

DURHAM UNIVERSITY OBSERVATORY, ENGLAND.

Position:- 54°46'N 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR FEBRUARY 1960

Instruments:- Wilson-Lamison seismometer free period 1 sec, coupled to G.E. galvanometer free period 3.7 sec, recording vertical component of velocity.  
Milne-Shaws free period 12 sec, damping ratio 20:1, magnification 250, recording N and E component displacements.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
4	ePKPZ	04 05 35			126°	H 03 46 30 (USCGS)
	ePPZ	07 32				
	MN	04 52	25	11		
	MN	05 57	20	6		
4	iPZ	17 02 50		+	81°5	H 16 50 30 (USCGS)
	iPPZ	06 00		+		
	MN	17 45	15	4		
7	ePZ	10 20 01			104°5	H 10 07 50 .10 deep (USCGS)
8	ePKPZ	13 04 36			124°	H 12 45 34 (USCGS)
	iXZ	04 50		-		
	iPPZ	06 34		-		
	iSSN	24 02		-		
	ME	13 53	20	12		
	ME	13 57	20	14		
9/10	iPKPZ	00 14 41		-	115°5	H 23 55 49 (USCGS)
	iPPZ	15 33		-		
	iXZ	15 44		+		
	iXE	22 31		-		
	iXE	25 13		-		
	iXE	26 08		+		
	iXE	26 59		+		
	iXN	28 10		-		
	eSSE	31 43				
MN	01 06	22	13			
10/11	ePKPZ	23 39 18			141°	H 23 19 55 (USCGS)
	iXZ	39 22		-		
	iPPZ	42 36		+		
	ME	03 58				
11	ME	07 59				
11	iPKPZ	08 47 38		-	128°	H 08 28 58 .02 deep (USCGS)
	eSKSE	54 21		-		
	iXZ	09 10 54		-		
	ME	09 59				



Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
19	iPZ	10 45 38		+	51.5	H 10 36 46 .03 deep (USCGS)
	ipPZE	46 26		- -		
	iPcPZ	47 01		-		
	iPPZ	47 43		-		
	iPPPZ	48 46		-		
	iScPZ	50 02		-		
	iXE	51 37		+		
	iSE	52 25		-		
	iSPZ	52 39		+		
	isSE	53 56		-		
	iScSE	55 15		+		
	iSSSE	57 36		-		
	21	ePZ	08 17 58			
eSE		21 32				
MN		08 25	12	7		
22	iPZ	21 09 27		-	22°	H 21 04 36 (BCIS)
23	iPZ	00 35 57		+	22°	H 00 31 00 (BCIS)
23	ePZ	07 39 26			21.5	H 07 34 30 (BCIS)
	iPPZ	39 58		-		
23	ePZ	07 52 49			21.5	H 07 47 48 (BCIS)
23	ePKPZ	11 49 47		+	145°	H 11 31 04 .08 deep (USCGS)
	iPKPZ	49 48		-		
24	iPKPZ	21 56 16		+	130°	H 21 37 04 (USCGS)
26	iPKPZ	06 52 16		+	146°	H 06 32 36 (USCGS)
26	iPZ	23 41 00		-	74°	H 23 29 25 (USCGS)
	eSN	50 32				
29	iPZ	23 45 44		-	25°	H 23 40 13 (BCIS)
	iPPZ	46 14		+		
	eXN	50 02				
	iSN	50 19		-		
	iSE	50 21		-		
	iXZ	51 15		+		
	ME	23 58	10	13		

28th April, 1960.



epk

Position:- 54°46'N 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR MARCH 1960

Instruments:- Wilson-Lamison seismometer free period 1 sec, coupled to G.E. galvanometer free period 1.6 sec, recording vertical component of velocity.  
Milne-Shaws free period 12 sec, damping ratio 20:1, magnification 250, recording N and E component displacements. No E recording after 15th, N recording failed at times.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
No recordings from 09 hrs on 2nd. to 3rd.						
4	iPZ	02 27 37		+	75°5	H 02 15 56 (USCGS)
4	iPZ	04 05 31		+	84°	H 03 53 00 (USCGS)
	isKSN	15 47		+		
	MN	05 07	35			
4	ePZ	16 29 24			17°	H 16 25 27 (BCIS)
	iPZ	29 26		-		
	iXN	31 54				
	ME	16 35	15	3		
5	ePPNE	14 08 44			111°	H 13 49 16 (USCGS)
	iPPPN	10 53		-		
	iXN	16 14		+		
	iSSN	24 15		-		
	MN	15 50	20	22		
	ME	15 58	20	22		
6	iPPZ	04 27 27		+	80°	H 04 11 54 (USCGS)
	ME	04 58	14	4		
8	iPKPZ	16 52 38		+	141°	H 16 33 38 .04 deep (USCGS)
	ipPKPZ	53 36		-		
	iXZ	53 51		+		
	iXZ	54 23		-		
	iXZ	54 41		+		
	iXZ	54 48		+		
	iXZ	55 12		+		
	iSKPZ	55 25		-		
	iPPZ	55 38		-		
	iPKSZ	56 01		+		
	iXZ	56 08		+		
	iXZ	56 18		+		
	ipPPZ	56 30		+		
	iXZ	57 00		+		
<del>9/10</del>	<del>iPZ</del>	<del>00 07 16</del>		<del>+</del>	<del>92°</del>	<del>H 23 54 20 .02 deep (USCGS)</del>
10	iPKPZ	14 03 49		-	140°	H 13 44 25 (USCGS)
	iXZ	04 04		-		
10	iPZ	14 44 22		+	76°	H 14 32 39 .02 deep (USCGS)
	ipPZ	44 43		-		

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
12	iPZ iSE	00 31 41 41 18		- +		
12	iPZ iXZ iPPZ iPPPZ iXZ iXZ iSE MN	11 58 34 58 42 58 57 59 08 59 29 12 00 45 02 10 12 04	9	+ - - - + - + 8	20°	H 11 54 01 (BCIS)
12	iPKPZ ePPNE ePKSNE iSSE ME	20 49 54 51 54 53 08 21 09 16 21 48	18	+  + 2	127°	H 20 30 39 (USCGS)
13	iPZ SN	05 19 19 22 18		+  	18°	H 05 15 04 (BCIS)
13	ME	06 37	20			
13/14	iPZ	00 05 42		-	76°	H 23 53 32 (USCGS)
20	iPNZ iPPN iSN iSKSN GN LQ MN MN	17 19 50 22 54 29 59 30 38 41 06 50 38 17 55 18 03	20 15	+ + + + +   310 220	81°	H 17 07 30 .01 deep (USCGS)
21	MN	01 22	22	7	81°	H 00 34 50 (USCGS)
21	ePZ MN	09 30 40 10 06			81°	H 09 18 22 (USCGS)
23	ePZ iPcPZ iXZ iXZ eXZ iXZ MZ	00 35 37 35 50 36 11 36 17 37 07 39 24 01 17		+ - + -  	81°	H 00 23 22 (USCGS) No N record
23	iPZ	01 19 34		-	81°	H 01 07 15 (USCGS) No N record
23	iPZ	22 34 41		-	81°	H 22 22 36 (USCGS) No N record
23	ePZ Z Z eZ eZ iZ	23 11 24 13 09 13 34 14 14 14 29 15 09		-     	10°5	H 23 08 53 (BCIS) No N record

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
24	iPZ	06 06 18		-	76°	H 05 54 28 (USCGS)
25	iPKPZ	02 47 47		+	141°	H 02 28 56 .07 deep (USCGS)
28	iPZ	00 25 41		+	79°	H 00 13 38 (USCGS)
28	ePKPZ	12 57 38			149°	H 12 37 50 (USCGS)
29	iPKPZ	06 50 17		+	143°	H 06 30 54 (USCGS)
	iPKPZ	50 28		+		
	iSKSN	54 12		-		
	MN	07 57	20	8		
	MN	08 33	20	4		
29	iPKPZ	22 29 35		-	126°	H 22 10 20 (USCGS)
30	iPZ	13 02 46		+		
	eSN	05 59				
	MN	13 10	10	1		
31	iXN	20 18 30		-		
	iXZ	18 40		+		

CORRECTION TO 1959 APRIL LIST

22 April for iPZ 11 13 57 read iPZ 19 13 57.

For 27 April read 26 April.

~~23 May, 1960.~~

UNIVERSITY OBSERVATORY, ENGLAND.

Position:- 54°46'N, 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR APRIL 1960

Instruments:- Wilson-Lamison seismometer free period 1 sec, coupled to G.E. galvanometer free period 1.6 sec, recording vertical component of velocity.  
Milne-Shaw free period 12 sec, damping ratio 20:1, magnification 250, recording N component displacement.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude and direction	microns	Epicentral distance	Notes
1	iPKPZ	03 13 43		+		148°	H 02 55 04 .10 deep (USCGS)
1	eSN MN	14 33 10 14 50	14			68°	H 14 12 05 (USCGS)
7	iXZ	14 06 24		+			
8		No recordings					
12	iPZ	01 27 21		+		65°5	H 01 16 40 (USCGS)
13	iPZ	12 49 22		+		79°	H 12 37 38 (USCGS)
15	iPZ	11 51 00		+		81°	H 11 39 01 .02 deep (USCGS)
15	ePKPZ	22 24 43				139°	H 22 05 06 (USCGS)
17	iPKPZ	15 59 51		+		145°5	H 15 40 02 (USCGS)
17	ePKPZ	22 08 12				145°	H 21 49 24 .08 deep (USCGS)
18	iPZ	08 19 25		-		91°	H 08 07 07 .07 deep (USCGS)
21	iPZ	02 30 23		+		103°	H 02 16 29 (USCGS)
21	iPKPZ	16 41 38		+		145°	H 16 21 57 (USCGS)
23	iPZ	13 18 48		-		60°	H 13 08 35 (USCGS)
23	iPKPZ	18 17 41		+		129°	H 17 58 19 (USCGS)
24	iXZ	03 37 00		+		109°	H 03 22 23
	iXZ	38 36		+			.10 deep
	iPKPZ	39 53		+			(USCGS)
	iPPZ	40 37		-			
	iXZ	41 39		+			
	iSKKSN	46 32		-			
	iSN	47 13		+			
24	?PZ	15 04 58				105°	H 14 50 45 (USCGS)

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
24	iPZ	12 23 12		+	48°5	H 12 14 26 (USCGS)
	iPcPZ	24 39		-		
	iPPZ	25 13		+		
	iSN	30 10		+		
	iXN	30 54		+		
	SSN	33 37				
	MN	12 41	30	6		
25	PZ	15 04 48			67°	H 14 53 53 (USCGS)
25	ePN	16 33 59			24°5	H 16 28 32 (USCGS)
	eSN	38 25				
	MN	16 43	12			
28	?iPZ	16 39 19		+	27°5	H 16 33 25 (USCGS)
29	iPPZ	02 35 30		-	113°	H 02 15 35 (USCGS)
29	ePPZ	19 51 12			108°	H 19 32 12 (USCGS)
	eSKSN	57 16				
	MN	20 41	18			
30	ePPZ	04 20 31			108°	H 04 01 32 (USCGS)
	MN	05 10				
30	iPKPZ	11 20 00		+	142°5	H 11 00 05 (USCGS)

27th June, 1960.



DURHAM UNIVERSITY OBSERVATORY, ENGLAND.

Position:- 54°46'N, 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR MAY 1960

Instruments:- Wilson-Lamison seismometer free period 1 sec. coupled to G.E. galvanometer free period 1.6 sec. to 16th., subsequently free period 3.4 sec., recording vertical component of velocity.  
Milne-Shaw free period 12 sec. damping ratio 20:1, magnification 250, recording N component displacement.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
1	iPZ	04 26 35		-	109°	H 04 11 47 (USCGS)
3	PZ	08 06 39		-	73°5	H 07 55 07 (USCGS)
3	iPZ	22 35 17		-	88°	H 22 22 41 .025 deep (USCGS)
3/4	PKPZ	00 16 13			146°	H 23 57 37 .10 deep (USCGS)
5	iPZ	11 37 27		-	72°	H 11 26 00 (USCGS)
6	iPZ	18 58 45		+	71°	H 18 47 26 (USCGS)
8	ePZ eXZ	14 40 54 40 59			77°	H 14 29 14 (USCGS)
9	PZ	00 23 47			86°	H 00 11 10 (USCGS)
9	eSN	03 12 21			105°	H 02 46 08 (USCGS)
9	ePZ	16 36 56			55°	H 16 27 26 (USCGS)
12	iPZ iXZ eSN	22 44 34 44 35 54 26		+ -	78°	H 22 32 32 (USCGS)
12	ePZ	23 12 33			78°	H 23 00 36 (USCGS)
13	iPN iPZ iXNZ iSN iSKSN MN	16 18 23 18 26 18 39 27 28 28 17 16 47		- - + - - + 5	69°5	H 16 07 12 (USCGS)
14	iPZ	22 31 14	22	+	71°	H 22 19 55 (USCGS)





			Period sec.	Amplitude microns and direction	Epicentral distance	Notes
18	iPZ	06 47 45		-	87°	H 06 35 09 .02 deep (USCGS)
	iXZ	47 47		+		
	iPcPZ	47 51		+		
	ipPZ	48 13		+		
	iPPN	51 10		-		
	iSKSN	57 48		+		
	iSN	58 08		-		
	MN	07 29	20	20		
	MN	07 33	12	11		
19	iPZ	02 15 55		+	52°	H 02 07 00 .03 deep (USCGS)
	iSN	23 08		-		
	iSSN	26 49		-		
19	ePZ	10 25 24			92°	H 10 11 51 (USCGS)
	eSN	36 25				
	MN	11 23	14	4		
20	ePKPZ	11 32 24			152°	H 11 12 31 (USCGS)
	iPKPNZ	32 44		- -		
	eSKSN	39 29				
21	ePZ	06 46 13			22°	H 06 41 10 (USCGS)
	eSN	50 23				
	MN	06 58	10			
21	ePZ	10 17 25			110°	H 10 02 50 (USCGS)
	iPKIKPNZ	21 28		- -		
	ePPNZ	22 02		+ -		
	iPPZ	22 10		+		
	iPPN	22 14		-		
	iPPPZ	24 31		+		
	iSKSN	28 14		-		
	iSKKSN	28 46		-		
	iPSN	31 44		-		
	iSSN	37 39		+		
	MN	11 04	20	550		
21	iPPZ	11 13 09		-	110°	H 10 53 51 (USCGS)
	ePPPZ	15 27				
21	iPZ	12 35 30		-	111°	H 12 21 16 (USCGS)
21	ePZ	13 14 32			110°	H 12 59 58 (USCGS)
	iPPZ	19 20		-		
21	iPZ	14 13 46		+	110°	H 13 59 17 (USCGS)
	iPPZ	18 33		-		
22	iPPNZ	10 49 49		- -	111°	H 10 30 39 (USCGS)
	iNZ	49 50		+ +		
	ePPPZ	51 57				
	iSKSN	55 54		-		
	iSKKSN	56 52		-		
	MN	11 35	20	40		
22	ePZ	10 47 27			110°	H 10 32 43 (USCGS)
	iPPNZ	52 00		- -		
	iNZ	52 01		+ +		
	iPPPZ	54 19		-		
	iSKSN	58 14		+		
	iSKKSN	59 12		-		
	iSSN	11 07 39		-		
22	ePZ	11 09 56			92°	H 10 56 59 .03 deep (USCGS)

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes	
22	ePZ	12 31 29			111°	H 12 16 43 (USCGS)	
22	iPZ	19 10 34		-	111°	H 18 55 57 (USCGS)	
	iPPZ	15 10		-			
	iPPPZ	17 46		-			
	eSKSN	21 09		+			
	iSKKSN	22 16		-			
	iPSN	24 43		+			
	iSSN	30 24		-			
22	iPKIKPN	19 29 26		-	111°	H 19 10 47 (USCGS)	
	iPPZ	30 19		+			
	iPPPZ	32 30		-			
	iSKKSN	37 08		+			
22	iPZ	19 25 54		+	111°	H 19 11 20 (USCGS)	
	iPKIKPZ	30 06		-			
	iPPZ	30 34		-			
	iXZ	30 45		-			
	iSKKSN	37 41		-			
	MN	20 26	16	800			
	GN	23 30	160				
	GN	00 25	200				
	MN	01 30	} on the 23rd.				
	MN	03 55					
	MN	06 16					
	MN	08 16					
	MN	11 46					
MN	15 10						
23	ePPZ	00 47 44					111°
23	iPPZ	01 10 35			+	111°	H 00 51 12 (USCGS)
23	iPPZ	05 32 41			-	111°	H 05 13 35 (USCGS)
	iPPPZ	35 22			-		
	eSKSN	39 11					
	eSSN	48 40					
23	PZ	10 06 59			111°	H 09 52 20 (USCGS)	
	PPZ	11 32					
23	PPZ	10 57 19			111°	H 10 37 59 (USCGS)	
24	eXN	15 08 15			167°5	H 14 46 34 (USCGS)	
	iXN	11 53		+			
	MN	16 13	30	13			
	MN	16 30	15	6			
24	iPPZ	20 52 34		+	116°	H 20 32 43 (USCGS)	
25	ePPN	08 54 36			118°	H 08 34 33 (USCGS)	
	iPPPZ	57 13		-			
	iSKKSN	09 01 35		+			
	iSSN	10 55		+			
	MN	09 44	17	30			



	component	G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
26	iPZ	05 14 52	12	-	21°	H 05 10 11 (BCIS)
	iPN	14 57		+		
	iXZ	15 13		-		
	iPPN	15 22		+		
	iSZ	18 48		+		
	iSN	18 51		-		
	MN	05 23		36		
26	iPZ	20 16 27		+	71°	H 20 05 07 (USCGS)
	iXZ	16 48		-		
27	ePKPZ	00 44 58			148°	H 00 25 03 (USCGS)
27/28	MN	00 12	22		119°	H 23 06 55 (USCGS)
28	MN	12 07	22		111°	H 11 05 40 (USCGS)
29	PPZ	07 58 50	20	6	111°	H 07 39 29 (USCGS)
	MN	08 31				
29	PPZ	08 53 40			111°	H 08 34 20 (USCGS)
30	iPKPZ	08 49 32		-	156°	H 08 29 27 (USCGS)
31	MN	03 40			113°	H 02 40 00 (USCGS)
31	iXZ	04 00 45		-	19°5	H 03 54 46 (USCGS)
31	iXZ	05 13 47		-	143°	H 04 52 28 (USCGS)
31	iPZ	11 12 16	20	3	59°	H 11 02 20 (USCGS)
	iXZ	12 53				
	iXZ	13 43				
	iSN	19 59				
	iXN	21 55				
	MN	11 32				
31	ePZ	11 52 09			58°	H 11 42 19 (USCGS)

21st July, 1960.

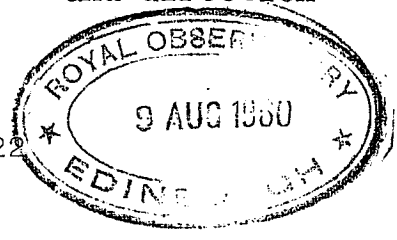
EDINBURGH UNIVERSITY OBSERVATORY, ENGLAND

Position;- 54°46'N, 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR JUNE 1960

 Instruments:- Wilson-Lamison seismometer free period 1 sec. coupled to G.E. galvanometer free period 3.4 sec., recording vertical component of velocity.  
Milne-Shaw free period 12 sec. damping ratio 20:1, magnification 250, recording N component displacement.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
1	ePZ MN	05 17 21 06 05			111°	H 05 02 56 (USCGS)
2	MN	07 01	22		115°	H 05 58 03 (USCGS)
2	iPKPZ	07 38 32		-	145°	H 07 19 10 .025 deep (USCGS)
2	iPKPZ iSKSN MN MN	08 06 19 13 32 08 55 09 04		+ + 2 20	127°	H 07 47 11 (USCGS)
2	iPZ	08 50 45		-	111°	H 08 36 10 (USCGS)
2	ePKPZ iPKPZ	19 17 46 17 47		+ -	146°	H 18 59 05 .09 deep (USCGS)
2	iPKPZ	20 07 11		-	146°	H 19 48 29 .09 deep (USCGS)
3	eXZ	13 34 22			144°	H 13 14 38 .10 deep (USCGS)
3	ePKPZ iPKPZ	13 42 06 42 07		- +	144°	H 13 23 37 .10 deep (USCGS)
3	iPZ	16 30 00		-	79°	H 16 18 04 .02 deep (USCGS)
4	iPZ iPcPZ	02 39 23 39 59		+ -	76°	H 02 27 06 (USCGS)
4	ePZ eSNZ MN	08 15 06 19 14 08 24				
4	ePZ iSN	11 10 36 14 46		+ -	25°	H 11 05 10 (USCGS)
5	iPZ	07 58 39		-	73.5°	H 07 47 08 (USCGS)
6	ePZ iPZ iPcPZ iSN MN MN	01 29 23 29 24 29 42 38 52 02 12 02 15		+ - + - 4 5	74°	H 01 17 48 (USCGS)



Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
6	eXN	06 14 52			117°	H 05 55 44 (USCGS)
	eXNZ	15 20				
	ePPN	15 39		-		
	iXZ	16 40		-		
	iXNZ	16 52		++		
	iPPPZ	18 17		+		
	iSKSN	21 34		-		
	iSKKSN	23 44		+		
	iPPSN	26 35		+		
MN	07 01	20	115			
MZ	07 03	20				
6	ePKPZ	23 48 58			150°	H 23 30 08 .10 deep (USCGS)
7	iPZ	13 08 37		-	71°	H 12 57 15 (USCGS)
	iXZ	08 39		-		
8	iPZ	16 26 07		+	31°	H 16 19 48 (USCGS)
	iPPN	27 12		-		
	iXZ	31 44		+		
	GN	34 27	11			
	MN	16 37	10	5		
9	iPZ	08 28 41		-	21°	H 08 24 00 (USCGS)
9	iPZ	17 52 56		+	23°5	H 17 47 41 (USCGS)
	iSN	57 10		-		
	MN	18 02	10	4		
11	eN	15 35 32			132°	H 15 14 07 (USCGS) No Z record
	ePPN	35 41				
	iPKSN	36 52		+		
	iSKSN	40 33		-		
	eSSN	52 14				
	MN	16 22	22	10		
MN	16 37	22	10			
11	iPKSN	17 00 21		-	132°	H 16 37 40 (USCGS) No Z record
	iPPPZ	02 14		-		
	iSKSN	04 13		-		
	MN	17 40	30	14		
	MN	17 48	22	10		
11	iPKSN	17 30 08		+	132°	H 17 07 52 (USCGS) No Z record
	iXN	33 29		-		
	MN	18 15	20	2		
	MN	18 32	22	3		
13	MN	06 53			116°	H 05 47 05 (USCGS)
15	iPZ	15 49 04		+	81°	H 15 36 51 (USCGS)
	MN	16 29	16			
16	iPKPZ	09 25 21		-	164°	H 09 05 07 (USCGS)
	eSKSN	32 09				
17	iPKPZ	05 21 05		-	147°	H 05 02 34 .10 deep (USCGS)
17	eSKSN	16 57 18			74°	H 16 35 32 (USCGS)
	MN	17 25				

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
20	ePZ	02 15 45			110°	H 02 01 08 (USCGS)
	eXNZ	19 29				
	iPKIKPZ	19 52		-		
	ePPZ	20 17				
	ePPN	20 21				
	eXN	21 24				
	iSKSN	26 27		-		
	iPSN	30 00		-		
	iSSN	36 01		-		
	MN	03 04	20	55		
MN	03 09	20	55			
MZ	03 11	16				
20	ePZ	13 14 21			111°	H 12 59 40 (USCGS)
	iPKIKPNZ	18 54		++		
	iPPNZ	19 01		++		
	iPPPN	21 41		+		
	SKSN	24 55				
	iSKSN	25 26		-		
	iSKKSN	26 53		+		
	iPSN	28 35		+		
	iSSN	34 59		+		
	MN	14 03	20	38		
MN	14 12	18	26			
20	PPZ	14 42 45			111°	H 14 23 30 (USCGS)
	PPPZ	45 25				
	MN	15 21	18			
20	iPPZ	17 18 52		+	111°	H 16 59 35 (USCGS)
22	MN	09 00	20		116°	H 08 11 50 (USCGS)
22	MN	14 08	10			
22	iXZ	14 58 42				
22	iPZ	16 22 29		-	63°	H 16 12 00 (USCGS)
	iXZ	28 25		-		
	iXZ	29 02		-		
	eSN	30 58				
23	iPKPZ	12 26 52		-	119°	H 12 08 13 (USCGS)
25	?PnZ	14 30 37			6°	H 14 29 13 (BCIS)
	eSnN	31 59				
	SgN	32 39				
25	ePKPZ	15 01 53		-	159°	H 14 41 42 (USCGS)
	iPKPZ	02 09		-		
	iPKPZ	02 17		-		
	iXN	02 26		-		
	iXZ	02 30		-		
	eSKSN	08 49				
	MN	16 15	18			
25	ePKPZ	15 19 20		+	159°	H 14 58 59 (USCGS)
	eSKSN	28 08				
26	iPN	17 01 54		-	100°	H 16 48 40 (USCGS)
27	MN	18 19			161°	H 17 33 56 (USCGS)

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Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
29	ePPN MN	02 17 36 03 03	21	5	118 <sup>o</sup>	H 01 57 14 (USCGS)

8 August 1960.



Position: - 54°46'N, 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR AUGUST 1960

Instruments: - Wilson-Lamison seismometer free period 1 sec. coupled to G. E. galvanometer free period 3.4 sec., recording vertical component of velocity.  
Milne-Shaw free period 12 sec. damping ratio 20.1, magnification 250, recording N and E component displacement.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
1	ePZ	02 29 15			48°	H 02 20 52
	ipPZ	29 55		+		.02 deep
	iPcPZ	30 51		-		(USCGS)
	iPPE	31 13		-		
	eSN	36 07				
	ME	02 49	25			
1	eSN	22 20 43			92°	H 21 56 24 (USCGS)
2	ePKPZ	05 26 50			147°	H 05 07 22
	iPKPZ	26 52		-		.02 deep
	iPPZ	30 16		-		(USCGS)
	eSKSE	33 41				
	eSKSPNE	40 33				
	ME	06 19	22			
2	iPZ	06 26 33		-	74°	H 06 14 47 (USCGS)
2	iPKPZ	09 50 32		+	153°	H 09 30 27 .01 deep (USCGS)
2	eSN	14 07 50			102°	H 13 42 28 .015 deep (USCGS)
4	iPZ	07 46 22		+	73.5°	H 07 34 54
	iPN	46 24		-		.015 deep
	iPcPZ	46 46		+		(USCGS)
	iSN	55 56		-		
	iSKSN	56 34		+		
	eSSN	08 00 54				
	ME	08 30	19	15		
4	eSN	09 29 46			73.5°	H 09 08 36 .02 deep
	eSKSN	30 18				(USCGS)
5	eSN	09 05 17			66° 5	H 08 45 31 (USCGS)
5	eSKSN	22 49 26			74°	H 22 27 34 (USCGS)
6	iPZ	03 17 36		-	90° 5	H 03 05 56 .10 deep (USCGS)
8	PZ	20 42 24			27° 5	H 20 36 28
	MN	20 55	12			.01 deep (USCGS)
9	ePZ	06 23 28			96°	H 06 10 11 .02 deep (USCGS)



Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
9	iPZ	07 51 06		-	74.5°	H 07 39 23 (USCGS)
	PcPN	51 27				
	iPPN	53 53		+		
	iSN	08 00 44		-		
	iSKSN	01 19		+		
	eSSN	05 22				
	MN	08 24	16	16		
9	ePN	14 14 26			74°	H 14 02 39 (USCGS)
9	PKPZ	17 06 08			149°	H 16 46 38
	SKSN	12 47				.03 deep (USCGS)
	MN	18 02				
	MN	18 11				
	MN	18 20				
	MN	18 41				
	MN	18 54				
10	PNZ	12 50 45			78°	H 12 38 48 (USCGS)
12	ePZ	13 24 57			84°	H 13 12 34
	ePN	25 02				.015 deep (USCGS)
	eSN	35 15				
	MN	14 05	20			
13	iPZ	07 23 14		-	79°	H 07 11 05
	iPcPZ	23 24		+		.01 deep (USCGS)
	ePPZ	26 27				
	iSN	33 55		+		
	iSSN	39 05		-		
	MN	07 55	28			
	MN	08 03	18			
13	ePN	14 29 10			113°	H 14 14 58
	ePKPZ	33 28				.01 deep (USCGS)
	iPKIKPZ	33 45		+		
	ePPN	34 21				
	iPPZ	34 28		-		
	iPPPZ	36 51		-		
	iXN	41 24		+		
	iPSN	44 05		-		
	iXN	51 01		+		
	MN	15 19	21	26		
	MN	15 25	18	15		
	MZ	15 25	18			
14	iPZ	04 12 44		+	77°	H 04 00 52
						.01 deep (USCGS)
14	eSKSN	14 39 27			113°	H 14 14 58
						.01 deep (USCGS)
15	iPZ	07 11 43		+	88°	H 06 58 56 (USCGS)
16	iPKPZ	08 32 38		+	125°	H 08 13 31 (USCGS)
	iSKSN	40 13		-		
17	eSN	09 54 47			75°	H 09 33 49
						.01 deep (USCGS)
17	eSN	11 45 28			75°	H 11 24 07
						.01 deep (USCGS)



component	G. M. T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
18 iPZ eSN	20 58 59 21 08 43		+	77°	H 20 47 03 (USCGS)
18 iPKPZ	23 03 02		-	135°	H 22 43 46 .01 deep (USCGS)
19 ePZ	17 14 48			70°	H 17 03 39 (USCGS)
20 ePZ iPcPZ iXZ eSKSN eSN	20 21 48 21 53 26 51 32 21 32 41		+ -	91°	H 20 08 39 (USCGS)
20 iPPZ	22 41 38		-	106°	H 22 22 45 .01 deep (USCGS)
21 iPKPZ	00 36 56		-	121°	H 00 18 01 (USCGS)
21 iPKPZ	17 40 30		-	140°	H 17 20 55 (USCGS)
24 MN	00 10	20			
24 MN	02 31	12			
24 MN	15 16	18	3		
24 iPZ eSN	19 39 18 48 38		+	74°	H 19 27 53 .02 deep (USCGS)
25 eSN MN	18 02 33 18 31	19	2	72°	H 17 41 59 (USCGS)
26 iPZ	07 19 12		+	55°	H 07 09 40 .01 deep (USCGS)
26 eSKSN	12 12 48			119°	H 11 47 30 .01 deep (USCGS)
26 eSKSN	18 53 35			137.5	H 18 27 18 .01 deep (USCGS)
27 ePNZ eSN MN	10 23 31 28 16 10 36	10		29°	H 10 17 18 .01 deep (USCGS)
27 iPKPZ	13 10 19		+	147°	H 12 50 54 .025 deep (USCGS)
27 iPZ eSN	18 27 27 36 49		+	73°	H 18 16 16 .04 deep (USCGS)
28 eSN	06 27 23			81°	H 06 05 23 .02 deep (USCGS)

UNIVERSITY OBSERVATORY, ENGLAND.

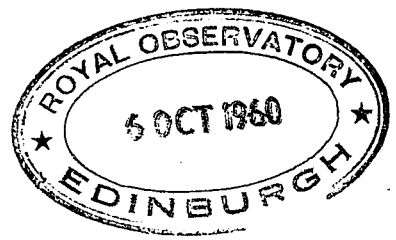
Position:- 54°46'N, 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR AUGUST 1960

Instruments:- Wilson-Lamison seismometer free period 1 sec. coupled to G.E. galvanometer free period 3.4 sec., recording vertical component of velocity.  
Milne-Shaw free period 12 sec. damping ratio 20.1, magnification 250, recording N and E component displacement.

CORRECTION AND ADDITIONAL READINGS

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
1	ePZ	02 29 19		in place of 02 29 16		
24	ePKPZ	06 08 36			144°	H 05 49 01 .01 deep (USCGS)
30	ePKPN eSKSN	07 03 50 10 51			120°	H 06 45 16 .01 deep (USCGS)
30	eXZ iXZ	22 15 04 15 18		+		? seismic



5 October 1960.

DURHAM UNIVERSITY OBSERVATORY, ENGLAND.

Position:- 54°46'N, 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR SEPTEMBER 1960

Instruments:- Wilson-Lamison seismometer free period 1 sec. coupled to G.E. galvanometer free period 3.4 sec., recording vertical component of velocity.  
Milne-Shaw free period 12 sec. damping ratio 20.1, magnification 250, recording N and E component displacement.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude and direction	microns	Epicentral distance	Notes
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ADDITIONAL READING FOR AUGUST 1960

17	eXN iXN	15 32 15 32 25				8°	H 15 28 06 (BCIS)
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SEPTEMBER 1960

1	eSN	06 21 13				76°	H 05 59 55 .01 deep (USCGS)
1	iSKSN iPKKPN eSKKSN	08 00 25 03 13 04 57		- - -		153°	H 07 35 22 .06 deep (USCGS)
1	PZ SN MN MN	15 48 07 56 58 16 17 16 19		in minute break 20 12 20 20		67°	H 15 37 14 (USCGS)
2	iPZ	13 57 32				72°	H 13 46 10 .01 deep (USCGS)
2	eSN	18 58 24				104°	H 18 32 19 (USCGS)
2	iPN eSN MN	22 14 15 23 35 22 55		- - 18 3		73°	H 22 02 49 .01 deep (USCGS)
3	ePKPZ	06 01 20				146°	H 05 41 40 .01 deep (USCGS)
3	iPKPZ	12 59 51				128°	H 12 41 35 .08 deep (USCGS)
3	ePKPZ	21 00 55				148°	H 20 41 09 (USCGS)
3/4	iPZ iPcPZ iSN iSKSN iSSN MN	23 58 23 58 39 00 08 15 08 35 13 19 00 36		- - + + + 18 6		77°.5	H 23 46 24 (USCGS)
4	ePKPN	02 58 28				147°	H 02 39 04 .01 deep (USCGS)
4	iSN	13 24 31				105°	H 12 59 39 .03 deep (USCGS)

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
5	iPKPZ	10 01 47		+	145°	H 09 41 53 .01 deep (USCGS)
6	iPKPZ iPPZ	14 22 32 26 03		- +	145°	H 14 03 02 (USCGS)
6	ePZ eSN	15 36 32 46 12			78°	H 15 24 40 .02 deep (USCGS)
No Z record from 20 hrs September 6 to 20 hrs September 7						
6	ePN eSN	21 32 11 38 25			40°	H 21 24 26 (USCGS)
7	ePN eSKSN	01 30 58 41 21			93°	H 01 17 39 (USCGS)
8	ePNZ eSN	11 21 52 33 51			105°5	H 11 07 41 (USCGS)
9	ePN MN	16 23 19 16 29			17°	H 16 19 16 (USCGS)
9	iPZ	20 08 35		+	17°	H 20 04 33 (USCGS)
10	ePZ eSN	00 25 17 30 12			29°	H 00 19 08 (USCGS)
10	iPPZ iPPPZ	11 02 30 04 55		+ -	105°	H 10 44 51 .10 deep (USCGS)
11	iPKPZ	11 12 14		-	159°	H 10 51 52 .01 deep (USCGS)
13	iPZ	03 21 34		+	92°	H 03 09 10 .07 deep (USCGS)
No recording 09 hrs to 21 hrs September 13						
14	ePN	05 16 20			126°	H 04 57 12 (USCGS)
14	?iPKPZ	16 41 39		..	143°	H 16 24 13 .09 deep (USCGS)
14	iPKPZ iPKPZ	23 38 18 38 37		+ +	146°	H 23 18 35 (USCGS)
15	iPKPZ	03 50 28		+	128°	H 03 31 17 .01 deep (USCGS)
17	iSN	08 14 17		-	75°	H 07 52 51 (USCGS)
17	iSKSN MN	08 27 16 08 55	18	- 10	75°	H 08 05 29 (USCGS)

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
17	iPKPZ	20 15 48		+	146°	H 19 56 11 (USCGS)
	iPKPZ	15 51		-		
19	eSN	04 03 29	15	-	85°	H 03 39 41 .02 deep (USCGS)
	MN	04 32		6		
19	iPZ	19 13 15	22	-	76°	H 19 01 25 .01 deep (USCGS)
	ipPZ	14 02		-		
	iSN	22 58		+		
	iSKSN	23 17		+		
	MN	19 40		2		
22	iPZ	05 48 45	12	-	64°	H 05 38 14 (USCGS)
	ipPZ	51 13		+		
	iSN	57 20		+		
	MN	06 20		4		
22	PZ	09 16 07			64°	H 09 05 37 (USCGS)
	ipPZ	18 28		+		
	iSN	24 45		+		
22	iPZ	09 25 27	18	+	64°	H 09 14 58 (USCGS)
	iSN	34 02		+		
	MN	09 56		35		
23	iPKPZ	23 22 07		+	147°	H 23 02 24 (USCGS)
28	iPKPZ	17 53 13		-	143°5	H 17 34 59 .11 deep (USCGS)
29	ipPZ	11 36 11	20	+	101°	H 11 18 53 .08 deep (USCGS)
	ipPPZ	37 22		+		
	eSN	40 32				
	eSKSN	41 33				
	MN	12 21		1		
30	iPZ	06 46 28		-	68°	H 06 35 09 (USCGS)
	eSN	55 01				

20 February 1961

DURHAM UNIVERSITY OBSERVATORY, ENGLAND.



Position:- 54°46'N, 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR OCTOBER, 1960

Instruments:- Wilson-Lamison seismometer free period 1 sec. coupled to G.E. galvanometer free period 3.4 sec., recording vertical component of velocity.  
Milne-Shaw free period 12 sec. damping ratio 20.1, magnification 250, recording N and E component displacement.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
1	ePN iSN iSKSN MN	16 22 30 31 51 32 32 17 02		- - -	73°	H 16 10 57 (USCGS)
6	ME	16 57			58°	H 16 19 15 (USCGS)
6	iPEZ iPPZ iSN MN	19 59 37 20 00 01 03 04 20 05	15	++ - + 13	18°	H 19 55 34 .01 deep (BCIS)
7	iPZ MN	03 19 31 03 25	18	+ 6	17°	H 03 15 35 (BCIS)
7	iPKPZ ipPKPZ iXZ iPPZ ipPPZ iPKSN eSKSN MN	15 37 19 37 37 37 48 38 45 38 55 40 43 44 09 16 28	22	+ + + - - - 19	119°5	H 15 18 31 .01 deep (USCGS)
8	iPZ	02 03 56		-	80°	H 01 51 51 .01 deep (USCGS)
8	ePZ iPZ iPcPZ ipPZ iPPZ iSN iPSE iScSE isSN isSE GE MN	06 03 56 03 59 04 13 06 05 07 02 12 53 13 51 14 02 16 52 18 13 06 25 40 06 43	12	- - + - + - - - + + - 12	77°	H 05 53 01 .10 deep (USCGS)
8	ePZ eSKST eSE ME	20 52 43 21 03 13 03 24 21 40	15	1	86°	H 20 40 01 .01 deep (USCGS)
9	iPZ iPPN eSN isSN isSE ME	09 12 36 15 40 22 29 23 37 27 39 09 44	20	+ + + - + 17	79°	H 09 00 42 .02 deep (USCGS)

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
13	iPZ iSE	02 25 47 29 23		+ +	20°	H 02 21 13 .01 deep (USCGS)
13	iPZ iPPZ iSN iSSN	15 03 48 06 25 12 53 17 32		- - - -	69°.	H 14 52 35 (USCGS)
14	MN	18 57				
14	ePZ iPcPZ iSN MN	21 30 47 31 03 40 12 22 08	11	- +	73°	H 21 19 11 .01 deep (USCGS)
14	PZ iPPZ iSE ME	23 00 06 00 38 03 41 23 07	10	+ - 10	19°.	H 22 55 42 (USCGS)
15	iPE iSE ME	01 58 34 02 02 09 02 05	12	- - 4	19°.	H 01 54 09 (USCGS)
17	iPZ ipPZ	15 57 30 57 41		+ -	78°	H 15 45 37 .01 deep (USCGS)
20	SKSN	11 32 30			135°	H 11 05 58 (USCGS)
22	MN	09 42			135°.	H 08 22 01 .01 deep (USCGS)
27	MN	15 49			16°	H 15 39 27 (BCIS)
28	iPNZ iSE iXN MN MN	04 22 40 25 53 25 57 04 29 04 35	11 11	+- + + 17 12	16°	H 04 18 50 (BCIS)
28	MN	05 38			16°	H 05 27 18 (BCIS)
28	iPN iSN iXN MN MN	07 50 33 53 52 54 00 07 57 08 03	11	- - - - -	16°	H 07 46 43 (BCIS)
28	iPZ iPcPZ ipPZ iPPZ iSN isSN MN	13 29 31 30 01 30 03 32 16 38 39 39 26 13 48	12	+ - + - - - 2	72°	H 13 18 14 .01 deep (USCGS)
28	ePE eSKSE iSE MN	22 42 03 52 18 52 28 23 24	20	+ 8	85°.	H 22 29 27 .01 deep (USCGS)



Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
29	ePE eSE	00 11 52 14 29			14°	H 00 08 39 (BCIS)
29	iPZ eSE ME	13 30 19 34 46 13 36	18	2		
30	iPZ ME	08 40 46 08 42	18	- 3	44°	H 08 32 39 (USCGS)
30	iPPN iSN ME	12 32 15 39 26 13 14	20	- - 7	98°	H 12 14 36 .01 deep (USCGS)
30	iSKSN	21 56 40		+	96°	H 21 32 48 .01 deep (USCGS)

20 February 1961



DURHAM UNIVERSITY OBSERVATORY, ENGLAND.

Position:- 54°46'N, 01°35'W, height above M.S.L. 103 metres.

SEISMOLOGICAL BULLETIN FOR NOVEMBER 1960

Instruments:- Wilson-Lamison seismometer free period 1 sec. coupled to G.E. galvanometer free period 3.4 sec., recording vertical component of velocity.  
Milne-Shaw free period 12 sec. damping ratio 20.1, magnification 250, recording N and E component displacement.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
1	ME	06 51	12	1	66°5	H 06 15 29 (USCGS)
1	iPEZ	09 00 43		--	112°	H 08 46 02
	iPKPN	04 35		-		.01 deep
	iBPN	05 34		-		(USCGS)
	ipPPE	06 03		+		
	iSKSN	11 23		-		
	iPSN	14 56		-		
	iSSN	21 02		+		
	ME	09 49	20	56		
	MZ	09 49				
5	iPZ	20 25 41		-	22°	H 20 20 49
	iXZ	25 46		-		(BCIS)
	iXZ	25 46		+		
	eXZ	26 00				
	iPPZ	26 15		-		
	iXZ	26 30		+		
	iSN	29 38		-		
	iPcPZ	29 47		+		
	iSSN	30 23		+		
	iXN	33 11		-		
	iScSN	37 04		-		
6	iPZ	04 49 38		-	71°	H 04 38 17
	iSN	58 52		-		(USCGS)
	iPSN	59 43		-		
	MN	05 20	12	5		
	MN	05 40	20	3		
6	ePKPN	06 34 49			156°5	H 06 15 06
	MN	07 41	20			.03 deep
	MN	08 00	20			(USCGS)
6	iPZ	22 21 33		-	72°	H 22 10 06
	iSN	30 37		+		(USCGS)
8	ePZ	04 36 01			41°	H 04 28 11
						(USCGS)
8	ePZ	11 47 43			70°	H 11 36 27
						(USCGS)
9	eSKSN	03 43 41			117°	H 03 17 59
	iXN	47 28		+		(USCGS)
	iSSN	53 48		+		
	MN	04 23	18	7		
9	iSSN	11 09 20		-	72°	H 10 43 43
	MN	11 24	19	35		(USCGS)
9	SKSN	20 30 37			98°	H 20 06 16
	MN	21 14				(USCGS)

No recording of horizontal components after 10 November.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
11	iPZ	05 36 24		-	23°	H 05 31 29 (BCIS)
13	iPZ	09 32 08		-		
	iPcPZ	32 24		-		
	iPPZ	35 02		+		
	iSZ	41 46		-		
16	iPZ	23 09 59		+	60°5	H 22 59 48 (USCGS)
18	iPZ	06 09 36		-	29°	H 06 03 37 (USCGS)
20	ePZ	22 14 53			90°	H 22 02 00
	iXZ	15 12		+		.01 deep
	ipPZ	15 21		-		(USCGS)
	isPZ	15 42		-		
	MZ	22 53				
23	iPKPZ	14 32 15		-	149°	H 14 12 21 (USCGS)
	iXZ	32 31		-		
	iXZ	32 44		+		
23	iPKPZ	18 16 26		+	149°	H 17 56 38 .01 deep (USCGS)
24	iPKPZ	07 12 32		-	149°	H 06 52 41 (USCGS)
	ipPKPZ	12 35		+		
	iPPZ	16 22		-		
	ipPPZ	16 37		-		
	MZ	08 26				

21 February 1961

Position:- 54°46'N, 01°35'W, height above M.S.L. 103 metres

SEISMOLOGICAL BULLETIN FOR DECEMBER 1960



Instrument:- Wilson-Lamison seismometer free period 1 sec. coupled to G.E. galvanometer free period 3.4 sec., recording vertical component of velocity.

Date	Phase and component	Time G.M.T.	Period sec.	Amplitude microns and direction	Epicentral distance	Notes
2	MZ	10 03	22	100	98°	H 09 10 41 (USCGS)
3	iPZ	04 34 53		+	64°	H 04 24 17
	ipPZ	31 33		+		.01 deep (USCGS)
	iPcPZ	35 41		-		
	iPPZ	37 22		-		
	iSZ	43 55		+		
	MZ	05 07	12	70		
4/5	iPKPZ	00 14 19		-	146°5	H 23 55 39 .10 deep (USCGS)
5	iPZ	18 00 58		-	70°	H 17 49 43 (USCGS)
5	iPZ	18 18 45		+	70°	H 18 07 27 (USCGS)
5	iPZ	21 26 15		-	20°	H 21 21 44 (BCIS)
	iXZ	26 32		-		
	iXZ	26 37		-		
6	iPZ	09 09 34		-	95°5	H 08 56 08 (USCGS)
8	iPKPZ	01 42 52		-	147°5	H 01 24 19 .11 deep (USCGS)
11	iPKPZ	00 20 39		-	146°5	H 00 01 10 .02 deep (USCGS)
13	iPKPZ	07 56 28		+	167°5	H 07 36 14 (USCGS)
	iPKPZ	58 02		+		
	iPPZ	08 01 55		-		
	MZ	09 27				
14/15	iPPZ	00 10 39		+	108°	H 23 51 29 .01 deep (USCGS)
16	iPZ	18 26 16		-	21°	H 18 21 32 (USCGS)
17	iXZ	16 57 29		+	76°	H 16 44 45 (USCGS)
22	iPZ	03 15 04		+	85°	H 03 02 29 .01 deep (USCGS)
22	iPPZ	21 23 42		-	129°	H 21 02 41 .08 deep (USCGS)