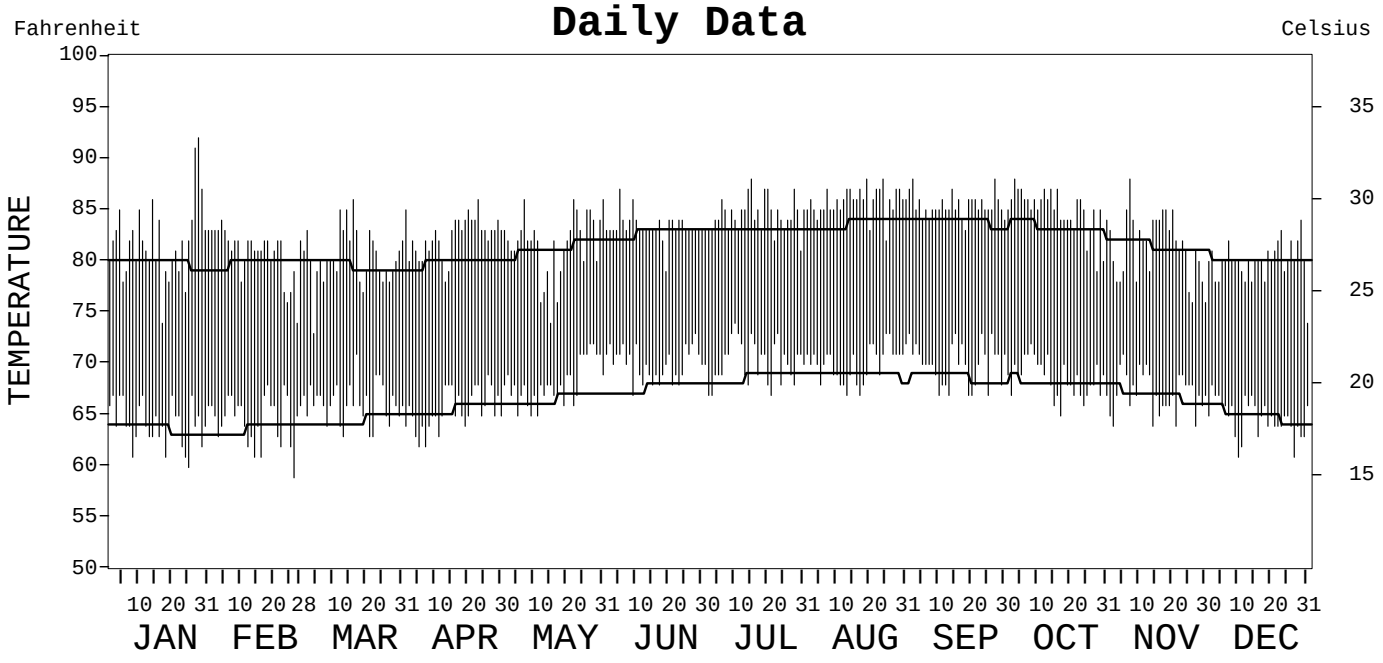
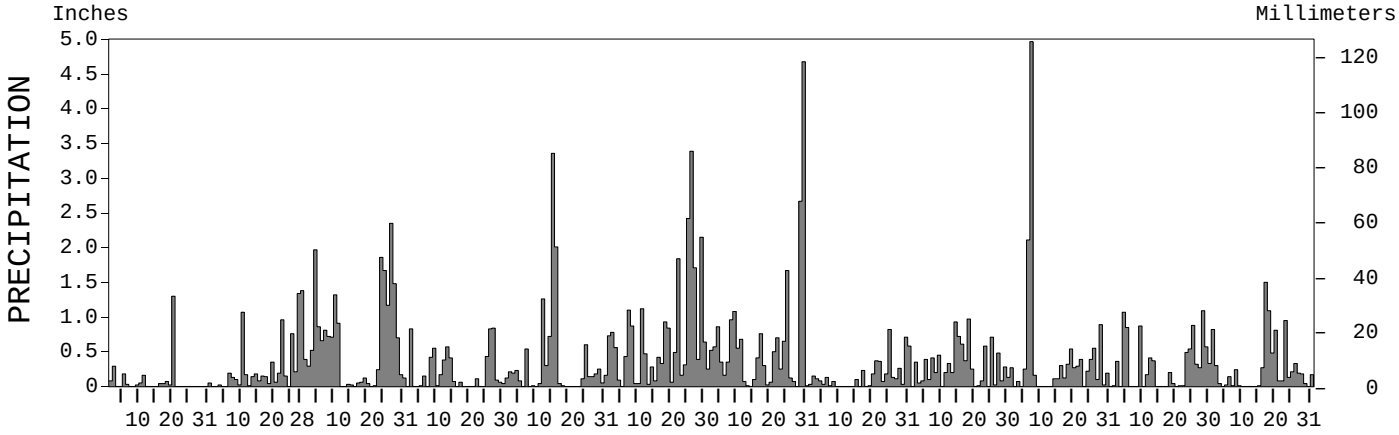
1997 LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

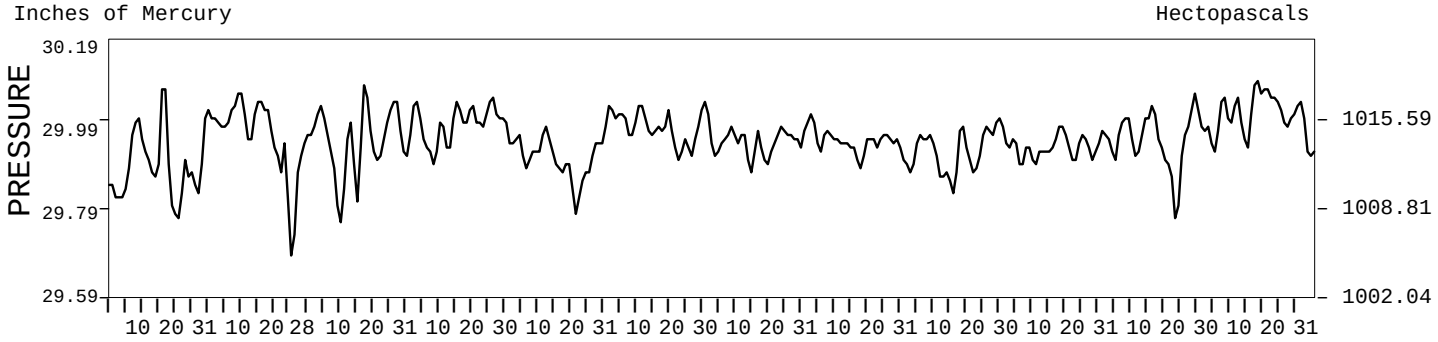
ISSN 0198-1692

HILO,
HAWAII (ITO)

Daily Data







I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER.

Kenneth S. Johnson

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

ACTING DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 1997

HILO, HI (ITO)

LATITUDE: 19° 43′ 24″ N LONGITUDE: 155° 03′ 05″ W ELEVATION (FT): GRND: 38 BARO: 38 TIME ZONE: BERING (UTC+10) WBAN: 21504

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	MEAN DAILY MAXIMUM	82.0	80.8	80.4	82.4	81.7	83.3	84.5	85.8	85.4	84.9	81.4	80.0	82.7
	HIGHEST DAILY MAXIMUM	92	84	86	86	86	87	88	88	88	88	88	84	92
	DATE OF OCCURRENCE	28	04	16	23	31+	05	15	24+	02	03	07	29	JAN 28
	MEAN DAILY MINIMUM	64.2	64.6	66.2	65.5	68.2	70.0	70.2	70.1	70.0	68.6	67.2	64.8	67.5
	LOWEST DAILY MINIMUM	60	59	63	62	65	67	67	67	67	65	64	61	59
	DATE OF OCCURRENCE	25	26	22+	05+	11+	09	21+	17+	25+	17	27+	27+	FEB 26
	AVERAGE DRY BULB	73.1	72.7	73.3	74.0	75.0	76.7	77.4	78.0	77.7	76.8	74.3	72.4	75.1
	MEAN WET BULB	67.3	66.7	68.6	67.7	69.9	71.8	72.0	71.9	72.2	70.9	69.4	66.5	69.6
	MEAN DEW POINT	64.1	63.7	66.7	64.6	67.6	69.8	69.7	69.2	69.8	68.3	67.3	63.6	67.0
	NUMBER OF DAYS WITH:													
	MAXIMUM ≥ 90°	2	0	0	0	0	0	0	0	0	0	0	0	2
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0
H/C	HEATING DEGREE DAYS	0	0	0	0	0	0	0	0	0	0	0	0	0
	COOLING DEGREE DAYS	261	221	261	277	317	358	388	407	389	373	287	239	3778
RH	MEAN (PERCENT)	76	77	84	76	81	83	80	76	80	79	82	79	79
	HOUR 02 LST	86	85	92	84	90	91	89	87	89	87	87	85	88
	HOUR 08 LST	80	83	90	80	85	89	88	82	86	85	87	85	85
	HOUR 14 LST	64	65	71	63	68	75	68	63	68	66	69	66	67
	HOUR 20 LST	81	82	85	78	82	83	78	76	80	81	84	83	81
S	PERCENT POSSIBLE SUNSHINE	48	45	37	60	41	44	48	59	59	56	27	30	46
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG(VISBY ≤ 1/4 MI)	0	0	0	0	0	0	0	0	0	0	0	0	0
	THUNDERSTORMS	1	3	0	0	0	1	2	0	0	2	2	0	11
CLOUDINESS	AVG. SKY COVER (OKTAS)													
	SUNRISE – SUNSET	4	5	7	5	7	6	6	5	5	5	6	6	6
	MIDNIGHT – MIDNIGHT	4	5	7	5	7	6	6	5	6	5	6	6	6
	NUMBER OF DAYS WITH:													
	CLEAR	10	3	0	4	0	0	1	3	2	2	2	0	27
	PARTLY CLOUDY	13	17	12	18	11	13	17	22	18	20	11	17	189
	CLOUDY	8	8	19	8	20	17	13	6	10	9	17	14	149
PR	MEAN STATION PRESS. (IN.)	29.91	29.98	29.97	30.01	29.93	30.00	29.97	29.96	29.95	29.95	29.97	30.03	29.97
	MEAN SEA-LEVEL PRESS. (IN.)	29.95	30.02	30.01	30.05	29.97	30.04	30.01	30.00	29.99	29.99	30.01	30.07	30.01
WINDS	RESULTANT SPEED (MPH)	0.4	1.0	1.2	1.0	1.2	0.4	0.5	0.7	0.1	0.8	0.9	1.1	0.1
	RES. DIR. (TENS OF DEGS.)	17	05	14	17	35	32	11	01	27	28	34	28	35
	MEAN SPEED (MPH)	7.4	8.2	7.1	7.5	6.6	6.7	6.5	6.2	6.3	6.2	6.4	7.5	6.9
	PREVAIL.DIR.(TENS OF DEGS.)	22	22	22	22	22	22	24	23	22	22	22	22	22
	MAXIMUM 2-MINUTE WIND:													
	SPEED (MPH)	24	39	20	20	16	17	22	15	15	16	28	18	39
	DIR. (TENS OF DEGS.)	34	34	08	10	02	05	12	01	10	14	34	35	34
	DATE OF OCCURRENCE	16	24	05	19	29+	24+	29	27+	02	26+	01	11+	FEB 24
	MAXIMUM 5-SECOND WIND:													
	SPEED (MPH)	31	59	29	28	23	26	29	24	26	25	43	25	59
	DIR. (TENS OF DEGS.)	N	N	N	E	N	SE	SE	NE	SE	N	N	N	N
	DATE OF OCCURRENCE	16	24	17	26+	29+	22	29	17	05	18	01	12+	FEB 24
PRECIPITATION	WATER EQUIVALENT:													
	TOTAL (IN.)	2.33	7.84	19.25	6.03	10.75	22.70	19.38	4.75	8.98	12.64	8.86	8.10	131.61
	GREATEST 24-HOUR (IN.)	1.30	1.98	3.14	1.01	3.90	4.72	7.00	1.07	1.17	5.32	1.62	2.03	7.00
	DATE OF OCCURRENCE	20	27-28	24-25	26-27	14-15	25-26	29-30	30-31	14-15	06-07	04-05	17-18	JUL 29-30
	NUMBER OF DAYS WITH:													
	PRECIPITATION ≥ 0.01	13	23	27	19	23	29	29	23	26	22	20	24	278
	PRECIPITATION ≥ 0.10	4	17	21	12	17	23	23	15	20	20	16	16	204
	PRECIPITATION ≥ 1.00	1	3	7	0	3	7	4	0	0	2	2	2	31
SNOWFALL	SNOW,ICE PELLETS,HAIL:													
	TOTAL (IN.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	GREATEST 24-HOUR (IN.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	DATE OF OCCURRENCE													
	MAXIMUM SNOW DEPTH (IN.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	DATE OF OCCURRENCE													
	NUMBER OF DAYS WITH:													
	SNOWFALL ≥ 1.0	0	0	0	0	0	0	0	0	0	0	0	0	0

NORMALS, MEANS, AND EXTREMES

HILO, HI (ITO)

LATITUDE: 19° 43′ 24″ N LONGITUDE: 155° 03′ 05″ W ELEVATION (FT): GRND: 38 BARO: 38 TIME ZONE: 135E MER (UTC+10) WBAN: 21504

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	79.8	79.8	79.5	79.8	81.2	82.7	83.0	83.6	83.8	83.2	81.4	80.0	81.5
	MEAN DAILY MAXIMUM	48	79.6	79.3	79.2	79.7	80.9	82.5	82.8	83.5	83.7	83.0	81.0	79.6	81.2
	HIGHEST DAILY MAXIMUM	51	92	92	93	89	94	90	89	93	92	91	92	93	94
	YEAR OF OCCURRENCE		1997	1968	1972	1978	1966	1969	1995	1950	1951	1979	1996	1980	MAY 1966
	MEAN OF EXTREME MAXS.	48	85.7	85.3	84.5	84.1	84.7	85.6	85.9	86.9	87.0	87.4	85.7	84.7	85.6
	NORMAL DAILY MINIMUM	30	63.6	63.6	64.4	65.5	66.5	67.6	68.6	68.9	68.6	68.1	66.8	64.8	66.4
	MEAN DAILY MINIMUM	48	63.5	63.3	64.2	65.3	66.4	67.6	68.6	69.0	68.5	67.9	66.7	64.6	66.3
	LOWEST DAILY MINIMUM	51	54	53	54	56	58	60	62	63	61	62	58	55	53
	YEAR OF OCCURRENCE		1995	1962	1983	1949	1947	1946	1970	1955	1970	1985	1985	1977	FEB 1962
	MEAN OF EXTREME MINS.	48	58.6	58.0	59.6	61.6	62.6	64.3	65.0	65.3	64.9	64.1	62.4	59.5	62.2
	NORMAL DRY BULB	30	71.7	71.7	72.0	72.7	73.9	75.2	75.8	76.3	76.2	75.7	74.2	72.4	74.0
	MEAN DRY BULB	48	71.4	71.3	71.7	72.4	73.7	75.0	75.7	76.2	76.1	75.4	73.8	72.1	73.7
	MEAN WET BULB	14	66.1	65.8	66.7	67.7	69.0	70.2	71.4	71.9	71.7	70.9	69.9	67.2	69.0
	MEAN DEW POINT	14	63.1	62.6	63.5	65.0	66.4	67.8	69.2	69.6	69.4	68.6	67.8	64.4	66.5
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.1	0.1	*	0.0	0.1	*	0.0	0.1	0.2	0.3	*	0.1	1.0
	MAXIMUM ≤ 32°	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MINIMUM ≤ 32°	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MINIMUM ≤ 0°	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H/C	NORMAL HEATING DEG. DAYS	30	0	0	0	0	0	0	0	0	0	0	0	0	0
	NORMAL COOLING DEG. DAYS	30	208	188	217	231	276	306	335	350	336	332	276	229	3284
RH	NORMAL (PERCENT)	30	77	76	78	80	79	77	80	80	79	80	80	79	79
	HOUR 02 LST	30	83	83	85	88	87	86	88	87	87	87	86	85	86
	HOUR 08 LST	30	78	77	80	81	79	78	81	80	79	79	81	80	79
	HOUR 14 LST	30	66	65	67	70	67	65	68	68	69	70	70	68	68
	HOUR 20 LST	30	82	81	82	83	82	81	82	82	84	85	85	84	83
S	PERCENT POSSIBLE SUNSHINE	47	46	46	42	37	37	44	41	41	43	38	33	37	40
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY≤1/4 MI)	52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	THUNDERSTORMS	52	0.9	1.3	1.5	1.0	0.6	0.1	0.3	0.3	0.5	1.1	1.2	0.9	9.7
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	51	5.0	5.3	6.0	6.4	6.2	5.9	6.1	5.9	5.6	5.7	5.9	5.5	5.8
	MIDNIGHT-MIDNIGHT (OKTAS)	33	5.0	5.2	5.9	6.4	6.2	6.1	6.3	5.9	5.6	5.8	6.0	5.5	5.8
	MEAN NO. DAYS WITH:														
	CLEAR	51	6.5	5.3	2.7	1.2	1.2	1.7	1.3	1.8	2.9	2.7	3.2	5.0	35.5
	PARTLY CLOUDY	51	11.4	10.3	10.2	9.2	10.6	11.3	11.5	12.2	12.0	11.8	10.0	10.8	131.3
	CLOUDY	51	13.1	12.7	18.0	19.7	19.1	17.1	17.7	16.5	14.5	16.1	16.2	14.6	195.3
PR	MEAN STATION PRESSURE(IN)	25	29.96	29.97	30.02	30.02	30.02	30.01	29.99	29.97	29.94	29.95	29.96	29.97	29.98
	MEAN SEA-LEVEL PRES. (IN)	14	30.00	30.00	30.05	30.06	30.04	30.05	30.02	30.00	29.97	29.98	30.00	30.01	30.02
WINDS	MEAN SPEED (MPH)	31	7.6	7.9	8.0	7.8	7.6	7.3	7.2	7.2	7.1	7.0	7.0	7.4	7.4
	PREVAIL.DIR(TENS OF DEGS)	18	22	22	22	22	22	23	24	22	22	22	22	22	22
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	18	35	39	28	26	29	25	25	25	25	29	28	29	39
	DIR. (TENS OF DEGS)		36	34	35	34	35	11	05	36	04	34	02	36	34
	YEAR OF OCCURRENCE		1987	1997	1987	1987	1987	1982	1984	1993	1987	1983	1987	1989	FEB 1997
	PEAK GUST :														
	SPEED (MPH)	14	47	59	40	40	41	32	36	36	37	33	43	45	59
	DIR. (TENS OF DEGS)		NW	N	N	N	N	NE	SE	N	SE	SE	N	NW	N
	YEAR OF OCCURRENCE		1992	1997	1993	1989	1987	1987	1986	1991	1992	1988	1997	1989	FEB 1997
PRECIPITATION	NORMAL (IN)	30	9.88	10.29	13.92	15.26	9.91	6.20	9.71	9.34	8.53	9.60	14.51	12.04	129.19
	MAXIMUM MONTHLY (IN)	55	32.24	45.55	49.93	43.24	25.01	22.70	28.59	26.92	21.82	26.10	45.75	50.82	50.82
	YEAR OF OCCURRENCE		1979	1979	1980	1986	1964	1997	1982	1991	1994	1951	1990	1954	DEC 1954
	MINIMUM MONTHLY (IN)	55	0.36	0.58	0.88	2.93	1.18	1.80	3.83	2.66	1.59	2.40	1.01	0.28	0.28
	YEAR OF OCCURRENCE		1953	1986	1972	1962	1945	1985	1975	1971	1974	1962	1989	1980	DEC 1980
	MAXIMUM IN 24 HOURS (IN)	55	10.90	22.30	17.05	11.07	10.26	4.72	7.11	11.57	9.49	8.88	15.59	11.45	22.30
	YEAR OF OCCURRENCE		1990	1979	1980	1971	1965	1997	1982	1991	1994	1951	1959	1987	FEB 1979
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	16.4	16.6	23.1	25.1	25.5	24.3	27.2	25.9	23.4	23.6	22.4	19.8	273.3
	PRECIPITATION ≥ 1.00	30	2.6	2.6	3.7	3.7	2.2	1.0	1.7	1.4	2.2	2.2	3.9	3.1	30.3
SNOWFALL	NORMAL (IN)	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MAXIMUM MONTHLY (IN)	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	YEAR OF OCCURRENCE														
	MAXIMUM IN 24 HOURS (IN)	55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	YEAR OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN)	47	0	0	0	0	0	0	0	0	0	0	0	0	0
	YEAR OF OCCURRENCE														
	NORMAL NO. DAYS WITH:														
	SNOWFALL ≥ 1.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PRECIPITATION (inches) 1997 HILO, HI (ITO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1968	4.77	11.46	10.21	29.68	2.71	8.72	7.43	9.62	8.53	5.97	10.22	24.82	134.14
1969	19.66	43.66	30.64	14.57	7.83	2.76	11.75	17.50	7.24	3.19	6.33	8.10	173.23
1970	2.76	2.56	4.89	28.60	20.26	5.60	12.27	20.53	5.61	8.44	7.21	35.25	153.98
1971	13.47	5.31	12.04	27.82	6.49	2.79	4.13	2.66	8.63	7.28	17.88	32.19	140.69
1972	10.96	10.13	0.88	17.79	4.71	4.58	9.07	8.77	5.20	9.52	13.23	4.01	98.85
1973	3.45	5.51	18.84	7.34	8.34	3.69	4.40	3.54	8.07	9.72	26.88	8.19	107.97
1974	5.88	7.57	13.47	19.11	8.07	4.76	7.81	4.25	1.59	6.65	14.56	19.20	112.92
1975	19.62	9.28	10.40	10.23	3.01	4.20	3.83	8.13	2.73	8.88	11.15	8.47	99.93
1976	15.62	11.63	25.00	11.58	6.01	2.97	5.46	5.13	5.31	11.35	7.24	7.37	114.67
1977	1.22	9.56	15.49	10.90	10.86	2.46	6.36	7.60	4.19	10.30	8.78	2.66	90.38
1978	5.41	4.26	12.95	6.53	9.64	10.99	11.19	13.53	5.44	10.12	20.21	8.82	119.09
1979	32.24	45.55	5.32	9.90	4.10	10.45	6.54	7.04	3.64	5.03	21.56	7.40	158.77
1980	0.91	4.14	49.93	11.01	5.88	9.66	9.17	8.24	13.70	7.69	7.13	0.28	127.74
1981	1.51	4.95	5.66	4.63	4.16	2.43	4.32	8.97	12.79	10.23	11.73	18.53	89.91
1982	13.58	1.35	48.50	12.00	6.89	6.03	28.59	25.45	9.92	6.53	4.74	6.78	170.36
1983	0.90	0.83	1.98	10.31	9.60	3.94	7.21	7.48	12.08	8.06	2.33	3.37	68.09
1984	10.76	10.06	3.37	12.08	6.59	4.28	6.63	9.36	4.05	2.52	18.38	12.00	100.08
1985	2.25	16.14	21.28	10.61	17.04	1.80	9.86	6.71	11.78	8.19	4.71	2.59	112.96
1986	4.95	0.58	15.37	43.24	8.61	9.11	11.17	10.64	14.36	11.53	35.72	5.75	171.03
1987	9.02	5.06	4.79	9.24	15.65	12.91	18.26	3.69	11.56	14.21	15.83	22.19	142.41
1988	10.31	9.95	13.09	12.90	7.77	5.11	5.50	16.56	11.30	8.50	25.74	13.46	140.19
1989	27.46	6.54	7.33	37.19	19.80	7.03	22.93	8.82	9.73	13.16	1.01	5.71	166.71
1990	29.13	15.24	10.80	4.02	8.13	10.04	10.78	7.80	18.47	20.96	45.75	30.10	211.22
1991	3.81	9.32	37.88	11.02	8.08	9.85	9.82	26.92	9.41	5.15	6.74	15.04	153.04
1992	1.33	1.29	3.90	6.62	2.99	9.36	17.63	13.62	17.59	3.38	25.16	17.02	119.89
1993	2.17	2.67	11.96	9.04	7.54	6.63	18.43	11.38	4.99	12.83	10.74	16.11	114.49
1994	10.39	25.52	18.48	8.59	7.18	13.29	11.71	14.58	21.82	8.73	35.91	6.61	182.81
1995	4.52	1.56	4.17	8.14	8.68	5.35	15.13	13.93	4.20	7.62	8.52	4.10	85.92
1996	14.29	11.81	16.66	6.27	3.65	10.33	13.22	4.77	7.03	11.07	14.22	6.89	120.21
1997	2.33	7.84	19.25	6.03	10.75	22.70	19.38	4.75	8.98	12.64	8.86	8.10	131.61
POR= 55 YRS	9.49	11.35	13.88	12.85	9.02	6.87	10.33	10.20	8.10	9.87	14.88	13.38	130.22

WBAN : 21504

AVERAGE TEMPERATURE (°F) 1997 HILO, HI (ITO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1968	72.9	74.9	74.5	73.8	75.7	76.6	76.8	76.5	76.8	77.1	76.2	73.7	75.5
1969	71.4	72.2	72.5	72.8	74.5	76.2	75.8	76.2	75.0	74.5	73.3	71.5	73.8
1970	72.0	71.1	71.1	72.4	73.7	73.7	74.2	74.9	74.8	75.3	73.9	72.7	73.3
1971	71.3	71.9	69.4	70.9	72.2	75.0	76.6	76.6	76.6	75.4	73.8	70.9	73.4
1972	70.1	70.7	73.8	72.7	73.0	75.3	75.4	76.5	76.4	76.0	73.3	71.4	73.7
1973	72.2	71.1	72.5	72.2	72.9	74.6	75.7	76.3	76.3	75.8	75.4	73.8	74.1
1974	74.5	72.6	73.1	73.5	73.8	75.3	76.1	76.9	77.3	76.9	73.6	72.3	74.7
1975	71.0	71.9	71.2	72.4	73.1	74.4	74.8	75.7	75.5	74.7	73.5	72.2	73.4
1976	71.3	71.2	71.6	72.1	73.0	73.6	74.5	76.2	76.9	76.2	74.5	73.2	73.7
1977	73.9	74.0	73.3	74.2	74.7	76.2	77.1	78.1	77.5	76.9	75.2	73.7	75.4
1978	71.7	72.5	73.2	74.2	76.2	76.5	77.1	76.8	76.2	75.5	74.1	71.1	74.6
1979	69.8	70.4	71.5	73.8	73.8	74.2	74.6	75.6	76.5	76.1	73.0	72.8	73.5
1980	71.6	72.6	72.3	74.5	77.3	77.6	77.8	75.0	75.7	74.8	73.8	74.2	74.8
1981	73.5	72.7	71.6	72.8	74.2	76.0	76.1	76.1	76.2	74.6	73.9	72.0	74.1
1982	71.9	71.8	70.3	71.2	72.9	76.3	76.7	76.9	76.1	74.9	74.6	71.8	73.8
1983	71.4	71.9	72.5	71.9	72.6	74.3	74.8	75.2	74.9	74.1	73.8	72.9	73.4
1984	72.4	71.5	73.8	73.0	74.0	74.7	75.2	75.3	75.4	76.5	73.6	71.1	73.9
1985	69.8	70.5	69.4	69.8	71.4	74.4	75.4	75.7	75.7	74.3	73.0	71.6	72.6
1986	71.1	73.6	74.7	73.6	75.4	76.6	77.8	78.5	77.9	76.4	75.1	72.8	75.3
1987	71.8	70.7	71.6	72.2	72.5	75.4	76.7	77.9	77.8	76.6	74.7	73.1	74.3
1988	71.9	72.3	72.2	72.6	74.2	74.7	75.7	76.0	76.6	77.9	76.3	74.9	74.6
1989	72.2	71.4	72.4	71.1	72.7	74.7	75.2	75.0	74.6	75.6	73.6	71.3	73.3
1990	72.1	70.4	71.2	73.5	74.1	75.0	76.0	77.0	77.2	76.2	75.4	72.5	74.2
1991	72.0	72.8	70.8	72.6	74.2	74.8	76.0	76.9	76.9	76.2	75.8	72.9	74.3
1992	71.2	71.4	72.3	72.4	74.8	76.2	76.2	77.2	77.8	77.7	75.2	73.6	74.7
1993	71.1	70.1	71.6	73.5	73.3	75.4	75.8	77.0	77.1	76.0	73.4	71.7	73.8
1994	70.0	71.3	71.7	73.4	74.9	76.0	78.1	78.6	78.1	77.4	74.9	73.0	74.8
1995	72.6	72.9	74.8	74.1	75.5	76.9	77.9	77.7	78.2	76.2	75.6	74.6	75.6
1996	73.4	70.9	71.5	74.4	76.1	76.9	77.5	77.5	77.5	77.3	75.8	73.2	75.2
1997	73.1	72.7	73.3	74.0	75.0	76.7	77.4	78.0	77.7	76.8	74.3	72.4	75.1
POR= 51 YRS	71.3	71.2	71.5	72.3	73.5	74.9	75.5	76.1	75.9	75.4	73.8	72.0	73.6

HEATING DEGREE DAYS (base 65°F) 1997 HILO, HI (ITO)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1983–84	0	0	0	0	0	0	0	0	0	0	0	0	0
1984–85	0	0	0	0	0	0	0	0	0	0	0	0	0
1985–86	0	0	0	0	0	0	0	0	0	0	0	0	0
1986–87	0	0	0	0	0	0	0	0	0	0	0	0	0
1987–88	0	0	0	0	0	0	0	0	0	0	0	0	0
1988–89	0	0	0	0	0	0	0	0	0	0	0	0	0
1989–90	0	0	0	0	0	0	0	0	0	0	0	0	0
1990–91	0	0	0	0	0	0	0	0	0	0	0	0	0
1991–92	0	0	0	0	0	0	0	0	0	0	0	0	0
1992–93	0	0	0	0	0	0	0	0	0	0	0	0	0
1993–94	0	0	0	0	0	0	0	0	0	0	0	0	0
1994–95	0	0	0	0	0	0	0	0	0	0	0	0	0
1995–96	0	0	0	0	0	0	0	0	0	0	0	0	0
1996–97	0	0	0	0	0	0	0	0	0	0	0	0	0
1997–	0	0	0	0	0	0							

WBAN : 21504

COOLING DEGREE DAYS (base 65°F) 1997 HILO, HI (ITO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	207	209	240	239	298	341	344	351	308	300	253	208	3298
1970	223	173	195	229	273	270	290	313	303	325	276	246	3116
1971	203	201	142	185	232	306	366	367	354	328	271	188	3143
1972	163	171	281	236	256	316	330	365	349	348	256	207	3278
1973	233	180	239	222	253	294	341	358	345	340	321	278	3404
1974	299	219	261	263	276	315	351	375	375	376	262	235	3607
1975	192	201	197	232	257	288	311	339	323	309	262	233	3144
1976	201	186	214	222	255	268	302	355	364	357	291	261	3276
1977	280	260	264	281	307	343	379	415	382	374	312	274	3871
1978	216	215	263	283	353	351	383	375	341	332	279	195	3586
1979	155	160	210	271	278	280	302	338	351	350	246	248	3189
1980	213	227	234	293	390	385	405	316	328	313	269	295	3668
1981	271	220	210	242	293	338	350	348	345	302	274	225	3418
1982	220	196	170	194	252	348	369	379	340	317	293	219	3297
1983	207	200	239	214	240	287	313	324	303	288	272	250	3137
1984	236	194	282	247	284	298	324	326	320	363	261	195	3330
1985	154	161	142	152	204	290	329	339	329	294	248	211	2853
1986	196	246	308	264	329	356	404	423	396	363	309	250	3844
1987	218	163	212	226	241	319	369	407	389	365	299	259	3467
1988	221	216	233	238	293	298	338	349	353	405	345	315	3604
1989	227	188	238	189	248	297	327	315	294	335	264	202	3124
1990	227	157	200	260	290	308	349	379	376	353	317	237	3453
1991	223	222	188	234	296	301	348	378	365	351	333	251	3490
1992	197	192	235	229	312	343	355	384	387	402	315	275	3626
1993	193	148	213	263	263	318	343	380	370	350	260	217	3318
1994	161	183	214	261	312	338	412	427	401	389	305	254	3657
1995	241	228	310	281	335	364	410	402	401	355	325	303	3955
1996	266	178	209	291	349	360	396	394	379	387	331	265	3805
1997	261	221	261	277	317	358	388	407	389	373	287	239	3778

SNOWFALL (inches) 1997 HILO, HI (ITO)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1971–72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972–73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973–74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974–75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975–76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976–77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1977–78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978–79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979–80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980–81	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981–82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982–83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983–84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984–85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985–86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986–87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987–88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988–89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989–90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990–91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991–92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992–93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993–94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994–95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995–96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996–97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997–	0.0	0.0	0.0	0.0	0.0	0.0							
POR= 54 YRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

WBAN : 21504

REFERENCE NOTES:

PAGE 1:
THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).

PAGE 2 AND 3:
H/C INDICATES HEATING AND COOLING DEGREE DAYS.
RH INDICATES RELATIVE HUMIDITY
W/O INDICATES WEATHER AND OBSTRUCTIONS
S INDICATES SUNSHINE.
PR INDICATES PRESSURE.
CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).

GENERAL:
T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE.
+ INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES.
BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.
NORMALS ARE 30–YEAR AVERAGES (1961 – 1990).
ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM.
PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH.
POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING.
WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED.
0.* OR * INDICATES THE VALUE OR MEAN–DAYS–WITH IS BETWEEN 0.00 AND 0.05.
CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON–ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME–AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET.
THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.

GENERAL CONTINUED:
CLEAR INDICATES 0 – 2 OKTAS, PARTLY CLOUDY INDICATES 3 – 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED.
WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. ”00” INDICATES CALM. ”36” INDICATES TRUE NORTH.
RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION.
AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2.
SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL.
A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F.
DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR.
DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY.
WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.

ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE ”METAR” OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.

1997
HILO,
HAWAII (ITO)

The city of Hilo is located near the midpoint of the eastern shore of the Island of Hawaii. This island is by far the largest of the Hawaiian group, with an area of 4,038 square miles, more than twice that of all the other islands combined. Its topography is dominated by the great volcanic masses of Mauna Loa (13,653 feet), Mauna Kea (13,796 feet), and of Haulalai, the Kohala Mountains, and Kilauea. In fact, the island consists entirely of the slopes of these mountains and of the broad saddles between them. Mauna Loa and Kilauea, which occupy the southern half of the island, are still active volcanoes.

Hawaii lies well within the belt of northeasterly trade winds generated by the semi–permanent Pacific high pressure cell to the north and east. The climate provides equable temperatures from day to day and season to season. In Hilo, July and August are the warmest months, with average daily highs and lows of 83 and 68 degrees. January and February, the coolest months, have highs of 80 degrees and lows of 63 degrees. Greater variations occur in localities with less rain and cloud, but temperatures in the mid–90s and low 50s are uncommon anywhere on the island near sea level.

Over the windward slopes of Hawaii , rainfall occurs principally as orographic showers within the ascending moist trade winds. Mean annual rainfall, except for the semi–sheltered Hamakua district, increases from 100 inches or more along the coasts to a maximum of over 300 inches at elevations of 2,000 to 3,000 feet, and then declines to about 15 inches at the summits of Mauna Kea and Mauna Loa. Leeward areas are topographically sheltered from the trades and are therefore drier, although sea breezes created by daytime heating of the land move onshore and upslope, causing afternoon and evening cloudiness and showers. The driest locality on the island, and in the State, with an annual rainfall of less than 10 inches, is the coastal strip just leeward of the southern portion of the Kohala Mountains and of the saddle between the Kohalas and Mauna Kea.

Within the city of Hilo, average rainfall varies from about 130 inches a year near the shore to as much as 200 upslope. The wettest part of the island, with a mean annual rainfall exceeding 300 inches, lies about 6 miles upslope from the city limits. Relative humidity at Hilo is in the moderate range, however, due to the natural ventilation provided by the prevailing winds, the weather is seldom oppressive.

The trade winds prevail throughout the year and profoundly influence the climate. The islands entire western coast is sheltered from the trades by high mountains, except that unusually strong trade winds may sweep through the saddle between the Kohala Mountains and Mauna Kea and reach the areas to the lee. But even places exposed to the trades may be affected by local mountain circulations. Except for heavy rain, really severe weather seldom occurs. During the winter, cold fronts or the cyclonic storms of subtropical origin may bring blizzards to the upper slopes of Mauna Loa and Mauna Kea, with snow extending at times to 9,000 feet or below and icing nearer the summit.

Storms crossing the Pacific a thousand miles to the north, low pressure or tropical storms, may generate seas that cause heavy swell and surf.

STATION LOCATION

HILO, HAWAII

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE SEA LEVEL GROUND TEMPERATURE SITE	ELEVATION ABOVE GROUND WIND INSTRUMENTS	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	RAIN TIPPING BUCKET GAGE	WEIGHING RAIN GAGE	8 INCH RAIN GAGE	HYGROTHERMOMETER	AUTOMATIC OBSERVING EQUIPMENT *	REMARKS
COOPERATIVE																
Hilo Boarding School Grounds 1/4 mi. West of Hilo Bay	1/1880	8/1918		19° 44'	155°05'	100		5					3			Extreme thermometers installed 1-1-05.
Hilo Federal Building (Post Office)	8/1918	Present	1/4 mi.	19° 44'	155°05'	40		5					3			Total precipitation published for this location until 5-42 and average temperature until 3-46.
AIRPORT																
Inter-Island Terminal Along North end of General Lyman Airport	12/15/39	12/21/40	2 mi. E	19° 44'	155°04'	25										Station operated by Inter-Island Airways. Daytime operation only.
Inter-Island Terminal Along North end of General Lyman Airport	12/21/40	4/17/42	No Change	19° 44'	155°04'	25	52		5				3			Station remained in same location. Type changed from SAWRS to CAA.
Underground Building 1000 Ft. N. of General Lyman Airport	4/17/42	9/17/47	1000 Ft. N	19° 44'	155°04'	22	36	5	4				3			Station moved underground during war years. Extreme thermometers installed in October 1945.
Hawaiian Airlines Term. Along W. Side of AP.	9/17/47	1/10/50	1/4 mi.SSW	19° 43'	155°04'	30	40	26	26				24			
WB Building, along N end of General Lyman AP	1/10/50	2/2/54	1/4 mi.NNE	19° 43'	155°04'	28	34	7	7			3	3			
Administration Building General Lyman Field	2/2/54	Present	1/4 mi.SSW	19° 43'	155°04'	c27	a21 h21	7 f18 g4	7 f18 g4	%21	d4 f17	e4	4 f17	b4 h4	NA	a - 57 feet to 6/11/66. b - Commissioned 7400 feet NE of thermometer site 7/1/66. c - 31 feet to 7/1/66. d - Commissioned 6/1/67. e - Decommissioned 6/1/67. f - Relocated to roof 7/1/69. g - Effective 12/31/72, removed September 1974. % - Commissioned 5/16/79. h - Moved 25' S 3/13/81.

* Type
M = AMOS
T = AUTOB
S = ASOS
W = AWOS

SUBSCRIPTION:
Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.
INQUIRIES/COMMENTS CALL: (704) 271-4800

National Climatic Data Center
151 Patton Avenue, Rm 120
Asheville NC 28801-5001

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300
FORWARD AND ADDRESS CORRECTION