

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU (SEISMOLOGY)



Location of Seismograph — U. S. Government House, Agana, Guam, M. I.

Position of Seismograph — Latitude, North $13^{\circ} - 28' - 20.3''$ Longitude East $144^{\circ} - 44' - 55.9''$

Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

January 1930

Date of earthquake	4th.	9th.	10th.	26th.	29th.	29th.
Time of beginning	4:04:30, AM.	3:10:30, PM.	12:31:00, PM.	10:23:00, PM.	9:44:20, AM.	3:07:05, PM.
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	E-W	E-W	N-S	N-S	N-S	N-S
Sounds	None	None	None	None	None	None
Felt by	None	None	None	None	None	None

Name of observer

W. W. Rowley

Address of observer

Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

1. Felt only by an experienced observer, very faint.
2. Felt by a few persons at rest, faint.
3. Direction or duration appreciable, weak.
4. Felt by persons walking. Doors, etc., moved.
5. Felt by nearly everyone. Furniture moved.

6. Belis rung, pendulum clocks stopped. Alarm.
7. Fall of plaster, slight damage. Scare.
8. Fall of chimneys, walls cracked. Fright.
9. Some houses partly or wholly wrecked. Terror.
10. Buildings ruined, ground cracked. Panic.

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Position of Seismograph — Latitude, North $13^{\circ} - 28' - 20.3''$ Longitude East $144^{\circ} - 44' - 55.9''$

Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

January 1930

Date of earthquake	29th.					
Time of beginning	9:12:00, PM.					
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	E-W					
Sounds	None					
Felt by	None					

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

- | | |
|--|--|
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Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

February 1930

Date of earthquake	4th.	4th.	4th.	21st.	22nd.	28th.
Time of beginning	8:11:50, AM.	8:19:35, AM.	8:24:00, AM.	2:58:30, PM.	5:36:30, AM.	11:38:40, PM.
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	N-S	N-S	E-W	N-S	E-W	E-W
Sounds	None	None	None	None	None	None
Felt by	None	None	None	None	None	None

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

March 1930

Date of earthquake	4th.	9th.	15th.	21st.	24th.	27th.
Time of beginning	10:39:10, PM.	1:12:50, PM.	11:30:40, AM.	11:10:20, PM.	4:55:30, AM.	8:51:10, PM.
What doing					Laying down	
Onset of shocks					Abrupt	
Nature of shocks					Trembling	
Intensity					3	
Number of shocks					1	
Duration of each					10 seconds	
Direction of vibration	N-S	E-W	E-W	E-W	N-S	N-S
Sounds	None	None	None	None	None	None
Felt by	None	None	None	None	Many	None

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Position of Seismograph — Latitude, North 13° - 28' - 20.3" Longitude East 144° - 44' - 55.9"

Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

March 1930

Date of earthquake	30th.					
Time of beginning	10:17:40, AM.					
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	N-S					
Sounds	None					
Felt by	None					

Name of observer

W. W. Rowley

Address of observer

Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Time used, Zone, Minus 10.

April 1930

Date of earthquake	1st.	25th.	26th.	26th.	27th.	28th.
Time of beginning	9:45:15, AM.	4:09:40, AM.	3:07:20, AM.	4:00:20, AM.	8:47:30, AM.	12:11:45, AM.
What doing			At rest	Sitting down		
Onset of shocks			Abrupt	Abrupt		
Nature of shocks			Trembling	Trembling		
Intensity			2	1		
Number of shocks			1	1		
Duration of each			15 seconds	5 seconds		
Direction of vibration	E-W	N-S	E-W	E-W	E-W	E-W
Sounds	None	None	None	None	None	None
Felt by	None	None	Many	Few	None	None

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Time used, Zone, Minus 10.

Apr 11 1930

Date of earthquake	28th.	29th.				
Time of beginning	11:12:55, PM.	12:03:30, AM.				
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	N-S	E-W				
Sounds	None	None				
Felt by	None	None				

Name of observer **W. W. Rowley**

Address of observer **Naval Station, Guam.**

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Time used, Zone, Minus 10.

May 1930

Date of earthquake	1st.	1st.	7th.	8th.	11th.	11th.
Time of beginning	7:17:40, PM.	7:54:15, PM.	6:10:20, PM.	1:22:10, PM.	3:16:10, AM.	3:51:15, AM.
What doing	Laying down	Sitting down	Standing		Asleep	Laying down
Onset of shocks	Abrupt	Rapid	Abrupt		Abrupt	Gradual
Nature of shocks	Trembling	Trembling	Trembling		Rocking	Trembling
Intensity	1	3	1		4	2
Number of shocks	1	2	1		2	1
Duration of each	5 seconds	1st. 1 min. 2nd. 30 sec.	10 seconds		1st. 2 min. 2nd. 5 sec.	10 seconds
Direction of vibration	E-W	E-W	N-S	E-W	E-W	N-S
Sounds	None	Yes	None	None	Yes	None
Felt by	Few	Many	Few	None	Many	Few

Name of observer

W. W. Rowley

Address of observer

Naval Station, Guam.

REMARKS

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Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

May 1930

Date of earthquake	12th.	12th.	22nd.	24th.		
Time of beginning	3:04:20, PM.	4:34:50, PM.	1:29:30, AM.	3:10:35, AM.		
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	N-S	E-W	E-W	E-W		
Sounds	None	None	None	None		
Felt by	None	None	None	None		

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

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Time used, Zone, Minus 10.

June 1930

Date of earthquake	6th.	11th.	18th.	18th.	18th.	
Time of beginning	12:36:15, PM.	10:54:45, AM.	11:09:55, AM.	9:16:30, PM.	9:51:10, PM.	
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	N-S	N-S	N-S	E-W	N-S	
Sounds	None	None	None	None	None	
Felt by	None	None	None	None	None	

Name of observer

W. W. Rowley

Address of observer

Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

June 1930

Date of earthquake	29th.					
Time of beginning	9:26:30, ^P _M					
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	E-W					
Sounds	None					
Felt by	None					

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Time used, Zone, Minus 10.

July 1930

Date of earthquake	2nd.	5th.	20th.	31st.		
Time of beginning	2:46:50, ^A _M	1:00:00, ^A _M	7:32:05, ^P _M	7:51:05, ^A _M		
What doing		Lying down	Standing	Standing		
Onset of shocks		Gradual	Abrupt	Gradual		
Nature of shocks		Rocking	Trembling	Trembling		
Intensity		2	3	2		
Number of shocks		1	1	1		
Duration of each		30 seconds	30 sec.	10 seconds		
Direction of vibration	N-S	E-W	E-W	N-S		
Sounds	None	None	None	None		
Felt by	None	Many	Many	Few		

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

August 1930

Date of earthquake	1st.	3rd.	3rd.	4th.	4th.	4th.
Time of beginning	2:11:15, ^P _M	11:40:30, ^P _M	11:52:40, ^P _M	12:01:00, ^A _M	12:26:15, ^A _M	12:40:20, ^A _M
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	E-W	N-S	E-W	E-W	N-S	N-S
Sounds	None	None	None	None	None	None
Felt by	None	None	None	None	None	None

Name of observer

W. W. Rowley

Address of observer

Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

August 1930

Date of earthquake	18th.	22nd.	26th.			
Time of beginning	10:47:45, ^A _M	2:33:00, ^P _M	4:23:30, ^P _M			
What doing			Standing			
Onset of shocks			Abrupt			
Nature of shocks			Trembling			
Intensity			2			
Number of shocks			1			
Duration of each			10 seconds			
Direction of vibration	N-S	E-W	N-S			
Sounds	None	None	None			
Felt by	None	None	Few			

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

September 1930

Date of earthquake	15th.					
Time of beginning	10:55:10, P					
What doing	Laying down					
Onset of shocks	Gradual					
Nature of shocks	Rocking					
Intensity	3					
Number of shocks	2					
Duration of each	20&10 sec.					
Direction of vibration	E-W					
Sounds	Yes					
Felt by	Many					

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

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Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

October 1930

Date of earthquake	2nd.	2nd.	3rd.	13th.	14th.	16th.
Time of beginning	10:42:00, ^A _M	11:40:10, ^A _M	7:47:40, ^A _M	8:53:05, ^A _M	5:15:00, ^P _M	9:05:50, ^P _M
What doing	Standing	Sitting				
Onset of shocks	Gradual	Abrupt				
Nature of shocks	Trembling	Rocking				
Intensity	2	3				
Number of shocks	1	1				
Duration of each	16-seconds	10-seconds				
Direction of vibration	N-S	E-W	E-W	E-W	N-S	E-W
Sounds	Yes	Yes	None	None	None	None
Felt by	Many	Many	None	None	None	None

Name of observer **W: W. Rowley**

Address of observer **Naval Station, Guam.**

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

- | | |
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Time used, Zone, Minus 10.

October 1930

Date of earthquake	18th.	25th.	28th.	29th.	29th.	
Time of beginning	12:53:30, ^P _M	6:16:30, ^A _M	5:14:10, ^A _M	7:11:40, ^A _M	10:32:00, ^P _M	
What doing	Standing	Sitting down		Standing		
Onset of shocks	Abrupt	Gradual		Abrupt		
Nature of shocks	Trembling	Trembling		Trembling		
Intensity	2	3		2		
Number of shocks	1	2		1		
Duration of each	5 seconds	10-15 sec.		10 seconds		
Direction of vibration	N-S	E-W	N-S	N-S	E-W	
Sounds	None	None	None	None	None	
Felt by	Few	Many	None	Few	None	

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

- | | |
|--|--|
| 1. Felt only by an experienced observer, very faint. | 6. Bells rung, pendulum clocks stopped. Alarm. |
| 2. Felt by a few persons at rest, faint. | 7. Fall of plaster, slight damage. Scare. |
| 3. Direction or duration appreciable, weak. | 8. Fall of chimneys, walls cracked. Fright. |
| 4. Felt by persons walking. Doors, etc., moved. | 9. Some houses partly or wholly wrecked. Terror. |
| 5. Felt by nearly everyone. Furniture moved. | 10. Buildings ruined, ground cracked. Panic. |

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU (SEISMOLOGY)



Location of Seismograph — U. S. Government House, Agana, Guam, M. I.

Position of Seismograph — Latitude, North 13° - 28' - 20.3" Longitude East 144° - 44' - 55.9"

Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

October 1930

Date of earthquake	30th.	30th.	30th.	30th.		
Time of beginning	7:23:35, ^A _M	7:52:00, ^A _M	9:00:00, ^A _M	9:16:00, ^A _M		
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	N-S	N-S	N-S	E-W		
Sounds	None	None	None	None		
Felt by	None	None	None	None		

Name of observer **W. W. Rowley**

Address of observer **Naval Station, Guam.**

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

1. Felt only by an experienced observer, very faint.
2. Felt by a few persons at rest, faint.
3. Direction or duration appreciable, weak.
4. Felt by persons walking. Doors, etc., moved.
5. Felt by nearly everyone. Furniture moved.

6. Bells rung, pendulum clocks stopped. Alarm.
7. Fall of plaster, slight damage. Scare.
8. Fall of chimneys, walls cracked. Fright.
9. Some houses partly or wholly wrecked. Terror.
10. Buildings ruined, ground cracked. Panic.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU (SEISMOLOGY)



Location of Seismograph — U. S. Government House, Agana, Guam, M. I.

Position of Seismograph — Latitude, North $13^{\circ} - 28' - 20.3''$ Longitude East $144^{\circ} - 44' - 55.9''$

Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

November 1930

Date of earthquake	2nd.	2nd.	19th.	23rd.	24th.
Time of beginning	10:49:30, ^A _M	7:23:00, ^P _M	10:43:00, ^A _M	11:48:00, ^P _M	9:35:50, ^A _M
What doing			Standing	Lying down	Standing
Onset of shocks			Abrupt	Rapid	Abrupt
Nature of shocks			Trembling	Bumping	Trembling
Intensity			3	3	3
Number of shocks			1	1	1
Duration of each			10 seconds	20 seconds	10 seconds
Direction of vibration	E-W	N-S	E-W	N-S	E-W
Sounds	None	None	None	None	None
Felt by	None	None	Many	Many	Many

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

1. Felt only by an experienced observer, very faint.
2. Felt by a few persons at rest, faint.
3. Direction or duration appreciable, weak.
4. Felt by persons walking. Doors, etc., moved.
5. Felt by nearly everyone. Furniture moved.

6. Bells rung, pendulum clocks stopped. Alarm.
7. Fall of plaster, slight damage. Scare.
8. Fall of chimneys, walls cracked. Fright.
9. Some houses partly or wholly wrecked. Terror.
10. Buildings ruined, ground cracked. Panic.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU (SEISMOLOGY)



Location of Seismograph — U. S. Government House, Agana, Guam, M. I.

Position of Seismograph — Latitude, North 13° - 28' - 20.3" Longitude East 144° - 44' - 55.9"

Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

December 1930

Date of earthquake	1st.	2nd.	5th.	13th.	14th.	15th.
Time of beginning	8:49:00, ^P _M	6:46:00, ^A _M	6:33:10, ^A _M	12:00:00, ^P _M	8:56:00, ^P _M	1:57:05, ^A _M
What doing						
Onset of shocks						
Nature of shocks						
Intensity						
Number of shocks						
Duration of each						
Direction of vibration	N-S	E-W	E-W	N-S	E-W	E-W
Sounds	None	None	None	None	None	None
Felt by	None	None	None	None	None	None

Name of observer W. W. Rowley

Address of observer Naval Station, Guam.

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi-Forel.)

- | | |
|--|--|
| 1. Felt only by an experienced observer, very faint. | 6. Bells rung, pendulum clocks stopped. Alarm. |
| 2. Felt by a few persons at rest, faint. | 7. Fall of plaster, slight damage. Scare. |
| 3. Direction or duration appreciable, weak. | 8. Fall of chimneys, walls cracked. Fright. |
| 4. Felt by persons walking. Doors, etc., moved. | 9. Some houses partly or wholly wrecked. Terror. |
| 5. Felt by nearly everyone. Furniture moved. | 10. Buildings ruined, ground cracked. Panic. |

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU (SEISMOLOGY)



Location of Seismograph — U. S. Government House, Agana, Guam, M. I.

Position of Seismograph — Latitude, North 13° - 28' - 20.3" Longitude East 144° - 44' - 55.9"

Approximate elevation of recording drum — 15 feet above M. L. L. W.

Time used, Zone, Minus 10.

December 1930

Date of earthquake	15th.	15th.	15th.	15th.	28th.	
Time of beginning	3:29:00, ^A _M	7:38:20 ^A _M	10:45:30 ^A _M	10:49:10 ^A _M	12:52:00, ^A _M	
What doing	Laying down	Standing			Lying down	
Onset of shocks	Abrupt	Gradual			Gradual	
Nature of shocks	Trembling	Trembling			Trembling	
Intensity	2	2			2	
Number of shocks	1	1			1	
Duration of each	30 seconds	1 minute			30 seconds	
Direction of vibration	N-S	E-W	E-W	N-S	N-S	
Sounds	None	None	None	None	None	
Felt by	Few	Few	None	None	Few	

Name of observer **W. W. Rowley**

Address of observer **Naval Station, Guam.**

REMARKS

EARTHQUAKE INTENSITIES (Adapted Rossi - Forel.)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Felt only by an experienced observer, very faint. 2. Felt by a few persons at rest, faint. 3. Direction or duration appreciable, weak. 4. Felt by persons walking. Doors, etc., moved. 5. Felt by nearly everyone. Furniture moved. | <ol style="list-style-type: none"> 6. Bells rung, pendulum clocks stopped. Alarm. 7. Fall of plaster, slight damage. Scare. 8. Fall of chimneys, walls cracked. Fright. 9. Some houses partly or wholly wrecked. Terror. 10. Buildings ruined, ground cracked. Panic. |
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