ABSTRACT

SOME CLIMATIC ASPECTS OF THE REGION WEST OF THE TEHUANTEPEC ISTHMUS.

I.- Geographic description.- The area is located south of parallel 19°N, it consists of the following regions:

1.- The southermost portion of the Sierra Madre Oriental which receives here different names: Sierra de Ixtlán, Sierra de Villa Alta, Zempoaltépetl region, Sierra de Mijes and Sierra de Choapan.

2.- The region of the valleys whose altitude goes from 200 to 1600 m located between the Sierra Madre Oriental and the Sierra Madre del Sur, known as valleys of Oaxaca, Ocotlán, Tlacolula, Tehuantepec and Tequisistlán.

3.- The Sierra Madre del Sur has a general east to west direction, its southern slope descends to the Pacific Ocean and the northern one towards the valley's region. The name of its highest part is Sierra de Miahuatlán.

4.- The Gulf of Mexico coastal plain, here the Papaloapan and Coatzacoalcos rivers develop part of their courses.

5.- The Tuxtlas Sierra, is a small volcanic range which interrupts the continuity of the coastal plain.

II.- Mean annual temperature (Map 1).- We can recognize here the following thermal regions according with García, (1964).

A very hot area, with mean annual temperature over 26°C, is located over the coastal plain in the southwestern part of the Sierra de los Tuxtlas, and also over the Pacific coast and along the valleys of Tehuantepec and Tequisistlán, Oax.

A hot area with mean annual temperature between 22°C, and 26°C, is located over the greatest part of the Gulf coastal plain, from sea level to 800 or 1 000 m above sea level, and also along the valleys with altitude over 200 or 300 m.

A hot-temperate region, with mean annual temperature between 18°C and 22°C, forms a belt whase altitude goes from 800 or 1000 m to 1 500 or 1 800 m.

A temperate area, with mean annual temperature between 12° and 18°C is located on the slopes of the sierras from 1 800 to 2 800 m above sea level.

A cool-temperate area, with mean annual temperature under 12°C, occupies only a small portion with altitude over 2 800 m.

III.- Mean annual rainfall. The trades are the principal winds responsible

for the precipitation fallen during Summer, since in this part of the year the subtropical cells of high pressure are shifted towards the north. The precipitation is increased specially during late Summer and early Fall by tropical cyclones.

During Winter, the trades give but little precipitation, even though it is during this part of the year that the 'northers' increase the quantities of rain over the regions on the windward margins of the sierras. Even though, the rainy season is the Summer; the percentage of winter rain is small on areas located over the western parts of the sierras and on the valleys.

As may be seen from Map 2 that the rainiest regions, (with more than 2000 mm of rain a year, 79 inches), are located on the Gulf side slopes of the sierras with an altitude from 100 to 600 m. There is a region to the leeward of Sierra de los Tuxtlas with less than 1 200 mm a year (47 inches). The area where we found the lower precipitation is that of the a valleys of Tlacolula and Ocotlán, where we have less than 500 mm. a year (20 inches); also the other valleys have less than 1 000 mm. a year (39 inches), as well as the Pacific coast. The percentage of winter rain is less than 5 % of the annual over the two areas latest mentioned.

IV.- Climates that may be found in the area. The climatic classification used was Köppen's modified by Garcia in 1964.

1.- Group of climates A (hot-humid); it has three principal types:
Climate Af (hot humid with rains all the year), it occupies only a small area located on the northern slopes of the Sierra de Mijes.

Climate Am (hot humid with Summer rains) is found over a great part of the Gulf of Mexico Coastal plain.

Climates Aw (hot subhumid with Summer rains), is divided in three subtypes: Aw_o, Aw_1 and Aw_2, being the first one, the dryests (See Map 3).

2.- Subgroup of climates hot-temperate, humid or subhumid.
The climates (A)C(m) and (A)C(fm) are humid, they are found over the windward slopes of the Sierra Madre Oriental. The subhumid climates are divided in three subtypes according with their degree of humidity:
$(A)C(w_o)(w)$, $(A)C(w_1)(w)$ and $(A)C(w_2)(w)$, the second w means that those stations have less than 5 % of winter rain. The stations of these subtypes are located on the interior slopes of the sierras, as well as on the valleys region and the Pacific slopes.

3.- Group of climates C (temperate subhumid).
They occupy the slopes of both sierras madres with altitude between 1 800 and 2 800 m; they are subdivided in three subtypes according with their degree of humidity:
$C(w_o)$, $C(w_1)$ and $C(w_2)$ being the first one the dryest.

4.- Group of climates B (arid and semiarid)
Or this group is only represented the climate BS (semiarid steppe climate)
Its rainy season in the Summer and the percentage of winter precipitation is under 5 %

of the annual. It is divided in two subtypes according with its degree of humidity: BS_o and BS_1 being the first one the dryest.

The dryest month of all the climates here found is, as a rule, April.

Recommendations

After studying with detail all the climatic types and subtypes within the area, we think that the regions where the sun eclipse could be seen with certainty are those with climate BS_o and BS_1 since they are the dryest. Nevertheless it is possible that this could be also true in the subhumid climates with small precipitation like $Aw_o(w)$ and $(A)(Cw_o)(w)$; the advantage of these climates is that they are found on areas at moderate altitudes above sea level.

We think, is short, that the best zone to be chosen from the standpoint of Climatology would be the area located on both sides of the Panamerican highway from Totolapan to Tequisistlán, in the State of Oaxaca and we would suggest the areas near Nejapa and San Juan Lajarcia located only 120 Km east of the city of Oaxaca.

OAXACA

ESTACION	Coord.	Años	E	F	M	A	M	J	J	A	S	O	N	D	Anual
Alotepec Mixes	17° 6' 95°51'	T 11	15.3	15.7	17.9	19.4	19.6	18.8	18.2	18.6	18.3	17.0	15.7	14.9	17.5
C(m)(w)big	2400m	P 11	38.2	33.3	41.8	77.4	152.2	444.7	461.0	350.0	386.0	200.0	76.9	42.4	2303.9
Ayotzintepec	17°41' 96° 8'	T 11	22.9	22.6	23.7	25.9	27.2	27.1	26.1	26.7	26.8	25.9	23.6	22.6	25.1
Af(m)ig	65m	P 11	90.9	78.9	115.9	97.5	259.7	644.6	996.2	573.4	551.5	549.8	165.5	117.4	4241.3
Ayutla Mixe	17° 2' 96° 3'	T 11	14.5	15.5	18.0	18.5	18.5	17.3	16.0	16.2	16.1	15.1	14.8	13.3	16.2
$C(w_2)(w)b(i')g$	2100m	P 11	10.9	5.4	15.0	52.3	113.1	317.7	316.9	214.5	298.9	160.2	39.5	20.7	1565.0
Cuajimoloyas	17° 7' 96°26'	T 6	8.6	9.9	10.6	11.3	10.3	9.0	8.2	8.8	8.4	8.6	9.3	8.7	9.3
$C(w_2)cig$	3150 m	P 6	28.5	27.5	15.7	48.5	86.2	192.8	198.6	169.4	205.7	113.6	33.5	15.1	1135.1
Cuevas, Las	16°26' 95°21'	T 12	26.3	26.8	27.9	29.3	30.0	29.0	29.2	29.7	28.5	28.3	27.6	26.5	28.3
$Aw''_o(w)ig$	70m	P 22	3.5	0.6	3.1	1.8	37.3	211.5	171.8	127.9	224.8	87.0	9.4	3.7	882.4
Choapan	17°20' 95°56'	T 11	19.3	20.5	22.1	24.1	24.7	24.2	23.0	23.3	23.1	21.6	20.1	18.7	22.1
Af(m)(i')g	880m	P 12	79.6	61.0	70.0	70.8	140.9	435.6	517.9	371.0	432.2	292.9	169.4	74.9	2716.2

OAXACA

ESTADO	Coord.	Años	E	F	M	A	M	J	J	A	S	O	N	D	Anual
Ejutla	16°34' 96°44'	T 7	18.5	21.3	22.9	23.6	24.0	22.9	22.4	23.2	22.7	21.3	19.5	19.4	21.8
$BS_1(h')hw(w)(i')g$	1440 m	P 7	0.0	0.0	0.8	9.3	87.4	145.4	80.7	75.5	162.6	50.1	2.2	0.0	614.0
Guadalupe, La	17°33' 95°19'	T 5	21.2	22.6	24.4	26.6	28.7	28.8	27.2	27.2	26.9	25.3	23.4	21.2	25.3
Am(e)	75 m	P 5	38.7	32.4	27.1	51.8	52.0	263.0	474.2	349.9	268.6	138.0	81.9	44.0	1821.6
Ixtepec , Cd.	16°34' 95° 6'	T 12	25.2	25.5	27.5	29.0	29.8	28.5	28.2	28.9	27.7	27.3	26.6	25.4	27.5
$Aw''_0(w)ig$	120 m	P 24	8.1	4.3	2.8	4.9	57.2	219.9	158.1	138.9	215.8	85.6	11.3	2.3	909.2
Jaltepec Candoyoc	17°22' 95°25'	T 5	21.1	22.5	24.2	26.7	27.7	27.2	26.7	26.1	26.1	25.0	23.4	21.6	24.9
Am(w)(i')g	50 m	P 5	41.3	26.3	20.5	47.5	107.6	284.8	606.1	567.2	290.2	176.5	71.1	73.6	2312.7
Matías Romero	16°52' 95° 3'	T 29	22.3	23.1	24.6	25.9	27.1	26.3	25.6	25.4	24.7	24.6	23.3	22.8	24.6
$Aw''_2(w)ig$	250 m	P 27	20.6	12.5	21.8	16.5	50.0	202.5	254.6	238.0	286.0	139.2	45.2	14.8	1301.7
Metaltepec	17°13' 95°52'	T 5	15.0	16.8	17.5	19.3	19.5	19.1	17.9	18.4	18.6	17.4	16.3	14.8	17.6
C(fm)big	1100 m	P 5	117.7	90.1	124.6	98.5	145.1	553.8	739.9	582.3	573.0	373.5	211.6	132.2	3742.3

OAXACA

ESTACION	Coord.	Años	E	F	M	A	M	J	J	A	S	O	N	D	Anual
Miahuatlán	16°20' 96°36'	T 36	17.2	18.4	20.3	21.8	22.4	21.5	20.9	21.2	20.5	19.7	18.1	17.2	19.9
$BS_1hw(w)(i')g$	1560 m	P 20	5.4	2.8	1.8	26.7	82.6	130.3	115.9	97.7	125.5	56.0	7.1	2.9	654.7
Monte Rosa	17°48' 95°56'	T 5	20.9	22.1	23.6	26.5	27.7	27.9	26.5	26.9	26.7	25.6	23.2	21.2	24.9
Am(e)	51 m	P 5	36.2	35.2	43.5	62.2	101.9	377.5	497.4	393.3	380.1	202.1	87.8	59.3	2276.5
Nejapa Boquilla	16°37' 95°39'	T 20	22.4	23.5	26.0	27.8	28.2	26.9	26.0	26.5	25.8	24.6	23.2	21.9	25.2
$BS_1(h')w(w)(i')g$	570 m	P 21	2.4	2.1	2.7	21.0	63.8	121.2	114.3	89.9	128.0	42.7	5.4	1.6	595.1
Ocotlán de Morelos	16°48' 96°40'	T 15	17.2	19.0	21.4	23.1	23.7	22.6	21.6	22.3	21.4	20.0	18.2	17.5	20.7
$(A)C(w''_o)(w)a(i')g$	1526 m	P 14	3.0	3.5	3.6	34.3	102.4	165.3	120.1	98.6	157.3	45.3	6.7	6.5	746.6
Paso Ancho	16°22'? 96°53'?	T 4	18.9	19.5	21.8	23.5	24.2	23.7	22.5	22.8	22.6	22.4	23.7	19.1	22.1
$A(w''_o)(i')g$	1297m?	P 4	28.6	12.3	16.5	43.7	73.3	137.6	129.7	209.4	125.4	62.3	9.9	0.0	848.7
Puerto Angel	15°40' 96°30'	T 30	27.4	27.8	27.9	28.4	29.0	28.6	28.6	28.5	28.1	28.3	28.3	27.7	28.2
$Aw''_o(w)ig$	43 m	P 30	5.0	1.4	1.7	0.1	79.2	185.4	138.5	162.6	338.1	112.3	9.9	4.7	1038.9

OAXACA

ESTACION	Coord.	Años		E	F	M	A	M	J	J	A	S	O	N	D	Anual
Puxmetacán	17°16' 95°38'	T	5	19.5	20.9	22.1	24.8	25.9	25.6	24.4	24.8	24.2	23.3	21.4	19.8	23.1
Am(w)(i')g	440 m	T	5	62.9	8.7	46.6	74.5	42.0	292.7	561.6	806.4	548.7	151.3	123.0	0.0	2718.4
Quetzaltepec	16°57' 95°49'	T	5	17.7	19.1	19.7	22.2	21.7	21.1	19.7	19.2	20.1	19.3	17.9	16.5	19.5
(A)C(fm)a(i')g	850 m	P	5	85.7	49.8	58.0	43.9	109.2	345.2	526.6	444.4	366.4	244.1	182.4	136.0	2591.7
San Carlos Yautepec	16°30' 96° 7'	T	23	20.9	21.8	23.8	25.5	26.5	25.5	24.5	24.7	24.1	23.2	22.3	21.1	23.7
BS_1(h')w(w)(i')g	1220 m	P	26	4.7	2.5	1.5	14.7	45.5	128.3	118.6	103.7	129.0	54.1	5.8	0.9	609.3
San Francisco Ozoltepec	16° 7' 96°13'	T	15	17.8	18.0	18.4	19.0	18.3	17.8	18.1	18.3	17.5	17.8	18.2	18.0	18.1
(A)C(w_2'')(w)big	2000 m	P	14	14.5	30.5	16.2	46.7	201.5	281.5	223.8	171.8	325.1	175.6	24.7	5.0	1514.9
San Jerónimo Taviche	16°44' 96°36'	T	14	16.5	18.3	17.4	18.9	19.5	18.5	18.1	18.0	17.6	16.6	17.3	16.9	17.8
C(w_o)(w)big	1677 m	P	9	4.2	0.0	3.8	23.6	85.3	140.4	110.3	87.6	134.4	47.4	6.3	1.1	644.4
San Miguel Suchixtepec	16° 6' 96°28'	T	6	16.4	18.5	18.3	19.5	18.4	18.3	17.9	18.1	18.4	18.0	17.0	16.0	17.9
C(w_2(w)big	2842 m	P3	7	24.8	4.6	12.5	21.0	115.9	216.1	249.3	262.0	256.7	145.5	29.4	9.8	1347.6
San Pablo Coatlán	16°15' 96°47'	T	5	14.3	14.6	14.7	15.0	15.6	15.3	15.1	16.1	16.4	16.1	15.0	14.7	15.2
C(w_o)(w)bi	1875 m	P	5	0.1	0.0	0.7	3.2	34.6	97.8	134.6	111.1	150.5	38.8	17.3	1.4	590.1

OAXACA

ESTACION	Coord.	Años	E	F	M	A	M	J	J	A	S	O	N	D	Anual
Sarabia	17° 5' 95° 2'	T 11	21.6	22.6	25.2	27.1	28.1	27.6	26.5	26.0	26.8	24.9	23.3	21.5	25.1
Am(i')g	93 m	P 11	47.6	39.0	44.7	38.8	107.7	300.2	518.7	435.1	336.8	217.1	100.1	66.5	2254.3
Talea	17°23' 96°17'	T 6	15.1	18.2	19.5	21.3	20.8	19.5	17.9	19.2	18.8	18.0	16.8	14.9	18.3
(A)C(m)b(i')g	1750 m	P 6	46.0	32.1	45.5	47.5	118.5	220.3	345.6	230.0	291.8	217.0	164.8	97.1	1856.2
Tequisistlán	16°24' 95°36'	T 11	24.0	24.6	26.5	27.9	28.6	27.7	26.9	27.6	26.7	26.1	25.3	23.9	26.3
$BS_1(h')w(w)ig$	190 m	P 11	6.1	1.6	1.0	2.3	45.7	157.4	164.0	118.8	117.8	62.0	0.8	0.2	677.7
Tlacolula	16°57' 96°29'	T 33	15.7	17.4	19.4	20.9	21.2	20.4	19.0	19.5	19.3	18.5	17.0	15.9	18.7
$BS_1hw(w)(i')g$	1600 m	P 31	3.7	2.3	6.3	25.9	75.3	113.3	101.4	72.4	114.4	36.8	7.2	2.4	561.4
Totolapan	16°40' 96°18'	T 14	23.9	25.4	27.1	28.1	28.2	27.2	26.7	27.0	25.8	26.0	25.1	23.7	26.2
$BS_o(h')w(w)ig$	849 m	P 14	1.5	2.1	4.2	14.7	64.3	89.4	75.8	60.1	109.9	34.3	3.1	1.4	460.8
Tuxtepec	18° 6' 96° 7'	T 10	21.9	23.2	25.3	27.4	28.8	28.6	27.0	27.9	27.2	25.9	23.7	22.1	25.8
$Am(w'')(i')g$	90 m	P 10	25.8	23.2	38.3	46.4	115.1	409.1	630.9	341.0	417.2	263.9	88.1	52.8	2451.8

OAXACA

ESTACION	Coord.	Años	E	F	M	A	M	J	J	A	S	O	N	D	Anual
Villa Alta	17°21'	T 16	17.1	18.5	20.3	22.8	23.5	22.6	21.3	21.6	21.3	19.5	17.9	17.0	20.3
	96°10'														
(A)C(m)(w")a(i')g	1140 m	P 16	17.9	14.4	12.2	38.9	95.6	241.0	345.3	302.4	316.6	224.1	47.8	29.6	1685.8
Villa Hidalgo	17°11'	T 5	18.4	20.0	22.1	23.6	23.7	22.4	20.7	20.6	20.5	19.8	19.4	17.0	20.7
	96°11'														
(A)C(w_1)(w)a(i')g	1174 m	P 5	15.6	3.2	8.1	38.7	78.7	158.8	197.8	184.4	140.1	76.7	28.3	2.5	932.9
Yaee	17°27'	T 6	15.5	17.7	19.1	20.8	21.0	20.5	19.0	19.8	19.5	18.5	16.9	15.3	18.6
	96°16'														
(A)C(fm)b(i')g	1200 m	P 6	61.5	51.3	73.2	70.7	117.5	318.4	508.8	307.3	370.9	280.8	237.5	119.0	2516.9
Yaveo	17°20'	T 11	18.7	20.0	22.4	24.8	25.5	25.1	23.7	24.1	23.6	22.1	19.9	18.8	22.4
	95°42'														
Am(i')g	900 m	P 11	101.6	52.4	41.1	67.0	115.0	413.2	612.6	529.4	392.2	261.7	156.8	79.3	2822.3
Zapote, El	17°40'?	T 6	21.3	22.8	24.1	27.7	28.6	28.5	26.7	27.3	26.5	25.4	23.5	21.5	25.3
	95°53'?														
Am(e)g	60 m ?	P 6	61.9	55.5	72.6	40.9	120.8	386.0	696.4	472.7	456.8	280.8	136.9	94.8	2876.1

VERACRUZ

ESTACION	Coord.	Años	E	F	M	A	M	J	J	A	S	O	N	D	Anual
Acayucan	17°57' 94°54'	T 11	21.2	22.7	25.0	26.9	28.1	27.7	26.0	26.1	25.9	24.6	23.0	22.1	24.9
$Aw''_2(i')g$	158 m	P 11	40.9	36.2	25.1	38.6	56.5	231.3	370.8	250.5	290.5	235.4	84.9	43.2	1703.9
Boca Sochiapa	17°41' 95°23'	T 7	22.1	22.5	22.4	24.1	26.1	25.0	24.3	24.6	24.4	24.6	23.8	22.3	23.9
Aw_2ig	95 ,m	P 7	82.9	56.3	27.9	49.4	86.2	199.3	437.3	311.5	192.2	158.1	100.7	74.6	1176.4
Catemaco	18°25' 95°6'	T 17	19.8	22.0	24.1	26.1	27.1	26.9	25.8	25.6	25.3	23.6	22.0	28.8	24.1
Am(e)g	360 m	P 17	55.2	41.8	25.6	36.9	61.7	235.3	322.7	218.6	445.9	266.6	131.2	93.8	1935.3
Coatzacoalcos	18°19' 94°25'	T 32	22.1	22.8	24.6	26.3	27.6	27.3	27.2	27.3	26.7	25.7	23.7	22.5	25.3
Am(i')g	14 m	P 33	134.0	72.3	57.4	51.3	112.5	267.0	233.0	297.2	499.3	524.9	281.9	195.4	2726.2
Coyame	18°26' 95°0'	T 9	20.1	20.8	23.0	24.6	25.8	25.5	25.0	25.5	25.2	23.7	21.7	19.8	23.4
Af(m)(i')g	340 m	P 9	202.0	156.9	151.1	94.0	110.0	382.5	602.3	405.4	750.8	703.7	531.9	382.2	4419.8
Cuautotolapan	18°9' 95°18'	T 13	22.5	23.6	26.4	28.1	29.9	29.3	28.0	28.4	27.9	26.4	24.1	22.8	26.5
$Aw''_1(w)(e)g$	14 m	P 13	26.6	21.7	16.4	28.6	85.8	180.6	262.9	191.7	283.2	188.8	56.8	34.4	1377.5

VERACRUZ

ESTACION	Coord.	Años	E	F	M	A	M	J	J	A	S	O	N	D	Anual
Florencia	17°38' 95°11'	T 6	22.0	23.4	23.4	25.2	27.2	26.6	24.5	24.5	25.4	24.8	22.6	21.8	24.3
$Aw_1(i')g$	50 m	P 7	30.0	34.6	15.7	43.4	73.3	119.3	302.3	199.3	133.4	67.2	78.6	45.2	1143.1
Guazuntlán	18°9' 94°48'	T 7	21.8	22.5	24.6	26.9	27.7	27.5	26.4	26.6	26.1	25.3	23.5	22.2	25.1
$Aw''_2(i')g$	180 m	P 7	39.9	26.2	22.9	24.6	41.2	199.8	398.3	218.8	283.5	181.0	113.7	93.2	1643.1
Hidalgotitlán	17°46' 94°39'	T 6	21.9	23.0	24.8	27.4	28.6	28.3	27.3	27.7	26.8	26.2	24.2	21.9	25.7
Am(i')g	77 m	P 6	88.2	46.8	33.6	18.3	85.3	237.8	353.2	283.7	311.0	256.6	165.7	134.5	2014.7
Jaltipan	17°58' 94°42'	T 20	22.0	23.0	25.4	27.8	29.1	28.3	27.2	27.5	26.7	25.5	23.8	22.3	25.7
Am(e)g	133 m	P 20	67.8	34.0	29.2	23.6	64.9	237.2	316.7	259.4	379.5	244.4	139.2	94.2	1890.1
Jesús Carranza	17°27' 95°2'	T 14	22.5	23.5	25.2	26.9	28.1	27.8	26.5	26.6	26.7	25.6	23.4	22.1	25.4
Am(i')g	26 m	P 16	67.0	56.4	42.4	47.7	96.7	254.0	543.8	465.2	386.6	206.4	88.8	61.6	2316.6
Juan Diaz Covarrubias	18°11' 95°15'	T 18	24.4	25.0	27.8	29.6	30.6	29.6	28.2	28.6	28.1	26.6	25.5	24.7	27.4
$Aw''_1(w)(i')g$	40 m	P 18	22.7	14.3	13.9	23.2	60.5	169.4	225.5	177.6	247.5	175.4	63.2	31.4	1224.6

VERACRUZ

ESTACION	Coord.	Años		E	F	M	A	M	J	J	A	S	O	N	D	Anual
Lauchapan	18°15' 95°19'	T	12	21.7	22.5	25.1	27.5	28.8	28.4	27.1	27.5	26.9	25.3	22.9	21.6	25.4
$Aw''_2(w)(e)g$	13 m	P	12	27.6	23.1	27.2	33.9	78,1	188.9	336.5	227.0	368.4	255.5	97.5	60.8	1724.5
Mangos, Los	18°17'? 95°8' ?	T	5	20.8	21.4	22.6	26.6	27.3	26.8	24.9	25.8	25.1	24.2	22.8	21.1	24.1
$Aw''_2(w)(i')g$	275 m ?	P	5	27.1	23.3	12.5	10.8	59.2	207.4	309.3	150.3	233.4	169.6	120.5	36.2	1359.6
Mata de Limones	18°7' 95°32'	T	5	22.1	23.7	25.4	27.9	29.3	28.6	27.0	27.3	26.9	26.0	23.6	22.0	25.8
$Aw_o(e)g$	20 m	P	5	22.5	30.7	19.5	7.3	27.8	165.0	240.1	189.0	187.6	122.1	60.5	23.7	1095.8
Minatitlán	17°59' 94°32'	T	23	23.3	23.8	25.7	27.3	28.8	28.3	27.8	27.7	27.5	26.2	24.5	23.4	26.2
Am(i')g	64 m	P	23	101.2	80.5	37.8	24.9	72.8	262.2	415.5	335.2	480.3	381.9	259.8	138.2	2570.3
Morillo	18°18' 95°24'	T	5	21.3	23.0	24.8	27.7	28.9	29.1	27.0	27.5	26.9	25.8	23.5	21.6	25.6
$Aw''_1(e)$	50 m	P	5	23.8	28.0	26.9	19.1	60.8	150.7	237.2	144.2	238.3	190.7	155.1	73.6	1348.4
Nanchital	18°4' 94°24'	T	15	21.7	22.5	24.2	26.6	27.9	27.8	26.6	27.4	26.0	25.6	23.7	22.3	25.2
Am(f)(i')g	19 m	P	15	184.2	78.3	57.6	50.8	118.4	308.9	261.7	235.7	481.8	426.9	317.8	300.7	2822.8

VERACRUZ

ESTACION	Coord.	Años	E	F	M	A	M	J	J	A	S	O	N	D	Anual
Nopalapan	18°7' 95°20'	T 14	20.9	22.2	24.6	27.1	29.0	27.4	26.5	26.7	25.7	24.8	23.6	21.8	25.0
$Aw''_1(e)g$	25 m	P 16	25.6	18.7	15.9	25.3	55.7	138.7	267.6	162.7	218.0	162.2	56.0	40.4	1186,8
Rodríguez Clara	17°59' 95°25'	T 7	22.0	23.4	25.5	29.0	30.0	30.0	27.7	28.3	27.5	26.2	23.9	21.7	26.3
$Aw''_1(e)$	148 m	P 7	31.2	26.5	26.5	35.0	66.5	231.2	330.2	187.6	216.9	149.9	80.0	53.8	1435.3
San Andrés Tuxtla	18°27' 95°11'	T 35	20.7	22.2	24.6	26.9	28.0	27.3	26.2	26.0	25.2	23.8	21.9	21.0	24.5
Am(w")(e)g	360 m	P 36	43.1	21.8	27.5	32.1	69.1	225.2	284.0	254.7	488.9	336.4	141.3	71.4	1995.5
San Cristóbal Ingenio	18°22' 95°44'	T 6	20.7	23.8	25.3	26.6	28.1	26.3	26.4	26.3	26.4	25.0	22.6	21.0	24.9
$Aw''_2(w)(e)g$	6 m	P 6	23.5	10.4	11.4	30.7	39.5	136.5	187.4	129.8	359.8	292.9	122.0	40.0	1383.9
San Nicolás	18°15' 95°32'	T 7	22.1	23.3	25.4	28.7	30.0	30.0	27.8	28.4	27.8	26.5	24.4	22.2	26.4
$Aw''_o(e)$	20 m	P 7	40.6	22.1	23.5	16.5	71.4	192.6	211.2	97.6	178.2	129.6	94.4	48.9	1126.6
Santiago Tuxtla	18°24' 95°16'	T 13	21.1	22.2	24.6	26.3	27.8	27.5	26.1	26.4	25.8	24.0	22.4	21.0	24.6
Am(i')g	285 m	P 13	82.9	37.6	42.0	51.0	71.5	210.3	319.8	209.1	729.3	532.2	234.3	144.0	2664.0

VERACRUZ

ESTACION	Coord.	Años		E	F	M	A	M	J	J	A	S	O	N	D	Anual
Tapalapan	18°33' 95°18'	T	5	22.3	22.0	22.4	24.7	25.7	26.0	25.3	25.3	25.3	25.2	24.3	21.7	24.2
Am(f)i	500 m	P	5	143.8	46.1	63.6	43.1	90.2	196.1	264.6	192.9	318.2	390.9	492.1	239.1	2480.7
Tecuanapa	17°46' 94°9'	T	6	21.8	23.4	25.1	27.5	28.7	28.7	27.6	28.1	27.2	25.9	24.1	21.9	25.8
Am(i')	17 m	P	6	97.4	56.0	37.8	22.7	183.5	296.3	353.1	243.9	401.9	381.4	401.9	214.0	2609.9
Tesechoacán	18°9' 95°40'	T	15	22.5	23.4	25.8	27.4	28.9	28.6	27.6	27.5	26.9	25.8	25.2	22.7	26.0
$Aw''_2(w)(i')g$	18 m	P	16	36.3	20.7	16.6	27.2	69.5	205.3	247.0	243.6	304.6	159.3	81.5	60.6	1472.2
Tres Zapotes	18°27' 95°27'	T	5	21.7	23.1	24.9	27.5	28.8	29.0	27.6	28.0	27.4	26.4	24.1	22.2	25.9
$Aw''_1(e)$	140 m	P	5	56.4	28.5	46.7	22.2	77.4	178.6	201.6	141.2	187.3	242.3	130.9	99.2	1412.3
Venustiano Carranza	17°50' 95°49'	T	36	22.1	23.6	25.2	27.4	28.4	28.1	27.2	27.7	27.0	25.8	23.9	22.6	25.8
Am(i')g	95 m	P	35	47.4	32.4	32.8	35.8	95.9	279.1	383.9	342.7	388.0	224.2	92.6	55.4	2010.2
Villa Azueta	18°5' 95°42'	T	12	22.0	23.0	25.6	27.7	29.3	28.8	27.5	28.3	27.5	26.1	23.8	22.2	26.0
$Aw''_2(w)(e)g$	20 m	P	12	28.6	25.2	20.2	31.4	80.1	238.3	345.2	166.8	276.2	163.7	69.7	37.0	1482.4

VERACRUZ

ESTACION	Coord.	Años		E	F	M	A	M	J	J	A	S	O	N	D	Anual
Zapotitlán	18°33'	T	9	22.1	22.9	23.5	24.5	24.7	26.2	26.2	26.4	25.7	25.8	23.8	22.9	24.6
	94°46'															
Am(f)i	4 m	P	12	157.8	96.0	89.8	50.7	73.5	355.4	360.8	349.3	521.0	501.4	312.5	347.8	3216.0

NOTA: La T y la P indican respectivamente temperatura y precipitación.
La cifra siguiente indica el No. de años de observación que se consideraron en el trabajo.
Los meses del año se representan con su letra inicial
Las temperaturas mensuales están dadas en °C y las precipitaciones en mm.
La última columna representa el promedio anual de temperatura y la precipitación total anual del período considerado.