

Two Years of Momentum Flux Data for 31° N

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At various times during the past two years, the authors have had occasion to report upon the results of an investigation of the angular momentum balance of the atmosphere as deduced from actual wind measurements distributed over the northern hemisphere (STARR and WHITE 1951, 1952a, 1952b). The meteorological implications of the results of these studies have been discussed in these papers. A further investigation for a period of one additional year has now been completed for 31° N, in order to verify the previous conclusions with independent data. A continuous two-year period has thus been analysed and represents a concluded phase of the investigation for this latitude.

For the second year, computations were made at the standard pressure levels. In combining the data for the first year with those of the second the 2, 6, 10, 20, 30, 40, and 55 thousand foot levels are identified with the 1000, 850, 700, 500, 300, 200, and 100 mb pressure levels respectively. For purposes of record Table I presents the final array of results, while Table II presents a frequency distribution of all available observations for the two year period. The form of these tables is identical with that of the corresponding ones given by STARR and WHITE (1952a, 1952b), to which papers the reader is referred for details of notation.

It is worthy of note that the vertical average of $[\bar{v}]$ with respect to pressure between 1000 and 100 mb is only $-1.31 \text{ cm sec}^{-1}$.

Table I. Percentage of total possible observations at each level for each station.

Stations	Pressure levels in mb.						
	1000	850	700	500	300	200	100
Qrendi	20	57	58	52	52	33	18
Bahrein	22	63	62	61	57	47	22
Hyderabad	50	0	94	78	34	0	0
Debrugarh	80	0	87	46	17	0	0
Tokyo	91	92	97	95	85	58	24
Midway	81	79	74	66	53	42	21
Honolulu	93	88	80	73	60	46	26
Weather Ship (a) ..	77	84	85	82	71	59	22
Santa Maria	99	99	99	97	87	74	38
Big Spring	4	99	99	94	76	58	21
New Orleans	99	98	96	89	70	48	11
Miami	100	100	99	93	90	78	30
Kindley Field	87	87	83	68	36	13	1
Weather Ship (b) ..	85	79	81	74	55	40	15
Lagens	83	88	87	80	65	41	9
North Front	69	71	68	61	51	23	7
Habbaniya	25	54	52	53	49	43	29
Hong Kong	55	45	40	34	23	18	11
Farouk	32	58	58	55	38	16	2

