

Weather Diary Cam Ranh Bay Airbase,
Republic of Vietnam Nov. 28, 1968 to Sept.
26, 1969. By Joel Rosenbaum Former USAF
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Introduction

As a USAF weather officer stationed at Cam Ranh Bay Airbase, South Vietnam from October 1968 to October 1969, I kept a daily weather diary briefly describing each day's weather, including unusual weather activity and the probable cause. I thought I might use the data in the diary for an advanced degree in meteorology. Instead the diary was tucked away in a drawer for many years. Since there is some interest in this information I am sharing this material with the USAF History Office, Texas A&M University Dept of Meteorology and the Vietnam archives of Texas Tech. University. I have included maps, a climatic summary, and a brief discussion of the climate of Vietnam. I have also included photos to illustrate the diary. As the Russians vacate Cam Ranh Bay there is renewed American interest in using the base for Naval and Air units. So the information in this diary may be useful in the near future. The Vietnamese were once dominated by the Chinese and even fought a short but brutal border war with them in 1979. They usually seek the friendship of a larger power to keep the Chinese out of Vietnam. It would therefore be possible for the Vietnamese allow the American military some type of usage of Cam Ranh Bay in the future.

Educational Background

I received a BS in agriculture from Rutgers College of Agriculture and Environmental Science (now Cook College) in 1966.

I was also commissioned a 2nd Lt. USAF through AFROTC at Rutgers. I had always been interested in weather from a young age and was sent to the Basic Weather Officer Training course at Texas A&M University. My first assignment from weather training was Otis AFB, Mass. I volunteered for Vietnam and was sent to Tropical Analysis and Forecasting school at Chanute AFB, Ill. One of my instructors, Capt Lavin would later be sent to the forecast center at Tan Son Nhut Airbase (Saigon). Some of the weather discussions in my diary are based on his discussions' of the weather outlook for Vietnam sent over the teletype. I was selected to be Chief Forecaster of the weather detachment due to my keen interest in Meteorology and my attendance at tropical weather school.

My instruction at Texas A&M also gave me a good background in meteorology. There were higher-ranking officers in the detachment but I was chosen on ability rather than rank. I improved our forecast reliability and received the USAF Commendation medal at the end of my tour. My last assignment was Blytheville AFB, Ark. I separated in March 1970 and returned to Rutgers for graduate study in meteorology, receiving an MS degree in Meteorology in October 1972. Due - to limited job opportunities I returned to school and became a Registered Respiratory Therapist. I worked in that field for twenty years until being disabled by non-Hodgkin's Lymphoma caused by Agent Orange exposure in Vietnam. Since my training at Texas A&M helped me perform so well in Vietnam I felt that when I pass on I would like to be remembered as one of theirs. My congressman Rush Holt worked out an agreement with Texas A&M allowing me to take two courses by correspondence to complete their BS requirements. On December 15, 2001 I was awarded a BS degree in Meteorology from Texas A&M. This makes at least two Texas A&M graduates that served either as detachment commander or Chief Forecaster of Det. 18 30th Wea Sq./ Cam Ranh Bay, RVN. The other was General Chapman the former head of Air Weather Service, who as a Major in 1971 served as the Detachment Commander of the Weather Detachment at Cam Ranh.

Brief History of Cam Ranh Bay

Cam Ranh Bay located on the east coast of Vietnam is considered one of the world's largest natural harbors. The Russians used it for re-provisioning their fleet during the Russo-Japanese War of 1904. When the Japanese occupied Cam Ran during WWII there are accounts of American B-29's attacking the base. When Vietnam was reunified the Russians again made use of the base. At one time the base was home to 20-30 Russian warships, including submarines and 40 aircraft. The aircraft included TU-95 naval recon aircraft and a squadron of MIG-23 aircraft. The MIG-23's had large dolphins painted on their tails. This was perhaps a reference to the secret use of trained dolphins by the US Navy at Cam Ranh to attack any enemy divers. The April 1969 issue of Trains magazine noted that a new 15-mile branch rail line was being built to the opposite side of Cam Ranh Bay to afford direct rail distribution to the entire coastal tributary area of the military port. Whether or not it was completed or in use today-I have no idea. However with peace there are at least three daily trains between Ho Chi Minh City (Saigon) and Hanoi with stops at Nha Trang and Danang. Some of the trains carry sleeping cars.

Living and Working Conditions

All weather officers lived in a Quonset hut just above the South China Sea. There was a communal shower and toilets. A few officers managed to scrounge up air conditioners, but my quarters were unair-conditioned. When the wind picked up sand covered everything in the Quonset hut. The weather station was in a Quonset but shared with base operations. It was air-conditioned which helped working conditions. Cam Ranh had a basic but useful FPS-103 weather radar. Pleiku, which was near the Laotian border, had sophisticated FPS-41 weather radar. I suspect it was used to estimate rainfall amounts on the Ho Chi Minh trail. It came out later that the USAF was seeding the clouds over the trail to increase rainfall and impede enemy supplies down the trail.

Schedulewise our workload was better than my previous stateside base of Otis AFB where I worked six shifts on and one day off. At Cam Ranh we worked four shifts on and one day off. Most facilities at Cam Ranh were open seven days a week. There were local hazards such as poisonous sea snakes, poisonous cone shells and one venomous colonel who blamed our weather observer for not reporting zero visibility in fog. He tongue lashed me for three days accusing Weather of being the cause of his near fatal operation of an F-4C Phantom on approach. It was only after he tongue lashed me good for the third time that one of his people called me aside quietly and told me the colonel had forgot to turn on his defogging equipment on approach and his cockpit fogged up. There were also some attacks by the Viet Cong. General Chapman former head of the Air Weather Service sent me a letter on November 8, 1992 indicating his most memorable episode as Detachment Commander of the Weather Detachment at Cam Ranh.

The one episode, I clearly remember occurred Aug. 26, 1971. Sappers got into the bomb dump causing chaos, explosions and significant damage. We were all routed to the weather station in our nightclothes - I briefed the wing commander the next morning in borrowed fatigues, as we weren't allowed back to our hootches. Some were not able to borrow fatigues and posted facsimile charts in non-standard uniforms. (From Gen. Chapman to Joel Rosenbaum 11/8/92)

Brief Climatology of South Vietnam

I have enclosed an Air Weather Service climatic brief for Cam Ranh Bay to compare to my diary entries. A short climatology was extracted from Climate of Republic of Vietnam, 1st Weather Wing Special Study 105-9(revised).

The climate is monsoonal in nature and is characterized by two major seasons-the southwest monsoon from mid-May to late September and the northeast monsoon from early November to mid-March. These two major seasons are separated by two rather short transitional periods in the spring and autumn.

For the southern lowlands and the area west of the Annam Range, the southwest monsoon season is a period of heavy and frequent precipitation, high humidities, maximum cloudiness, and tropical temperatures. In contrast, the northeast monsoon is the season of relatively little precipitation, lower humidities, least cloudiness and lowest temperatures. The spring transition season is characterized by increasing precipitation amounts and frequencies, increasing cloudiness, increasing humidities, and it is the season with the highest temperatures. The autumn transition season is characterized by more rapid changes than occur during the spring transition as the southwest monsoon is replaced by the northeast monsoon. The climate along the east coast and the eastern slopes of the Annam Range differs markedly from that of the rest of the country. Precipitation is heaviest and most frequent in October and November. Low cloudiness is most extensive from November through February and less frequent during the southwest monsoon. The highest temperatures occur during the southwest monsoon rather than the spring transitional period. Occasionally, tropical storms enter or form in the South China Sea and strike the eastern coast bringing heavy rains, flooding, and destruction to coastal sections

Suggested Additional Reading

Thor's Legions, Weather Support to the U.S. Air Force and Army 1937-1987 by John F. Fuller, American Meteorological Society 1990.

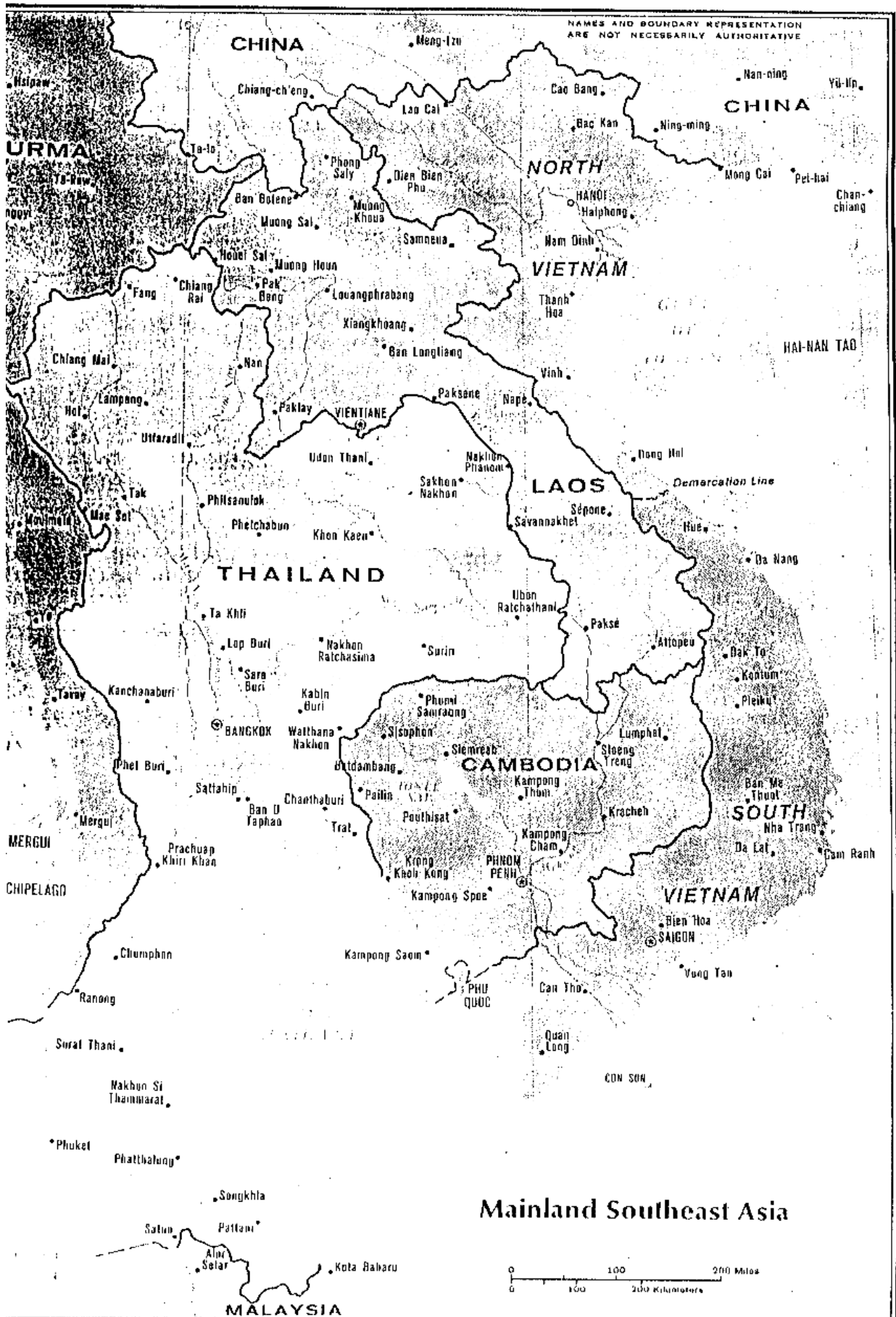
America's Weather Warriors 1814-1985 Charles C. Bates and John F. Fuller, Texas A&M University Press 1986.

Air Weather Service in Southeast Asia 1961-1976 A Pictorial

Account, Margaret C. Faulbaum, Office of MAC History Military Airlift Command, Scott AFB, ILL. 1979.

Climate of Republic of Vietnam, 1st Weather Wing Special study 105-9(revised). Dept of the Air Force 20th Weather Squadron 1st Weather Wing March 1969.

Forecaster's Guide to Tropical Meteorology, Maj. Gary D. Atkinson, USAF, Air Weather Service, USAF, 1 April 1971.



Mainland Southeast Asia

AWS CLIMATIC BRIEF

Prepared by ^{LWG} ETAC (MAY 1971)

CAM RANH BAY AF, SOUTH VIETNAM

PERIOD: 1965-70

WBAN # 41015
WMO # 48897¹

N 12 00 E 109 13

FIELD ELEVATION: 47 ft

STN LTRS: VVGR VA2-192

MONTH	TEMPERATURE (°F)				PRECIPITATION (in)		WIND (KT)		MEAN					MEAN NUMBER OF DAYS								MEAN CLOUDS (TENTHS)				
	EXTREME MAXIMUM	MEAN DAILY MAXIMUM	MEAN DAILY MINIMUM	EXTREME MINIMUM	MEAN TOTAL	MAXIMUM IN 24 HOURS	MEAN SNOWFALL	MAX SNOWFALL IN 24 HOURS	PREVAILING DIRECTION	MEAN SPEED	EXTREME (PEAK) SPEED (GUST)	0400 RELATIVE HUMIDITY (%)	1300 DEW POINT (°F)	VAPOR PRESSURE (in Hg)	PRESSURE ALTITUDE	MEAN NUMBER OF DAYS										
																00.95% (FMI)	PRECIP ≥ 0.01 in	PRECIP ≥ 0.5 in	SNOWFALL ≥ 0.1 in	SNOWFALL ≥ 1.5 in	THUNDERSTORMS		FOG (< 7 MILES)	TEMPERATURE (°F)		
	90	80	60	50	90	80	60	50																		
JAN	91	80	71	63	4.1	2.5			N	11	27	83	71	68.69	250	12	3			0	4	#	21			7
FEB	95	82	71	63	0.3	0.4			N	10	32	82	65	67.67	250	3	0			0	#		1	23		6
MAR	100	85	73	65	1.2	2.3			N	9	27	83	64	70.74	350	4	1			#	1	6	30		5	
APR	98	88	76	71	2.8	4.2			NE	7	35	83	64	73.82	300	4	2			2	1	13	30		6	
MAY	102	91	78	73	1.8	1.1			SSW	6	26	84	61	74.85	400	9	1			6	1	22	31		7	
JUN	102	92	78	74	2.1	2.0			SSW	6	26	82	57	74.85	400	6	1			5	0	27	30		7	
JUL	103	92	78	70	1.8	1.4			SSW	7	36	81	56	73.82	450	9	1			4	0	24	31		7	
AUG	99	91	78	73	1.7	1.5			SSW	6	47	81	58	74.85	450	10	1			4	#	23	31		8	
SEP	97	90	77	73	4.3	2.3			WNW	6	34	85	62	73.82	450	15	2			6	2	18	30		8	
OCT	93	86	75	72	8.8	5.3			N	8	46	87	69	73.82	300	18	4			2	2	6	30		8	
NOV	93	84	74	67	9.8	4.4			N	10	38	87	71	72.79	300	20	4			#	5	2	29		8	
DEC	90	82	73	66	9.3	6.0			N	11	35	85	72	70.74	250	18	6			0	6	#	25		8	
ANN	103	87	75	63	48.0	6.0	0	0	N	8	47	84	64	72.79	450	128	26	0	0	29	22	142	341	0	0	7
EYR	5	5	5	5	5	5	4	4		4	1	4	4	4	4	4	4	4	4	4	5	4	4	4	4	3

REMARKS
 Number Observed Within: Apr May Jun Jul Aug Sep Oct Nov Dec Ann
 (FOR: 1949-1969) 60 NM 0/0 0/0 0/0 0/0 0/0 0/0 2/0 5/4 2/1 9/5
 (A) Typhoons and Tropical Storms 120 NM 0/0 0/0 0/0 0/0 0/0 0/0 2/0 7/6 5/3 14/9
 (B) Typhoons Only 240 NM 1/0 1/0 0/0 1/1 0/0 3/1 7/3 11/9 7/3 31/18 DEC 70.
 RUSSWO POR: Hrly and Daily Obs: 6511-6910. Flying Weather POR: 6702-7003. ¹ Tentative. 1 WEA GP SEARTT

NOTE: *DATA NOT AVAILABLE. *LESS THAN 0.5 DAY, 0.5 OR 0.05 INCH, OR 0.5 PERCENT (%) AS APPLICABLE.

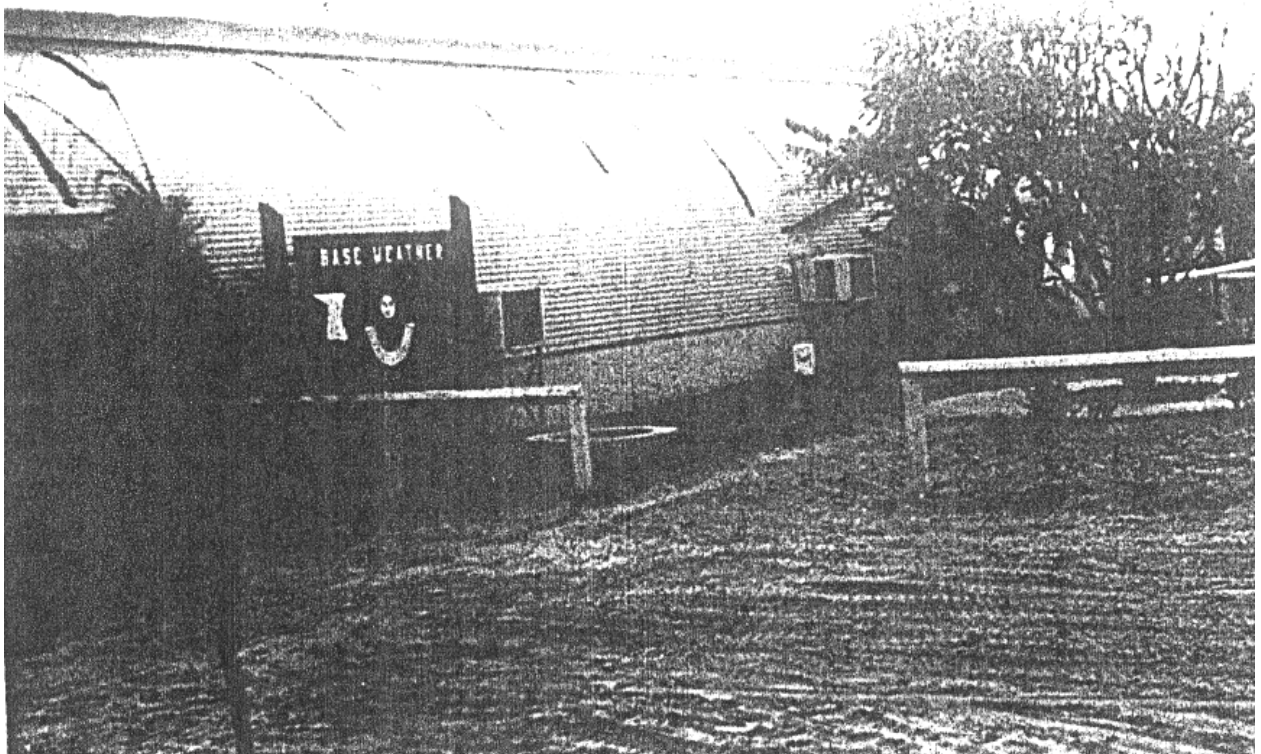
FLYING WEATHER (% FREQ)	HOURS (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	EYR
CIG less than 3000 feet and/or VSBY less than 3 miles	00 - 02	14	4	10	11	2	1	1	0	3	10	17	15	7	
	03 - 05	14	9	8	10	2	0	0	0	2	7	13	13	7	
	06 - 08	12	8	10	5	1	1	0	0	0	5	14	14	6	
	09 - 11	5	6	5	4	1	0	0	0	0	6	10	5	4	
	12 - 14	3	3	3	1	0	#	0	1	#	2	9	3	2	
	15 - 17	3	#	3	2	1	2	1	2	3	4	9	6	3	
	18 - 20	9	3	4	4	3	1	0	2	5	6	10	10	5	
	21 - 23	11	2	7	6	2	1	1	#	4	9	12	11	6	
ALL HOURS	9	4	6	5	2	1	#	1	2	6	12	10	5	3	
CIG less than 1500 feet and/or VSBY less than 3 miles	00 - 02	3	#	#	#	0	#	#	0	#	1	2	1	1	
	03 - 05	1	1	1	2	#	0	0	0	0	#	2	1	1	
	06 - 08	1	1	1	0	1	0	0	0	0	2	3	0	1	
	09 - 11	1	#	2	1	0	0	0	0	0	2	4	#	1	
	12 - 14	1	#	1	0	0	0	0	0	0	1	3	0	1	
	15 - 17	#	0	1	#	#	#	#	1	1	1	3	1	1	
	18 - 20	2	0	1	1	0	#	1	2	2	2	2	1	1	
	21 - 23	2	0	#	0	0	#	1	0	0	3	3	3	1	
ALL HOURS	2	#	1	1	#	#	#	#	#	2	3	1	1	3	
CIG less than 1000 feet and/or VSBY less than 2 miles	00 - 02	2	0	0	0	0	0	#	0	0	#	1	0	#	
	03 - 05	0	0	0	1	0	0	0	0	0	1	0	#	#	
	06 - 08	#	0	0	0	0	#	0	0	0	0	0	0	#	
	09 - 11	1	0	1	1	0	0	0	0	0	2	2	#	1	
	12 - 14	#	0	0	0	0	0	0	#	0	1	1	0	#	
	15 - 17	#	0	#	#	#	#	#	1	#	1	1	0	#	
	18 - 20	1	0	1	1	0	#	0	2	1	0	0	#	1	
	21 - 23	1	0	#	0	0	#	1	0	0	2	2	#	1	
ALL HOURS	1	0	#	#	#	#	#	#	#	1	1	#	#	3	
CIG less than 200 feet and/or VSBY less than 1/2 mile	00 - 02	0	0	0	0	0	0	0	0	0	0	0	0	0	
	03 - 05	0	0	0	0	0	0	0	0	0	0	0	0	0	
	06 - 08	0	0	0	0	0	0	0	0	0	0	0	0	0	
	09 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12 - 14	0	0	0	0	0	0	0	0	0	0	0	0	0	
	15 - 17	0	0	0	0	0	0	0	0	0	0	0	0	0	
	18 - 20	0	0	0	#	0	0	0	0	0	0	0	0	0	
	21 - 23	0	0	0	0	0	0	0	0	0	0	0	0	0	
ALL HOURS	0	0	0	#	0	0	0	0	0	0	0	0	0	3	

1st Lt. Joel Rosenbaum, chief forecaster of Det. 18
30th Wea Sq. issues a weather warning to base
operations officer at Cam Ranh Bay AB, RVN Feb. 1969

Photo collection of Joel Rosenbaum



Base Weather Station, Cam Ranh Bay, Vietnam. The tower is the
FPS-103 weather radar.
(Photo from collection General Chapman, enhanced by
J. Rosenbaum)



Daily Weather Diary of Cam Ranh Bay
Air Base, Vietnam, kept by Lt. Joel
Rosenbaum Det 1 30th Wea Sqn Chief
Forecaster assigned to Cam Rahn Bay
from 2 Oct 68 to 4 Oct 69 promoted to
Captain Sept 69.
Diary entries run from November 28,
1962 to September 26, 1969.

- Nov. 28, 1968-Typhoon Nina moved inland early this morning
No rain after sunrise-then sudden showers in the late
morning. Dull gray dreary day with rainshowers to
the Northeast.
- Nov. 29- Sun broke out late in the morning. Sudden mist
appeared early afternoon obscuring the two small islands
offshore. It feels almost like a typical fall day back in
the states.
- Nov. 30- Sun finally broke out after early morning rain. feels
like the tropics again.
- Dec. 1 -Red rays reflected off horizon at sunrise, various gray
and black middle cloud overcast all day. Seemed almost
like a winter's day. Towering
cumulus buildups at sunset over the South China Sea.
- Dec. 2- Had light rainshowers and drizzle about 3 AM.
Precipitation dissipated about one hour before
sunrise. Very little cloudiness over field.
Very pleasant afternoon. At dusk there were cumulus
buildups to the east of us and low stratus over the
mountains to the west of us.
- Dec. 3- Clouds were mainly scattered all night. No rain. At sunrise
a gray middle cloud overcast appeared. We had southeast winds
about 10,000 ft. and Northeast below I suspect warm air
advection was the cause of the middle cloud layer. Clouds
cleared by early afternoon.
- December 4- Stratus at 2,000 ft after midnight broke up at dawn.
Cloud layer was overcast to broken
until dawn. No rainshowers. Middle cloud deck broken coverage
most of day.
- Dec. 5- A middle cloud broken to overcast persisted during the day.
No rain. A stratocumulus broken to overcast occurred in the
early morning hours.
- Dec. 6- Rainshower in the early morning. A speed Max
to the North of Cam Ranh. Overcast during afternoon. Heavy
rainshower middle afternoon. (Note a speed max is a small
area of winds generally above 20 knots
at the gradient level this can be a cause of rainshowers and or
cloudiness)
- Dec. 7 Moderate rainshowers early morning. Clear all day except
for a middle cloud overcast that moved in
the late afternoon. I believe the cloud deck was caused by
southeast winds at 700 millibars.
- Dec. 8- middle cloud deck broken to overcast most of day.
Scattered clouds at Sunset. No rain today.
- Dec. 9- clear all day no rain.
- Dec. 10- Partly cloudy No rain today.

Weather Diary Cam Ranh Bay-Rosenbaum-page 2

- December 11, 1968- clear most of day. Broken middle cloud layer after sunset. Occasional light mist on RMK hill Weather Officer quarters at Midnight.
- Dec. 12- Early wave at PE 9 brought rain in the afternoon and occasional heavy rain at night. (PE-9 was a grid location on the map about halfway between Vietnam and the Philippines. An easterly wave is a disturbance that usually produces inclement weather)
- Dec. 13- Rain till late morning. Then clearing. Gusty surface winds early afternoon.
- Dec. 14- light rain late morning. Clearing early afternoon. overcast at night.
- Dec. 15- Light rain in the vicinity till noon. Heavy rain during the evening. Front across Hainan Island was the cause.
- Dec. 16- Mostly cloudy all day. Rainshowers to the east early afternoon. Light rainshower early evening. Dec. 17-clear skies, light winds all day.
- Dec. 18- clear skies beautiful day. No rain.
- Dec. 19- A few scattered clouds. No rain. Pleasant sunset.
- Dec. 20 Mostly cloudy light rain at night.
- Dec. 21- Low ceilings and drizzle all night and early morning due to a sudden easterly wave. Clear after sunrise and the rest of the day.
- Dec. 22 - Partly cloudy. Buildups offshore at night.
- Dec. 23- Rain in morning. Clearing by late morning. Dec. 24- No rain but mostly cloudy all day.
- Dec. 25- Weak front to the south of Cam Ranh. There is a trough at 700 Millibars. Middle cloud overcast all day. Light drizzle at sunset.
- Dec. 26- Broken middle cloud this morning. Clearing by late morning. Warm pleasant day. The trough broke down at the 700 millibar level.
- Dec. 27- partly cloudy no rain.
- Dec. 28- Mostly cloudy. Warm air advection at 10,000 ft. There is a low circulation at 400 Millibars, which is probably the cause of a cirrus overcast. This might be a distill system working down. If so we should have rain by Monday morning.
- Dec. 29 Mostly cloudy. High cirrus overcast due to a' blowoff from a cyclonic circulation at about 5 degrees North and 105 degrees east. Middle cloud broken deck most of day.
- Dec. 30- Mostly cloudy. There is a trough and convergence on gradient level analysis, but no rain.
- Dec. 31- Mostly cloudy. No rain.
- January 1, 1969- Mostly partly cloudy. Middle cloud broken to overcast all day.
- Jan. 2- Mostly cloudy in the morning. Rain by 1500 local time and into the evening. The intertropical convergence zone has moved to 7 degrees North and there is a front running through Hainan Island with a wind max aloft. Apparently the combination OF these factors caused the rain.

- January 3, 1969-A combination of effects from a stationary front across Hainan Island and a low pressure system southeast of Phan Thiet gave Cam Ranh intermittent rain all day with a prevailing ceiling of 3000 feet.
- Jan 4- A trough along the coast at the gradient level developed a series of lows within it. We had the lowest ceilings and visibilities I've seen since I arrived in early October. We had a ceiling of 500 ft and a visibility of three quarters of a mile. There was rain all morning and early afternoon. There was a sudden break about 1500 local time and clouds seemed to have dissipated slightly. The heaviest rain and poorest visibilities and lowest ceilings were between Cam Ranh and Qui Nhon. Danang held up pretty well all day with a 2,000 ft. ceiling.
- Jan. 5- A ridge moved over Cam Ranh by early afternoon as expected. We had light rainshowers till late morning, the cloud decreased and the sun broke out by early afternoon. We had 2.24 inches of rain since Jan 1st. We expect pretty good weather for the next five days.
- Jan. 6- Isolated rain shower late morning. Relatively clear rest of day. Cumulus buildups formed out over water at sunset.
- Jan. 7- 3,500 ft broken after morning. Considerable stratocumulus at sunrise. It ' was almost clear at 1030 local. A heavy rainshower occurred at 1230 local- then it became partly cloudy. A trough, wind max to the north and a front at Danang probably caused the rainshower.
- Jan. 8- Rainshowers to the northwest and southwest late morning and early afternoon. A large wind max area to the north and south. We had 25 knot winds all day.
- Jan. 9- Low ceilings and visibilities with intermittent rainshowers until 1100 local. A trough at the gradient level combined with divergence aloft, a long over the water trajectory on the gradient level caused a massive influx of precipitation. Partly cloudy by afternoon.
- Jan. 10- Sheets of rain appeared on radar at 2300 local. We went down to a visibility of 2 miles in heavy showers by 0500 local. Apparently middle cloud overcast, trough and a wind max with convergence at 700 millibars and divergence above combined to give rain. Middle level clouds . prevented low stratus from dissipating. It is unusually wet for this time of year.

- January 11, 1969- Intermittent rain until 0800 local. Rain started about 0200 local. Rest of day mostly clear with a few towering cumulus. Skies mostly clear at night. Trough at surface associated with neutral point at the gradient level. Expect no rain Sunday the 12th but there will probably be some by Monday night or Tuesday morning as a front moves down out of China. (a neutral point in streamline analysis of winds is where streamlines of converging and diverging winds meet)
- Jan. 12- Clear day few clouds. Small over the water trajectory. A front moving down past Hainan Island will affect stations North of 14 degrees north. No rain is forecast for Cam Ranh.
- Jan. 13- Mostly clear.
- Jan. 14-Rain early morning. Light rain in the vicinity. the Low at 700 Millibars might be a distill system. Considerable middle cloud deck today.
- Jan. 15- Early morning rainshowers. Mostly cloudy all day with a few breaks in the overcast by early afternoon. A trough aloft at 400 and 500 Millibars should give us rain sometime after midnight.
THIS HAS BEEN A VERY CLOUDY MONTH. MORE CHARACTERISTIC OF THE NORTHEAST MONSOON. IN DECEMBER WE HAD 13 DAYS OF MEASURABLE PRECIPITATION AND 3.38 INCHES OF RAIN. IT SEEMS AS THOUGH JANUARY WILL BE THE SAME EVEN THOUGH THE AVERAGE IS 7 DAYS OF PRECIPITATION AND TOTAL RAINFALL OF 2.8 INCHES.
- Jan. 16- Heavy rainshowers during morning.
- Jan. 17- Heavy rainshowers morning hours. Mostly cloudy all day.
- Jan. 18- Mostly clear after late morning. Early morning rainshower. Cloud deck 1,200 ft. broken around 9:30PM lasted for half an hour. This also happened on Jan 12 around 8 PM. The winds aloft today were, all easterly and very light.
- Jan. 19- Clear most of day. Very few clouds.
- Jan. 20- Clear all day. Very little Cumulus activity.
- Jan. 21- Mostly clear. Winds had only a small over the water trajectory.
- Jan. 22- Mostly clear but a new surge is moving down. Expect more clouds tomorrow. Possible rain tomorrow morning.
- Jan. 23- Increasing clouds. Rain at Tuy Hoa this morning. Winds increased to 25 knots at the 5,000 ft. level. Possible rain tomorrow expect more clouds.
- Jan. 24- Clear at sunrise. then a middle cloud layer moved in, in the late morning and we were broken to overcast at 700 feet with some light rain early in the afternoon due to a trough that appeared at 700 millibars.
- Jan. 25- Mostly clear. A few towering cumulus clouds developed in the early afternoon.

- January 26, 1969-Mostly clear all day. Just a few puffy Cumulus type clouds in the afternoon with light balmy winds.
- Jan. 27 Increasing stratocumulus clouds late morning but skies were scattered all day. Fantastic sunrise one of the most magnificent I have seen here. Reddish cirrus clouds kept on becoming lighter as the sun approached nearer to the horizon.
- Jan. 28- Very few clouds, very light winds. Gradient level winds a-CC. from the southeast with much divergence aloft If we had strong northeast winds with convergence we'd probably get rainshowers.
- Jan. 29- Clear most of day. Large amount of stratocumulus over water at sunrise. Very light winds all day. Exceptionally fine weather. Yesterday ceiling became 4,000 feet after sunrise. The cloud deck was confined to Cam Ranh, Nha Trang and Phan Rang. I'm at a loss to explain the cause of the cloud deck but it dissipated at noon.
- Jan. 30- no entry made into diary
- Jan. 31- Cloudy all day. There was a frontal system across the demilitarized zone (boundary between north and South Vietnam)
- Feb. 1 - Rain early morning .11 inches of rain. Mostly cloudy till 1300 local then mostly clear. An altocumulus deck moved in about 2100 local time. Feb. 2- Mostly cloudy all - night. Rainshower occurred late morning. Sky cleared out by 1300 local. Stratocumulus moved back in by 0800 local time. Long Over the water trajectory plus convergence gave us the rainshowers.
- Feb. 3- mostly clear.
- Feb. 4- A front south of Hainan Island suddenly redeveloped and brought massive cloudiness light rain and very strong winds to Cam Ranh.
- Feb. 5- Strong winds continued in the Cam Ranh area with heavy overcast, blowing sand but no rain.
- Feb. 6- Mostly cloudy very strong gusty winds. Blowing sand but no rain.
- Feb. 7- Mostly, cloudy in the morning. Partly cloudy by afternoon. Strong winds. clouds rolled in after sunset. Another surge is moving down. Expect rain by tomorrow night.
- Feb. 8- Surge seems to be breaking down. Light rain at sunset. Mostly cloudy skies all day and night. no significant breaks in the clouds all day.
- Feb. 9- Mostly cloudy all day. Surge breaking down. Feb. 10- Partly cloudy . Fewer clouds than were present on the previous day. But still a broken to overcast middle deck all day.
- Feb. 11- Mostly clear. Light winds aloft. Very short over the water trajectory.
- Feb. 12- Occasionally broken ceiling early morning. Rest of day mostly clear. Winds aloft all less than 20 knots.

- February 13, 1969- Haze at sunrise but no reduction in visibility.
Ridge still present over Cam Ranh.
very little cloud cover. Scattered cloud coverage all day,
- Feb. 14- Clear all day. We expect increasing cloudiness tomorrow morning.
- Feb. 15- Clear all day. Light winds all day.
- Feb. 16- Clear entire period.
- Feb. 17- Clear entire period. A front is moving down. There may be increased cloudiness on the morning of the 18th.
- Feb. 18- Clear all day. Light winds aloft. Stratus formed in mountains at sunset. First time I noticed it in over a week.
- Feb. 19- Parallel to coast flow caused southeast winds at Cam Ranh and a max temperature of one or two degrees above normal. no clouds. Weather still good. A weak surge is pushing down from North Vietnam, but not expected to affect stations south of 16° North.
- Feb. 20- Mostly clear. Increasing cloudiness at sunset. Feb. 21- Mostly clear all day. Considerable haze. Southwest winds aloft.
- Feb. 22- Mostly clear until sunrise. Massive cloudiness moved in at 5,000 ft, a front moved down south of Danang. We cleared out by 1100 local time. Expect the same tomorrow with possible rainshowers.
- Feb. 23- Mostly clear all day.
- Feb. 24- Mostly clear most of period.
- Feb. 25- Mostly clear most of period.
- Feb. 26- Mostly clear. About four eighths coverage of stratocumulus at night.
- Feb. 27- Mostly clear all day. Surge moving down but not expected to affect Cam Ranh.
- Feb. 28- Mostly clear all day. Front dissipated.
Cloud cover of 1,500 broken stayed in from 2000 local to 2200 local time then dissipated.
- Mar. 1- Mostly clear all day.
- Mar. 2- Mostly clear all day.
- Mar. 3- Mostly clear all day. Some 4,000 ft. broken cloudiness occurred at 0900 local. I believe the cause of the cloudiness was a minor trough to the south of Cam Ranh on the gradient level chart.
- Mar 4- Mostly clear.
- Mar. 5- Massive stratocumulus clouds at sunrise but our cloud coverage never went to broken. A cold front moving down towards us. We expect more cloudiness tomorrow.

- March 6, 1969- Mostly clear most of day. Cloudiness from frontal system didn't materialize. We expect a few surges moving down in the next couple of days.
- Mar. 7- A wind max north of Danang probably caused 3,500 ft. broken ceiling, from after midnight to 0900 local. Probably speed convergence was the reason. Rest of the day was mostly clear.
- Mar. 8- Mostly clear all day.
- Mar. 9- Mostly clear all day.
- Mar. 10- - Broken stratus moved in at 2000 local time at 1,000 feet. It moved in and out until 0100 local . This is about the tenth time this has happened since the middle of January. The rest of the day was mostly clear.
- Mar. 11- Mostly clear all day.
- Mar. 12- Mostly clear all day.
- Mar. 13- A surge moved down and gave us 3,000 ft. broken at sunrise until noon. Apparently the wind max broke down. We expect no significant weather tomorrow. There were rainshowers and low ceilings today from Tuy Hoa to Danang. A thunderstorm occurred at Dalat.
- Mar. 14- Mostly cloudy in the morning with a trace of rain in the early morning.
- Mar. 15- Mostly cloudy all day. Weather was unusual today as it seemed more like the northeast monsoon type of weather rather than the transition from the NE Monsoon to the SW Monsoon.
- Mar. 16- Mostly cloudy until noon with a light rainshower for an hour after sunrise. The cloudiness for the past few days was apparently caused by a moist layer aloft left by a front that hung up and dissipated over Cam Ranh earlier in the week.
- Mar. 17- Had .01 inch of rain-wind max of 25 knots moved over us. There were intermittent 1,400 ft ceilings and visibilities of two and a half miles in rainshowers. Clouds broke by noon.
- Mar. 18- Had a very light rainshower after midnight. Clouds cleared away after that. Winds died off aloft. Clear rest of day with considerable hail in the mountains west of us.
- Mar. 19- Mostly clear with considerable haze.
- Mar. 20- Mostly clear.
- Mar. 21- Mostly clear.
- Mar. 22- Mostly clear.
- Mar. 23- Mostly clear.
- Mar. 24- Mostly clear.
- Mar. 25- Mostly clear.
- Mar. 26- Mostly clear.
- Mar. 27- Mostly clear with stratus forming over Hon Tre Island off Nha Trang late in the afternoon and at sunset. This may be an indication of an increase in moisture content in the atmosphere.

- March 28, 1969- Mostly clear with a patch of 8,000 ft. broken after midnight. Rest of day mostly clear. We used runway 18 in the afternoon indicating southeast winds by afternoon.
- Mar. 29- Cumulonimbus cloud to the west at sunset. Mostly clear all day. Temperatures about 5 degrees Fahrenheit above normal this month. Southerly gradient flow for almost a week now.
- Mar. 30- Mostly clear. Southerly flow at gradient level.
- Mar. 31- Front suddenly moved down to 14 degrees north. We went from clear to overcast at 3500 Ft after midnight. Many cumulus buildups and rainshowers in the vicinity after sunrise. Clearing by afternoon.
- Apr. 1- Mostly clear. Light northeasterly flow has decreased thunderstorms over III Corps area and Cumulonimbus clouds in the vicinity of Cam Ranh, (Note South Vietnam was divided into four tactical corps zones, III Corps was the Saigon area, II corps included Cam Ranh and I corps included Danang and the DMZ)
- Apr. 2- Mostly clear.
- Apr. 3- Mostly clear.
- Apr. 4- Mostly clear with a rapidly moving front. Expect considerable cloudiness and rainshowers at sunrise tomorrow.
- Apr. 5- As expected rainshowers and strong winds moved in after sunrise as a cold front whipped by very quickly. Rainfall amounted to .67 inches, which is the most we have had since January. Winds reached 30 to 35 knots.
- Apr. 6- Mostly cloudy all day ceiling was 3,500 ft broken to overcast. Strong winds but no rain. Strong winds and clouds should break in 24 to 36 hours.
- Apr. 7- Mostly clear.
- Apr. 8- Mostly clear with 3,000 ft overcast during early morning hours.
- Apr. 9- Mostly clear.
- April 10- Mostly clear until late afternoon when a middle cloud deck moved in around sunset.
- Apr- 11- Mostly cloudy 2,500 to 3,000 ft overcast all morning broke up at noon and moved back in about 1600 Local time. The cause of the cloudiness is probably a neutral point to the north of Cam Ranh at 850 Millibars and 700 Millibars.
- April 12- Mostly clear with a high cirrus broken deck appearing at about 1600 local time. The cirrus was probably the high anvil tops of the thunderstorms that occurred at Dalat to the west of us.
- Apr. 13- Mostly clear till about 1400 local time when a high cirrus deck moved in probably blow off from thunderstorms at Dalat. Danang picked up thunderstorms for the 2nd time in two days in the late afternoon.

- April 14, 1969- Mostly clear. Southerly winds greater than 20 knots for an hour at about 1400 local time, just like yesterday. Cumulonimbus buildups in the vicinity in the late afternoon. Danang had another thunderstorm. I expect one here within a week.
- Apr. 15- Mostly clear. A cumulonimbus cloud developed to the west of us, which gave a dark threatening appearance at sunset. Temperatures have been running in the low 90's, which is about 8 or 9 degrees warmer than the last month, but it feels 20 degrees warmer. It seems much hotter than it actually is. The winds seem to be gusting greater than 20 knots by early afternoon.
- Apr. 16- Mostly clear.
- Apr. 17- Mostly clear.
- Apr. 18- Mostly clear.
- Apr. 19- Mostly clear.
- April 20- mostly clear.
- Apr. 21- Tropical storm Susan now a typhoon (same as a hurricane in the U.S.). Present location approximately 250 miles southeast of Mactan Air Base in the Philippines. This storm could be a dangerous threat to Vietnam according to climatology if it crosses the southern part of the Philippines. Today at Cam Ranh was mostly clear. Winds were southeast. Expect gusty afternoon winds.
- Apr. 22- Mostly clear no gusty winds.
- Apr. 23- Mostly clear.
- Apr. 24- Mostly clear.
- Apr. 25- Mostly clear.
- Apr. 26- Mostly clear except for a 3,000 Ft. overcast that moved in at midnight for two hours.
- Apr. 27- A trough at 850 Millibars that suddenly developed along the coast brought rainshowers with in 3 miles of Cam Ranh, Mostly to the west. Mostly cloudy skies until noon then mostly clear.
- Apr. 28- Mostly clear.
- Apr. 29- Mostly clear all day. Considerable buildups. towering cumulus buildups at sunrise over the South China Sea. Considerable cloudiness about an hour before the sun went down. Towering Cumulus over South China Sea at sunset.
- Apr. 30- Towering Cumulus and Cumulonimbus clouds over the water. Warm land breeze blows across cool water and towering Cumulus clouds result. There were many cumulonimbus clouds to the west in the mountains in the late morning but there were no thunderstorms at Cam Ranh.
- May 1- Mostly clear. Light rainshowers in the vicinity from 0800 local to 1100 local.

May 2, 1969-Mostly clear. Towering cumulus clouds at sunrise and about two hours after sunset.

May 3-Mostly clear. Cumulonimbus east of us at sunrise and in the early afternoon. A massive influx of stratocumulus clouds at sunset with very light rainshowers over sections of the base about an hour after sunset.

May 4- Mostly clear. Towering cumulus clouds at sunset. Sky condition almost went scattered to broken about two hours after sunset. Towering cumulus appeared as rainshowers on radar at 2100 local. (Cam Ranh had a relatively simple FPS-103 weather radar). The rainshowers dissipated. It appears that very light winds during the day contribute to stratocumulus formation after sunset.

May 5- Mostly clear.

May 6- Mostly clear.

May 7- First thunderstorm of this year occurred at 0530 local. No precipitation only thunder and lightning. Rest of day mostly clear.

May 8- Rainshowers formed about 0100 local. We had .11 inches of rain by 0600 local. Heavier rain occurred at 0900 local. Clearing by noon. Numerous towering cumulus observed over water. I picked up radar echoes as far out as fifty miles east of us over the South China Sea.

The cause of the rain was an over the water trajectory non-stop from RCTP (Unk station) to Cam Ranh. A typical northeast monsoon rainshower situation plus a major convergence at 700 Millibars, Expect rainshowers tomorrow.

May 9- Rainshowers occurred at about 0500 local and broke up about 0600 local. According to the synoptic discussion these rainshowers are due to offshore flow (Sea Breeze Front) and southeast winds along the coast. Rest of day clear.

Signs of Southwest Monsoon in western Thailand.

May 10- Mostly clear. Southwest winds. The Southwest Monsoon is showing up in Thailand.

May 11- Mostly clear. Considerable lightning out to the west of us after sunset.

May 12- Southwesterly winds on Gradient level but not thought to be the Southwest Monsoon yet. Considerable - lightning out to the west after sunset.

May 13- Mostly clear.

May 14- Mostly clear. Afternoon cumulonimbus clouds west.

May 15- Mostly clear. Afternoon cumulonimbus clouds west.

May 16- Mostly clear. Intertropical convergence Zone appeared at 5 degrees North, it should be moving up soon and give us a few thunderstorms. Cumulonimbus clouds west of us during the afternoon.

May 17- Mostly clear.

May 18, 1969- Mostly clear.

May 19- Thunderstorms formed off to the southeast of Cam Ranh after midnight. none got close to Cam Ranh. The closest echo on our radar was five miles then it dissipated. There were considerable cumulus buildups at sunrise.

May 20-Mostly clear.

May 21- Mostly clear.

May 22- Mostly clear.

May 23- Southwest Monsoon appears at 700 Millibars.

Thunderstorm occurred at Cam Ranh at 1630 local time. Only thunder no rain.

May 24- Mostly clear.

May 25- Mostly clear. Thunderstorms appeared on our radar scope but dissipated seven miles from Cam Ranh.

May 26- Had first good thunderstorm with rain at 1530 local with a maximum gust of 20 knots. Storm ended by 1615 local time. Rest of day mostly clear.

May 27- Had another thunderstorm today at about 1700 local time. Only heard thunder. Thunderstorms and rainshowers began again about 2100 local time. It rained quite hard on RMK hill for half an hour. (RMK hill was where all the weather officers lived just above the South China Sea about a mile from the weather station). There was only a trace of rain at our official observing site. Now that we had several thunderstorms in a row I noticed several features in common-there was a trough at the gradient level to the south of us, the 700 Millibar winds were all westerly with winds greater than 20 knots to the north of us.

May 28- Had .31 inches of rain in good thunderstorms. The maximum gust in the thunderstorm was about 15 knots, which occurred at 1400 local time with generally west winds aloft and a good speed max approaching the Northwest corner of South Vietnam.

May 29- Mostly clear except at sunset.

May 30- Mostly clear.

May 31- Dark clouds at sunset but no thunderstorm. We had light rain from 0700 to 0800 local time, which seems to be unusual for this time of year. Several layers of scattered clouds throughout the day.

June 1- Mostly clear.

June 2- Mostly clear.

June 3- Mostly clear.

June 4 through June 11- On R&R in Hawaii. All days during this period were mostly clear except on June 8th we had a thunderstorm at 1700 local with .25 inches of rain and a max wind gust of 25 knots. We also had a trace of rain on June 11th.

- June 12, 1969-- Mostly clear.
- June 13- Mostly clear.
- June 14- Mostly clear.
- June 15- Thunderstorms moved to within 10 miles of Cam Ranh in the late afternoon but none moved over the airfield itself.
- June 16- Mostly clear very little convective activity.
- June 17- Mostly clear.
- June 18- Mostly clear.
- June 19- Mostly clear. Nha Trang had .57 inches of rain. It seems that they get considerably more rain than Cam Ranh, (Nha Trang is about 20 miles due north of Cam Ranh on the coast)
- June 20- Mostly clear.
- June 21- Mostly clear.
- June 22- a cyclonic circulation that formed about 10 degrees north and 119 degrees east from the gradient level to 700 Millibars gave Cam Ranh mostly cloudy skies until 100 local time.
Towering Cumulus reformed at 2200 local. There is a possibility of rain after midnight.
- June 23- Mostly cloudy in the morning due to southeast flow at the gradient level. Rainshowers offshore at night but only a trace of rain at Cam Ranh.
- June 24- Mostly cloudy in the morning and partly cloudy in the afternoon.
- June 25- Partly cloudy with gusty southwest winds at sunset.
- June 26- Had second thunderstorm of this month today at 3 PM. I suspect that the shifting of gradient winds from Southeast to Southwest might have had something to do with their occurrence. There was also a speed maximum to the south and southwest winds during the morning hours.
- June 27- Mostly clear.
- June 28- Mostly clear. Thunderstorms moved 5 miles west of air base at 1500 local, but then moved south and dissipated.
- June 29- Mostly cloudy today with a middle cloud layer.
- June 30- Mostly cloudy with strong southwest winds at sunset. Had a thunderstorm in the afternoon. The rain kept up until midnight and we had .09 inches recorded.
- July 1- Mostly cloudy. Light rain after sunset kept up for several hours. Gusts of 35 knots at sundown.
- July 2 through July 8- Thunderstorms on July 5th and July 7th. It appears that thunderstorms occur here at Cam Ranh in a two or three day sequence
50-75% of the Southwest monsoon months. I have reviewed the Weather records for Cam Ranh since 1965 and this appears to be the case. I have instructed our forecasters that if a thunderstorm occurs forecast it for the next day also.
- July 9- Mostly clear all day. Frequent lightning to the south after sunset. Tropical storm Tess appeared at 13 Deg. North 119 Deg. East, max winds of 40 knots.

- July 10, 1969- Tropical storm Tess is now a typhoon. The original course had it reaching land between Hainan Island and Hong Kong. Considerable Cirrus clouds at Cam Ranh.
- July 11- Mostly cloudy all day with strong Southwest winds at 15-20 knots in the morning. The winds died off in the afternoon. We expect rain in the morning or afternoon, as the typhoon was 240 nautical miles northeast of Cam Ranh. Heavy rain occurred about 1800 local and ended about midnight. We had 1.06 inches of rain.
- July 12- Typhoon Tess smashed ashore as a tropical storm at Vinh, North Vietnam. Mostly cloudy at Cam Ranh all day. Had heavy rainshowers at 2000 local time with a thunderstorm. Rain let up at about 2200 local. Unusual time for a thunderstorm to occur.
- July 13 through 16- Mostly clear.
- July 17- Light rainshowers occurred at 1830 local. Morning free of clouds.
- July 18- Had thunderstorm during the afternoon, Trough to south on gradient level. We had .36 inches of rain.
- July 19- Had thunderstorm but no rain. A good squall line moved to within 5 miles of us but then moved south along the bay and dissipated.
- July 20- Partly cloudy- No significant weather.
- July 21- Partly cloudy. No significant weather.
- July 22- A trough at 850 Millibars set off some light rain between 0500 and 0630 local and then heavier rain after sunset. This has been an unusually rainy and cloudy month.
- July 23 through 26- Mostly cloudy skies- middle clouds and some periods of light rain at night.
JULY HAS BEEN A SURPRISE - THERE IS A MARKED INCREASE IN CLOUDINESS FROM JUNE. Also the appearance of light rain after sunset ON MANY DAYS ALTHOUGH THE ACCUMULATION WAS USUALLY JUST A TRACE.
- July 27 through 29- Mostly cloudy with 8,000 to 10,000 foot ceilings. Strong southwest to west winds over all South Vietnam. Occasional light rain after dusk.
- July 30- Partly cloudy with winds greater than 20 knots at 0800 local, then they died down after that. Unusual rise in temperature at 1600 local to 36 deg. Centigrade (97 F). Winds shifted to 240 degrees so I suspect a chinook effect.
- July 31- Mostly cloudy.
- Aug. 1- Mostly clear by noon. Thunderstorm late in the afternoon with .38 inches of rain. Mostly cloudy that evening.

- August 2, 1969 - Expected another thunderstorm today but it didn't materialize. Mostly cloudy skies. A few rainshowers formed 5-10 miles west of us but they didn't affect Cam Ranh.
- Aug. 3 through 8- Partly cloudy . Rainshower on Aug. 6th about 1700 local.
Thunder and rain on Aug. 5th.
- Aug. 9- Partly cloudy with wind greater than 20 knots 2 or 3 hours after sunset.
- Aug. 10- Clear till early afternoon. Numerous cloud buildups out to the west. Sea breeze during afternoon. Thunderstorm came within 10 miles of Cam Ranh. There seems to exist a sea breeze front. All winds except for the first three thousand feet were southwest or westerly. Very dry air and moist sea air colliding could have set off the thunderstorms.
- Aug. 11- Mostly clear skies until early afternoon with considerable thunderstorms and rainshowers activity to the west from 1630 local to 1800 local.
- Aug. 12 through 13- Mostly clear. Wind shifted to southeast. On Aug. 13th Cumulonimbus clouds were to the southeast from sunrise to early afternoon. Considerable towering cumulus buildups late morning dissipating by early afternoon.
- Aug. 14- Mostly clear, with northeasterly winds. More typical of February or March than August. Expect a pretty good thunderstorm activity when we switch back to southwest flow again.
- Aug. 15- Mostly clear. Cool northeast flow.
- Aug. 16- Mostly clear. Cool northeasterly flow.
- Aug. 17- Mostly clear. Light easterly wind.
Tropical storm Cora at 135 degrees East-should give us Southwest winds within three days.
- Aug. 18- Cumulonimbus clouds at sunrise over the South China Sea. Mostly clear until sunset then considerable stratus clouds for two hours. Wouldn't be surprised to get an occasional rainshower early tomorrow morning, Light easterly flow at gradient level.
- Aug. 19- Cumulonimbus, towering cumulus early afternoon dissipated by sunset. Clear most of night.
- Aug. 20- Mostly clear. Early afternoon cumulonimbus clouds over water.
- Aug. 21- Mostly clear all day.
- Aug. 22- Mostly clear, light rain on RMK hill an hour after sunset. (sometimes it rained on the hill but not at the weather station)
- Aug. 23- Partly cloudy with considerable cumulonimbus activity offshore late in the morning due a wind max at 10,000 feet.
- Aug. 24- Mostly clear. Light easterly winds.

- August 25, 1969- Mostly clear until late afternoon, a huge Cumulonimbus cloud formed about 20 miles west of the air base but didn't move over the base. Winds are becoming more southerly and we expect a return to southwest flow shortly.
- Aug. 26- Mostly clear.
- Aug. 27- Mostly cloudy with considerable towering cumulus and cumulonimbus activity over the South China Sea from 0200 local to 0900 local.
Winds at gradient level becoming more southwesterly.
- Aug. 28- Mostly cloudy morning hours. Buildups west of us in the afternoon.
- Aug. 29- Partly cloudy. Thunderstorms formed two hours after sunset 40 miles south-southeast of Cam Ranh. Aug. 30 Mostly high cirrus overcast during the day.
Mostly clear after sunset.
- Aug. 31-- Partly cloudy. Tropical storm formed 360 miles northeast of Cam Ranh. It brought middle cloud overcast and light rain by midnight. We had .02 inches of rain. Thunderstorm occurred at Nha Trang. I expect a thunderstorm by early evening on Sept. 1st.
- Sept. 1- Mostly cloudy all day.
- Sept. 2- Partly cloudy strong southwest winds at sunset, light rain at 2000 local.
- Sept. 3- Mostly cloudy with periods of light rain after sunset.
- Sept. 4- Mostly cloudy. Light rain began at 1400 local and continued until 0200 local. A trough at the gradient level, 850, 700, and 500 millibars appears to be the cause.
- Sept 5- Partly cloudy. Severe thunderstorm developed at 1700, to 1800 local. It rained until 0200 local. We received 2.34 inches of rain. Our monthly average for September is about 4 inches. The thunderstorm developed north of us and then moved south. Upper level winds were northwesterly, a speed convergence and a streamline convergence, area was analyzed on the gradient level analysis over Phan Rang and Cam Ranh.
- Sept. 6- There is a stationary low in the center of the South China Sea. no rain. Partly cloudy-north to northeast winds.
- Sept. 7- Low pressure sitting of South Vietnam coast brought rain to many coastal bases, however there was no rain at Cam Ranh. The weather is almost typical of the northeast monsoon.
- Sept. 8- Mostly cloudy all day. Rain began to fall about 1600 local and kept up until after midnight. There must have been a considerable amount of rainfall in that time. The cause of the rain was a stationary low off the coast.
- Sept. 9- Rained again this afternoon. Very persistent rainshowers.
- Sept. 10- Had a thunderstorm at 1400 local rain continued until 2030 local. It has rained almost every day this month. We had 5 and 1/4 inches so far 1 inch more than the monthly mean.

September 11, 1969- Rained again this afternoon.

.40 inches of rain today. We must have about 6 inches of rain by now for the monthly total.

September 12- Rained again today. Rain began late in the afternoon just before sunset we had .45 inches.

Sept. 13- Rained today at 1500 local and kept up until 2000 local. Convergent winds over Cam Ranh at 300, 500 and 700 Millibars were. the probable cause of the rain. We expected thunderstorms, but only rain occurred. We should have some nocturnal thunderstorms one of these days. We had .20 inches of rain today.

Sept. 14- Rained about 1900 local. It got very black at 1800 local, there was lightning all quadrants, but no thunderstorm. It seems as though rain pattern is breaking up as rain ended at 2000 local. WE had .05 inches of rain.

Sept 15- Mostly clear in the morning. Expected no rain, but we had some by 1800 local. We had southwest winds from 0800-1100 local. This caused our temperatures to go into the high 80's.

Sept. 16- Partly cloudy rain at about 1600 local.

Sept. 17- Partly cloudy in the morning, light rain began at 1400 local and continued past sunset.

Sept. 18- Mostly cloudy. Began raining by 1400 local. Had thunderstorm and heavy rain late in afternoon.

Sept. 19- Rained late in afternoon again. Had thunderstorm.

Sept. 20- Had thunderstorm at noon. Low is now over Bangkok. Rain should end by tomorrow if the gradient level prognosis is right.

Sept. 21- Mostly clear. No rain.

Sept. 22- Day started off as clear with no clouds. A thunderstorm developed by 1900 local. Ridge at 300 millibars provided divergence. One of the worst thunderstorms I've seen here. We had .25 inches of rain from the thunderstorm.

Sept. 23- Mostly middle and high cloud overcast. Low at 114 degrees east in South China Sea. Expected rain but none materialized.

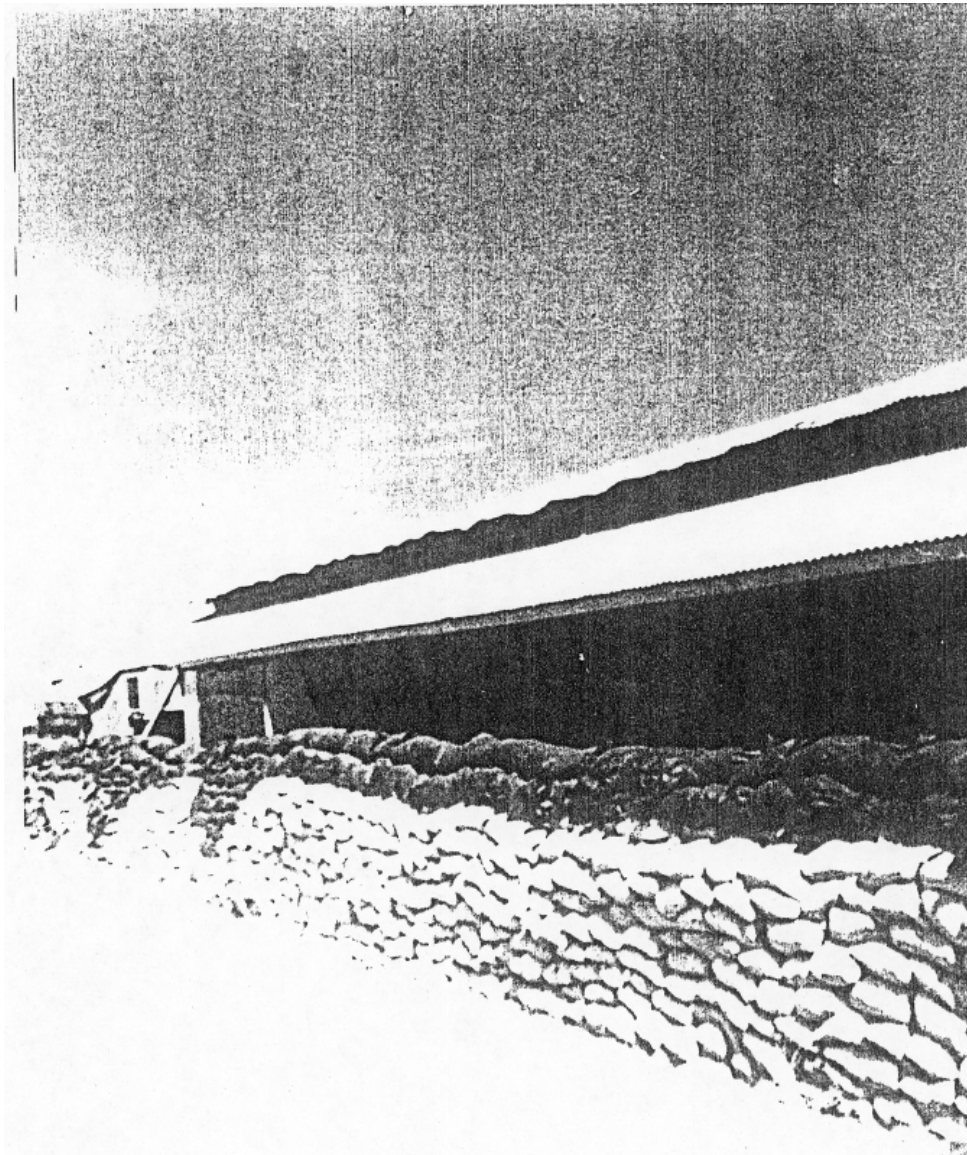
Sept. 24- Mostly clear all day. 8.12 inches of rain has fell so far this month.

Sept. 25- Mostly clear. Considerable thunderstorm activity to the north and northeast after sunset, but none over the airfield.

Sept. 26- Mostly clear. We had an over an inch of rain in a thunderstorm that lasted from 2100 local to midnight.

LAST ENTRY SCHEDULED TO GO HOME ON OCTOBER 2ND BUT WAS SCHEDULED ON A SEABOARD WORLD AIRWAYS FLIGHT. ONE OF THEIR PLANES WAS FORCED DOWN OVER CHINA WITH US TROOPS ON BOARD. THE 14TH AERIAL PORT OFFICERS LIVED WITH US IN OUR HOOTCH. THEY RESCHEDULED ME FOR ANOTHER CHARTER AIRLINE ON OCTOBER 4TH.

Living quarters for Cam Ranh Weather Officers
"C" Hootch on RMK hill overlooking the South
China Sea July 1 969. Photo by Joel Rosenbaum



Weather Officer 1st Lt. Ray Clark improving his quarters "C" Hootch Cam Ranh Bay, Vietnam
July 1969 Photo by Joel Rosenbaum

