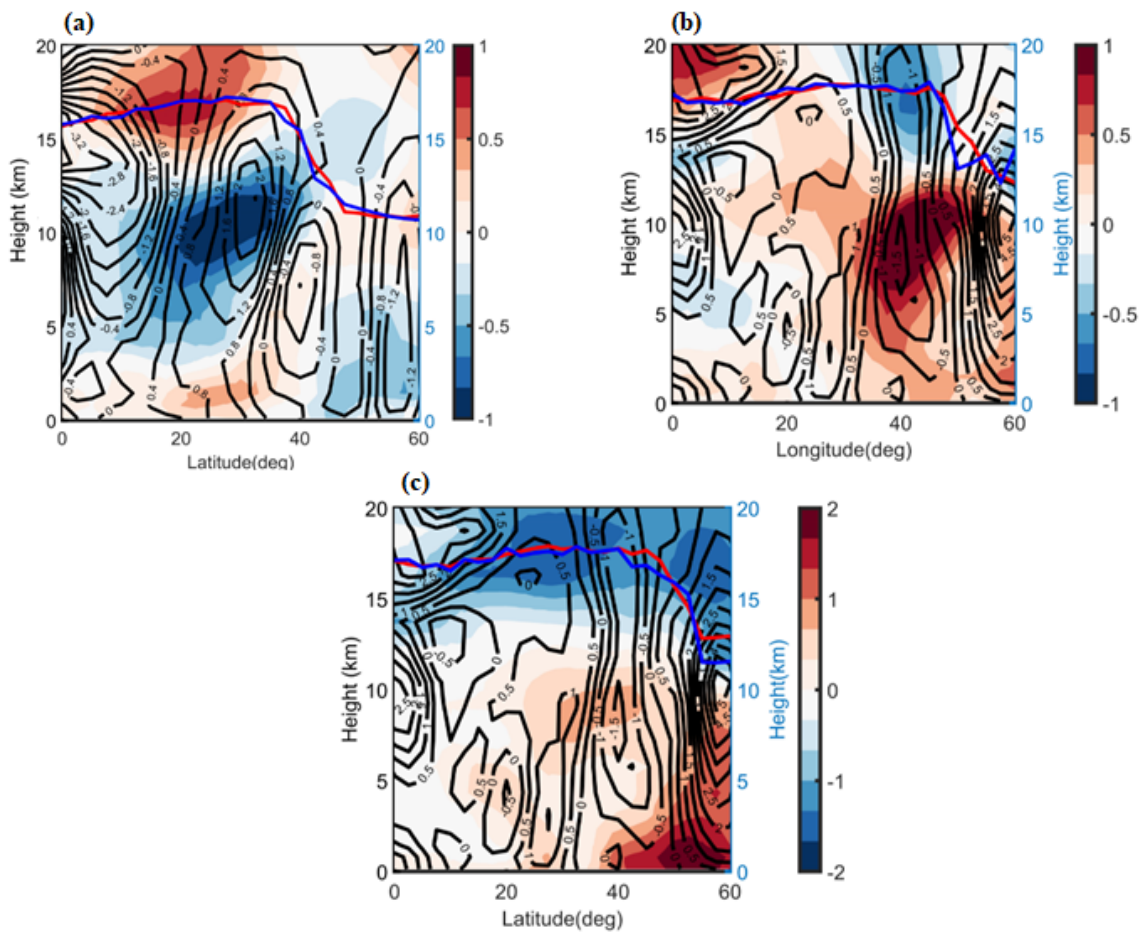
21

22

23 Figure S2. (a) & (b) Total number of active/break spells for July and August and trend

24 analysis using robust regression analysis at 95% confidence interval. (c) Precipitation

25 anomalies from 1948-2016. Positive (Negative) values indicate the strong (weak)

26 monsoon year.

27
28
29

30
31 Figure S3.Zonal mean cross-section of temperature and zonal wind difference between (a)

32 Active and break phase of Indian monsoon, (b) strong and weak monsoon years (c) strong

33 La Niño and El Niño years along with tropopause altitude averaged in the longitude band of

34 50-60ºE.

35