

BRITISH ANTARCTIC SURVEY
(formerly Falkland Islands Dependencies Survey)

436

Seismological Bulletin 1959

Halley Bay No. 1

Station Information

Position: 75° 31' S 26° 37' W

no 436

Three-component Willmore seismograph (Hilger and Watts) with 1 sec. seismometers and $\frac{1}{4}$ sec. galvanometers recording at 60 mm./min. Synchronome pendulum clock time control to $\pm \frac{1}{2}$ sec. on G.M.T.

The station continued in operation in 1959 under F.I.D.S. after the Royal Society Expedition.

Analysis

The phase data given in the Bulletin has been produced during an analysis of the records for South American and Southern Ocean shocks. In consequence it is not fully comprehensive and some emergent phases have not been included. However, all major movements have been reported.

Iceshelf movement causes much microseismic activity and local seisms. Only the vertical component can be analysed with confidence. Frequent recourse to low sensitivity recording has been necessary.

Halley Bay (Contd.)

2.

<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
Jan. 1	eP 073846	Tonga Is.
1	eP 080215	Fiji Is.
3	iP 112828	Peru
5	eP 095859	Loyalty
22	eP 053000	Japan
29	iPkP 234418	Norway
30	iP 162500	Chile
30	iP 182029	Kermadec Is.
30	iPkP 205846	Japan
30	iPkP 223636	Japan
Feb. 1	iPkP 033158	Hindu Kush
3	iP 224355	*
3	iP 233337	New Zealand
6	ePkP 145257	Aleutian Is.
7	eiP 094851	Peru
7	eP 234440	*
8	eP 055730	Fiji Is.
15	eiP 040308	Sandwich Is.
15	eiP 044616	Sandwich Is.
17	iP 122259	Aleutian Is.
23	iP 223242	Kermadec Is.
24	iP 113445	*
24	eP 110129	*
Mar. /		

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Halley Bay (Contd.)

<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
Mar. 16	eP 221952	Kermadec Is.
17	eiP 130250	Sandwich Is.
17	eP 150839	Sandwich Is.
17	eP 230841	*
29	iP' 192845 iPP 193135	Sikhota Alin

* no epicentral data - suspect local shock.

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BRITISH ANTARCTIC SURVEY
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Halley Bay No. 2

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<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
Apl 5	iP 211836	New Hebrides
5	eP 231006	S. Pacific
5	eP 234259	New Guinea
8	eiP 115048	Chile
9	eP 0628 4 32	Indian Ocean
10	eiP 055835	Fiji
10	iP 134309	* Chile
12	eP 210650	Samoa
16	eP 000352	Fiji
16	iP 073841	Fiji
✓ 19	eP 073335	S. Pacific
✓ 22	iP 203548	Pacific
✓ 24	iP 180927	Kermadec Is.
✓ 26	ePKP 205915	Formosa
✓ 30	iP 133008	Sandwich Is.
✓ May 4	ePKP 073548	Kamchatka
6	iP 141320	Indian Ocean
✓ 7	iP 203604	Flores Sea
✓ 8	ePKP 115441	Kamchatka
8	iPKP 154848	Kurile Is.
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Halley Bay (Contd.)

<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
✓ May 10	iPKP 001651	Kurile Is.
✓ 12	iP 095633	Argentina
13	iP 164032	Argentina
✓ 16	eP 063007	New Britain
18	iP 191224	New Zealand
✓ 21	eP 114335	Chile
✓ 22	iP 070732	New Zealand
23	iP 212311	*
26	iP 215137	Chile
✓ 29	eiP 105515	New Hebrides
Jun 2	✓ eP 033501	Tonga
2	✓ eP 034355	Tonga
2	✓ eP 051626	Bataan
2	✓ iP 054941	Chile
✓ 3	✓ iP 035616	Columbia
7	✓ iP 084313	Philippines
7	✓ eP 135126	Atlantic Ocean
8	eP 221106	*
9	eP 142602	*
9	iP 150443	Kermadec Is.
9	✓ eP 231501	Bouvet Is.
10	eP 020749	* Drake Passage
10	iP 131832	New Zealand

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Halley Bay (Contd.)

<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
Jun 11	iP 234244	Chile
13	iP 222704	Peru
✓ 14	iP 002155	Bolivia
✓ 14	iP 211407	Tonga
20	eP 064055	*
20	iP 101529	Fiji
23	iP 215008	Argentina
25	iPKP 052316	Japan
25	eP 053543	Kermadec Is.
26	eP 223652	Fiji
27	eP 034631	S. Atlantic
✓ 27	iP 191535	Kermadec Is.
✓ 27	ePKP 193045	China
28	iP 205639	Samoa
✓ 30	iP 103425	Kermadec Is.

* no epicentral data - suspect local shock.

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July 1959 sent

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BRITISH ANTARCTIC SURVEY
(formerly Falkland Islands Dependencies Survey)

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Seismological Bulletin 1959

Halley Bay No. 3

Station Information

Only vertical channel in operation. Chart speed reduced to 30 mm./min.
Time control from July 18th to August 3rd poor. Times liable to errors of
up to 2 secs.

<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
✓ Jul 2	eP 113908	Fiji
✓ 2	iP 114541	Fiji
✓ 3	eP 180900	New Hebrides
✓ 4	iP 050611	Tonga
✓ 6	iP 091835	Argentina
✓ 6	iP 093147	Argentina
✓ 9	iP 161514	Chile
✓ 10	eP 042156	Chile
✓ 11	eP 050412	New Hebrides
✓ 11	iP 121144	Indian Ocean
✓ 11	iP 184630	*
✓ 12	iP 003609	Fiji
✓ 13	iP 124842	Aleutians
✓ 13	iP 153549	Kermadec Is.
✓ 16	iPKP 153721	Aleutians
✓ 18	iP 071158	Fiji

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Halley Bay (Contd.)

<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
✓ Jul 18	iPKP 201330	Philippines
✓ 19	iP 151632	Peru
✗ 19	iP 153230	*
✗ 19	iP 154520	Peru
✗ 19	iP 195519	Java
✓ 20	iP 025336	Java Sea
✓ 20	iP 170553	Fiji
✓ 22	iP 164809	Kermadec Is.
✓ 23	iP 150843	Tonga
✗ 28	iP 105848	* Drake Passage
✓ 30	iP 130514	Kermadec Is.
✗ 31	iP 020105	South Peru
✓ 31	iP 205044	New Zealand
Aug ✗ 1	iP 101023	Argentina
✗ 3	eP 154601	Indian Ocean
✗ 3	eP 161909	Indian Ocean
✗ 4	iP 030956	Chile
✓ 4	iP 081340	Fiji
✗ 5	iP 105510	Kermadec Is.
✓ 10	iP 004512	Indian Ocean
✓ 12	iP 041553	Rhodesia
✗ 15	iP 033246	*

Halley Bay (Contd.)

<u>Date</u>	<u>Recorded Phases</u>		<u>Region of Prov. Epicentre</u>
✓ Aug 15	iPKP 091510	i 091600	Formosa
✓ 15	eP 132641		Tonga
✓ 16	iP 100532		Fiji
✓ 17	eP 011335		Fiji
✓ 17	eP 211819		Solomon Is.
✓ 18	iPKP 005239		Formosa
✓ 18	ePKP 065635		Montana
✓ 20	iP 073022		Peru
✓ 20	iP 122952		Indian Ocean
✓ 21	iP 081240		S. of Australia
✓ 21	iP 081457		"
✓ 21	iP 094715		"
X 22	iP 213812		Chile
✓ 24	eP 214406		Solomon Is.
X 25	iP 123340		Chile
X 27	eP 134412		Chile
✓ 28	iP 160316		New Hebrides
✓ 29	e 172258	i 172304	Lake Baikal
X Sep 4	eP 232949		Chile
✓ 5	iP 070829		Balleny Is.
X 5	iP 163846		*
✓ 5	eP 231702		Fiji
X 6	eP 190504		Peru

Halley Bay (Contd.)

<u>Date</u>	<u>Recorded Phases</u>		<u>Region of Prov. Epicentre</u>
✓ Sep 8	iP 131820		Bouvet Is.
✓ 8	iP 192919		Bouvet Is.
✓ 8	eP 202235		Sandwich Is.
X 10	eP 104737		New Zealand
✓ 12	iP 015054		Bolivia
✓ 14	eP 132753		Tonga
✓ 14	eiP 142118		Kermadec Is.
X 14	iP 151019		"
✓ 14	eP 171753		"
✓ 15	iP 111652		Fiji
✓ 17	eP 144750		Kermadec Is.
✓ 18	iP 120523		Sandwich Is.
X 18	eiP 183655		* "
X 18	iP 201537		* Drake Passage
X 20	iP 232710	i 232752	Chile
X 21	iP 132249		Sumba Is.
X 25	iP 022745		Java Sea
✓ 25	ePKP 025548		Formosa
✓ 26	iP 102759		Chile
✓ 27	iP 103345		Banda Sea

* no epicentral data - suspect regional shock.

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BRITISH ANTARCTIC SURVEY
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Station Information

Seismograph recordings ceased December 31st, 1959.

<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
Oct 8	X iP 001609	New Hebrides
9	iP 222009	Argentina
12	iP 035346	Chile
15	eiP 135815	Celebes Sea
16	iP 012351	Argentina
17	iP 013044	S. Pacific
17	iP 084309	S. Pacific
19	eP 013701	Kermadec Is.
19	iP 022454	Fiji
19	eP 030635	Kuriles
19	iP 083903	Kermadec Is.
19	iP 140358	Fiji
19	iP 160016	Sandwich Is.
21	iP 061139	*
25	iP 184226	Off Chile
26	ePKP 075435	Japan
27	iPKP 071232	Kuriles
28	iP 093358	Fiji
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Halley Bay (Contd.)

<u>Date</u>	<u>Recorded Phases</u>		<u>Region of Prov. Epicentre</u>
Oct 29	X iPKP 105513		Kuriles
✓ 29	X iP 143132		Kermadec Is.
✓ 29	X eiPKP 144901	i 145148	China
29	iP 221317		Indian Ocean
✓ 30	eP 071635		Fiji
30	iP 113116		Sandwich Is.
✓ 30	iP 214909		Fiji
✓ 31	iP 043911		Fiji
Nov 3	iP 095307		Java Sea
✓ 5	iP 111227		Indian Ocean
✓ 6	iP 115512		Tonga
✓ 7	iP 153042		Indian Ocean
✓ 8	eiPKP 141442		Japan
11	iP 102703		*
✓ 13	iP 101729		Fiji
X ✓ 15	iPKP 104413	i 104743	China
X ✓ 16	iP 010735		Chile
✓ 16	iP 024447		Indian Ocean
✓ 19	eiP 112217	iPP 112619	New Guinea
20	iP 003208		Kermadec Is.
✓ 22	eP 163534		S. Pacific
✓ 22	iP 194602		Fiji
26	iP 060421		Sandwich Is.

3.

Halley Bay (Contd.)

<u>Date</u>	<u>Recorded Phases</u>	<u>Region of Prov. Epicentre</u>
* Nov 28 ✓ X	iP 124401	Chile
Dec 3	eP 015924	Sandwich Is.
✓ 9 X	eP 141625	Fiji
✓ 14 X	iP 232542	Sandwich Is.
14	iP 235503	*
14	iP 235734	*
15	iP 002036	*
15	iP 002228	*
15	iP 052720	*
✓ 15 X	iP 121953	Sandwich Is.
✓ 21	iP 103222	Kermadec Is.
✓ 21 X	iP 112602	"
22	iP 113520	*
✓ 25 X	iP 102807	Chile
26	iP 170421	* Chile
✓ 27 X	iP 124717	Argentina
✓ 28 X	iP 101252	Chile
30	iP 000910	New Zealand

* no epicentral data - suspect regional shock.

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