# RHAM UNIVERSITY OBSERVATORY, ENGLAND

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

## SEISMOLOGICAL BULLETIN FOR JANUARY, 1965

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 displacements.

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 1 | iPZ | 21 43 03 | | - | 19°.5 | H 21 38 32 |
| | iSE | 46 31 | | - | | (BCIS) |
| | ME | 21 52 | 10 | 14 | | |
| 10 | ME | 14 52 | 21 | 19 | 138° | H 13 36 31 |
| | ME | 14 55 | 20 | 18 | | (USCGS) |
| 15 | ePZ | 06 08(33) | in minute break | | 46°.5 | H 06 00 00 (Uppsala) |
| 15 | ePZ | 23 51 47 | | | 19° | H 23 47 29 |
| | MN | 24 00 | | | | (BCIS) |
| 24 | iPE | 00 26 20 | | - | 113° | H 00 11 12 |
| | iXE | 26 58 | | + | | (USCGS) |
| | iPKPZ | 29 55 | | - | | |
| | iPPZ | 30 48 | | - | | |
| | iPSN | 40 14 | | - | | |
| | iSSN | 46 24 | | - | | |
| | ME | 01 12 | 23 | 230 | | |
| | ME | 01 28 | 20 | 140 | | |
| | MZ | 01 28 | 20 | | | |
| 28 | ePE | 04 16 03 | | | 79° | H 04 03 39 (USCGS) |
| 29 | ePN | 09 46 40 | | | 69°.5 | H 09 35 26 |
| | eSE | 55 53 | | | | (USCGS) |
| 30 | iPKPZ | 18 00 31 | | - | 137°.5 | H 17 42 12 .10 deep (USCGS) |
| 30 | ePKPZ | 18 24 41 | | | 137°.5 | H 18 06 21 .10 deep (USCGS) |

13th July 1965

# UNIVERSITY OBSERVATORY, ENGLAND

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

## SEISMOLOGICAL BULLETIN FOR FEBRUARY 1965

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 displacements.

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 1 | iPKPZ | 05 45 45 | | - | 143°.5 | H 05 27 05 .08 deep (USCGS) |
| | iPKPZ | 45 47 | | - | | |
| No recording 1 February 09 hrs to 8 February 0830 hrs. | | | | | | |
| 8 | ePZ | 15 56 46 | | - | 70° | H 15 46 50 .01 deep (USCGS) |
| | iXZ | 56 50 | | - | | |
| | ipPZ | 56 57 | | - | | |
| | iPPZ | 58 49 | | - | | |
| | iSE | 16 05 54 | | - | | |
| | iXN | 08 58 | | + | | |
| | MN | 16 34 | 12 | | | |
| 9 | ePKPZ | 06 01 45 | | | 143° | H 05 42 07 .04 deep (USCGS) |
| | ipPKPZ | 02 51 | | - | | |
| 9 | iPZ | 17 48 55 | | - | 72° | H 17 37 16 (USCGS) |
| 11 | iPZ | 04 51 21 | | + | 56° | H 04 42 01 (USCGS) |
| 12 | eSE | 01 04 35 | | | 74° | H 00 43 17 (USCGS) |
| 12 | iPN | 01 06 34 | | - | 73° | H 00 55 06 (USCGS) |
| | iSE | 15 06 | | - | | |
| | iPSN | 16 25 | | - | | |
| | eSSN | 20 15 | | | | |
| | MN | 01 36 | 19 | | | |
| | MN | 01 54 | 17 | | | |
| 16 | ePN | 12 36 28 | | | 80° | H 12 24 09 (USCGS) |
| | iSN | 46 20 | | + | | |
| No recording 17 February 12 hrs to 24 February 13 hrs. | | | | | | |
| 25 | ePKSN | 05 13 44 | | | 126° | H 04 51 28 (USCGS) |
| 25 | iSN | 05 43 14 | | - | 73° | H 05 22 15 (USCGS) |
| | MN | 06 05 | 20 | 6 | | |
| | ME | 06 09 | 20 | 11 | | |
| 26 | ME | 09 59 | 20 | 2 | 104° | H 08 55 42 (USCGS) |
| 27 | ME | 08 33 | 12 | 8 | 78° | H 07 46 29 (USCGS) |
| 27 | iPZ | 11 36 18 | | + | 31° | H 11 29 59 (USCGS) |
| | eSNZ | 41 41 | | | | |

13th July, 1965

# DURHAM UNIVERSITY OBSERVATORY, ENGLAND

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

## SEISMOLOGICAL BULLETIN FOR MARCH & APRIL 1965.

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 displacements.

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| March | | | | | | |
| 1 | iPZ | 19 33 47 | | - | 73°.5 | H 19 22 02 (USCGS) |
| 1 | ePE | 21 44 01 | | - | 78° | H 21 32 12 .015 deep (USCGS) |
| | ipPE | 44 27 | | - | | |
| | iSE | 53 45 | | - | | |
| | ME | 22 12 | 27 | 6 | | |
| 2 | ePE | 22 05 36 | | - | 26° | H 22 00 05 (BCIS) |
| | iSE | 10 15 | | - | | |
| 3 | iPZ | 06 23 27 | | + | 47° | H 06 14 57 (USCGS) |
| 3 | iPKIKPZ | 15 33 20 | | + | 136° | H 15 14 10 (USCGS) |
| | iPKPZ | 33 27 | | - | | |
| | iSSE | 54 06 | | - | | |
| | MN | 16 20 | 30 | 27 | | |
| | ME | 16 24 | 23 | 28 | | |
| | ME | 16 29 | 20 | 28 | | |
| | ME | 16 32 | 20 | 33 | | |
| 6 | ME | 21 05 | 18 | 4 | 91° | H 20 23 49 (USCGS) |
| | ME | 21 10 | 12 | 3 | | |
| 9 | iPE | 18 03 04 | | - | 24° | H 17 57 53 (BCIS) |
| | iXZ | 04 43 | | - | | |
| | iSE | 07 07 | | + | | |
| | ME | 18 12 | 15 | 110 | | |
| 9 | iPZ | 18 43 (00) | in minute break | | 24° | H 18 37 55 (BCIS) |
| | eSE | 47 17 | | - | | |
| 9 | iPZ | 19 52 07 | | - | 24° | H 19 46 59 (BCIS) |
| 10 | ePZ | 01 41 11 | | | 24° | H 01 36 05 (BCIS) |
| 10 | iPKPZ | 16 12 18 | | + | 147° | H 15 53 38 .09 deep (USCGS) |
| | iPKPZ | 12 51 | | + | | |
| 13 | ePE | 04 14 43 | | | 24° | H 04 09 33 (BCIS) |
| | iPZ | 14 46 | | - | | |
| | iSE | 19 03 | | - | | |
| 13 | iPKPZ | 14 13 18 | | - | 145° | H 13 54 33 .08 deep (USCGS) |

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 14 | iPZ | 16 01 (54) | in minute break | | 51° | H 15 53 05 .035 deep (BCIS) |
| | ipPE | 02 40 | | + | | |
| | iPcPE | 02 (54) | in minute break | | | |
| | iPPE | 03 49 | | - | | |
| | iScPZ | 05 27 | | - | | |
| | iPcSE | 06 23 | | + | | |
| | iSE | 08 31 | | + | | |
| | isSE | 10 11 | | + | | |
| | iScSE | 11 17 | | - | | |
| | iSSE | 12 48 | | + | | |
| 15 | ME | 02 59 | 15 | | 89° | H 02 02 09 (USCGS) |
| 16 | ePZ | 16 58 24 | | | 80° | H 16 46 15 (USCGS) |
| | ME | 17 38 | 20 | 23 | | |
| 18 | ePKPZ | 06 41 23 | | + | 145° | H 06 22 03 .025 deep (USCGS) |
| | iPKPZ | 41 26 | | - | | |
| 19 | ME | 17 25 | | | 109° | H 16 20 51 (USCGS) |
| 21 | ME | 12 09 | | | 112° | H 11 08 16 (USCGS) |
| 22 | ME | 04 02 | | | 139° | H 02 44 47 (USCGS) |
| 22 | ME | 23 53 | | | 106° | H 22 56 27 (USCGS) |
| 24 | ME | 25 10 | | | 140° | H 23 54 15 .02 deep (USCGS) |
| 24 | ME | 08 49 | | | 140° | H 07 59 39 .03 deep (USCGS) |
| 26 | iPKPZ | 00 38 35 | | - | 145° | H 00 [illegible] 56 .09 deep (USCGS) |

From 27 March to 18 April clock corrections unreliable.

April

| | | | | | | |
|---|---|---|---|---|---|---|
| 19 | iSE | 24 04 38 | | + | 84° | H 23 41 59 (USCGS) |
| | iScSE | 05 02 | | - | | |
| 25 | ME | 01 53 | 21 | | 95° | H 01 00 12 (USCGS) |
| 26 | iPZ | 20 40 16 | | - | 70° | H 20 29 07 (USCGS) |
| 26 | iPZ | 22 29 21 | | - | 90° | H 22 15 43 (USCGS) |
| | iSE | 40 59 | | + | | |
| | ME | 23 08 | 20 | 17 | | |
| | ME | 23 13 | 16 | 15 | | |

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 27 | iPZ | 14 14 35 | | - | 26° | H 14 09 06 |
| | ipPZ | 14 54 | | - | | (BCIS) |
| | iXZ | 15 06 | | - | | |
| | iXE | 17 31 | | + | | |
| | eSE | 19 01 | | | | |
| 29 | iPZ | 15 39 30 | | - | 66° | H 15 28 43 |
| | ipPZ | 39 48 | | + | | .01 deep |
| | iPcPZ | 39 58 | | + | | (USCGS) |
| | iPPE | 41 56 | | + | | |
| | iSE | 48 18 | | - | | |
| | iScSE | 49 18 | | + | | |
| | ME | 16 07 | 20 | 30 | | |

6th October, 1965.

DURHAM UNIVERSITY OBSERVATORY, ENGLAND

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

## SEISMOLOGICAL BULLETIN FOR MAY & AUGUST 1965

(There have been no recordings between May 2 and August 5)

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 |
|---|---|---|---|---|---|---|
| May 1 | eSE | 02 10 13 | | | 26°.5 | H 01 59 44 (USCGS) |
| From here on dates refer to the month of August. | | | | | | |
| 6 | PZ | 02 08 38 | | | 57° | H 01 58 41 (USCGS) |
| | iSN | 16 26 | | - | | |
| 11 | iPKIKPZ | 04 00 15 | | + | 139° | H 03 40 56 (USCGS) |
| | ePKPZ | 00 18 | | | | |
| | iXZ | 00 26 | | + | | |
| | iXZ | 00 38 | | + | | |
| | iPPZ | 03 16 | | + | | |
| | eXZ | 03 58 | | | | |
| | iPKSN | 04 03 | | - | | |
| | iSKPZ | 04 03 | | - | | |
| | ME | 05 00 | 22 | 32 | | |
| | ME | 05 47 | 17 | 10 | | |
| 11 | iSE | 18 48 43 | | + | 61°.5 | H 18 29 40 (USCGS) |
| | ME | 19 05 | 18 | 2 | | |
| 11 | ePKPZ | 20 12 04 | | | 140° | H 19 52 30 (USCGS) |
| | ME | 21 02 | 24 | 10 | | |
| | ME | 21 07 | 21 | 8 | | |
| | ME | 21 11 | 20 | 13 | | |
| | ME | 21 17 | 19 | 15 | | |
| 11 | iPZ | 20 15 41 | | - | 74° | H 20 04 16 (USCGS) |
| | iSE | 24 55 | | - | | |
| | ME | 20 47 | 16 | 3 | | |
| 11 | ePKIKPZ | 22 51 14 | | - | 140° | H 22 31 49 (USCGS) |
| | iPKPZ | 51 16 | | + | | |
| | iPKPZ | 51 36 | | + | | |
| | iPKSE | 54 51 | | - | | |
| | iXEZ | 55 05 | | - | | |
| | iXE | 55 11 | | - | | |
| | iXZ | 55 21 | | - | | |
| | iSSE | 23 13 07 | | - | | |
| | ME | 23 51 | 20 | 53 | | |
| | ME | 24 08 | 17 | 50. | | |
| | MZ | 24 08 | 17 | | | |
| | ME | 24 34 | 18 | 60 | | |
| | MZ | 24 34 | 18 | | | |
| 12 | iPKIKPZ | 08 21 06 | | + | 140° | H 08 01 43 (USCGS) |
| | iPKPZ | 21 12 | | - | | |
| | iSKPZ | 24 45 | | + | | |
| | iSKSE | 28 24 | | - | | |

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 12 | ePKPZ | 13 16 16 | | | 126° | H 12 57 10 |
| | iPKPZ | 16 21 | | + | | (USCGS) |
| | iPPE | 18 21 | | + | | |
| | iPSE | 28 04 | | - | | |
| | ME | 14 05 | 26 | 20 | | |
| | ME | 14 07 | 25 | 29 | | |
| | ME | 14 12 | 20 | 20 | | |
| | ME | 14 14 | 20 | 25 | | |
| 13 | iPKPZ | 05 00 25 | | - | 140° | H 04 40 55 |
| | eSSE | 21 32 | | | | (USCGS) |
| 13 | iPKPZ | 12 59 38 | | + | 140° | H 12 40 08 |
| | ePPE | 13 02 38 | | | | (USCGS) |
| | iSKPZ | 03 22 | | - | | |
| | iSSE | 21 07 | | + | | |
| | ME | 13 49 | 29 | 68 | | |
| | ME | 13 51 | 22 | 36 | | |
| | ME | 13 54 | 20 | 30 | | |
| | ME | 13 59 | 20 | 28 | | |
| | ME | 14 48 | 18 | 8 | | |
| | ME | 14 57 | 17 | 8 | | |
| 14 | eSSE | 11 48 46 | | | 140° | H 11 07 49 |
| | | | | | | (USCGS) |
| 16 | ePZ | 12 28 46 | | | 77° | H 12 16 50 |
| | iPZ | 28 49 | | - | | (USCGS) |
| | eSE | 38 39 | | | | |
| 16 | iPZ | 12 46 09 | | - | 58° | H 12 36 23 |
| | iPcPZ | 47 01 | | - | | (USCGS) |
| | iPPZ | 48 19 | | - | | |
| | iSE | 54 04 | | + | | |
| | iScSE | 56 04 | | + | | |
| | iSSE | 57 46 | | + | | |
| | ME | 13 05 | 14 | 14 | | |
| 16 | ePE | 19 59 32 | | | 30° | H 19 53 18 |
| | ePPE | 20 00 29 | | | | (USCGS) |
| | eSE | 04 30 | | | | |
| | ME | 20 09 | 15 | | | |
| 17 | ePE | 00 28 21 | | | 30° | H 00 22 24 |
| | ePPE | 29 24 | | | | (USCGS) |
| | ME | 00 38 | 15 | | | |
| 17 | ePE | 01 23 10 | | | 59° | H 01 13 25 |
| | | | | | | (USCGS) |
| 17 | ePZ | 10 48 12 | | | 90° | H 10 35 04 |
| | iSKSE | 58 20 | | - | | (USCGS) |
| | iSPZ | 11 00 32 | | + | | |
| 20 | iPPZ | 06 14 12 | | - | 117° | H 05 54 50 |
| | iSKSE | 19 16 | | - | | .05 deep |
| | iSKKSE | 20 35 | | - | | (USCGS) |
| | iPSE | 23 16 | | - | | |

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 20 | iPZ | 09 55 48 | | - | 93°.5 | H 09 42 49 |
| | iSKSE | 10 06 10 | | + | | .02 deep |
| | iSE | 06 38 | | + | | (USCGS) |
| 23 | ePE | 14 14 04 | | | 24° | H 14 08 57 |
| | iPZ | 14 14 | | + | | (BCIS) |
| | iPPZ | 14 52 | | + | | |
| | iSE | 18 13 | | - | | |
| | iPcSE | 21 49 | | - | | |
| | ME | 14 22 | 14 | 14 | | |
| 23 | ePZ | 19 58 10 | | - | 79°.5 | H 19 46 03 |
| | iPZ | 58 13 | | + | | (USCGS) |
| | iPcPZ | 58 23 | | + | | |
| | iPPE | 20 01 10 | | + | | |
| | iSE | 08 18 | | + | | |
| | iSSE | 13 18 | | - | | |
| | ME | 20 29 | 20 | 350 | | |
| | MZ | 20 29 | 20 | | | |
| | ME | 20 35 | 19 | 350 | | |
| | MZ | 20 35 | 19 | | | |
| 24 | ePE | 01 17 03 | | | 26° | H 01 11 00 |
| | iSE | 23 19 | | + | | (BCIS) |
| 24 | ePE | 13 22 37 | | | 63° | H 13 12 19 |
| | iSE | 31 16 | | - | | (USCGS) |
| | ME | 13 50 | 13 | | | |
| 31 | ePN | 07 36 30 | | | 33° | H 07 29 47 |
| | iSE | 41 38 | | + | | (BCIS) |
| | ME | 07 52 | 15 | 8 | | |

March 29th, 1966.

# UNIVERSITY OBSERVATORY, ENGLAND

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

## SEISMOLOGICAL BULLETIN FOR SEPTEMBER, 1965.

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 | iPZ | 04 39 53 | | - | 72° | H 04 29 22 .09 deep (USCGS) |
| No recording 2 September to 7 September inclusive. | | | | | | |
| 8 | iSN | 03 45 50 | | - | 66° | H 03 26 21 (USCGS) |
| | MN | 04 04 | 19 | | | |
| 8 | ePN | 11 28 05 | | | 67° | H 11 16 34 (USCGS) |
| | eSN | 36 49 | | | | |
| | MN | 11 58 | 15 | | | |
| 9 | iPE | 10 14 45 | | + | 80°.5 | H 10 02 25 (USCGS) |
| | iPPN | 18 08 | | + | | |
| | iSN | 24 46 | | + | | |
| | [illegible] | 25 03 | | + | | |
| | iSSE | 30 15 | | + | | |
| | ME | 10 39 | 40 | 4 | | |
| | ME | 10 49 | 20 | 5 | | |
| 11 | iPKIKPZ | 07 12 05 | | + | 126° | H 06 53 01 (USCGS) |
| | iPKIKPZ | 12 12 | | + | | |
| | iPKSN | 15 30 | | + | | |
| | iPKIKSN | 15 46 | | - | | |
| | iSKSE | 19 21 | | - | | |
| | iXN | 20 50 | | - | | |
| 12 | iPZ | 22 15 10 | | + | 85° | H 22 02 34 (USCGS) |
| | iPcPZ | 15 27 | | - | | |
| | eSKSE | 25 34 | | - | | |
| | iSE | 25 41 | | + | | |
| | iPSE | 26 38 | | | | |
| | iSSE | 31 27 | | - | | |
| 13 | iPZ | 13 19 05 | | - | 70° | H 13 07 48 (USCGS) |
| | iSE | 28 14 | | - | | |
| | ME | 13 53 | 20 | 2 | | |
| 14 | iPZ | 08 40 53 | | - | 103°.5 | H 08 27 16 (USCGS) |
| | iSKSE | 51 50 | | - | | |
| | iSN | 53 06 | | - | | |
| | MN | 09 25 | 20 | 2 | | |
| Recording intermittent 16 September 00 hrs., to 25 September 09 hrs. | | | | | | |
| 21 | iPZ | 01 50 49 | | - | 86° | H 01 38 30 (USCGS) |
| | iSKSE | 02 00 55 | | + | | |
| | iSN | 01 09 | | - | | |
| | ME | 02 30 | 10 | 6 | | |
| 12 | iPKIKPZ | 08 59 16 | | + | 126° | H 08 40 13 (USCGS) |
| | iPKSN | 09 02 48 | | - | | |
| | iXNE | 08 08 | | + | | |

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 25 | iPE | 20 14 36 | | - | 20° | H 20 09 57 |
| | iXZ | 14 59 | | - | | (BCIS) |
| | eSE | 18 31 | | | | |
| | iXE | 18 48 | | + | | |
| | ME | 20 20 | 20 | 1 | | |
| | ME | 20 24 | 11 | 1.5 | | |
| 26 | iPE | 10 07 46 | | - | 20° | H 10 03 08 |
| | iSE | 11 42 | | - | | (BCIS) |
| | ME | 10 13 | 20 | 1 | | |
| | ME | 10 17 | | | | |
| 28 | iPKPZ | 05 26 55 | | - | 153° | H 05 06 37 |
| | iSSE | 49 51 | | - | | (USCGS) |
| | ME | 06 32 | 20 | 7 | | |
| 29 | iPZ | 23 24 48 | | + | 20° | H 23 19 48 |
| | iSN | 28 33 | | + | | (BCIS) |
| | MN | 23 31 | 12 | 2 | | |
| 30 | iPN | 23 58 21 | | - | 61° | H 23 47 41 |
| | iXZ | 58 23 | | - | | (USCGS) |
| | iPcPZ | 59 05 | | + | | |
| | iSN | 24 06 38 | | + | | |
| | iXE | 06 49 | | - | | |
| | iScSN | 07 57 | | - | | |
| | ME | 24 23 | 18 | 12 | | |

April 1st, 1966.

DURHAM UNIVERSITY, OBSERVATORY, ENGLAND

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

## SEISMOLOGICAL BULLETIN FOR OCTOBER 1965

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 | iPZ | 09 03 49 | | + | 75° | H 08 52 06 |
| | iPcPZ | 04 07 | | - | | (USCGS) |
| | iPPZ | 06 50 | | - | | |
| | iSN | 13 29 | | + | | |
| | iScSE | 13 55 | | + | | |
| | iPSN | 14 08 | | + | | |
| | MN | 09 49 | 16 | 3 | | |
| 1 | iPKPZ | 13 41 05 | | - | 145° | H 13 22 29 |
| | eXE | 59 38 | | | | .09 deep |
| | iSSE | 14 02 38 | | - | | (USCGS) |
| 3 | iPZ | 14 57 04 | | - | 74° | H 14 45 27 |
| | iPcPZ | 57 23 | | - | | (USCGS) |
| | iSN | 15 06 32 | | - | | |
| | iPSN | 07 11 | | - | | |
| | MN | 15 36 | 20 | 3 | | |
| 3 | iPKPZ | 16 34 01 | | + | 116° | H 16 14 55 |
| | iSKSE | 41 01 | | - | | (USCGS) |
| | iPSE | 44 28 | | - | | |
| | ME | 17 23 | 18 | 10 | | |
| | ME | 17 29 | 15 | 5 | | |
| 6 | ePZ | 18 41 45 | | | 19° | H 18 37 30 |
| | eSE | 45 19 | | | | (BCIS) |
| 7 | iPKPZ | 01 28 46 | | - | 146°.5 | H 01 09 07 |
| | | | | | | (USCGS) |
| 7 | ePN | 03 50 18 | | | 107° | H 03 36 00 |
| | iSE | 04 02 27 | | + | | (USCGS) |
| | eSSE | 09 16 | | | | |
| | ME | 04 29 | 17 | | | |
| | ME | 04 38 | 15 | | | |
| 8 | ePZ | 06 08 19 | | | 46°.5 | H 06 00 00 |
| | iPZ | 08 26 | | + | | (Uppsala) |
| 12 | iPZ | 13 51 40 | | - | 66°.5 | H 13 40 56 |
| | ePcPZ | 52 24 | | | | (USCGS) |
| | iSE | 14 00 42 | | + | | |
| | MN | 14 23 | 19 | 4 | | |
| 13 | iPZ | 03 57 32 | | + | 19° | H 03 53 12 |
| | eSN | 04 01 06 | | | | (BCIS) |
| 13 | iPKPZ | 15 06 06 | | - | 147° | H 14 46 25 |
| | ePPZ | 09 26 | | | | (USCGS) |
| 13 | iPKPZ | 15 33 08 | | - | 140° | H 15 13 37 |
| | | | | | | (USCGS) |
| 18 | iPZ | 22 04 49 | | - | 112° | H 21 50 05 |
| | ME | 22 49 | 30 | 16 | | (USCGS) |
| | ME | 22 56 | 20 | 12 | | |

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 19 | ePZ | 21 00 16 | | | 73° | H 20 48 47 (USCGS) |
| | eSE | 09 39 | | | | |
| | MN | 21 32 | 20 | 2 | | |
| | ME | 21 39 | 16 | | | |
| 20 | ePZ | 24 06 35 | | | 77° | H 23 54 30 (USCGS) |
| | eSE | 16 23 | | | | |
| | ME | 24 34 | 22 | | | |
| 24 | iPZ | 12 19 39 | | - | 11° | H 12 16 57 (BCIS) |
| | iSZ | 21 32 | | - | | |
| 24 | iPZ | 18 26 40 | | - | 73° | H 18 15 05 (USCGS) |
| 25 | iPNZ | 22 46 02 | | - - | 77° | H 22 34 24 (USCGS) .02 deep |
| | ipPZ | 46 53 | | - | | |
| | iPPN | 49 00 | | - | | |
| | iSN | 55 45 | | - | | |
| | iPSE | 56 46 | | - | | |
| | iSSE | 59 17 | | + | | |
| | ME | 23 24 | 12 | 6 | | |
| 26 | iPKPZ | 10 41 19 | | - | 144° | H 10 21 46 (USCGS) |

20th April, 1966.

# DURHAM UNIVERSITY OBSERVATORY, ENGLAND

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

## SEISMOLOGICAL BULLETIN FOR NOVEMBER 1965

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 |
|---|---|---|---|---|---|---|
| 3 | iPZ | 01 50 43 | | + | 86°.5 | H 01 39 03 |
| | iPcPZ | 50 47 | | - | | .09 deep |
| | ipPZ | 52 53 | | - | | (USCGS) |
| | iPPZ | 54 20 | | + | | |
| | iSKSE | 02 00 09 | | + | | |
| | iSN | 00 27 | | - | | |
| | iScSE | 01 32 | | + | | |
| | iPSE | 02 48 | | - | | |
| | isSN | 04 17 | | + | | |
| | iSSE | 06 29 | | + | | |
| 11 | MN | 04 27 | 20 | | | |
| 12 | iPZ | 18 05 16 | | + | 89° | H 17 52 24 |
| | iPPN | 08 47 | | + | | (USCGS) |
| | iSE | 16 00 | | + | | |
| | ME | 18 42 | 28 | 26 | | |
| 13 | iPZ | 04 43 23 | | + | 55° | H 04 33 53 |
| | iPcPZ | 43 38 | | - | | (USCGS) |
| | ipPZ | 44 04 | | - | | |
| | iPPZ | 45 40 | | - | | |
| | iSN | 51 02 | | - | | |
| | iPSE | 51 29 | | - | | |
| | iScSE | 53 08 | | - | | |
| | iSSE | 54 47 | | - | | |
| | ME | 05 08 | 10 | 48 | | |
| 15 | iPZ | 11 28 32 | | + | 57° | H 11 18 50 |
| | iPcPZ | 29 22 | | - | | (USCGS) |
| | iPPZ | 30 25 | | - | | |
| | iSE | 36 22 | | + | | |
| | iPSN | 37 07 | | + | | |
| | iScSE | 38 27 | | + | | |
| | iSSE | 40 32 | | - | | |
| | ME | 11 48 | 15 | 15 | | |
| 16 | iPZ | 15 31 50 | | - | 37° | H 15 24 43 |
| | iSE | 37 46 | | + | | (BCIS) |
| | iXE | 38 27 | | - | | |
| 18 | iPKPZ | 20 19 04 | | - | 144° | H 20 00 19 |
| | iPKPZ | 19 26 | | + | | .07 deep |
| | | | | | | (USCGS) |
| 18 | iPZ | 22 09 29 | | - | 70° | H 21 58 12 |
| | MN | 22 49 | | | | (USCGS) |
| 19 | ePZ | 22 44 04 | | | 87° | H 22 31 20 |
| | ME | 23 21 | 20 | | | (USCGS) |
| 21 | iPZ | 05 06 26 | | + | 47° | H 04 57 56 |
| | | | | | | (BCIS) |

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 21 | iPPZ | 10 51 52 | | - | 118° | H 10 31 50 .01 deep (USCGS) |
| | MN | 11 47 | 20 | | | |
| 22 | iPE | 20 37 10 | | + | 74° | H 20 25 30 .01 deep (USCGS) |
| | iPPEA | 40 06 | | + | | |
| | iSE | 46 26 | | - | | |
| | iPSE | 47 09 | | - | | |
| | ME | 21 16 | | | | |
| 23 | ME | 02 13 | 25 | | 107° | H 01 17 31 (USCGS) |
| | MN | 02 17 | 16 | | | |
| | ME | 02 28 | 20 | | | |
| 28 | ME | 05 00 | 20 | 12 | 117° | H 03 56 46 (USCGS) |
| | ME | 05 03 | 20 | 17 | | |
| 28 | iPZ | 05 31 53 | | + | 27°.5 | H 05 26 05 (BCIS) .01 deep |

April 22nd, 1966.

# UNIVERSITY OBSERVATORY, ENGLAND

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

## SEISMOLOGICAL BULLETIN FOR DECEMBER 1965

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 | iPZ | 10 36 11 | | - | 31° | H 10 29 58 (USCGS) |
| 6 | iPZ | 11 47 25 | | - | 83°5 | H 11 34 54 (USCGS) |
| | iPPZ | 50 20 | | - | | |
| | iSN | 57 43 | | - | | |
| | MN | 12 15 | 30 | 22 | | |
| 7 | iPKPZ | 22 38 03 | | + | 125° | H 22 19 15 .02 deep (USCGS) |
| 9 | iPZ | 06 19 58 | | + | 81° | H 06 07 49 (USCGS) |
| | iPcP | 20 11 | | + | | |
| | iSE | 30 23 | | - | | |
| | iPSE | 31 11 | | + | | |
| | GE | 42 12 | | | | |
| | ME | 06 58 | 15 | 8 | | |
| | ME | 07 00 | 18 | 13 | | |
| 9 | iPKPZ | 13 31 15 | | - | 143° | H 13 12 55 .10 deep (USCGS) |
| 13 | iPZ | 11 04 04 | | + | 78° | H 10 52 09 (USCGS) |
| | eSN | 14 07 | | | | |
| | iPSN | 14 51 | | + | | |
| | MN | 11 42 | 20 | 5 | | |
| 13 | MN | 15 39 | 18 | | 78° | H 14 46 10 (USCGS) |
| 14 15 | ePZ | 12 08 33 | | | 05°5 | H 12 07 17 (BCIS) |
| | iSE | 09 39 | | - | | |
| 15 | iPZ | 23 17 21 | | - | 79° | H 23 05 21 (USCGS) |
| | iSN | 27 19 | | - | | |
| | iSSN | 32 21 | | - | | |
| | MN | 23 39 | 30 | 15 | | |
| 20 | iPZ | 00 13 14 | | - | 23° | H 00 08 11 (BCIS) |
| | iSN | 17 23 | | + | | |
| | ME | 00 24 | 10 | 13 | | |
| 20 | iPZ | 07 24 11 | | - | 73°5 | H 07 12 34 (USCGS) |
| 22 | ePZ | 19 51 51 | | | 65° | H 19 41 23 .01 deep (USCGS) |
| | ipPZ | 52 05 | | - | | |
| | iXZ | 52 47 | | - | | |
| | iSE | 20 00 28 | | + | | |
| | iPSN | 00 49 | | + | | |
| | MN | 20 16 | 27 | 12 | | |
| 23 | iPZ | 20 57 41 | | + | 61° | H 20 47 37 (USCGS) |
| | Mn | 21 25 | | | | |

| Date | Phase and component | Time G.M.T. | Period sec. | Amplitude microns and direction | Epicentral distance | Notes |
|---|---|---|---|---|---|---|
| 25 | iPKPZ | 03 16 15 | | - | 143° | H 02 57 58 .10 deep (USCGS) |
| 25 | iPZ | 15 15 26 | | - | 23° | H 15 10 29 (USCGS) |
| | eSE | 19 38 | | | | |
| 25 | iPKPZ | 19 39 02 | | + | 143° | H 19 20 45 .10 deep (USCGS) |

10th June, 1966.