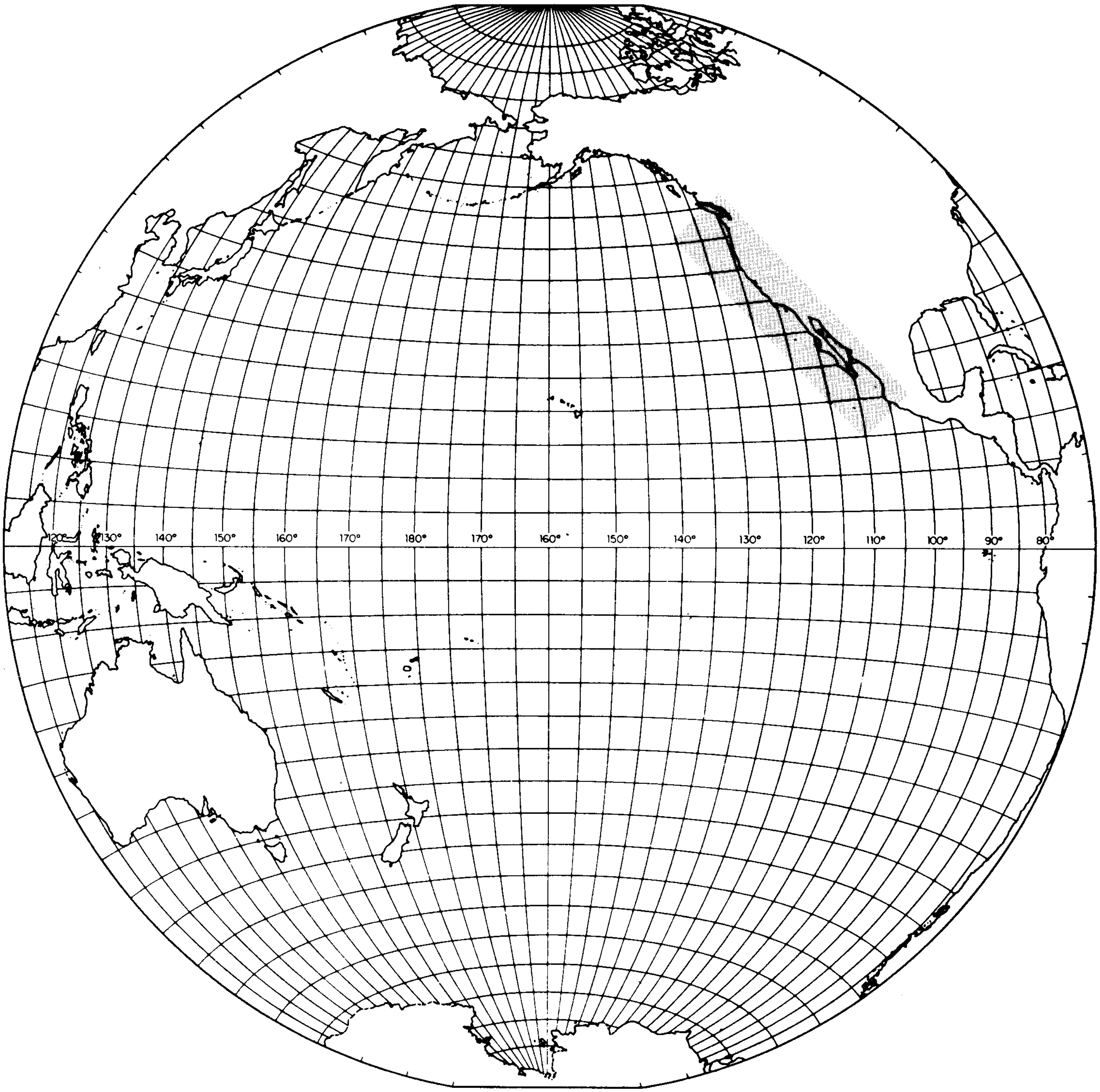
STATE OF CALIFORNIA
MARINE RESEARCH COMMITTEE



CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS

ATLAS No. 25

CALIFORNIA
COOPERATIVE
OCEANIC
FISHERIES
INVESTIGATIONS

Atlas No. 25

STATE OF CALIFORNIA
MARINE RESEARCH COMMITTEE

Cooperating Agencies:
CALIFORNIA ACADEMY OF SCIENCES
CALIFORNIA DEPARTMENT OF FISH AND GAME
STANFORD UNIVERSITY, HOPKINS MARINE STATION
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL MARINE FISHERIES SERVICE
UNIVERSITY OF CALIFORNIA, SCRIPPS INSTITUTION OF OCEANOGRAPHY

June, 1977

THE CALCOFI ATLAS SERIES

This is the twenty-fifth in a series of atlases containing data on the hydrography and plankton from the region of the California Current. The field work was carried out by the California Cooperative Oceanic Fisheries Investigations,[1] a program sponsored by the State of California under the direction of the State's Marine Research Committee. The cooperating agencies in the program are:

California Academy of Sciences
California Department of Fish and Game
Stanford University, Hopkins Marine Station
National Oceanic and Atmospheric Administration, National Marine Fisheries Service[2]
University of California, Scripps Institution of Oceanography

CalCOFI atlases[3] are issued as individual units as they become available. They provide processed physical, chemical and biological measurements of the California Current region. Each number may contain one or more contributions. A general description of the CalCOFI program with its objectives appears in the preface of Atlas No. 2.

This atlas was prepared by the Data Collection and Processing Group of the Marine Life Research Program, Scripps Institution of Oceanography.

CalCOFI Atlas Editorial Staff:
Abraham Fleminger and John G. Wyllie, Editors

CalCOFI atlases in this series, through June 1977, are:

No. 1. Anonymous, 1963. CalCOFI atlas of 10-meter temperatures and salinities 1949 through 1959.
No. 2. Fleminger, A., 1964. Distributional atlas of calanoid copepods in the California Current region, Part I.
No. 3. Alvarino, A., 1965. Distributional atlas of Chaetognatha in the California Current region.
No. 4. Wyllie, J.G., 1966. Geostrophic flow of the California Current at the surface and at 200 meters.
No. 5. Brinton, E., 1967. Distributional atlas of Euphausiacea (Crustacea) in the California Current region, Part I.
No. 6. McGowan, J.A., 1967. Distributional atlas of pelagic molluscs in the California Current region.
No. 7. Fleminger, A., 1967. Distributional atlas of calanoid copepods in the California Current region, Part II.
No. 8. Berner, L.D., 1967. Distributional atlas of Thaliacea in the California Current region.
No. 9. Kramer, D., and E. H. Ahlstrom, 1968. Distributional atlas of fish larvae in the California Current region: Northern Anchovy, *Engraulis mordax* (Girard). 1951 through 1965.
No. 10. Isaacs, J.D., A. Fleminger and J. K. Miller, 1969. Distributional atlas of zooplankton biomass in the California Current region: Spring and Fall 1955-1959.
No. 11. Ahlstrom, E. H., 1969. Distributional atlas of fish larvae in the California Current region: jack mackerel, *Trachurus symmetricus*, and Pacific hake, *Merluccius productus*, 1951 through 1966.
No. 12. Kramer, D., 1970, Distributional atlas of fish eggs and larvae in the California Current region: Pacific sardine, *Sardinops caerulea* (Girard). 1951 through 1966.
No. 13. Smith, P. E., 1971. Distributional atlas of zooplankton volume in the California Current region, 1951 through 1966.
No. 14. Isaacs, J. D., A. Fleminger and J. K. Miller, 1971. Distributional atlas of zooplankton biomass in the California Current region: Winter 1955-1959.
No. 15. Wyllie, J.G., and R.J. Lynn, 1971. Distribution of temperature and salinity at 10 meters, 1960-1969 and mean temperature, salinity and oxygen at 150 meters, 1950-1968 in the California Current.
No. 16. Crowe, F. J. and R. A. Schwartzlose, 1972. Release and recovery records of drift bottles in the California Current region, 1955 through 1971.
No. 17. Ahlstrom, E. H., 1972. Distributional atlas of fish larvae in the California Current region: six common mesopelagic fishes—*Vinciguerria lucetia, Triphoturus mexicanus. Stenobrachius leucopsarus, Leuroglossus stilbius, Bathylagus wesethi* and *Bathylagus ochotensis*. 1955 through 1960.
No. 18. Brinton, E., 1973. Distributional atlas of Euphausiacea (Crustacea) in the California Current region. Part II.

No. 19. Bowman, T. E. and M. W. Johnson, 1973. Distributional atlas of calanoid copepods in the California Current region, 1949 and 1950.

No. 20. Thomas, W. H. and D. L. R. Seibert, 1974. Distribution of nitrate, nitrite, phosphate and silicate in the California Current Region, 1969.
Owen, R. W., Jr., 1974. Distribution of primary production, plant pigments and Secchi depth in the California Current region, 1969.
Smith, P. E., 1974. Distribution of zooplankton volumes in the California Current region, 1969.

No. 21. Fleminger, A., J.D. Isaacs and J. G. Wyllie, 1974. Zooplankton biomass measurements from CalCOFI cruises of July 1955 to 1959 and remarks on comparison with results from October, January, and April cruises of 1955 to 1959.

No. 22. Namias, J., 1975. Northern hemisphere seasonal sea level pressure and anomaly charts, 1947-1974.

No. 23. Ahlstrom, E. H. and H. G. Moser, 1975. Distributional atlas of fish larvae in the California Current region: Flatfishes, 1955 through 1960.

No. 24. Brinton, E., and J. G. Wyllie. Distributional atlas of euphausiid growth stages off southern California, 1953 through 1956.

No. 25. Eber, L. E. Contoured depth-time charts (0 to 200m, 1950 to 1966) of temperature, salinity, oxygen and sigma-t at 23 CalCOFI stations in the California Current.

[1] Usually abbreviated CalCOFI, sometimes CALCOFI or CCOFI.
[2] Formerly called U.S. Fish and Wildlife Service, Bureau of Commercial Fisheries.
[3] For citation this issue in the series should be referred to as CalCOFI Atlas No. 25.

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CONTOURED DEPTH-TIME CHARTS (0 TO 200m, 1950 TO 1966) OF TEMPERATURE, SALINITY, OXYGEN AND SIGMA-T AT 23 CALCOFI STATIONS IN THE CALIFORNIA CURRENT.

L.E. Eber

CALCOFI ATLAS NO. 25

A. Fleminger and J. G. Wyllie, Editors
Marine Life Research Program
Scripps Institution of Oceanography
La Jolla, California

June, 1977

CONTOURED DEPTH-TIME CHARTS (0 TO 200m, 1950 TO 1966) OF TEMPERATURE, SALINITY, OXYGEN AND SIGMA-T AT 23 CALCOFI STATIONS IN THE CALIFORNIA CURRENT.

L. E. Eber[1]

CONTENTS

Introduction

Oceanographic data taken on CalCOFI cruises have been presented in three previously published CalCOFI Atlases, Nos. 1, 4 and 15 (Anon. 1963; Wyllie 1966; Wyllie and Lynn 1971). Two of these (Nos. 1 and 15) deal principally with horizontal distributions of temperature and salinity at 10 meters for individual CalCOFI cruises from 1949 through 1969. Atlas No. 15 also contains monthly mean charts of temperature, salinity and oxygen at 150 meters. Atlas No. 4 depicts geostrophic flow at the surface and 200 meters by month and for individual cruises from April 1949 through April 1965.

This atlas depicts the variation with time of temperature, salinity, oxygen and sigma-t in the upper 200 meters, at 23 stations in the CalCOFI area. The stations were selected to provide representative coverage of conditions both along and across the path of the mean current. Their locations are shown on the CalCOFI basic station plan (chart 1). The lines along which stations are occupied run perpendicular to the coast and are spaced 40 n mi (74 km) apart. In the conventional CalCOFI numbering system, a decimal point is used to separate line number, to the left, from station number, to the right. With the exception of chart 1, the decimal point has been omitted from the CalCOFI station number in this atlas and three digits each are used to designate line and station. Thus, station 90.45 (station 45 on line 90), in conventional notation, appears as 090045. The station numbers are given on the charts below each panel on the left hand side, following the parameter designation.

The time series are ordered sequentially by station number along each of five CalCOFI lines, 60, 80, 90, 100 and 120. Stations 60, 70 and 90 were selected for all five lines; other station selections were based on considerations of inshore coverage and frequency of occupancy. Stations 53 and 55 on line 90 were considered to be the same for the purpose of constructing the time series and are identified herein as station 090054. In general, only one of these two stations was occupied by a cruise. The frequency of occupancy by month is given for each station in Table 1. Although the source data extended from 1950 to 1968, the time sections were limited to the period 1950 to 1966, owing to the infrequency of cruises in subsequent years.

[1] Southwest Fisheries Center, National Marine Fisheries Service, La Jolla, California.

Table 1. Frequency of occupancy by month during 1950-1968.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
060060	12	2	2	11	5	9	14	4	4	6	4	1
060070	8	2	2	10	3	6	13	4	4	6	4	1
060090	8	2	2	9	7	7	12	3	4	5	4	1
080055	14	12	9	13	7	10	11	5	6	9	7	5
080060	14	10	10	15	5	14	10	6	5	8	6	5
080070	13	12	7	13	6	10	13	6	6	10	4	6
080090	12	8	7	13	6	12	13	5	5	9	2	5
090028	11	8	5	11	6	11	12	6	7	12	7	7
090037	14	12	8	15	8	14	15	5	9	12	5	8
090045	10	12	7	14	10	12	13	6	7	12	6	7
090054	11	10	8	13	8	11	13	6	9	12	8	7
090060	10	12	6	13	7	12	14	7	7	11	6	7
090070	10	13	7	13	8	11	15	7	7	12	5	6
090090	11	9	7	14	8	9	13	5	3	10	0	3
100030	11	8	4	10	5	7	14	4	3	10	4	4
100050	10	10	5	13	6	5	16	5	5	9	4	6
100060	12	9	7	12	6	7	16	6	3	8	5	5
100070	12	9	5	13	7	6	12	6	4	10	4	5
100090	9	8	6	14	7	6	12	1	3	8	2	1
120050	8	15	9	14	10	11	14	9	2	10	5	6
120060	6	12	5	14	6	6	14	10	2	9	5	6
120070	8	13	5	14	7	6	12	9	3	10	6	5
120090	4	11	5	9	7	4	11	7	3	9	5	2
Monthly totals	238	219	138	290	155	206	302	132	111	217	108	109

The charts are an outgrowth of a computer-based system to facilitate retrieval, analysis and presentation of CalCOFI oceanographic data (Eber and Wiley 1976). This system was developed following a set of guidelines and recommendations set forth principally by P. Smith, R. Owen, R. Lynn and R. Hewitt. The data processing for the present application, involving more than 900 computer runs, was performed by J. Metoyer.

The source data used for this atlas were obtained from magnetic tape files prepared in the format prescribed for the National Oceanographic Data Center (NODC). The interpolated values of parameters at standard depths, contained in these files, differ slightly from those published in Oceanographic Observations of the Pacific (1950-1959) and in the Physical and Chemical Data Report Series (Univ. of Calif., Scripps Institution of Oceanography 1961-1971). This resulted from different interpolation procedures. The observed values are the same in both cases, however, and the published data were used for reference in processing the NODC files.

Temperature, Salinity, Oxygen and Sigma-t Charts

The distributions of temperature, salinity, oxygen and sigma-t with depth and time are presented by means of contour plots in 4-year segments beginning on Chart 2. Each parameter occupies a separate panel. The corresponding anomalies from the monthly station mean are shown in similar fashion on facing pages.

The dots appearing in the panels indicate the actual observed depths at which temperature, salinity and oxygen were sampled. The contours were computed from standard (interpolated) depths. The dots were plotted at the month and year on the horizontal axis corresponding to the year-month code designating the cruise on which each station was occupied. Consequently, the elapsed time between successive occupancies of a station is not accurately represented by the horizontal displacement of dots on the time section.

The contours were generated and plotted by computer and reproduced unaltered except for thickening of selected contours, addition of hatching (on the anomaly charts), relocation of labels, etc. as needed for graphic enhancement. The method used for computing contour coordinates requires that the parameter field be defined at each point of a rectangular grid. The resolution of the parameter field afforded by a grid depends on the spacing between grid points, or grid interval. For this atlas, the grid intervals chosen were 10 meters along the depth (vertical) axis and 1 month along the time (horizontal) axis.

The procedure for fitting parameter values at standard depths[1] to grid points has been described in detail by Eber and Wiley (1976). Briefly, it consists of two steps: 1) vertical interpolation of the standard depth values to the 10-meter grid points, followed by 2) horizontal interpolation of 10-meter grid values to fill areas of missing data for cruises in which a station was not occupied. In step 2, a grid value was given weight on a decreasing scale out to $\pm$ 2 grid points at the same depth, subject to an additional constraint whereby the interpolation could not be carried across more than 2 months of missing data. Consequently, gaps appear in the contoured sections where the interval between successive occupancies of a station exceeded 2 months. In the horizontal interpolation, grid values were assigned a weighting factor of 12 for the grid point at which they were designated, and weights of 2 and 1, respectively, for adjacent grid points at ± 1 and ± 2 grid intervals on either side. This procedure effected some smoothing, which can result in a diminishing of horizontal gradients.

In cases where an occupied station was isolated in the time series by gaps of more than 2 months from both preceding and subsequent occupancies, the depths of contours for the respective parameters are indicated by short, horizontal line segments.

Instances of missing data within contoured portions of the sections are readily identified by the absence of dots. It should be noted that in such cases both phase and amplitude of seasonal fluctuations cannot be accurately represented by the contours. During the 1960's, when quarterly cruise schedules were adopted, this problem becomes more severe.

Monthly Means, Standard Deviations and Anomaly Charts

Monthly means of the four parameters were computed for standard depths at each station from all data available in the source file (1950-1968). For this purpose, each observation was classified according to the actual month the station was occupied, rather than the month designated by the cruise code, which could be different since cruises frequently overlapped adjacent months.

The monthly means for each station were fitted to a depth-time grid, preliminary to contouring, using the same method described for individual parameter values, except that the weight given to a mean for determination of grid point values was amplified in proportion to the number of observations (years) which it represented. This was done to suppress noise which might be introduced by monthly means representing only a few years. Referring to Table 1, it can be seen that the mean seasonal cycles computed in this manner are mainly determined by January or February, April, July and October due to a higher frequency of cruises in these months.

The contoured fields of mean monthly temperature, salinity, oxygen and sigma-t are presented for each station following the 16-year time series plots. As noted above, some of the lesser month-to-month variation depicted by the contours may reflect year-to-year differences rather than mean monthly changes, owing to insufficient data.

Mean seasonal charts of standard deviation with depth are presented for each station on facing pages, opposite the mean parameter charts. The contoured fields of standard deviation were prepared in the same way as described for the monthly mean parameter fields, from values of standard deviaiton computed at standard depths for each station. The formula used for this purpose was

$$\text{SDEV} = \sqrt{(\Sigma X_i^2 - (\Sigma X_i)^2/N)/N}$$

where X_i are the parameter values and N is the number of observations (years). There were some instances of $N = 1$, yielding a zero value for standard deviation. No special provision was made for such cases. Their effect on the contoured fields of standard deviation, however, is small owing to the procedure for fitting values to grid points in which the values are weighted according to the number of years (N) they represent.

The monthly mean parameter values at standard depths were used to compute anomalies. For this purpose, each monthly mean value was assigned to a specific day, taken as the average of the observation dates associated with that monthly mean. Then for each observation date, an interpolated mean was found, using the two monthly means which bracketed that date. The anomaly was obtained by subtracting the interpolated mean from the respective parameter value associated with the observation.

When a monthly mean for a station was missing,

[1]Standard depths are 0, 10, 20, 30, 50, 75, 100, 125, 150 and 200 meters.

meaning the station had not been occupied in that month, no anomaly was computed if the date of an observation fell between the assigned dates of the monthly means for the preceding and following months. The only cases of missing monthly means encountered in the preparation of this atlas involved station 090090 at which there were no observations at all for November, and station 120090 at which no oxygen values were obtained in December.

Departures from monthly means for temperature, salinity, oxygen and sigma-t are also presented as contoured fields in depth-time sections and appear on facing pages to those containing the corresponding parameter values. Areas represented by negative anomalies are distinguished by hatching.

The anomalies were computed at the standard depths for each station and cruise by subtracting monthly means, determined in advance for standard depths at each station, from the respective parameter values. These anomaly values were then fitted to the depth-time grid by vertical and horizontal interpolations as described in the preceding section. Consequently, the anomaly contours also reflect some horizontal smoothing which could diminish gradients and the magnitudes of maxima and minima in some cases.

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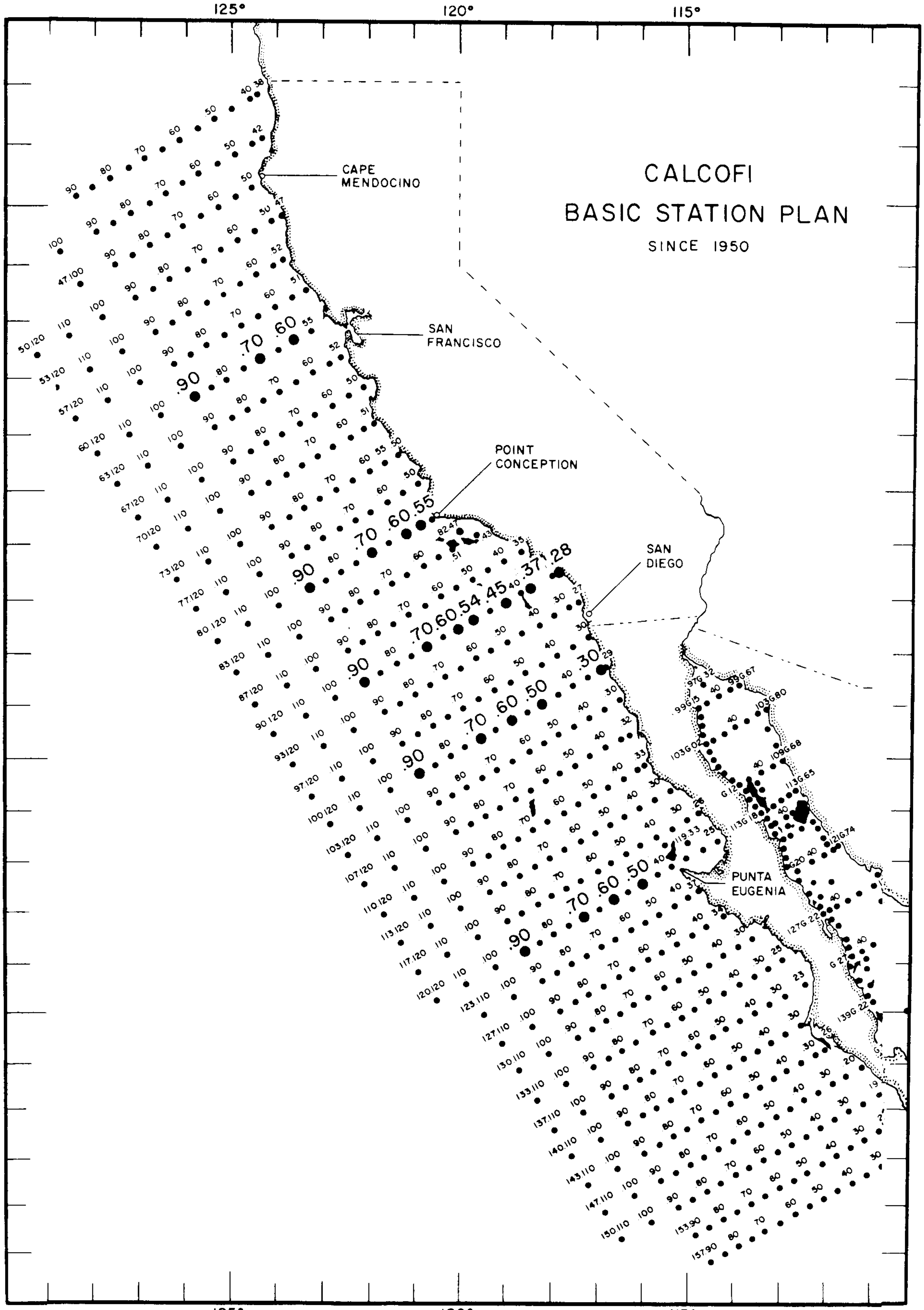

CALCOFI BASIC STATION PLAN
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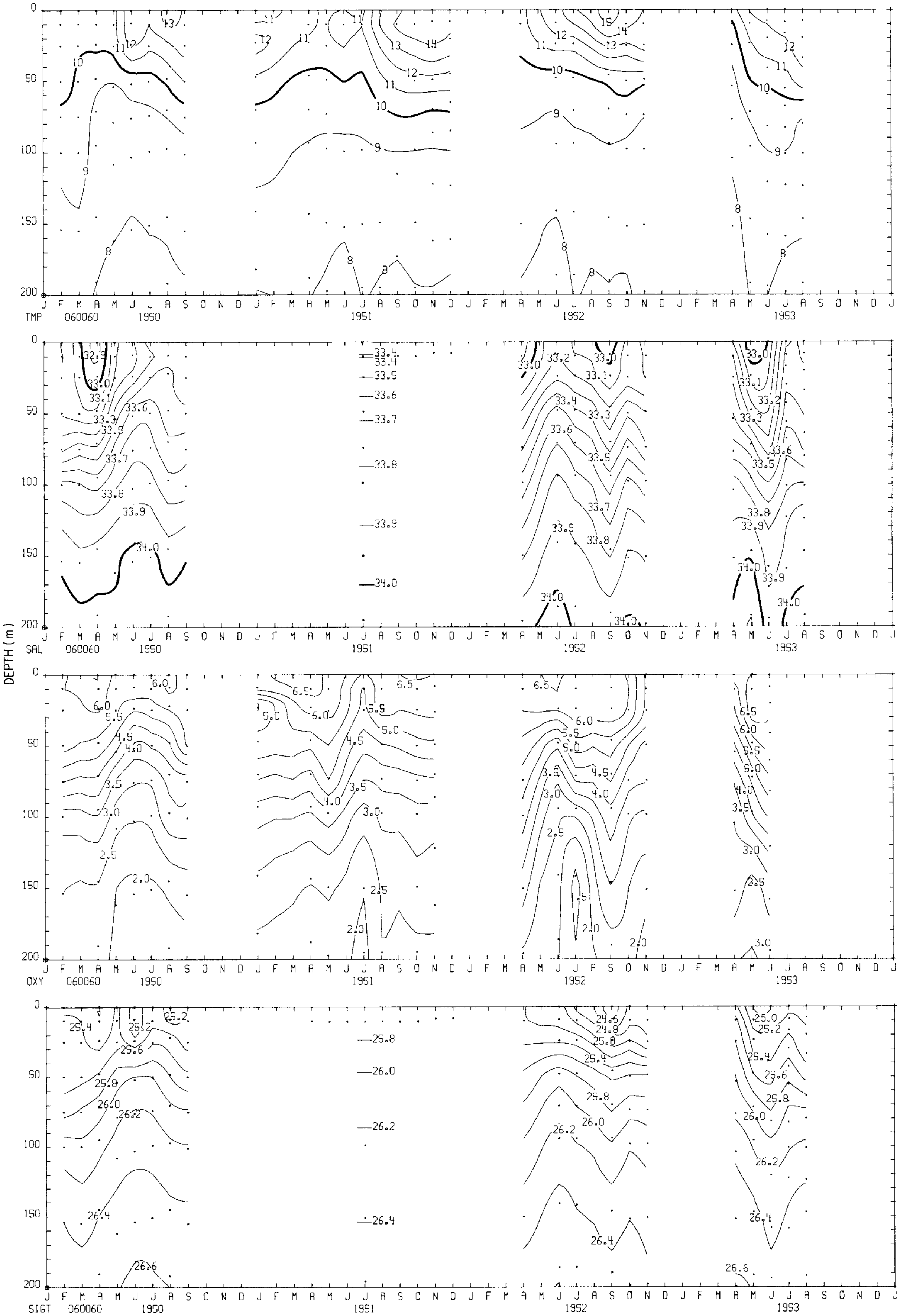
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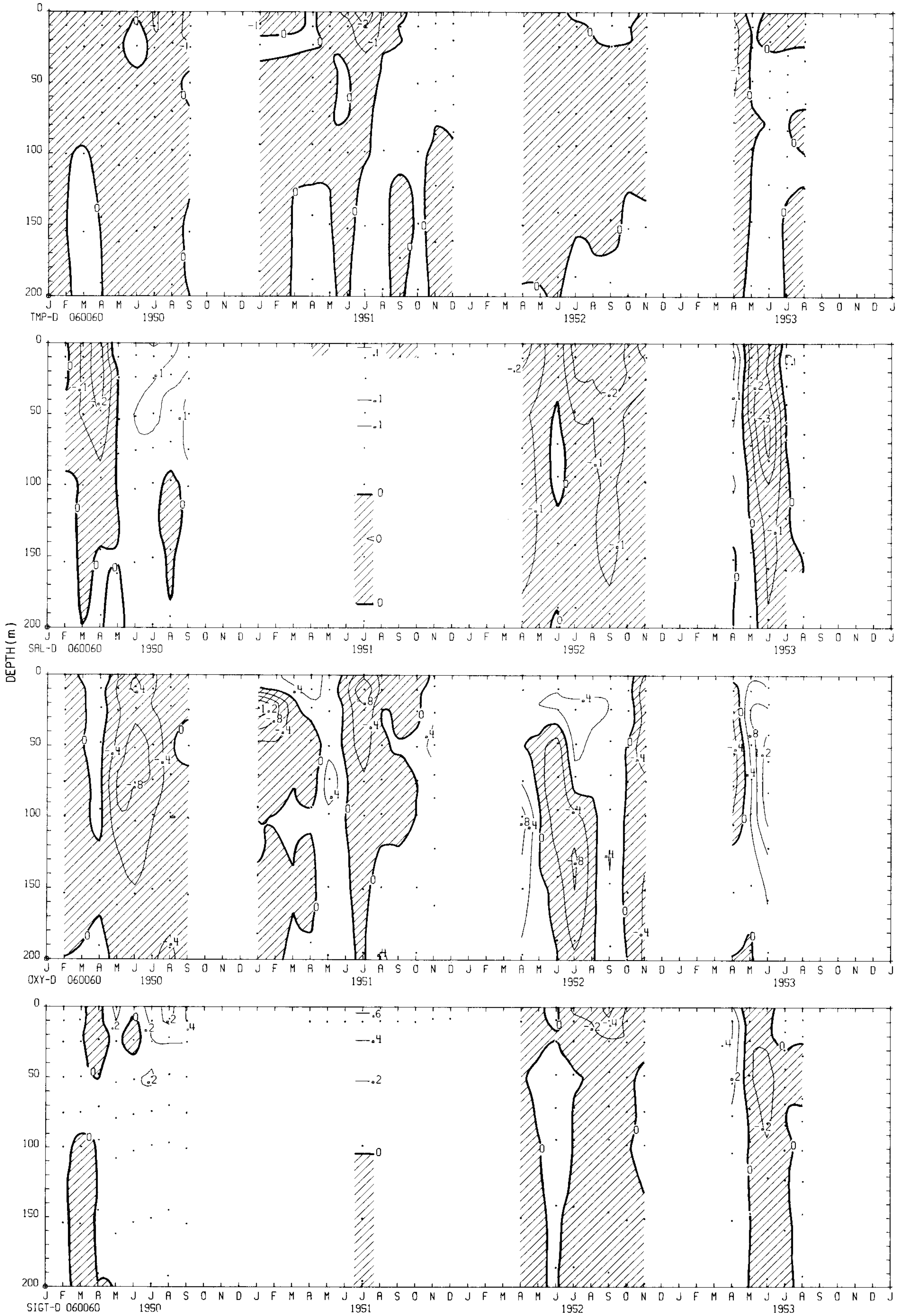
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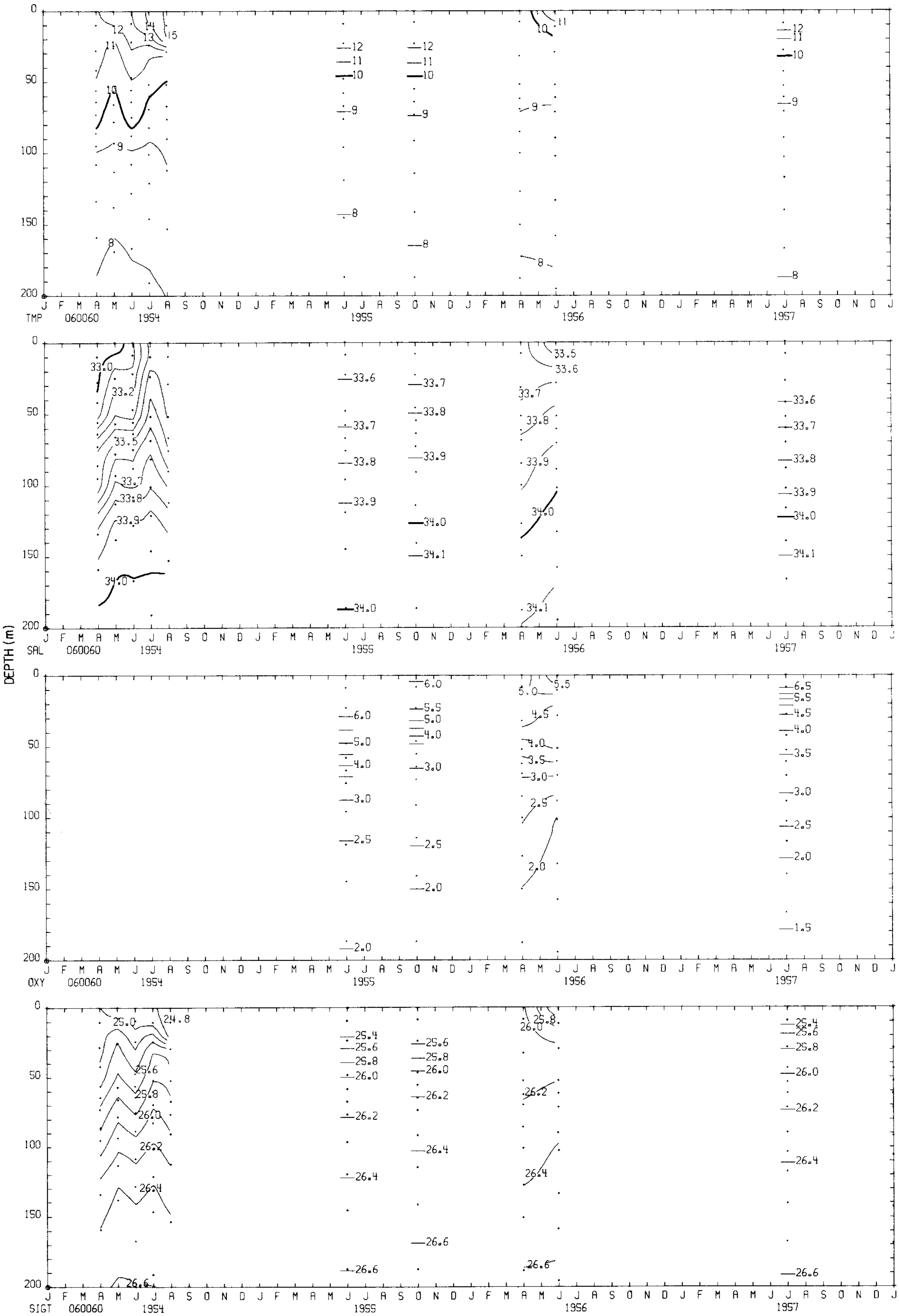
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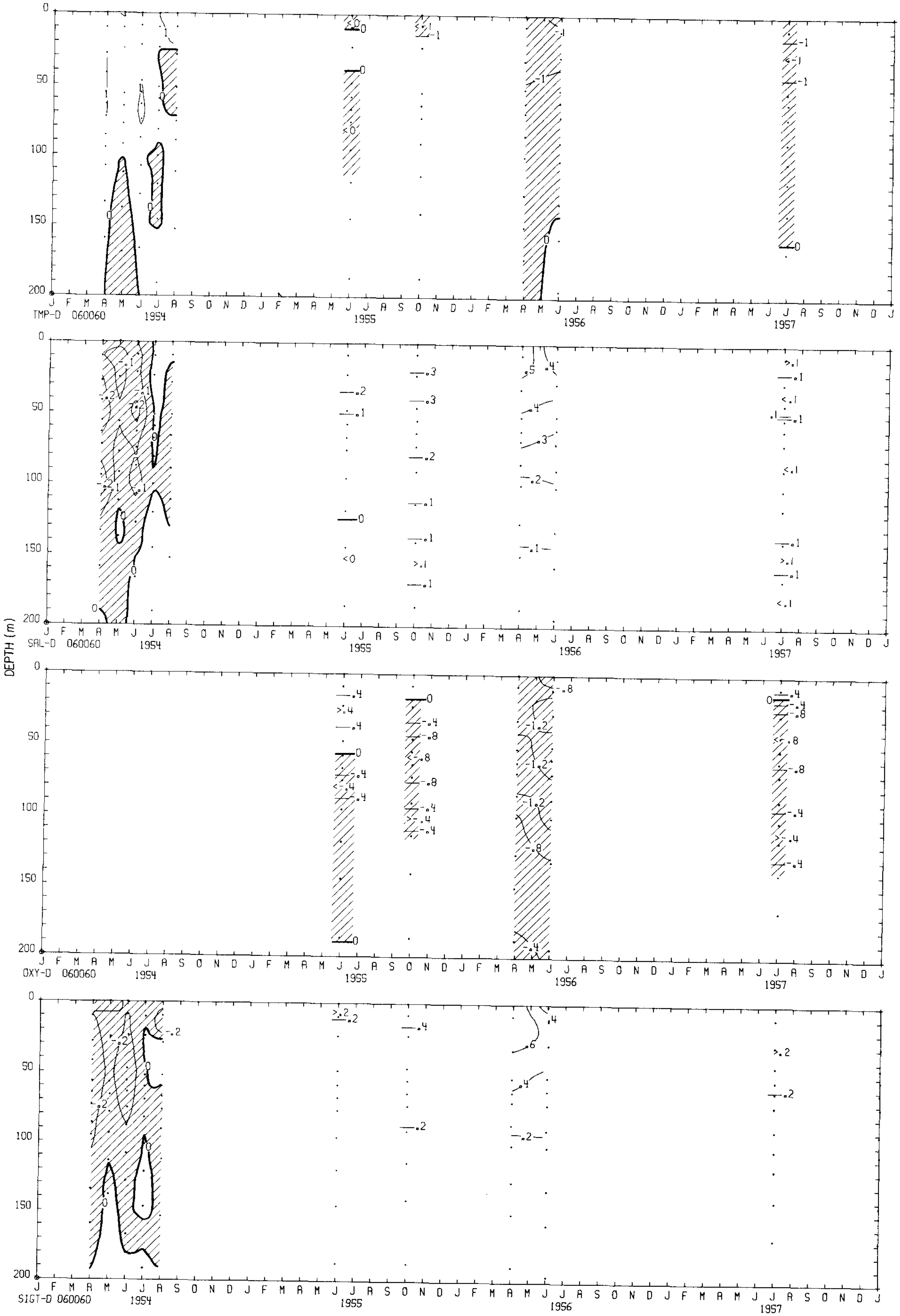
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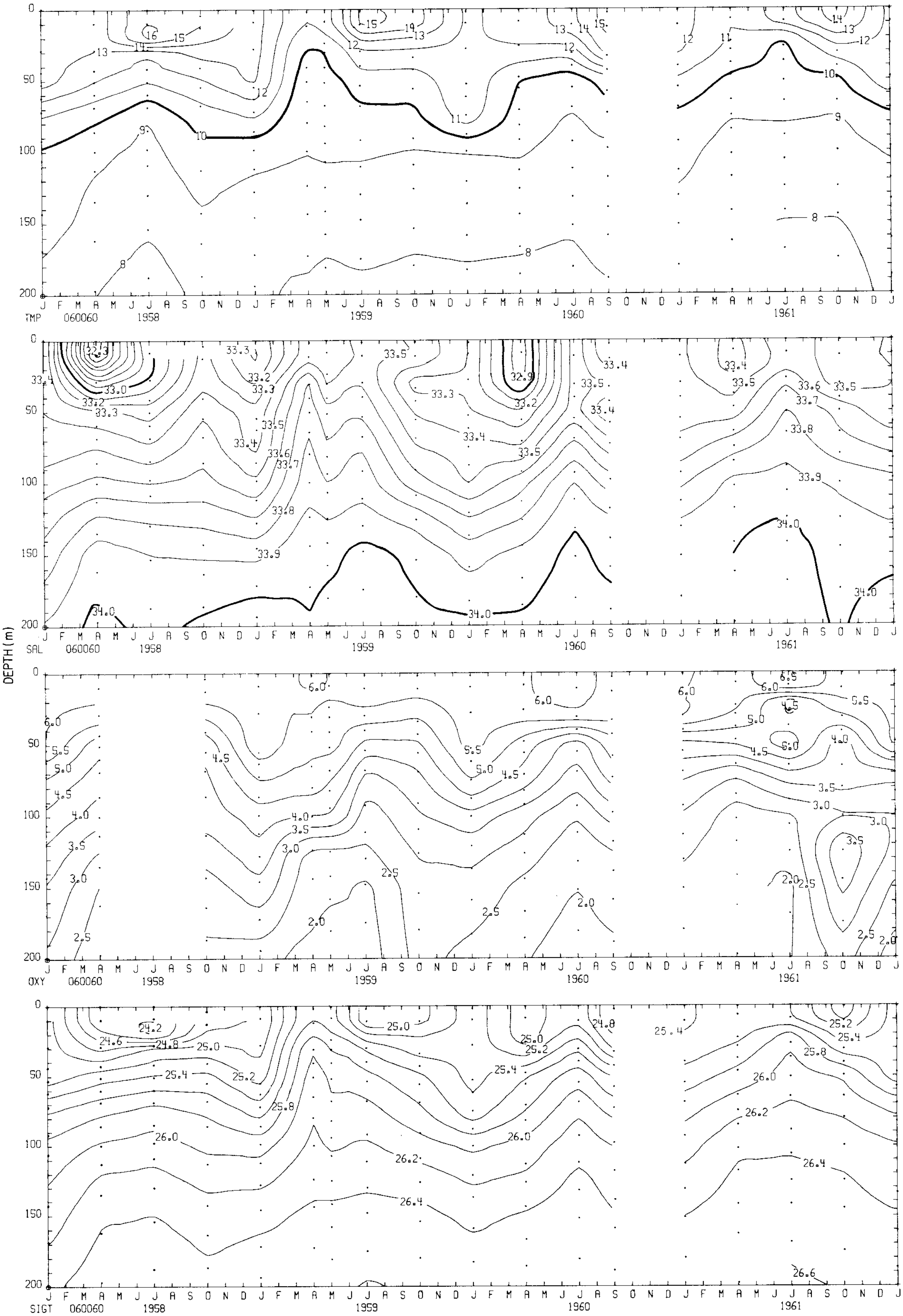
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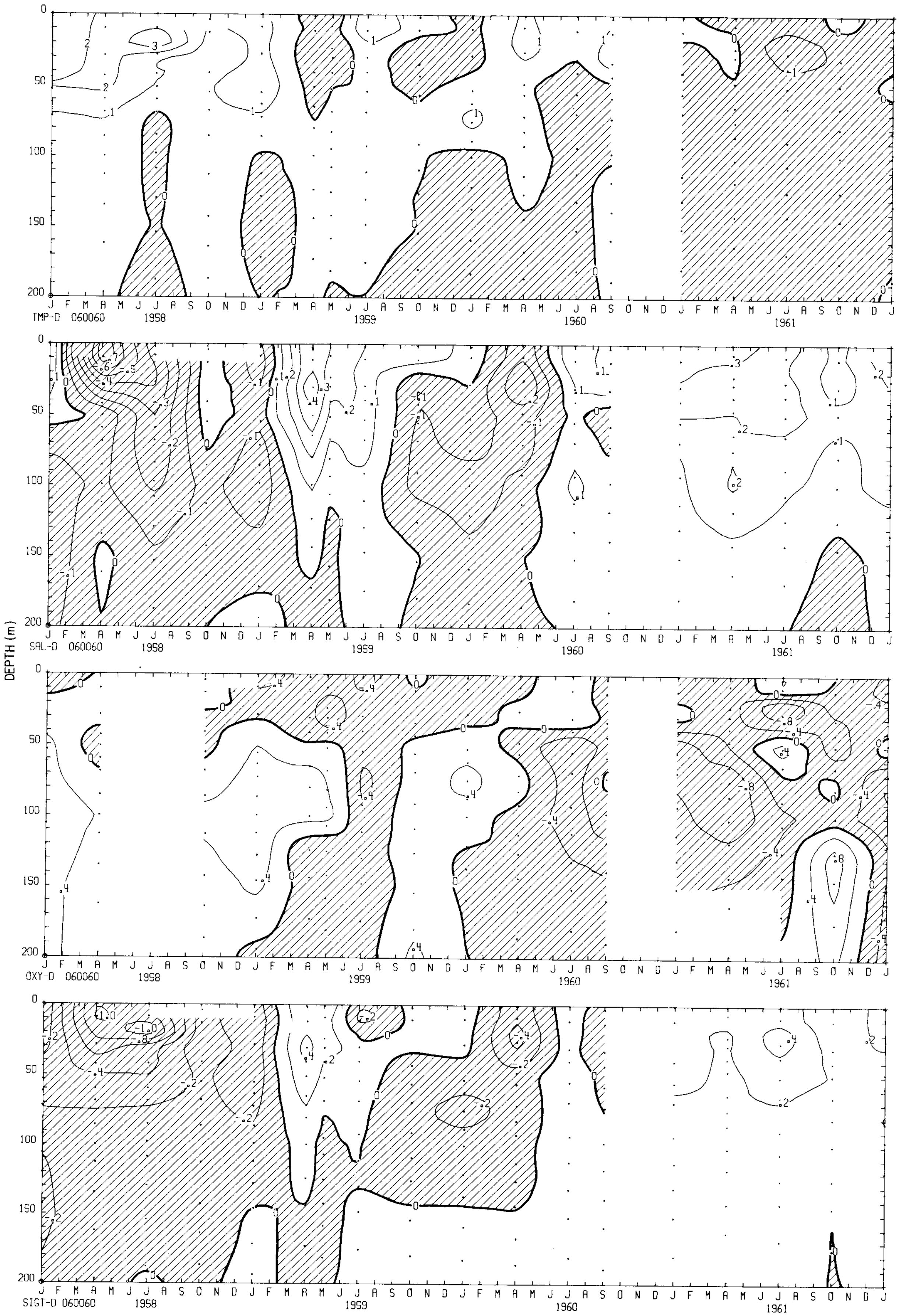
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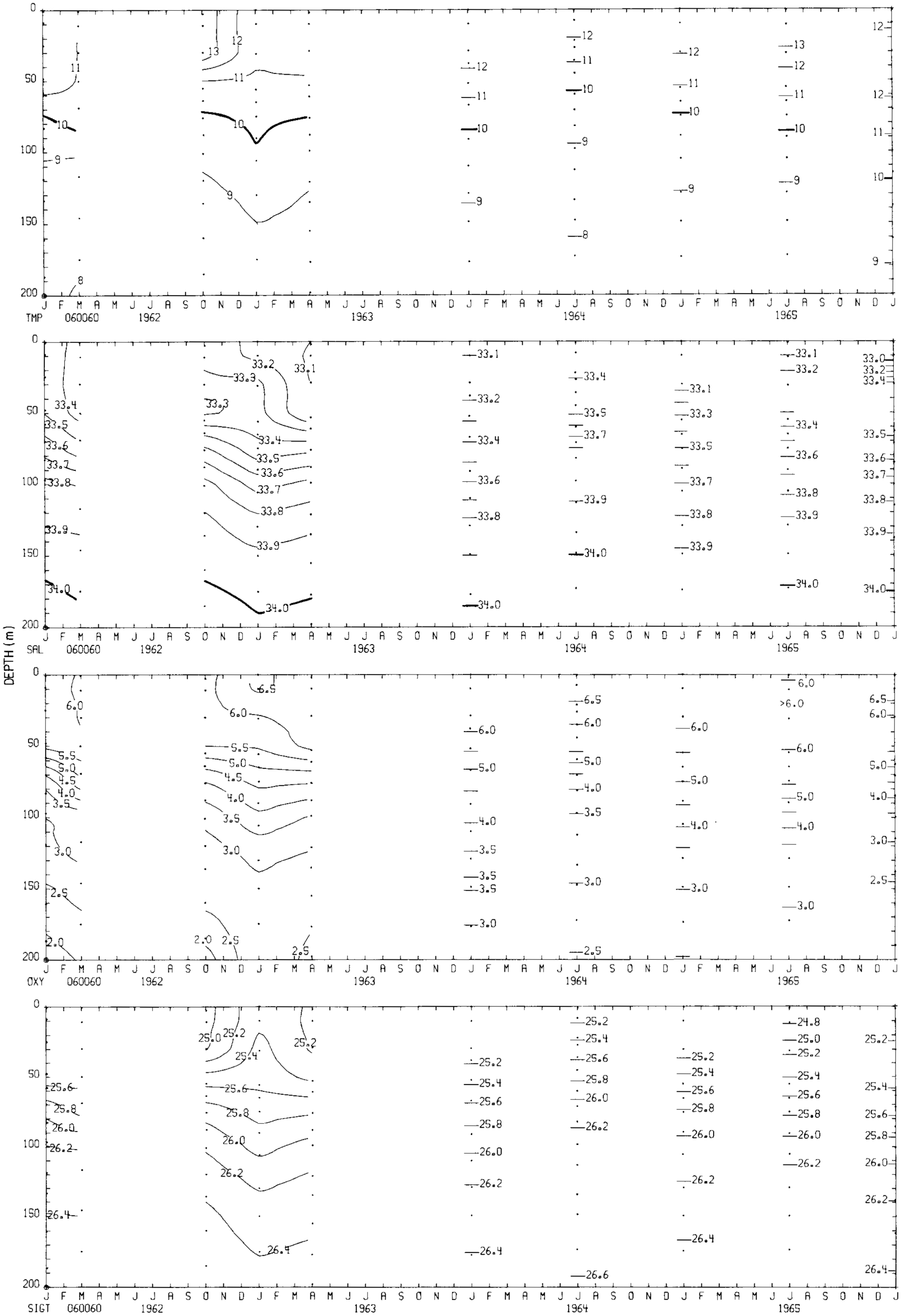
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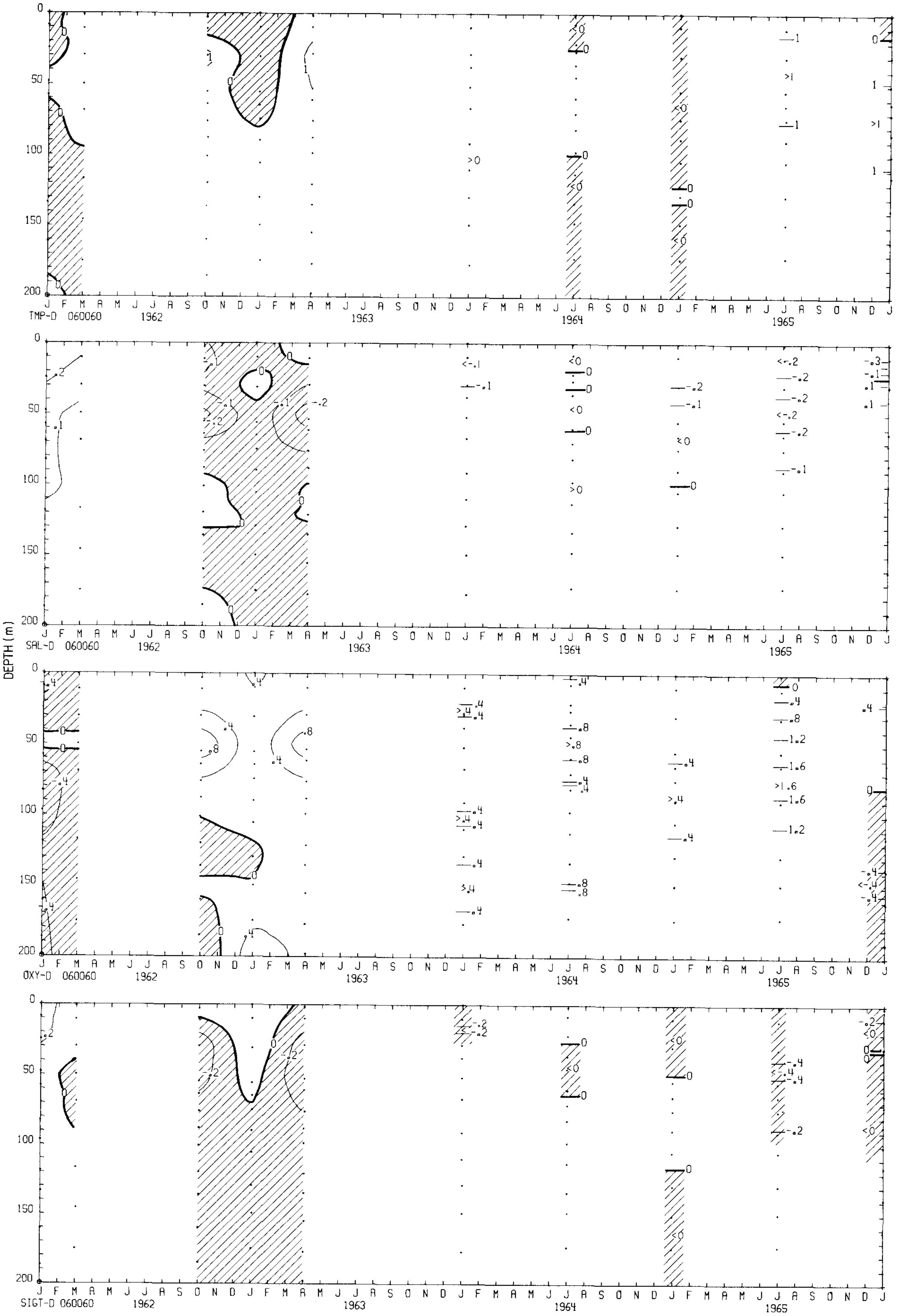
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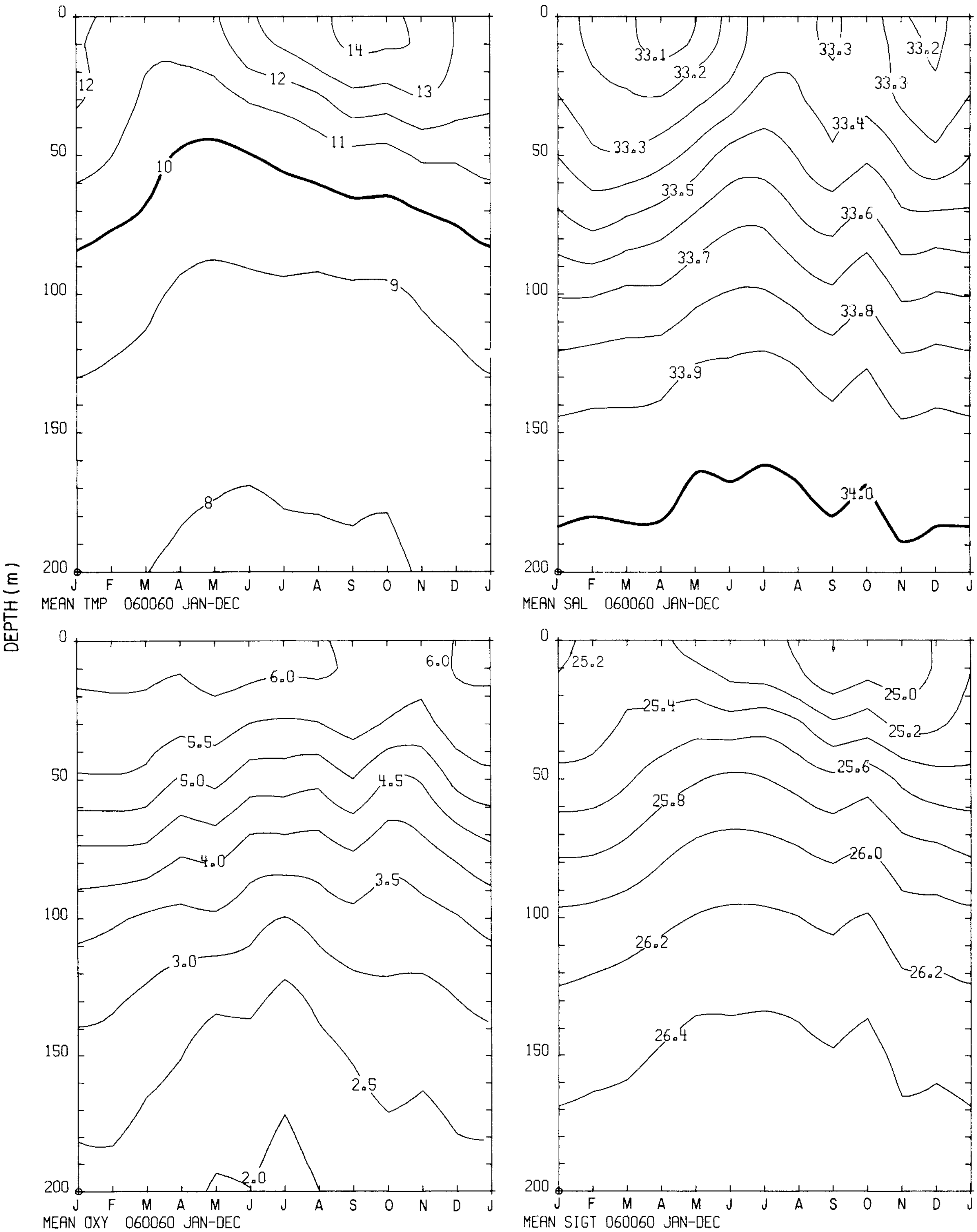
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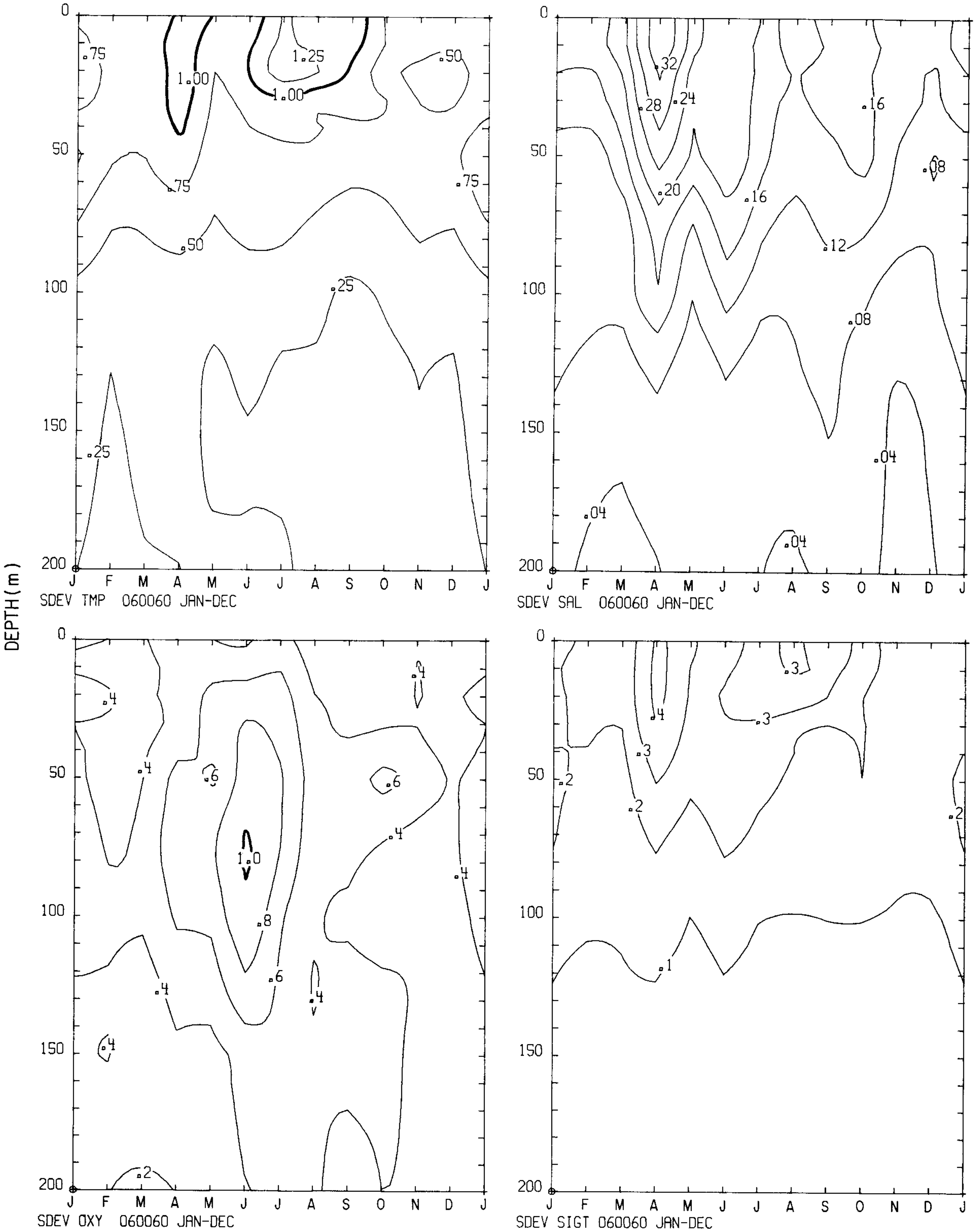
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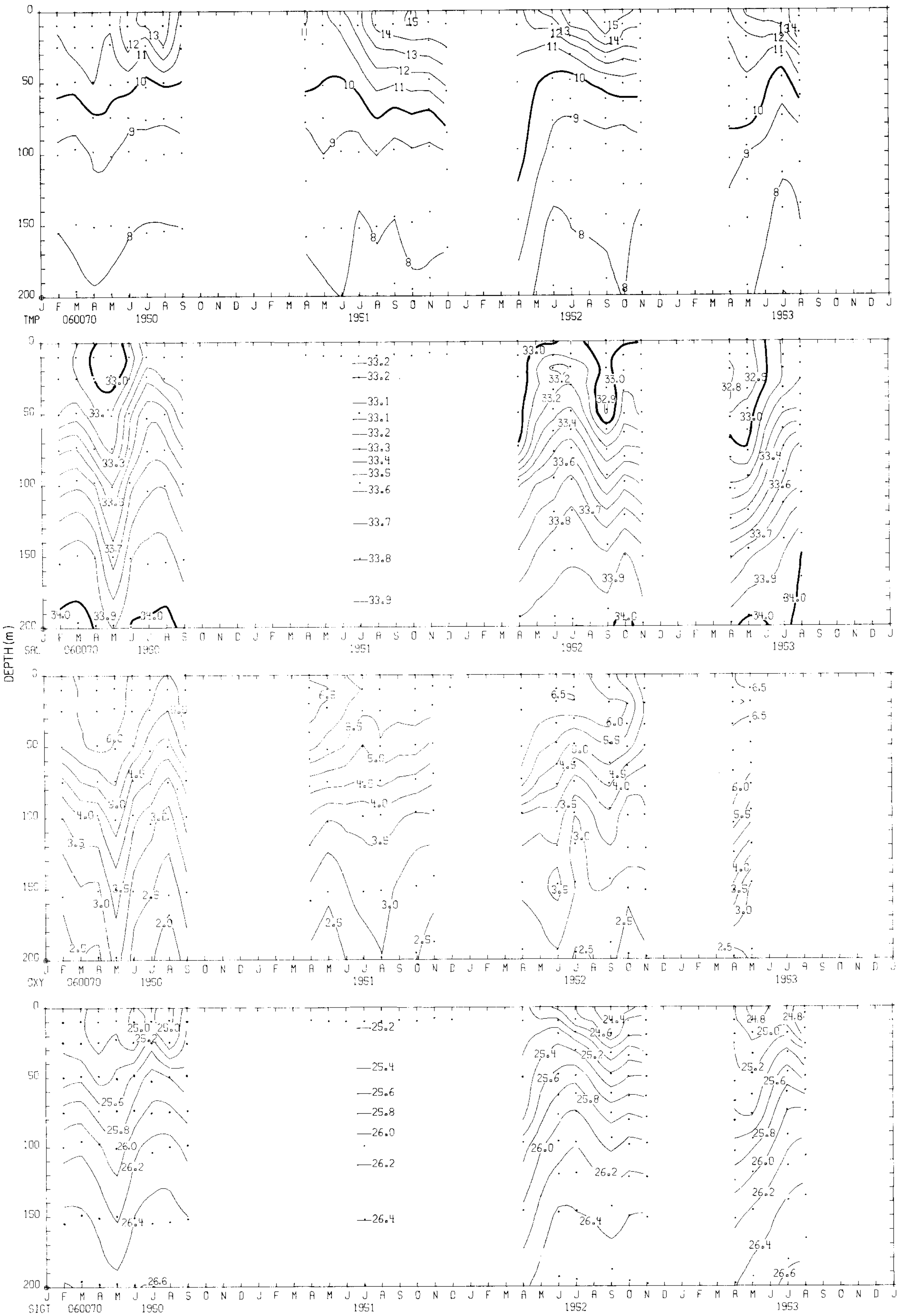
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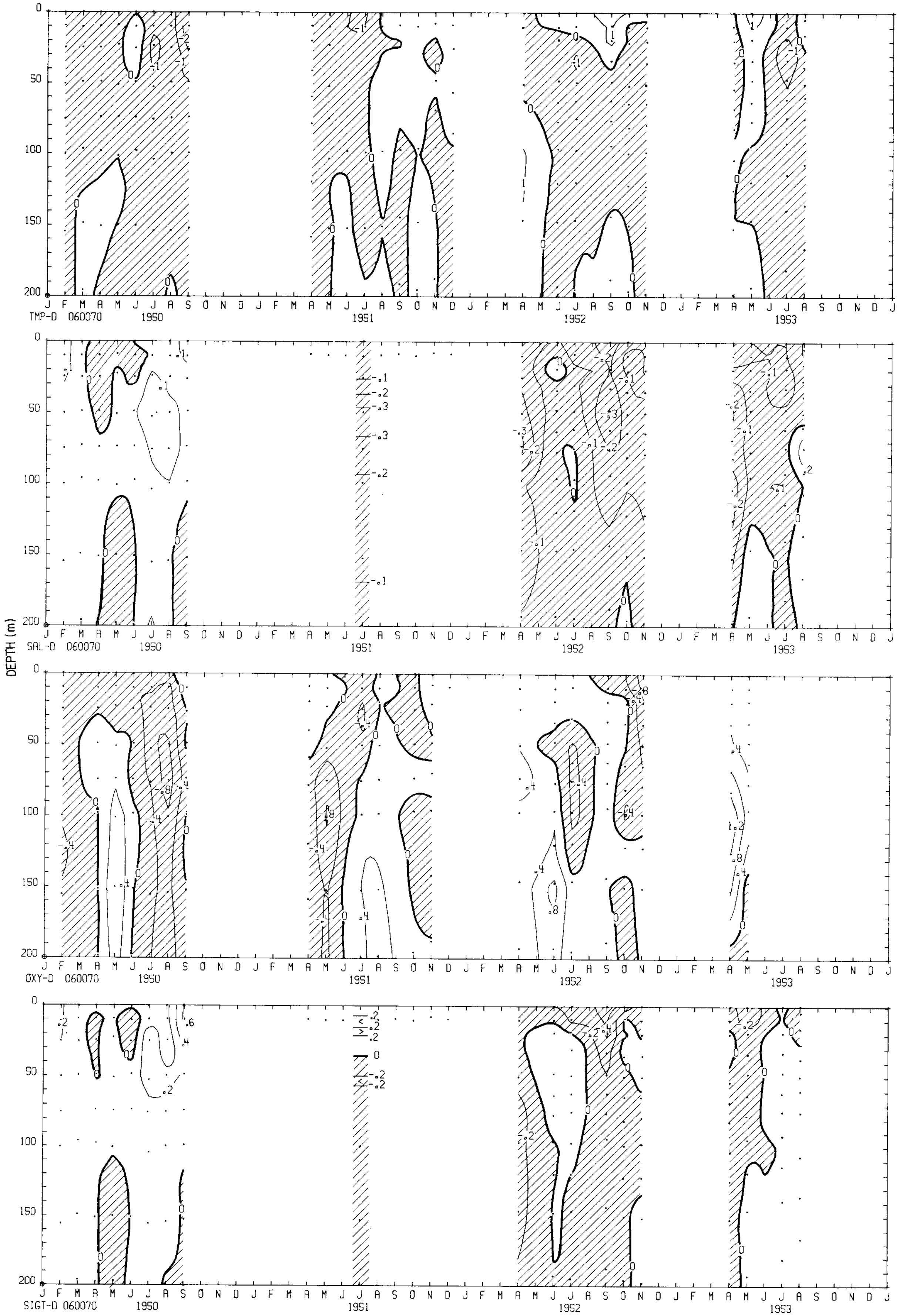
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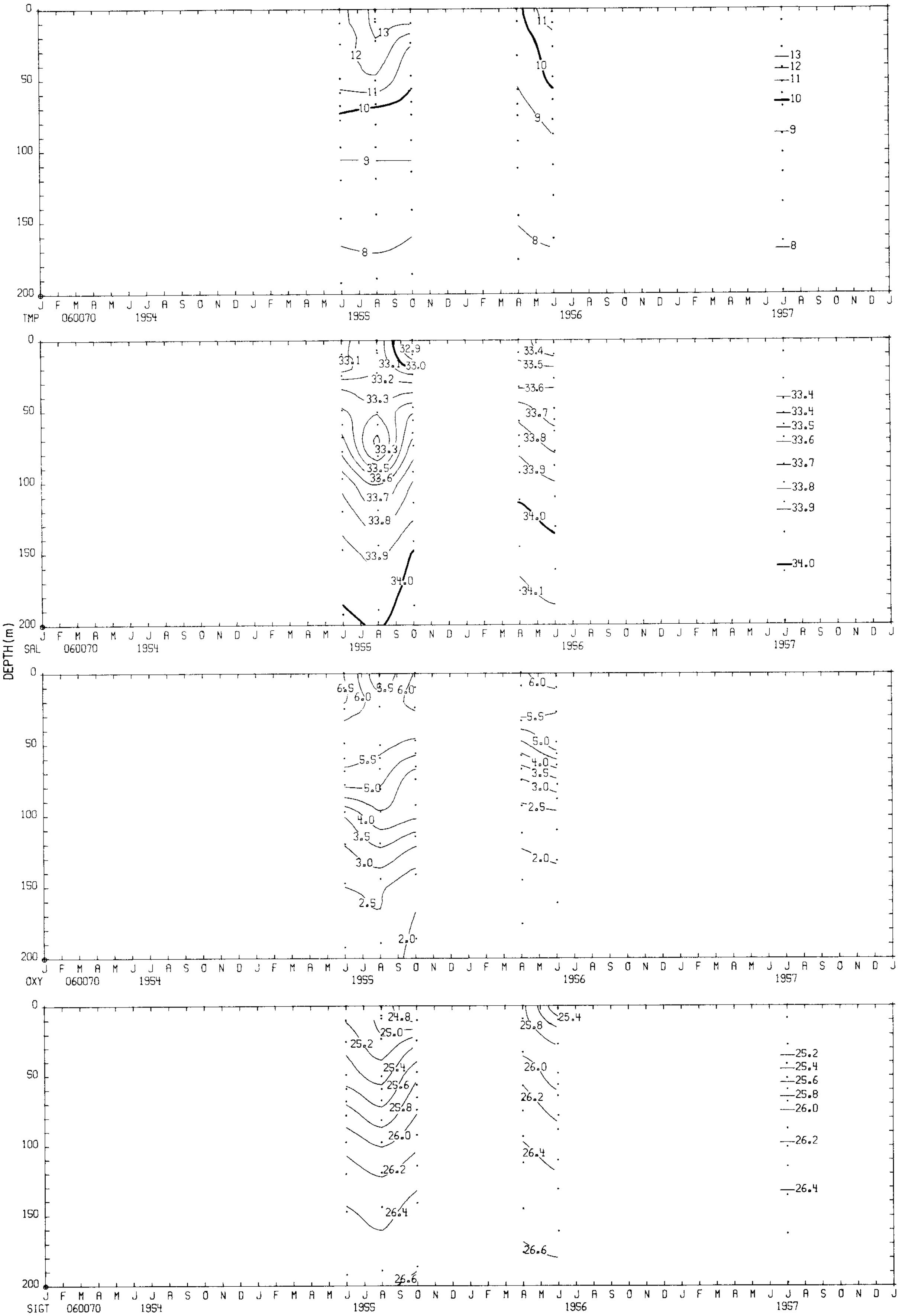
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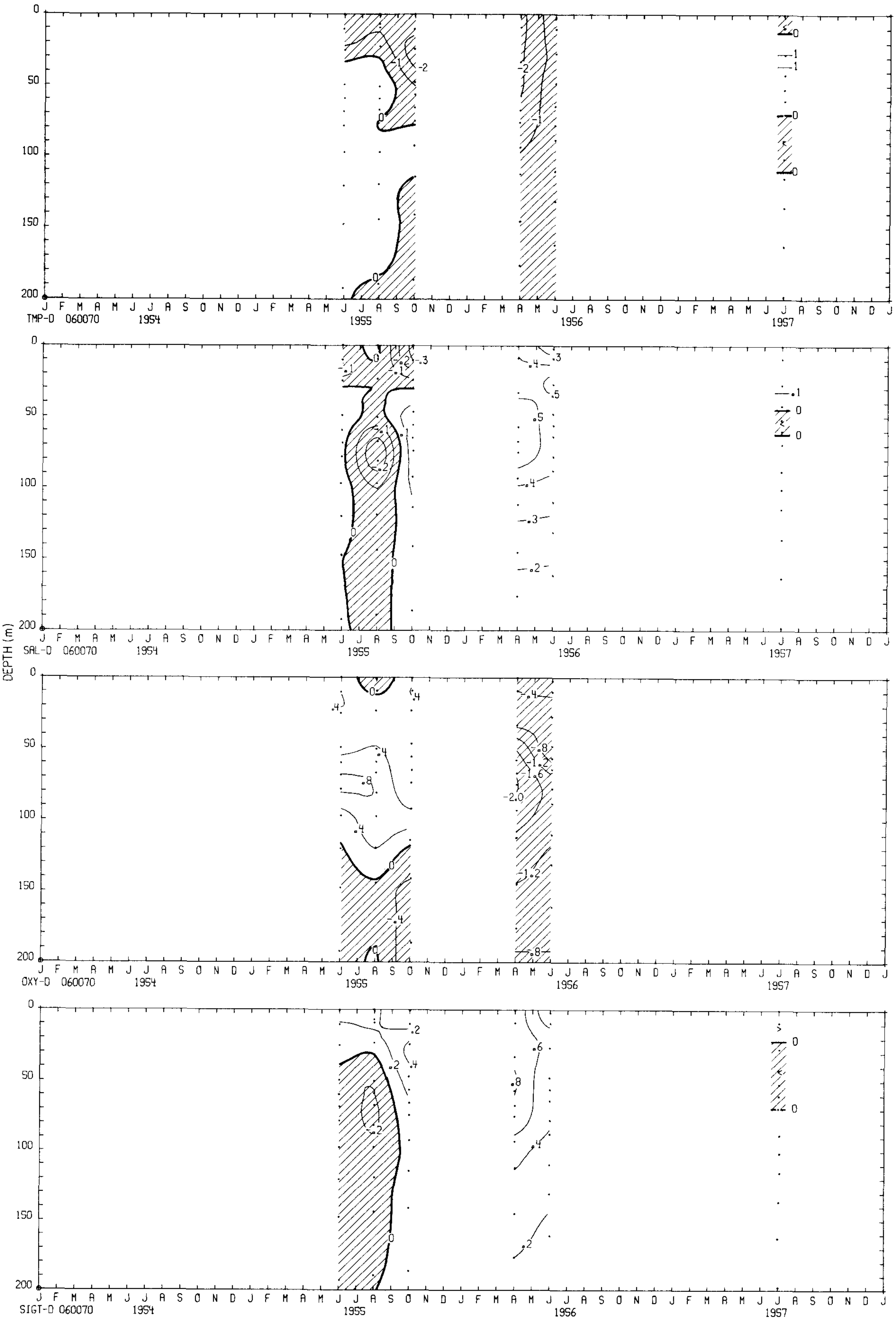
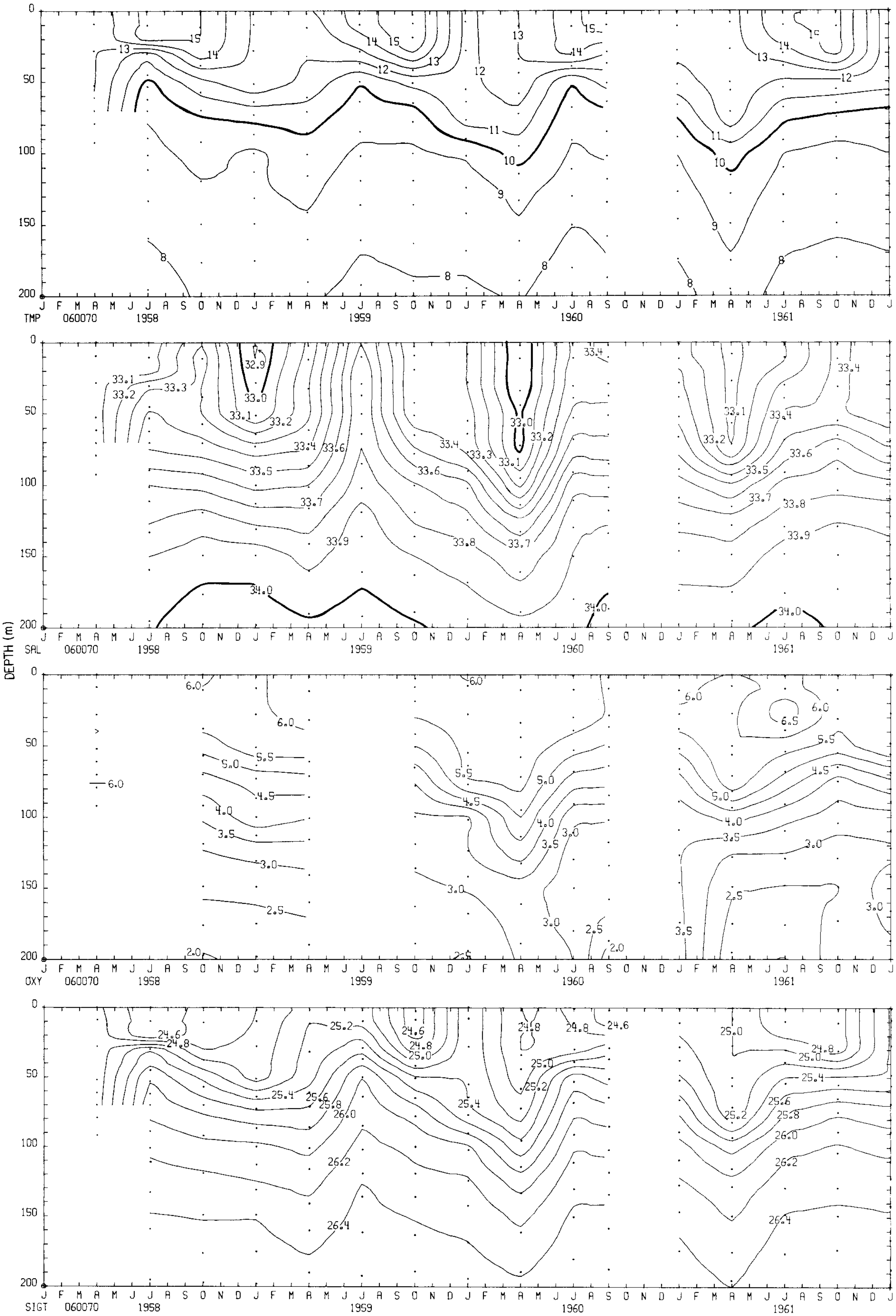
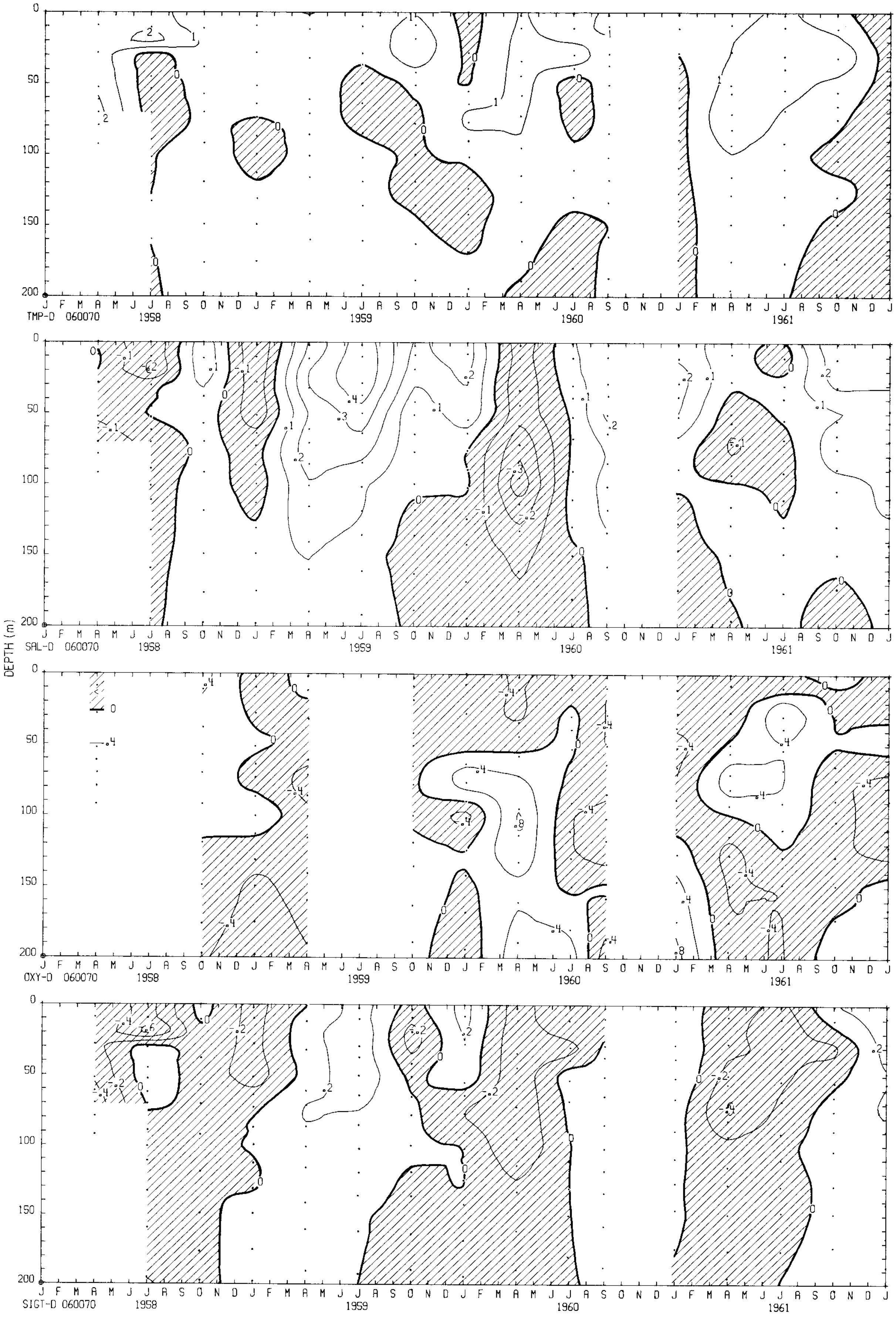
TMP 060070 1954 1955 1956 1957
SAL 060070 1954 1955 1956 1957
OXY 060070 1954 1955 1956 1957
SIGT 060070 1954 1955 1956 1957
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

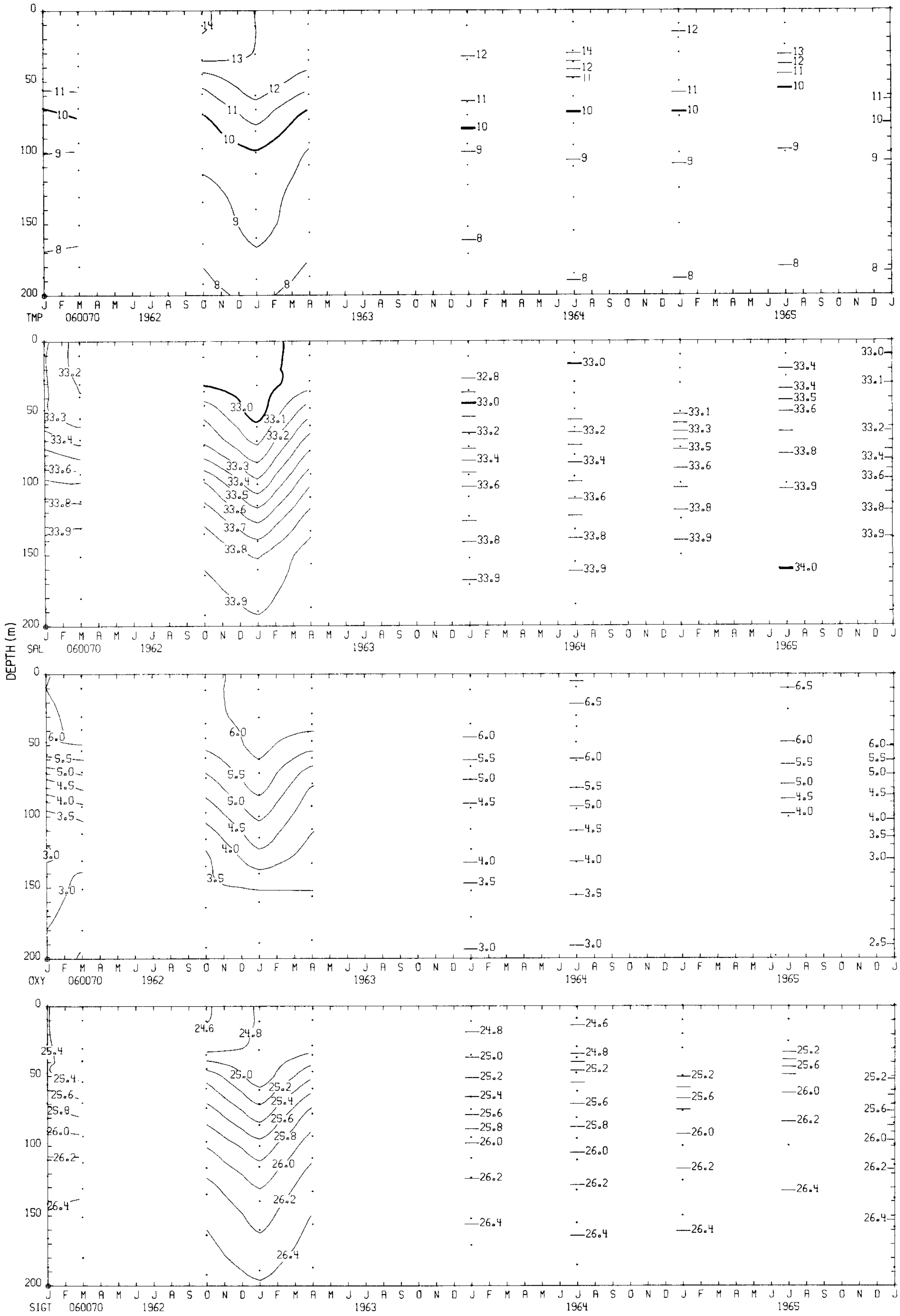


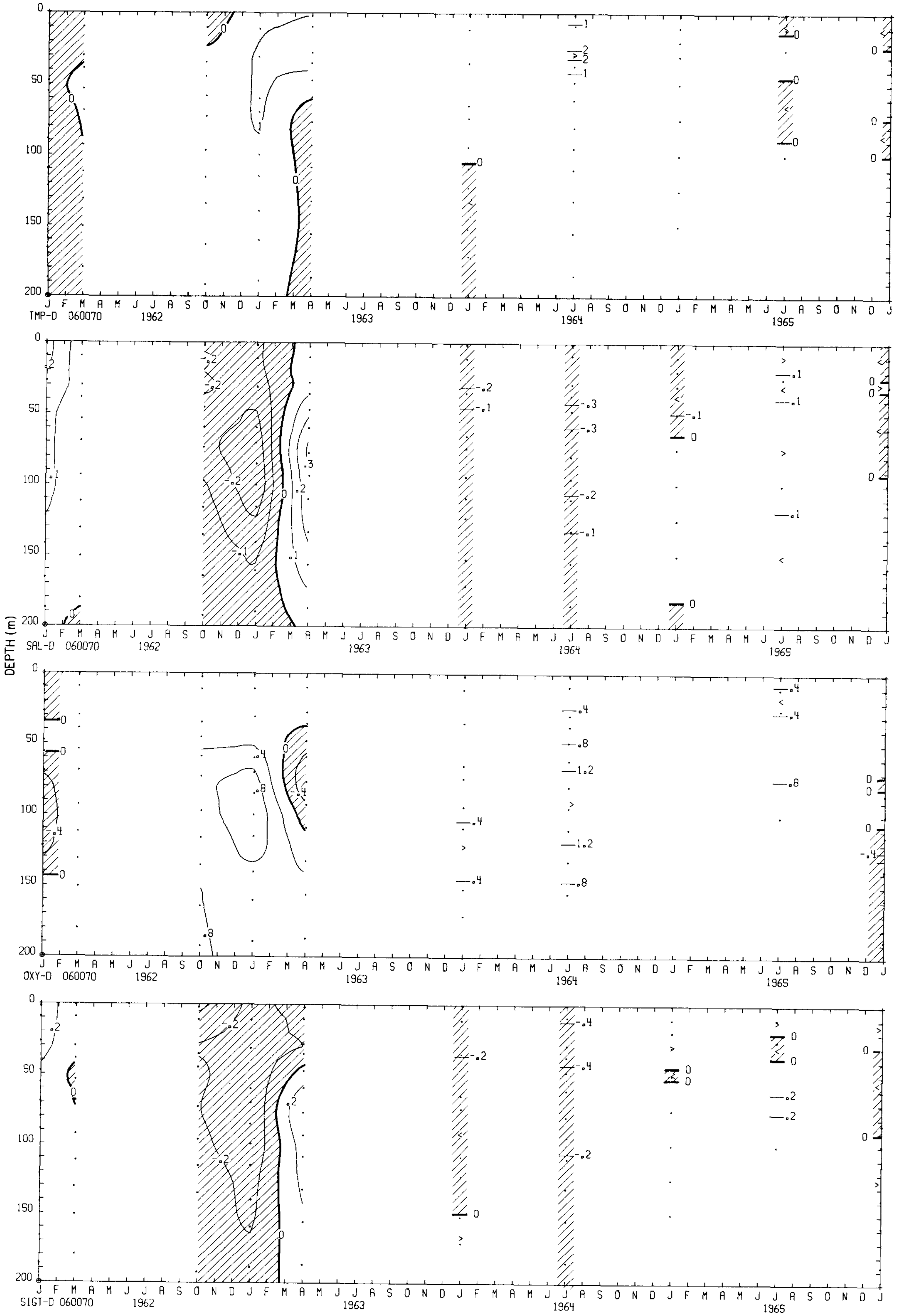
DEPTH (m)
TMP-D 060070
SAL-D 060070
OXY-D 060070
SIGT-D 060070
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1954
1955
1956
1957

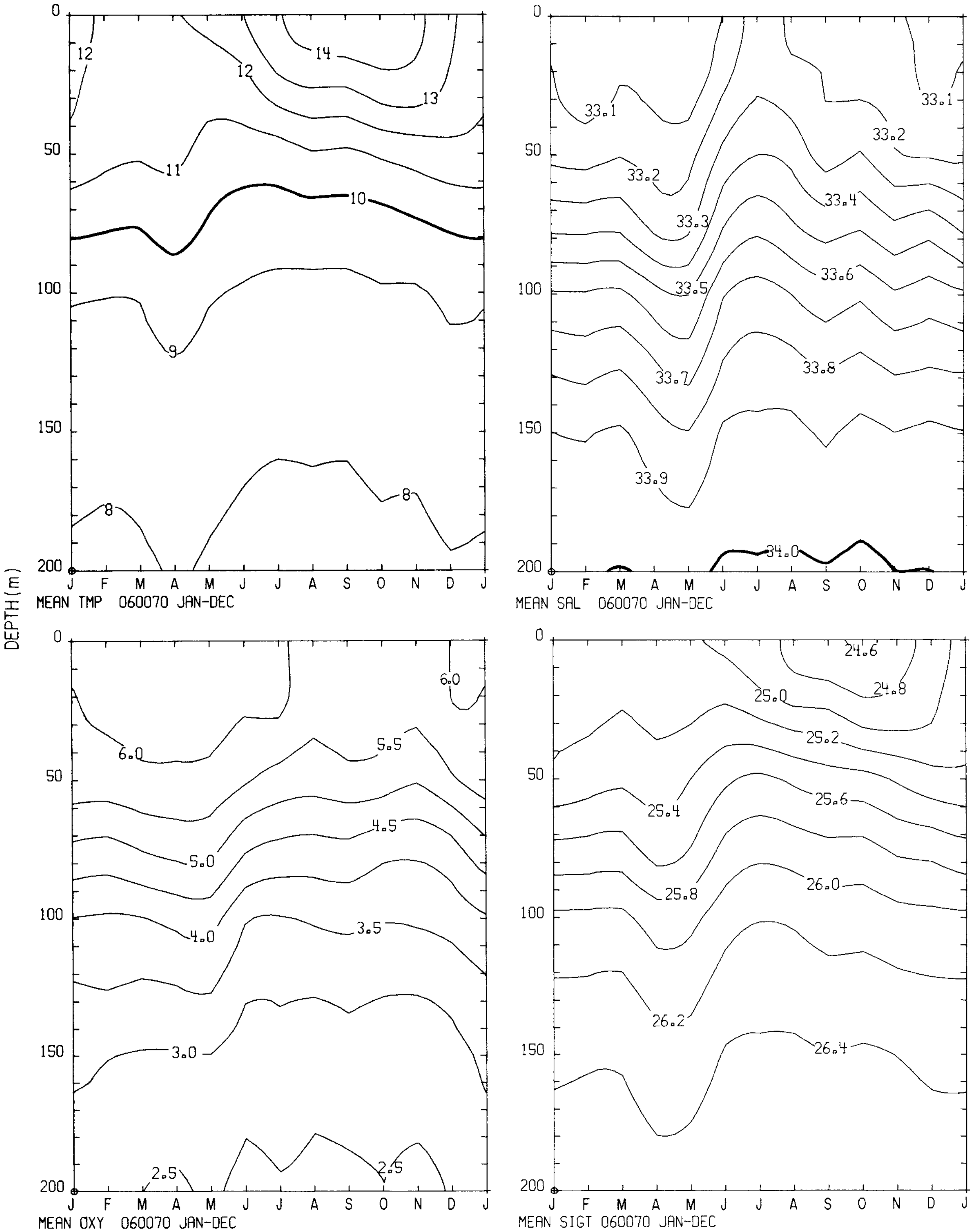

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 060070 1958 1959 1960 1961
SAL 060070 1958 1959 1960 1961
OXY 060070 1958 1959 1960 1961
SIGT 060070 1958 1959 1960 1961

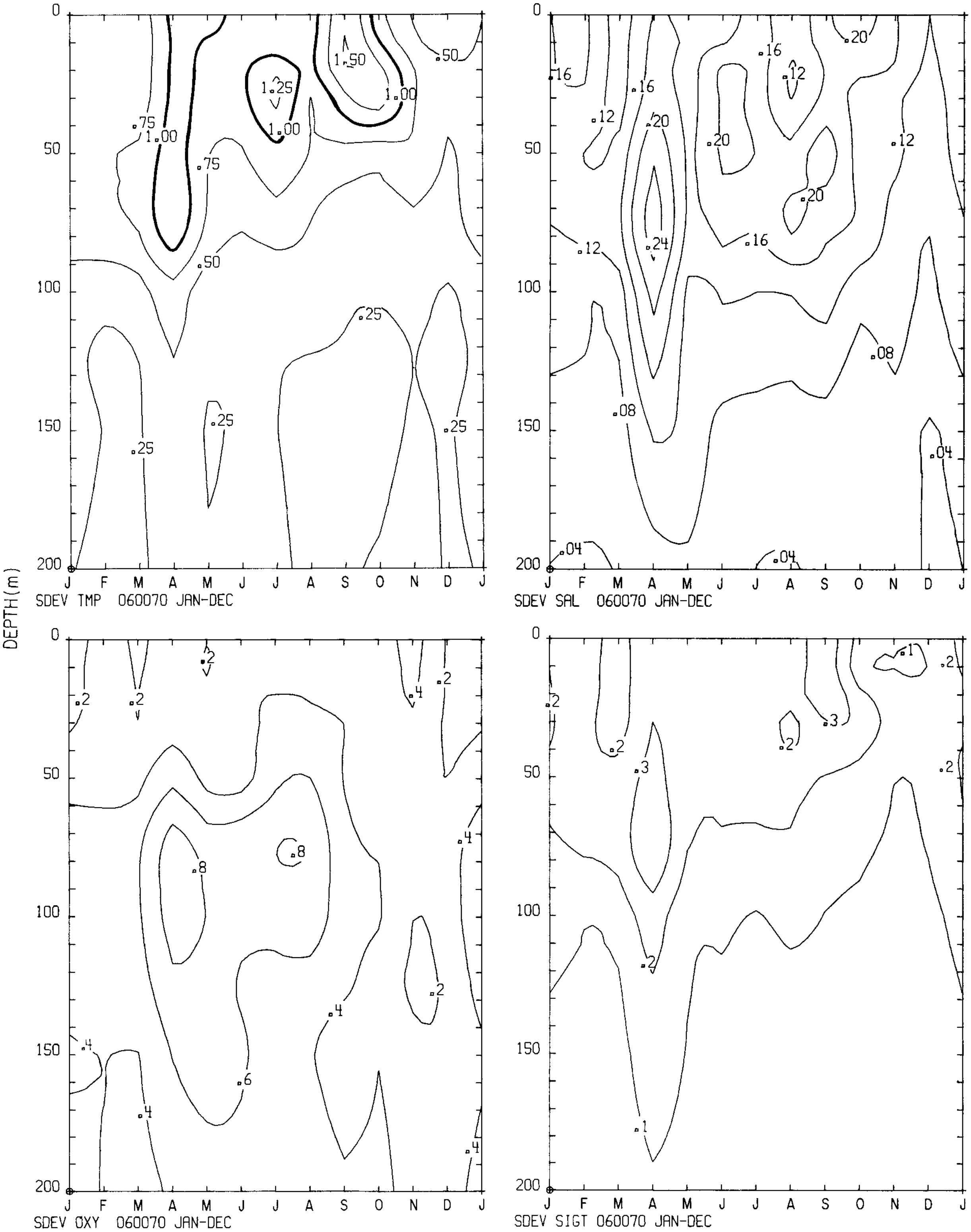


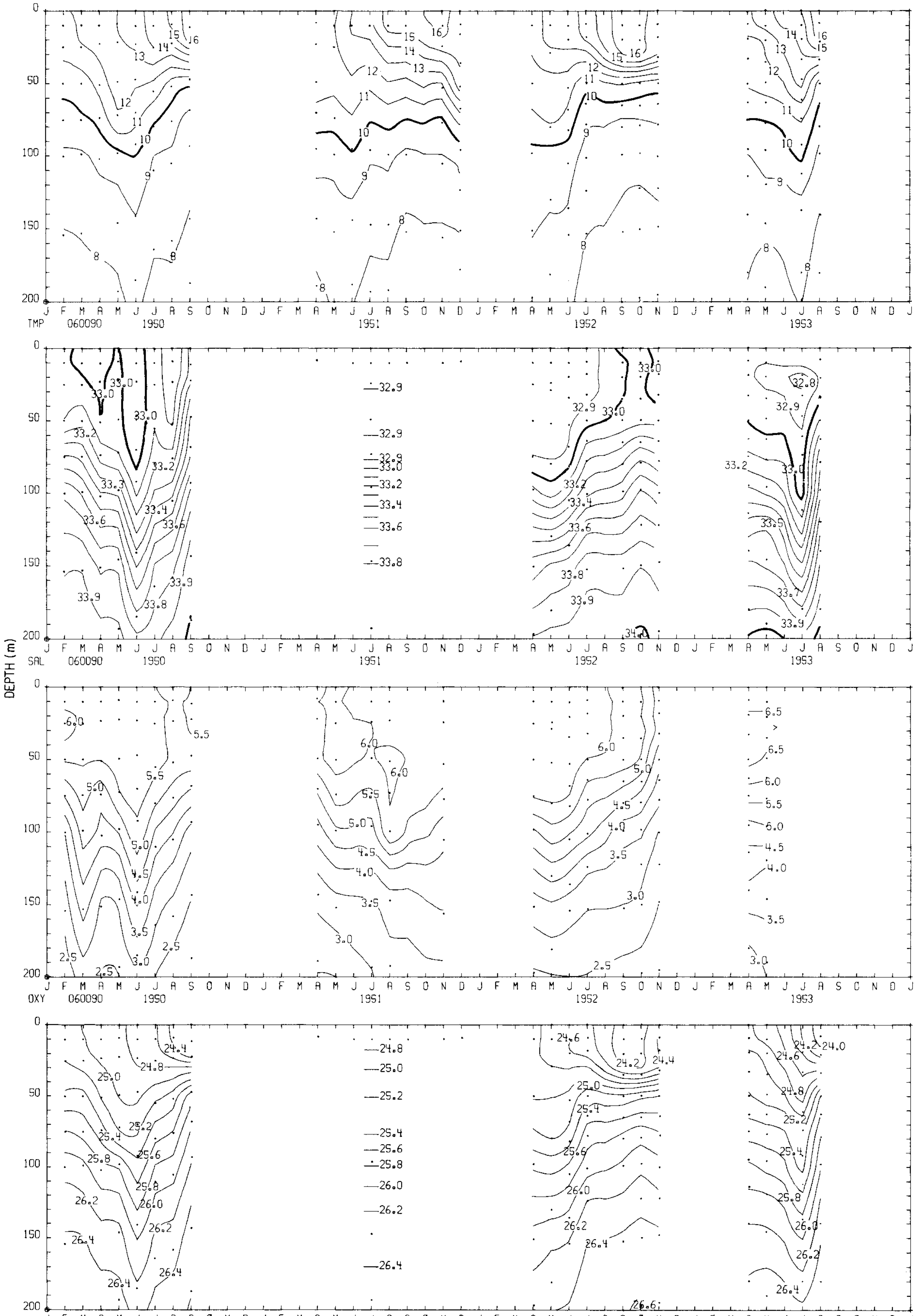
DEPTH (m)
TMP-D 060070
SAL-D 060070
OXY-D 060070
SIGT-D 060070
1958
1959
1960
1961
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
0
50
100
150
200

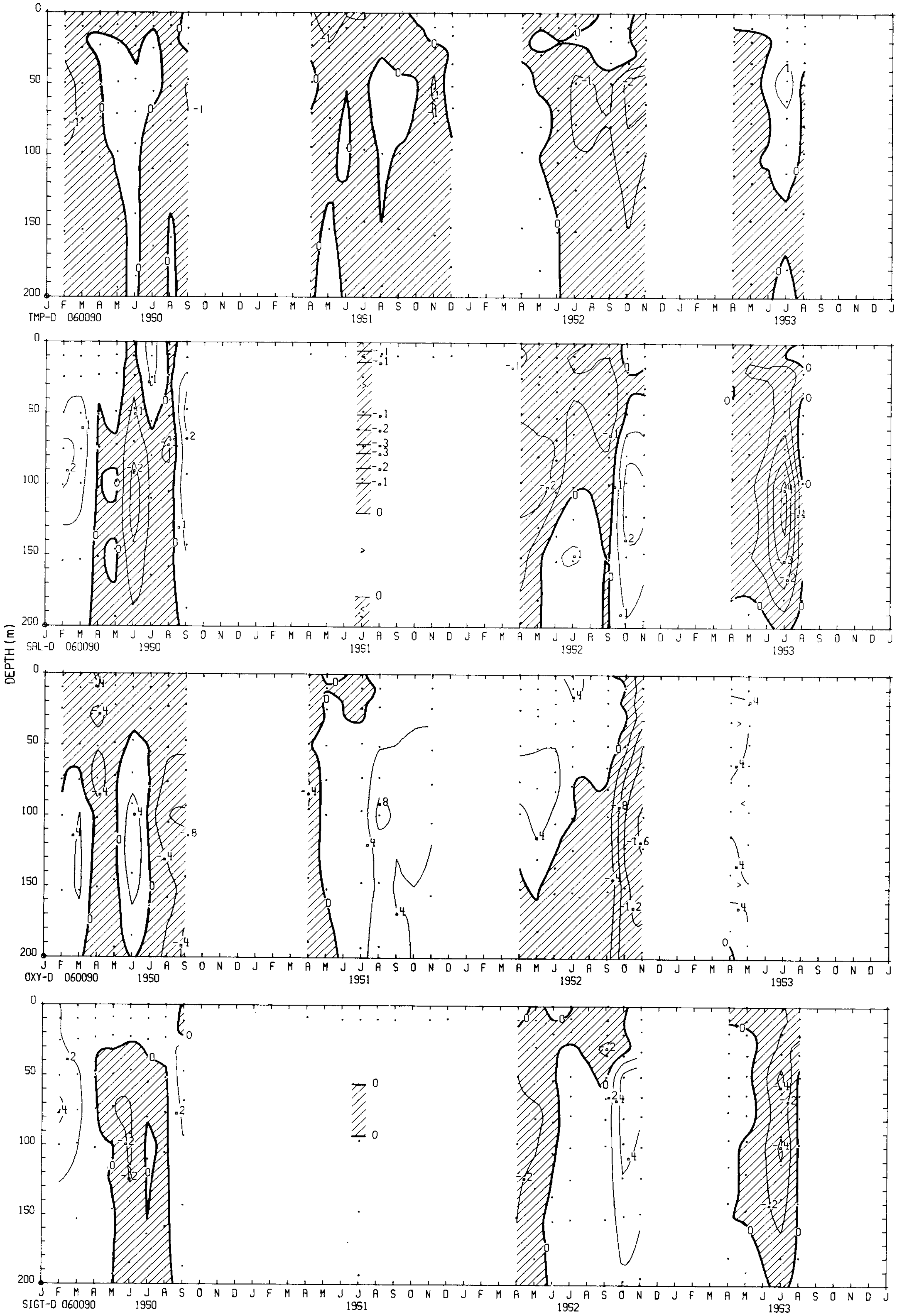

DEPTH (m)
TMP 060070 1962 1963 1964 1965
SAL 060070 1962 1963 1964 1965
OXY 060070 1962 1963 1964 1965
SIGT 060070 1962 1963 1964 1965

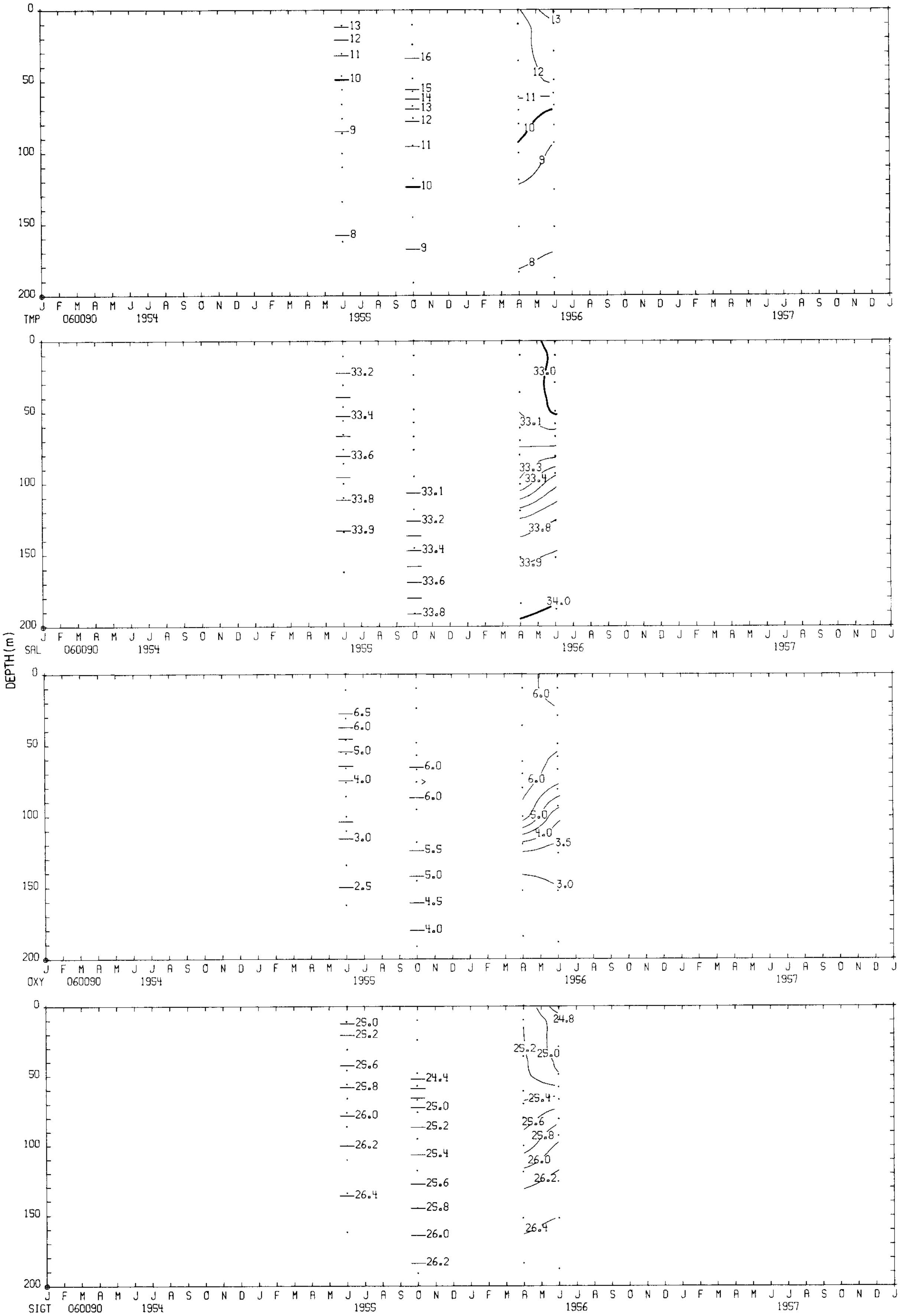

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 060070
1962
1963
1964
1965
SAL-D 060070
OXY-D 060070
SIGT-D 060070

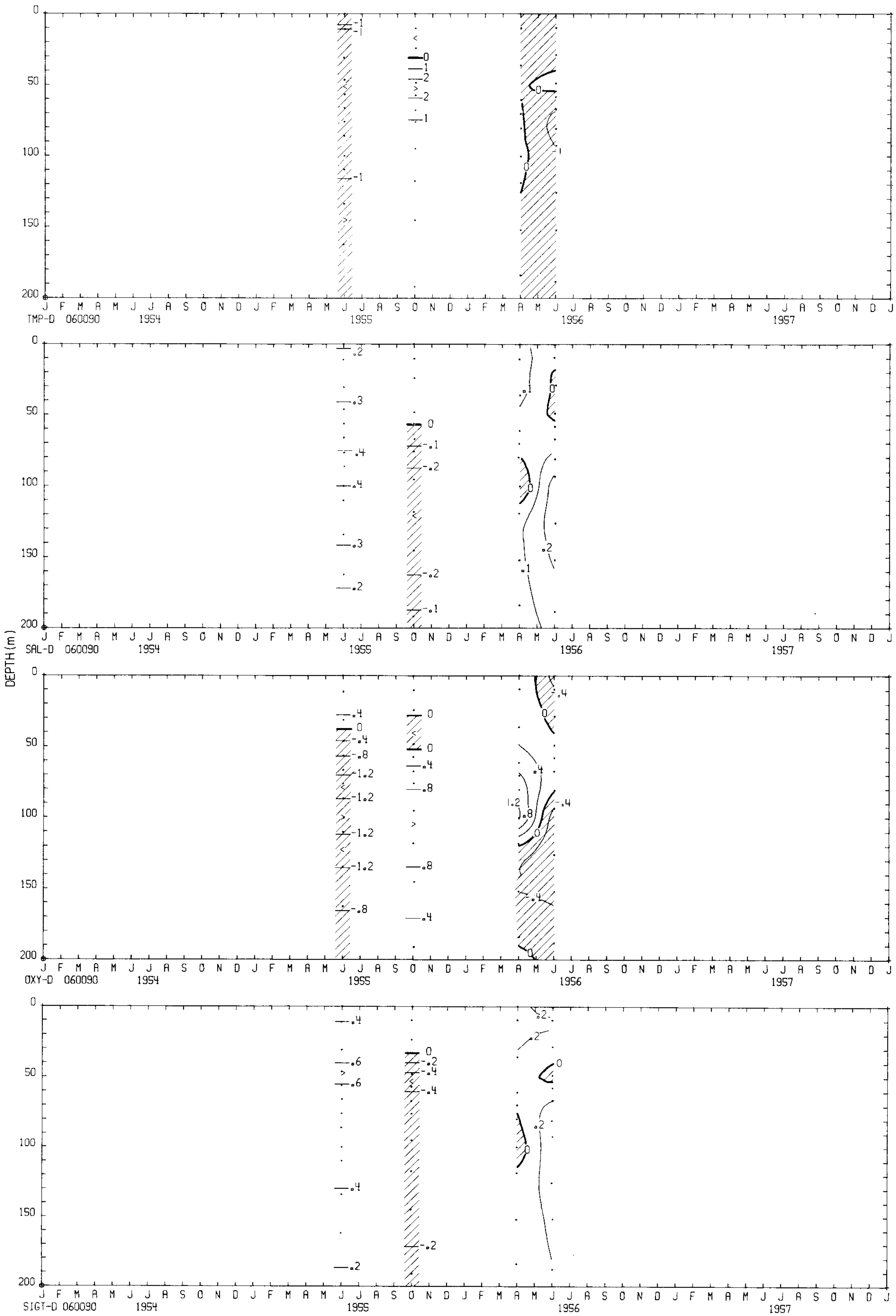

DEPTH (m)
MEAN TMP 060070 JAN-DEC
MEAN SAL 060070 JAN-DEC
MEAN OXY 060070 JAN-DEC
MEAN SIGT 060070 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200
14
13
12
11
10
9
8
33.1
33.2
33.3
33.4
33.5
33.6
33.7
33.8
33.9
34.0
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
24.6
24.8
25.0
25.2
25.4
25.6
25.8
26.0
26.2
26.4

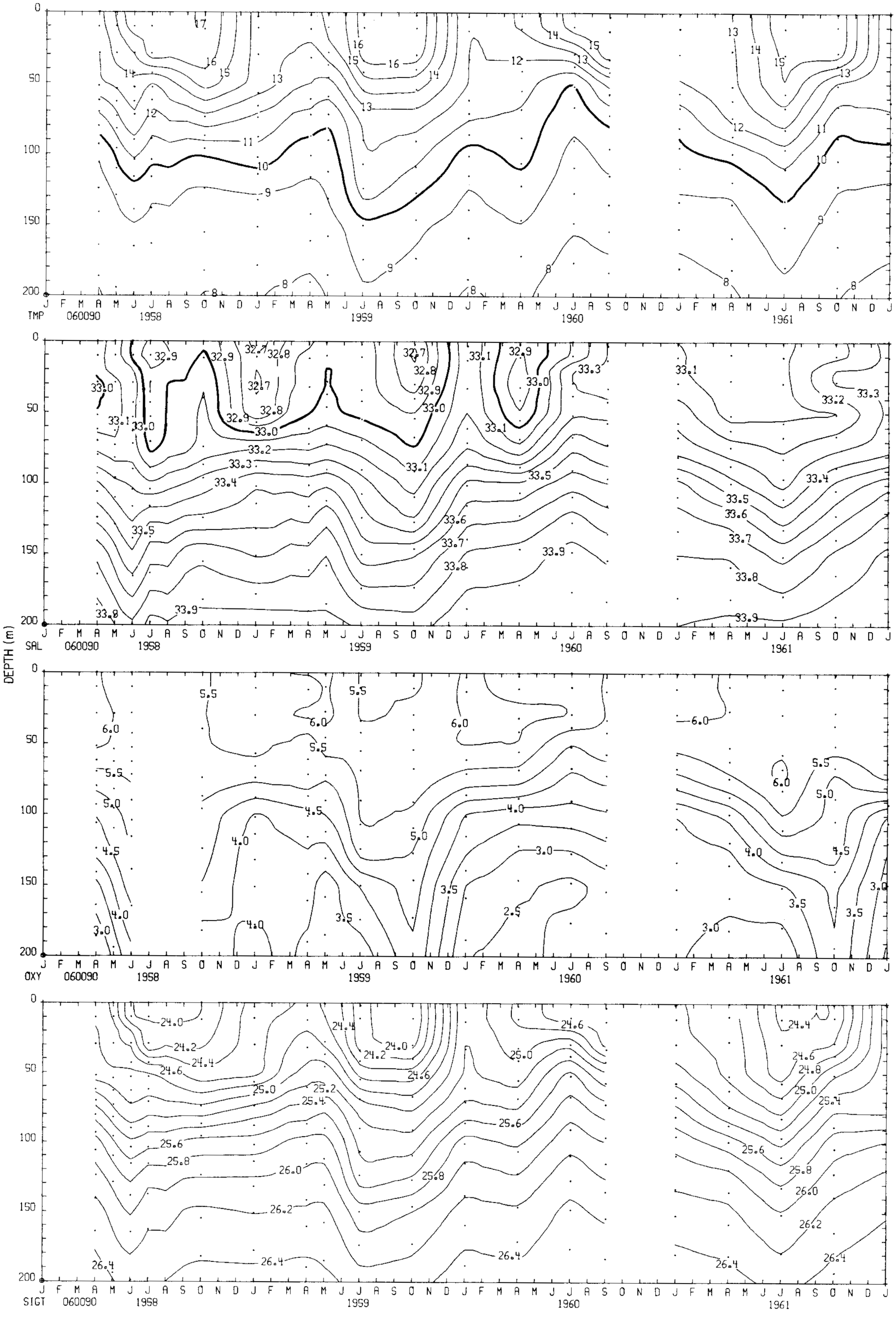

DEPTH(m)
0
50
100
150
200
J F M A M J J A S O N D J
SDEV TMP 060070 JAN-DEC
.75
1.00
.50
1.25
1.50
.25
SDEV SAL 060070 JAN-DEC
.16
.12
.20
.24
.08
.04
SDEV OXY 060070 JAN-DEC
.2
.4
.8
.6
SDEV SIGT 060070 JAN-DEC
.1
.2
.3


DEPTH (m)
TMP 060090 1950 1951 1952 1953
SAL 060090 1950 1951 1952 1953
OXY 060090 1950 1951 1952 1953
SIGT 060090 1950 1951 1952 1953
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
0 50 100 150 200

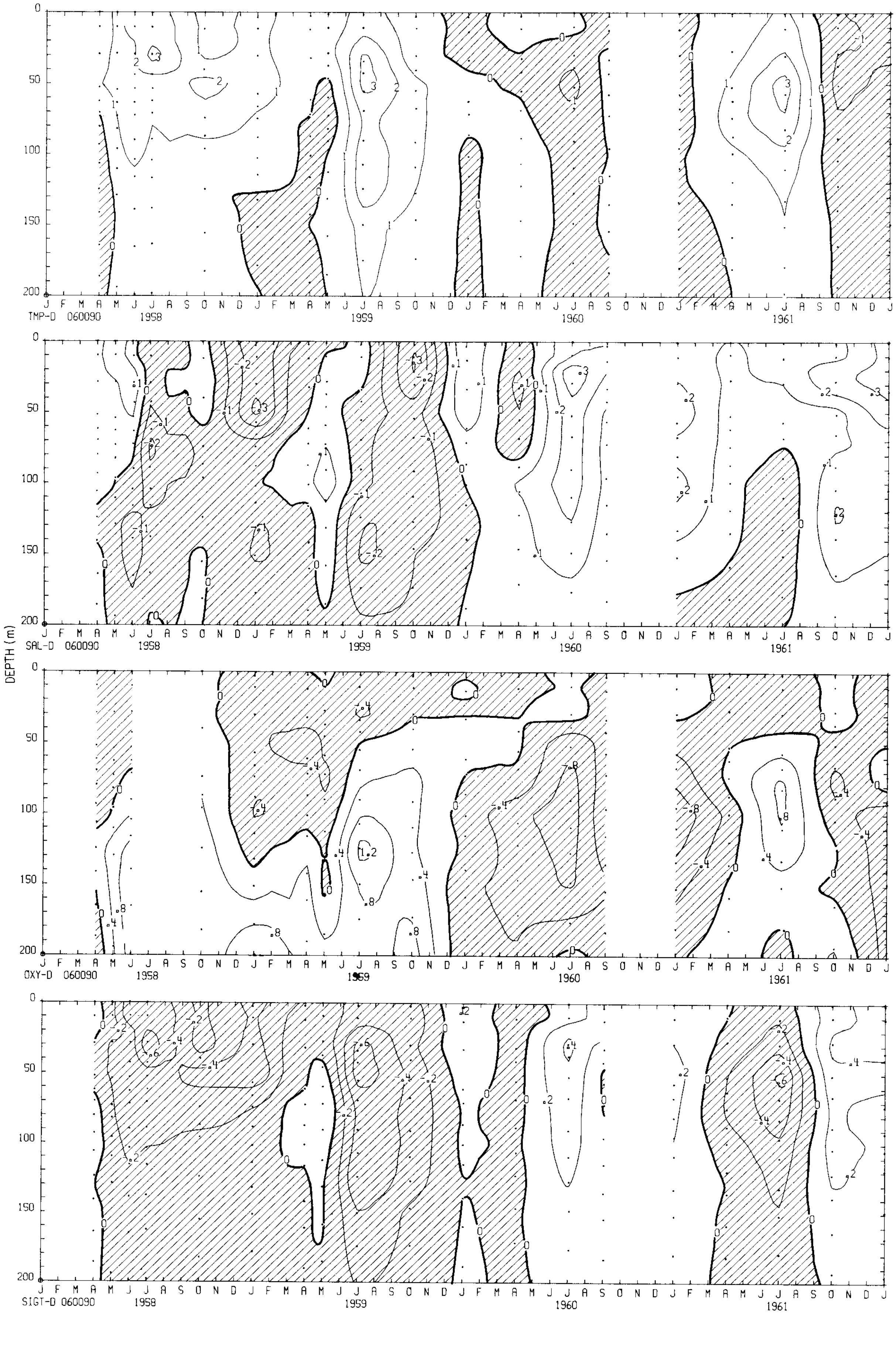

DEPTH (m)
TMP-D 060090
SAL-D 060090
OXY-D 060090
SIGT-D 060090
1950
1951
1952
1953


DEPTH (m)
TMP 060090 1954 1955 1956 1957
SAL 060090 1954 1955 1956 1957
OXY 060090 1954 1955 1956 1957
SIGT 060090 1954 1955 1956 1957
J F M A M J J A S O N D

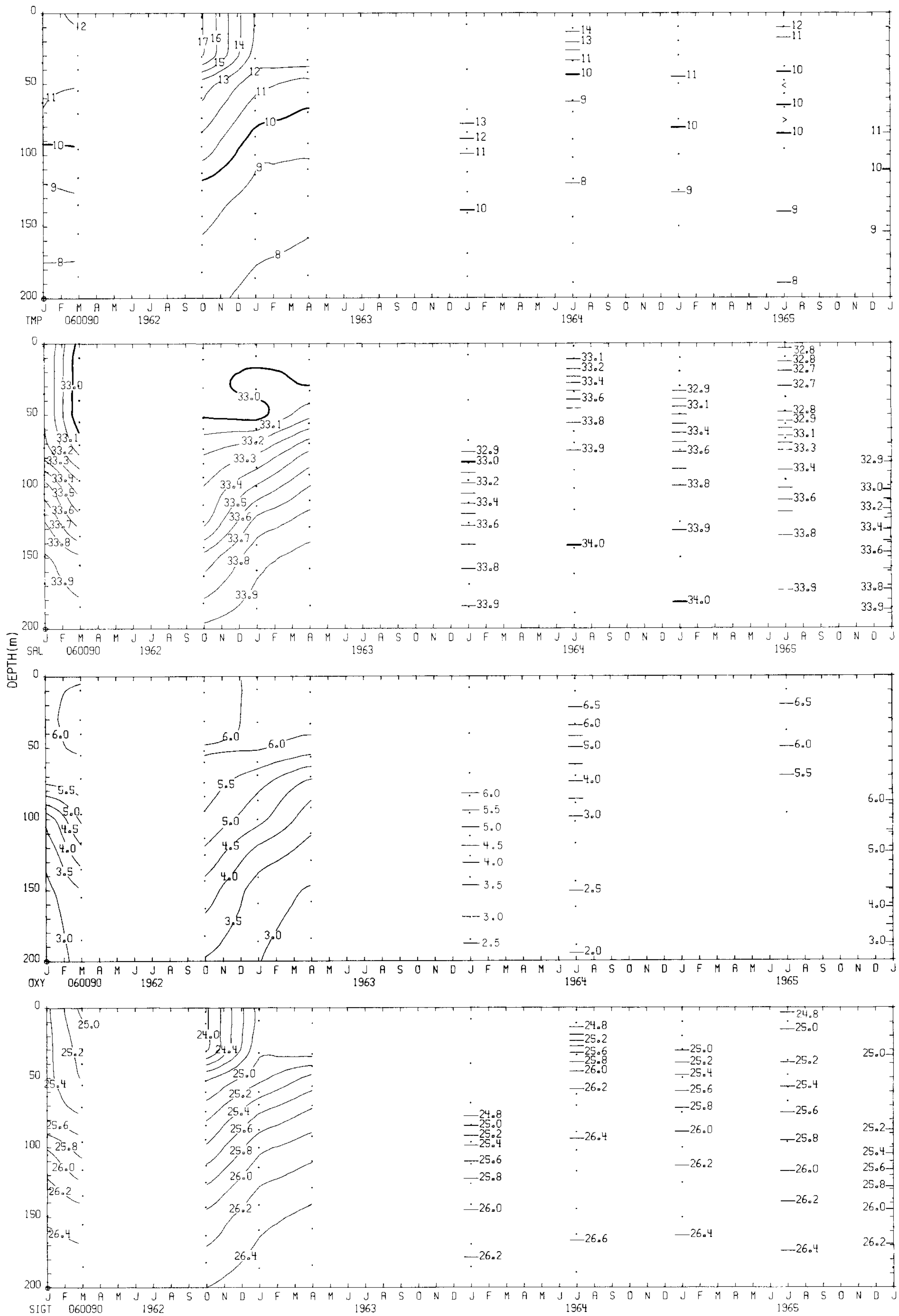

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 060090
SAL-D 060090
OXY-D 060090
SIGT-D 060090
1954
1955
1956
1957

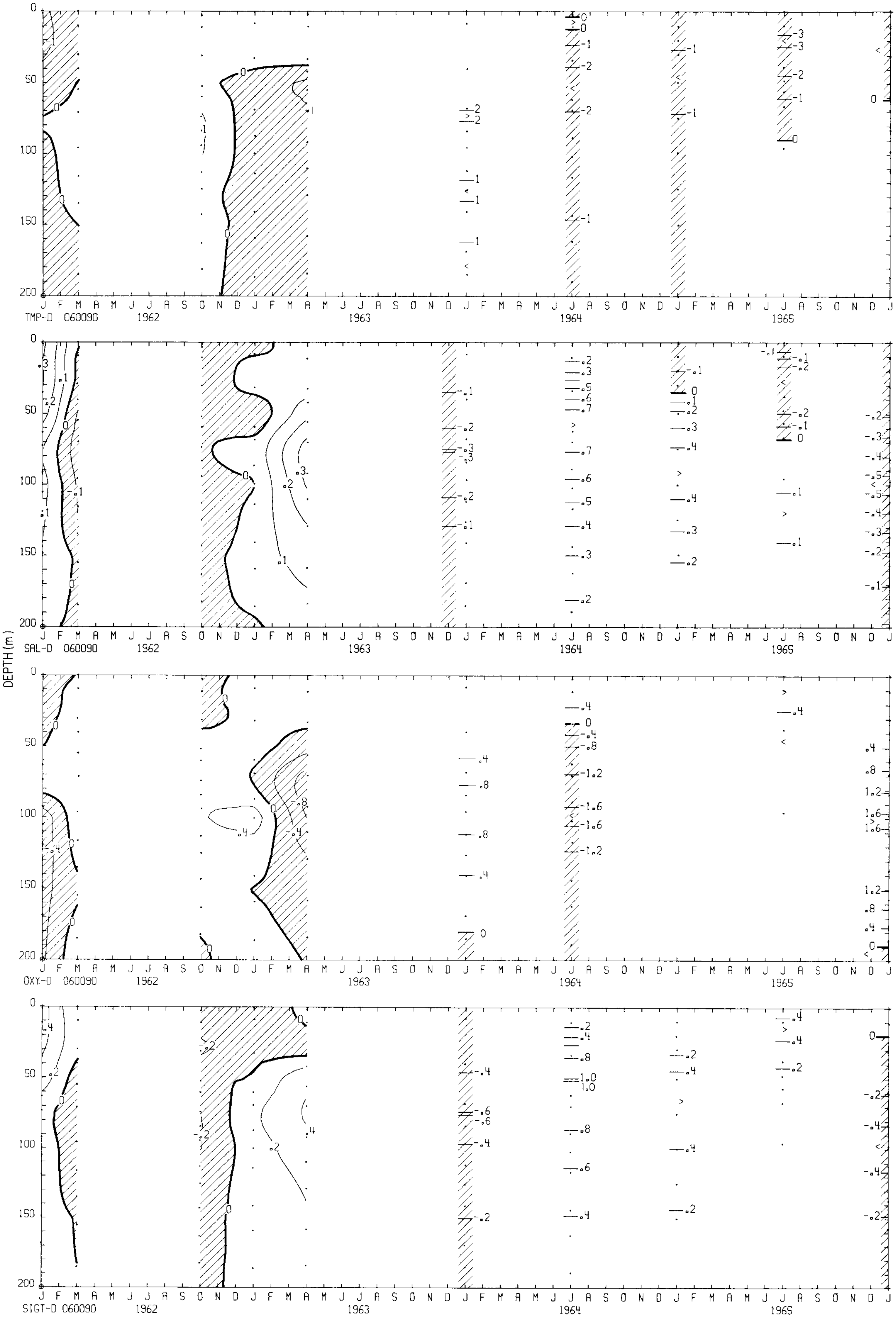


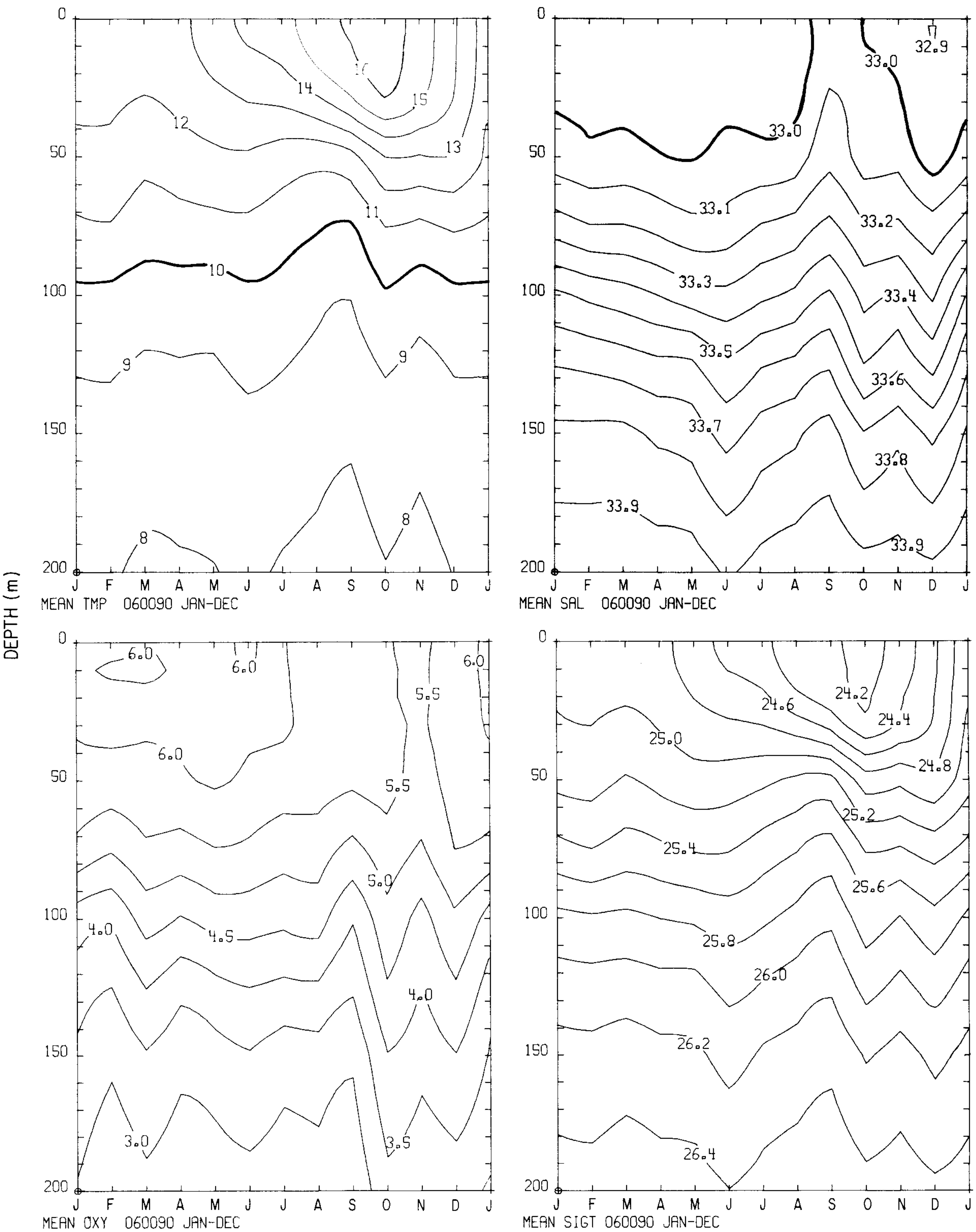
TMP 060090
SAL 060090
OXY 060090
SIGT 060090
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1958
1959
1960
1961



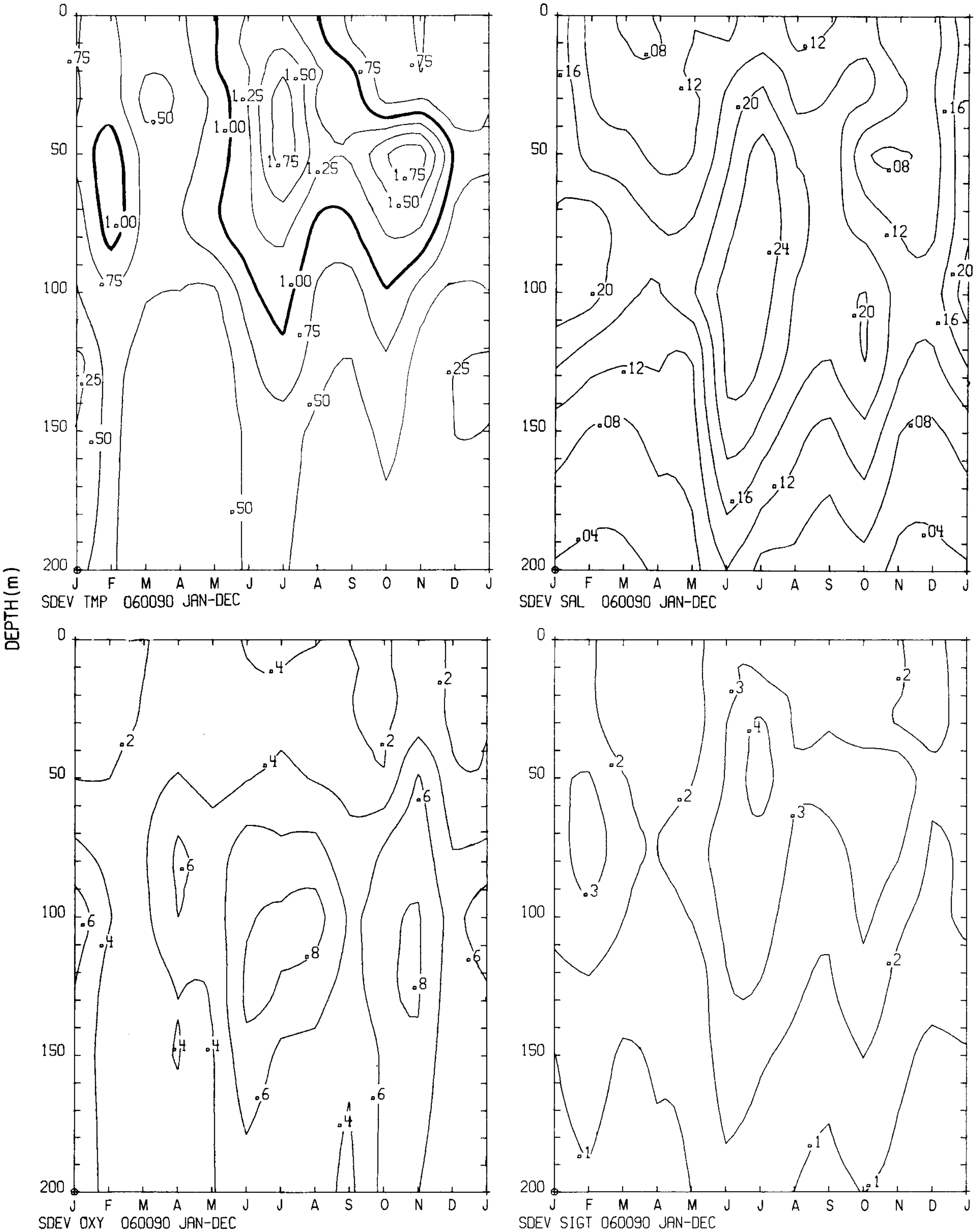
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 060090
SAL-D 060090
OXY-D 060090
SIGT-D 060090
1958
1959
1960
1961

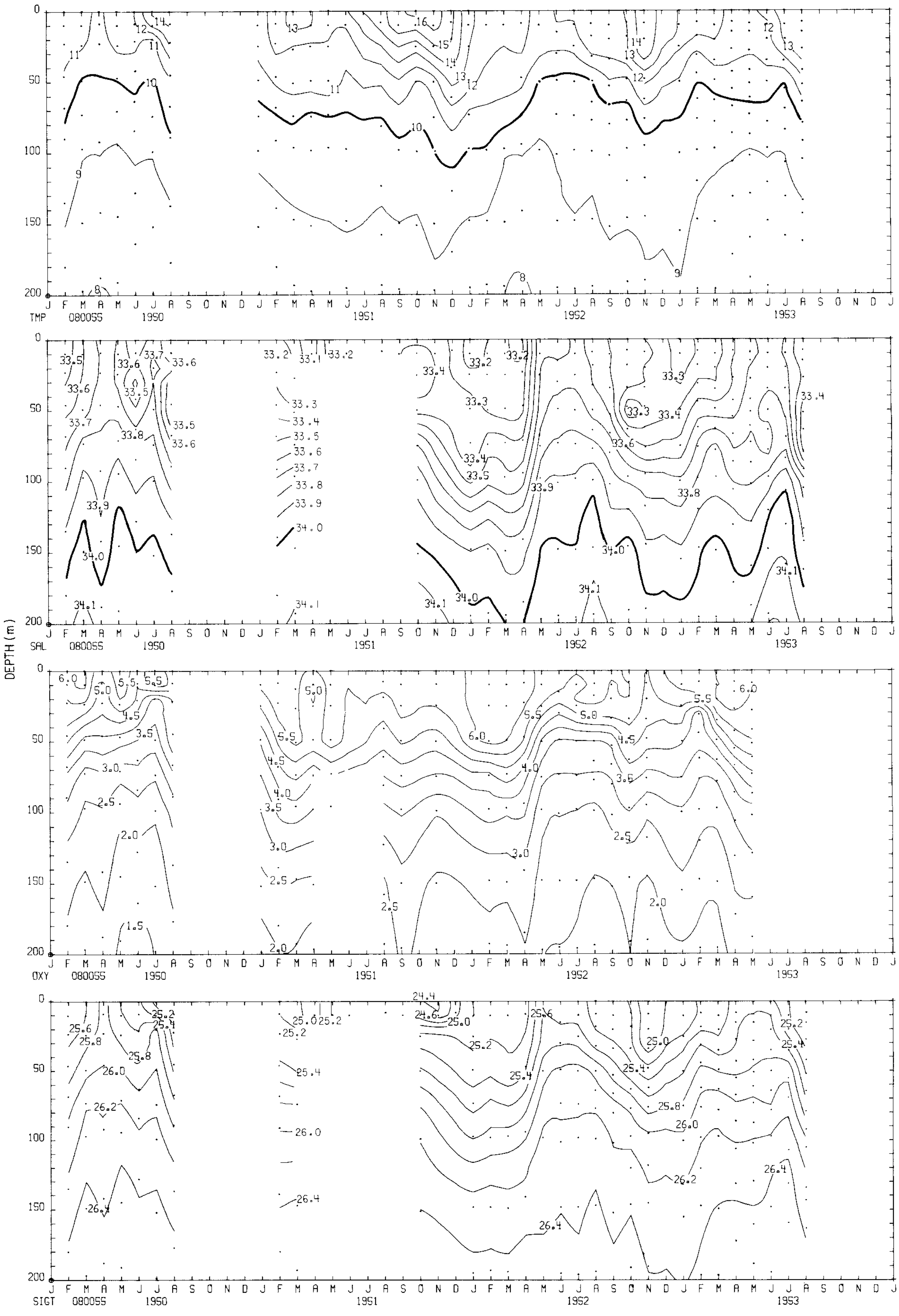

DEPTH (m)
TMP 060090 1962 1963 1964 1965
SAL 060090 1962 1963 1964 1965
OXY 060090 1962 1963 1964 1965
SIGT 060090 1962 1963 1964 1965

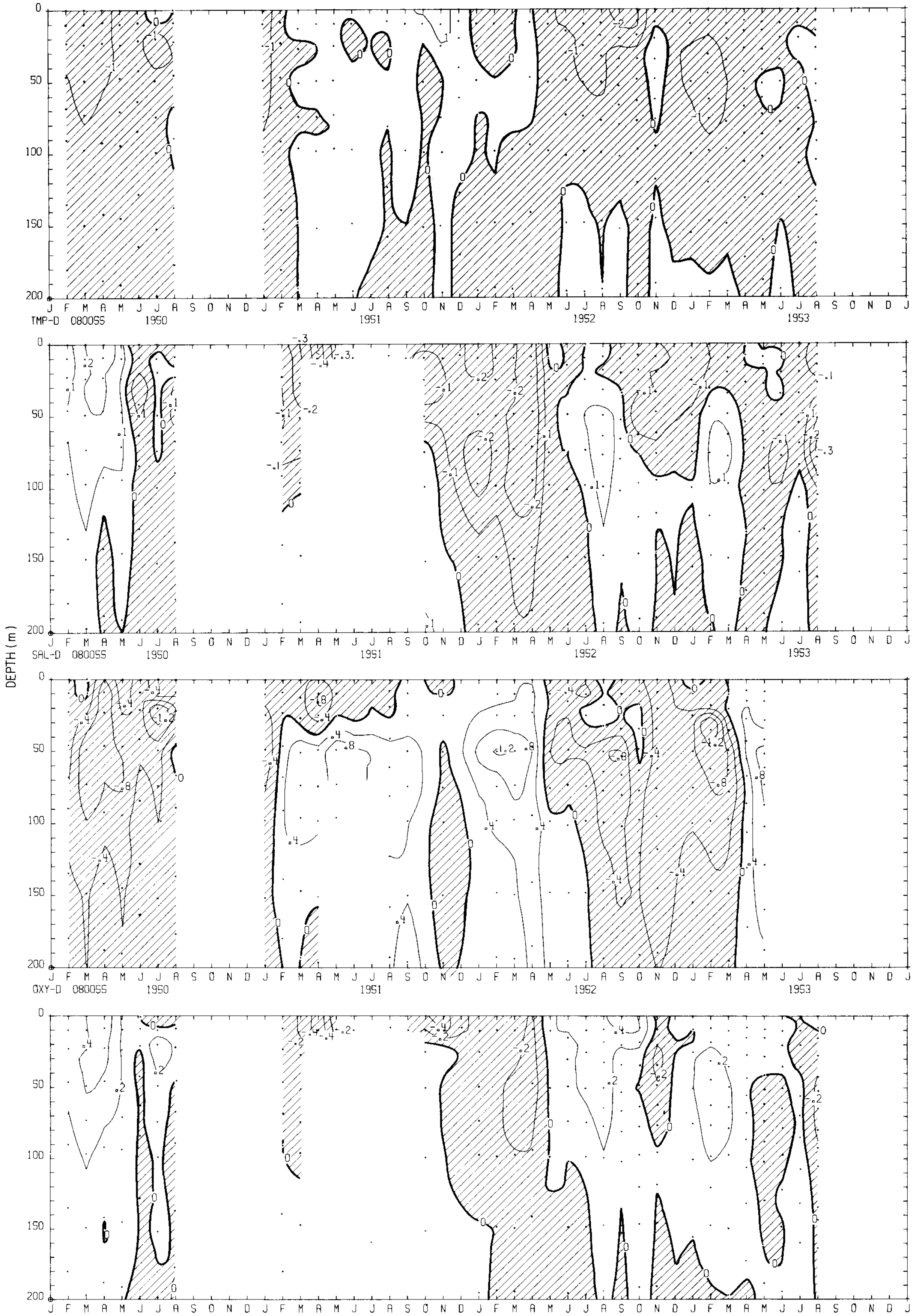

TMP-D 060090
SAL-D 060090
OXY-D 060090
SIGT-D 060090
DEPTH (m)
1962
1963
1964
1965
J F M A M J J A S O N D



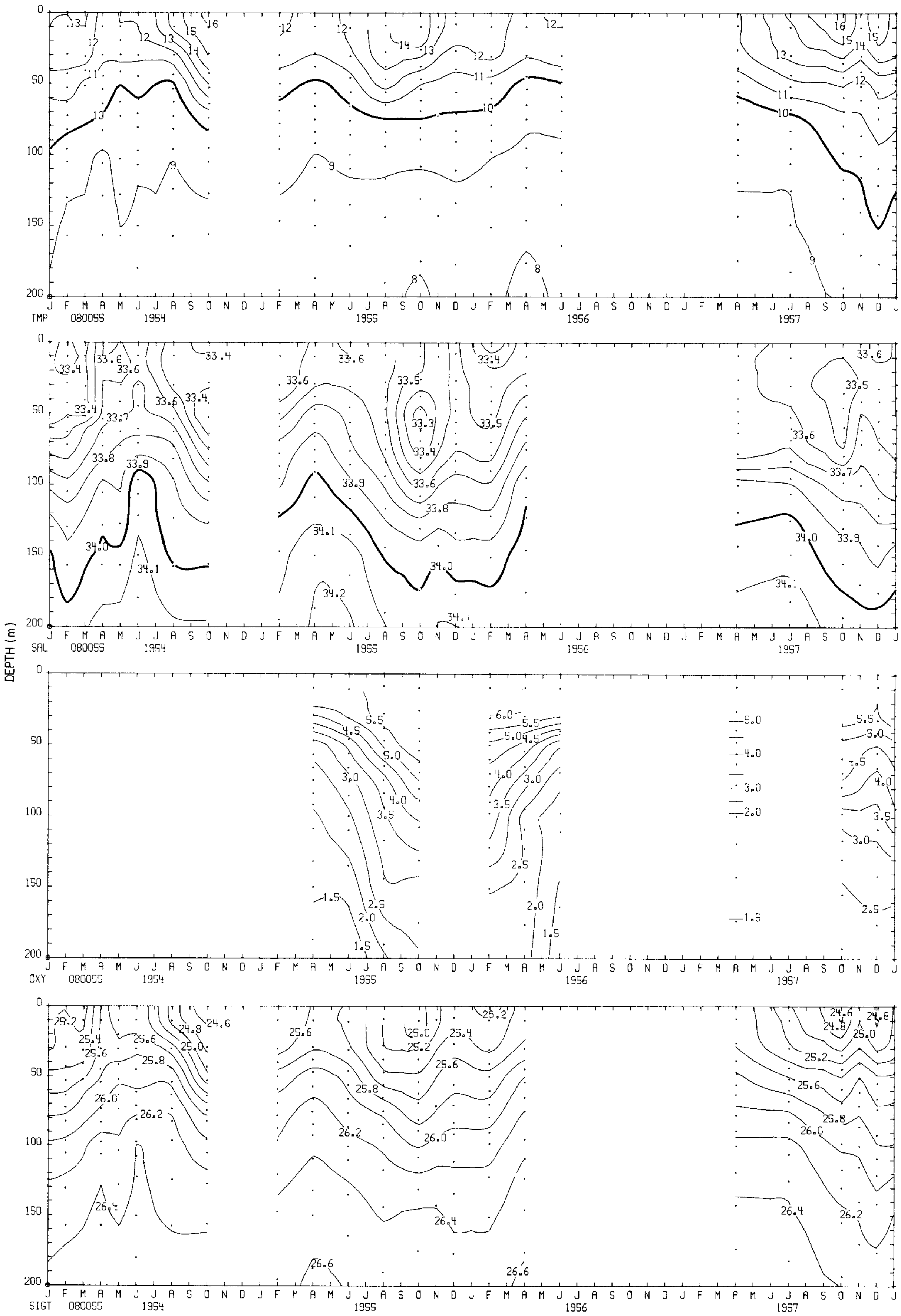
DEPTH (m)
MEAN TMP 060090 JAN-DEC
MEAN SAL 060090 JAN-DEC
MEAN OXY 060090 JAN-DEC
MEAN SIGT 060090 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200

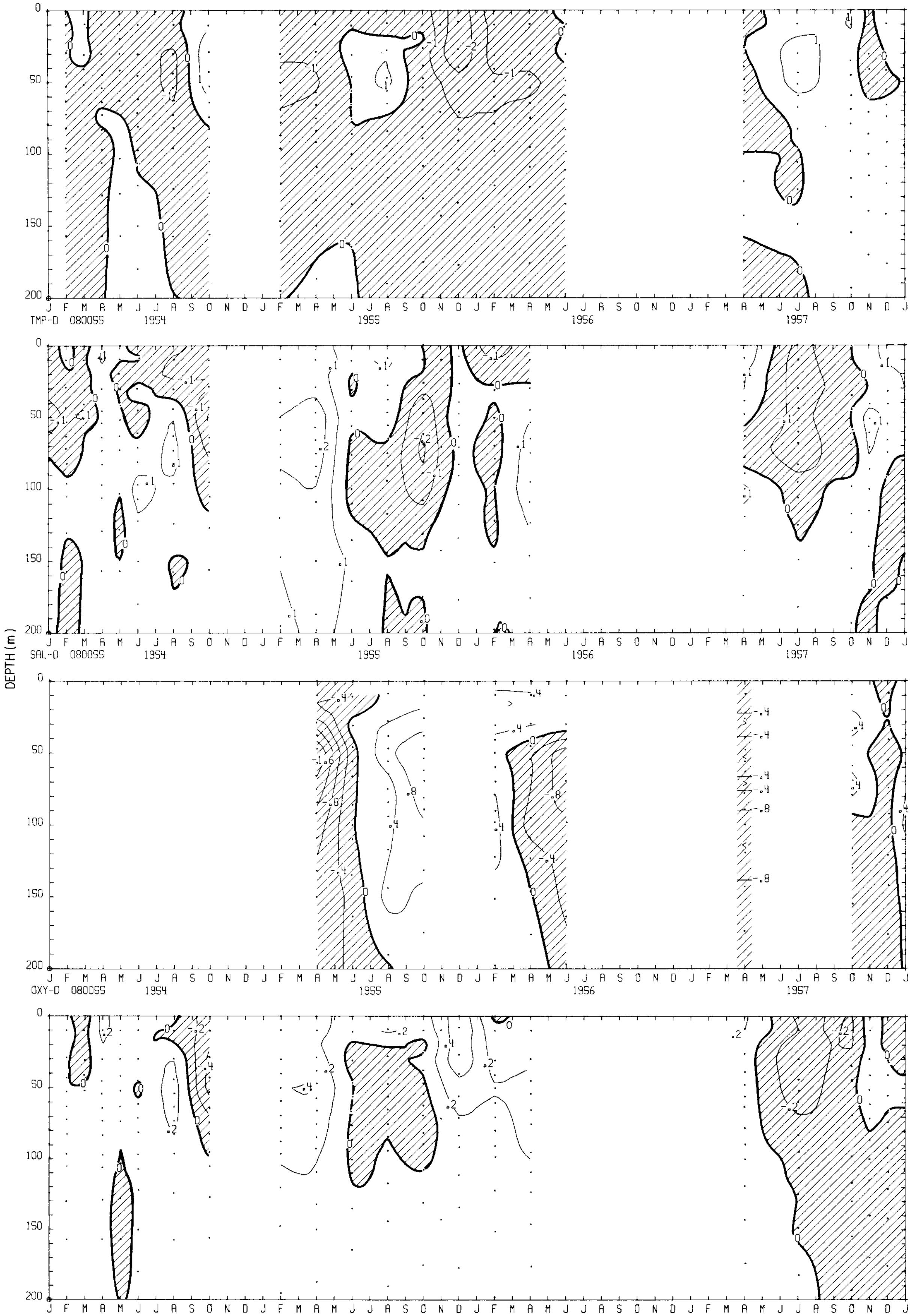

DEPTH (m)
SDEV TMP 060090 JAN-DEC
SDEV SAL 060090 JAN-DEC
SDEV OXY 060090 JAN-DEC
SDEV SIGT 060090 JAN-DEC

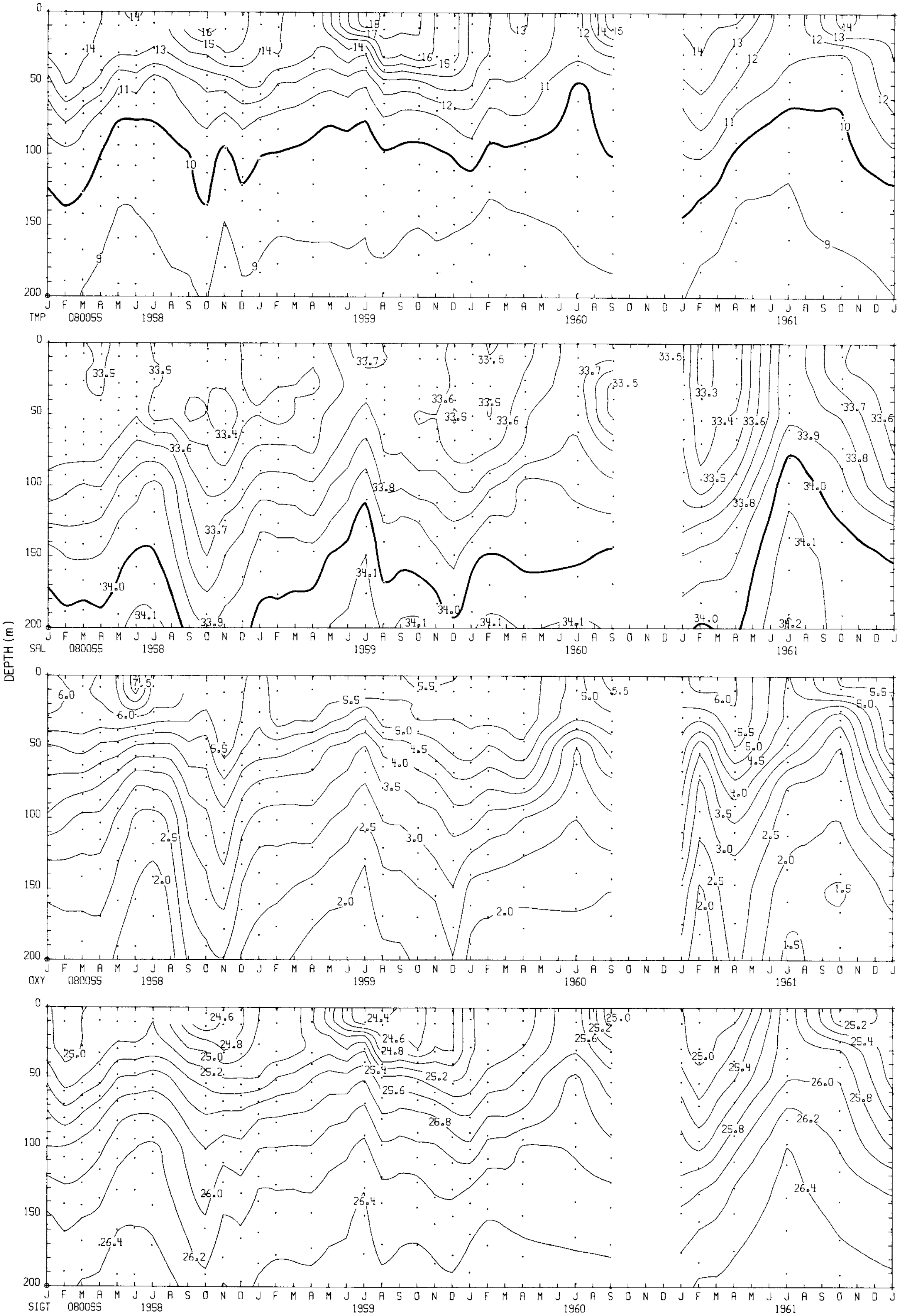

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 080055 1950
1951
1952
1953
SAL 080055 1950
OXY 080055 1950
SIGT 080055 1950

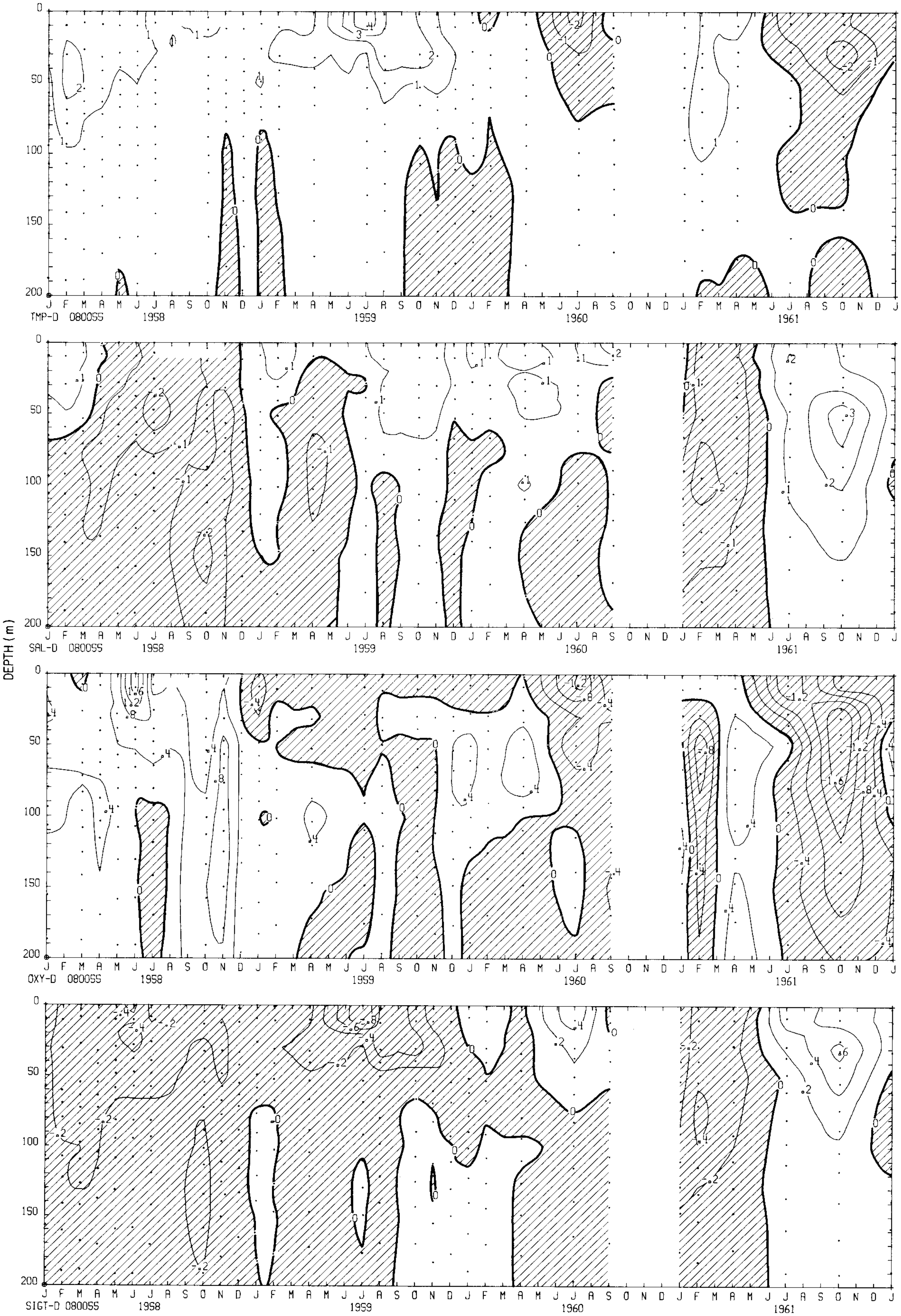


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 080055 1950 1951 1952 1953
SAL-D 080055 1950 1951 1952 1953
OXY-D 080055 1950 1951 1952 1953
SIGT-D 080055 1950 1951 1952 1953

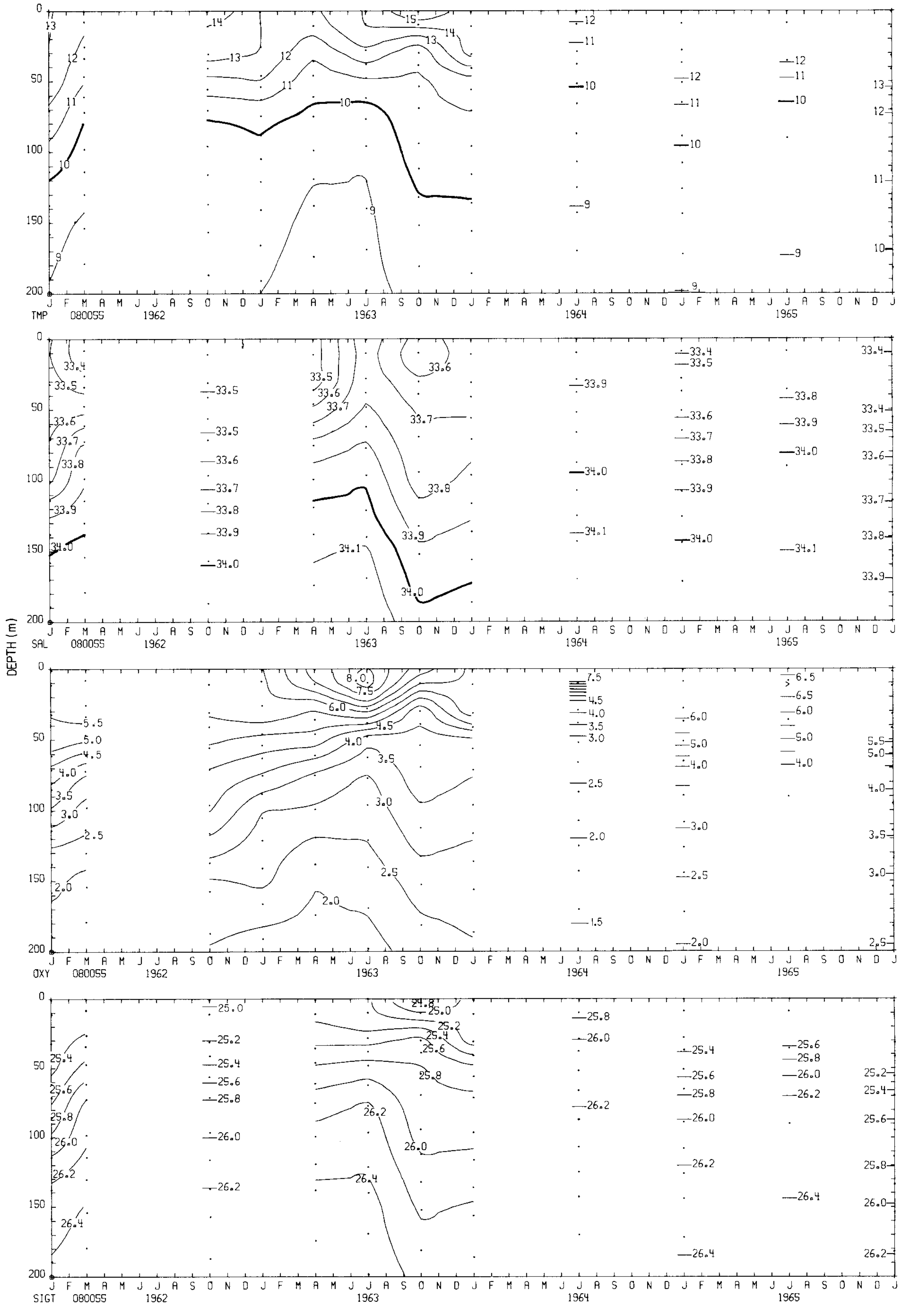

DEPTH (m)
TMP 08005S 1954 1955 1956 1957
SAL 08005S 1954 1955 1956 1957
OXY 08005S 1954 1955 1956 1957
SIGT 08005S 1954 1955 1956 1957

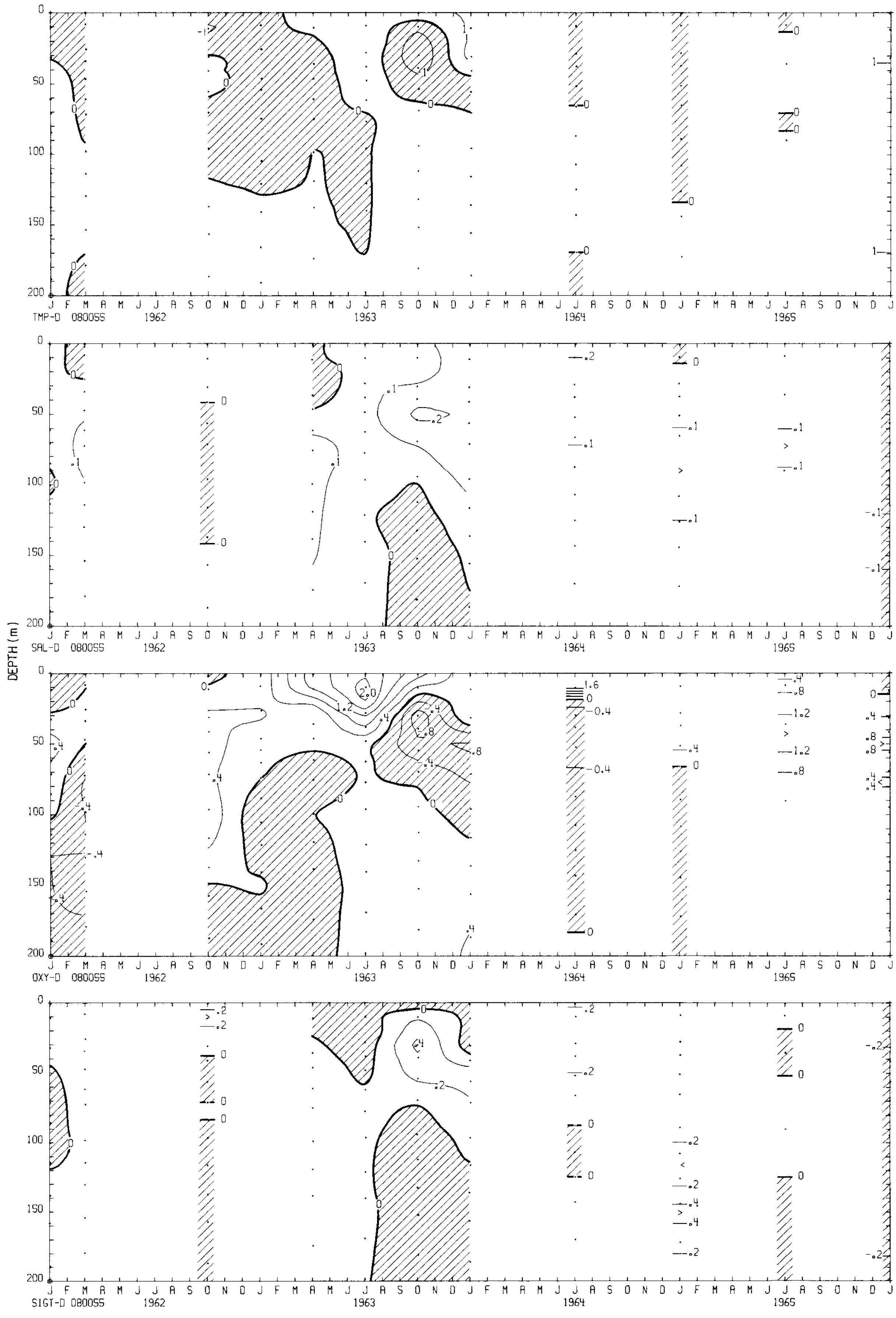

DEPTH (m)
TMP-D 080055
SAL-D 080055
OXY-D 080055
SIGT-D 080055
1954
1955
1956
1957

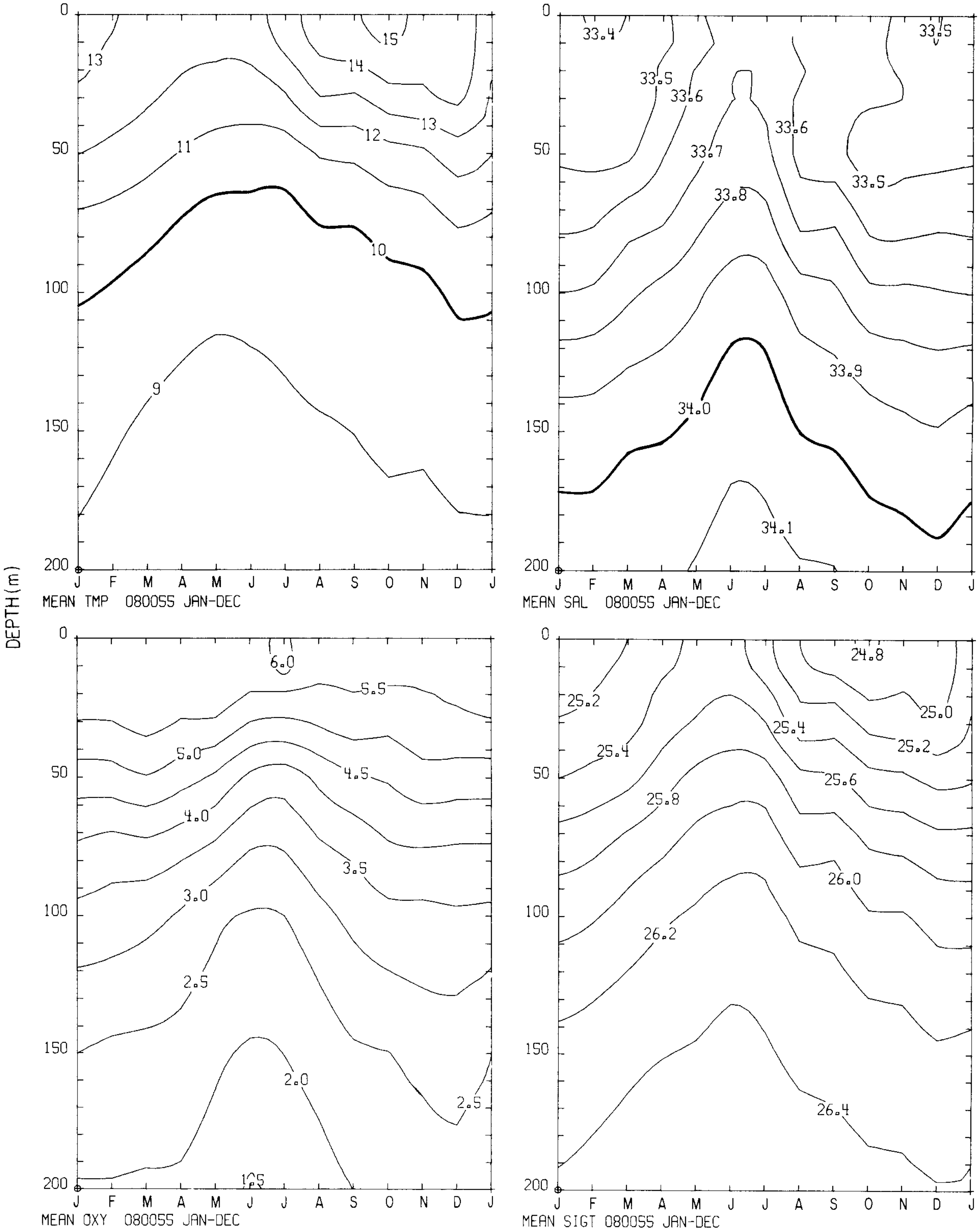

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 080055 1958
1959
1960
1961
SAL 080055 1958
OXY 080055 1958
SIGT 080055 1958

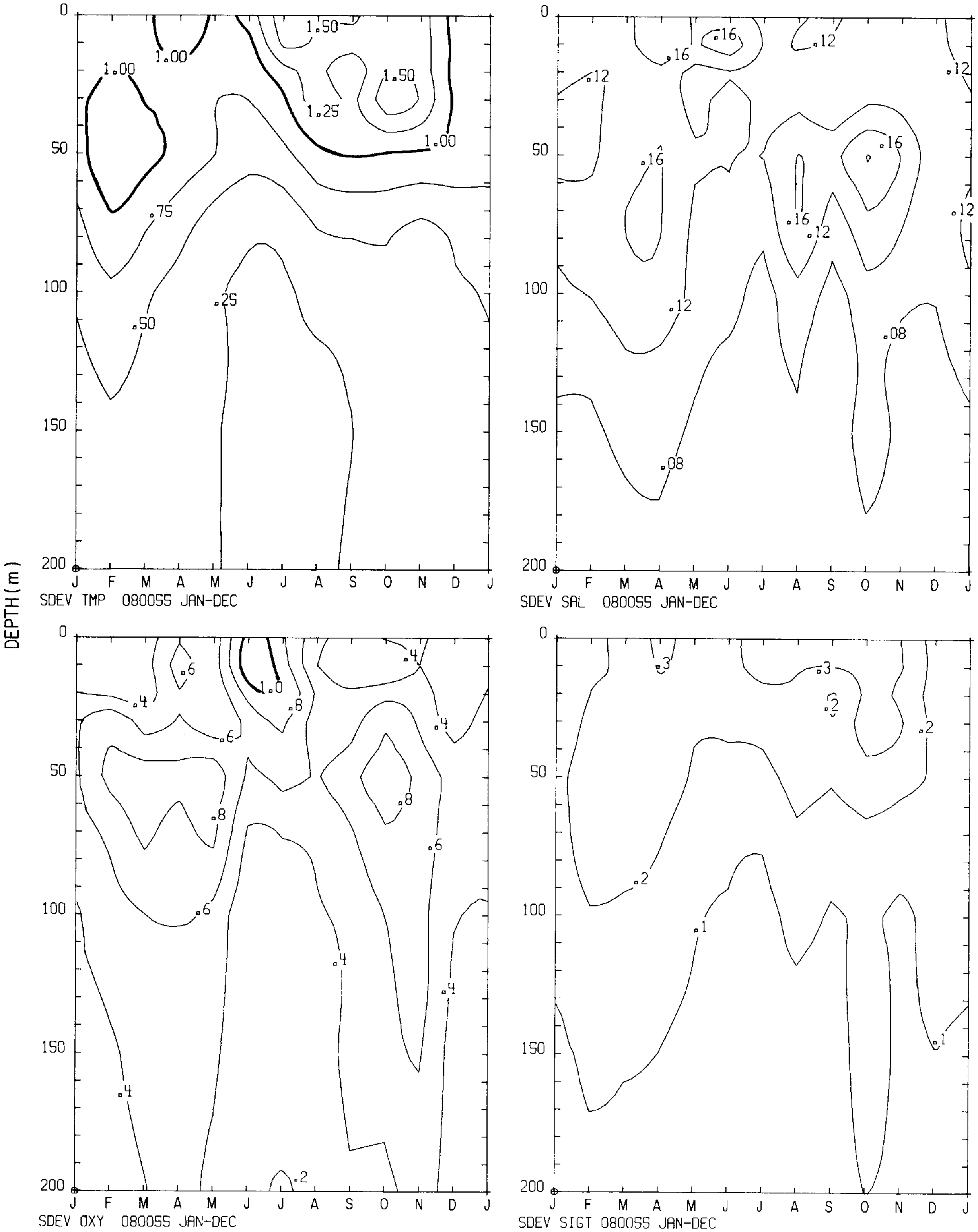


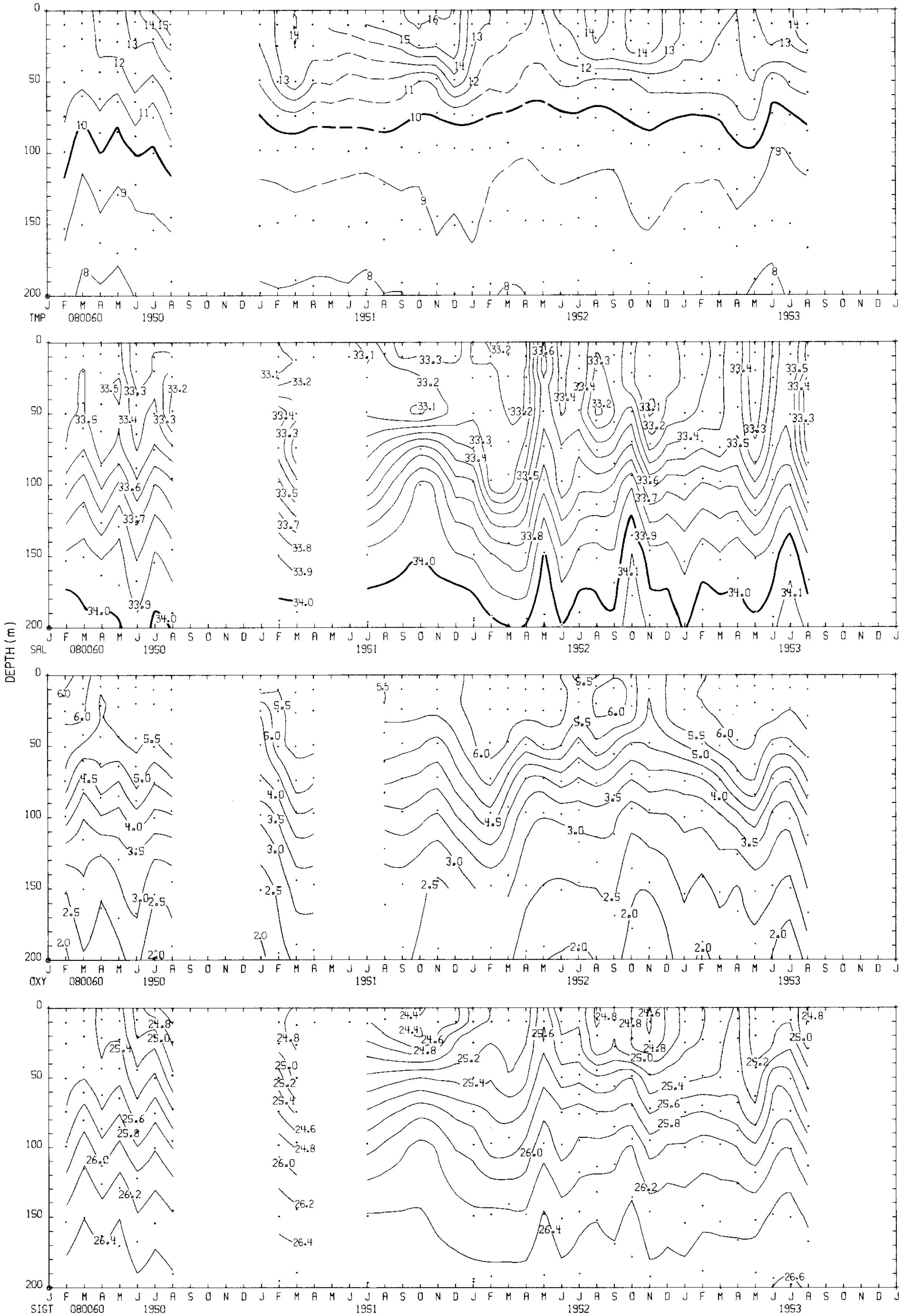
DEPTH (m)
TMP-D 080055
SAL-D 080055
OXY-D 080055
SIGT-D 080055
1958
1959
1960
1961
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

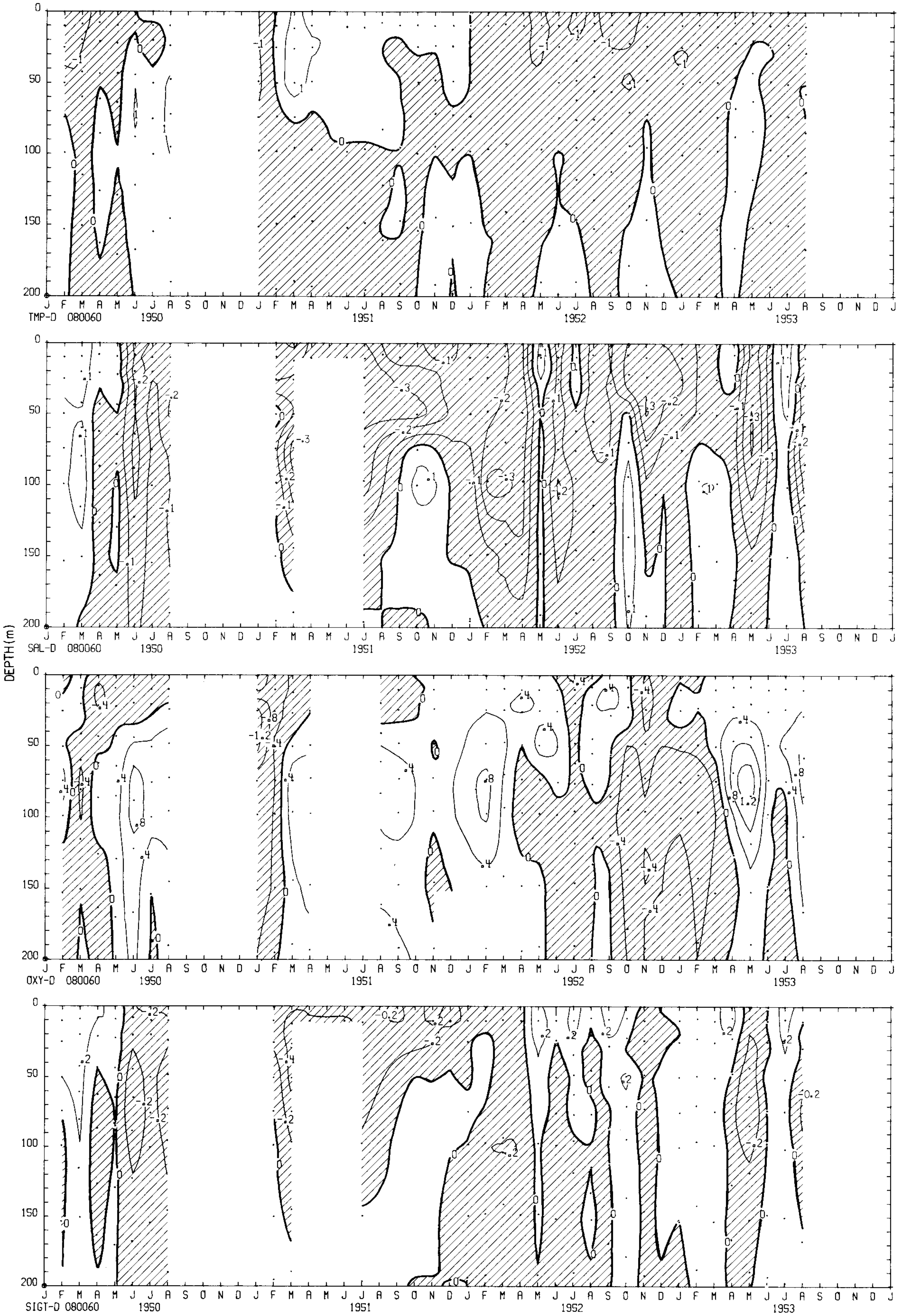

DEPTH (m)
TMP 080055 1962 1963 1964 1965
SAL 080055 1962 1963 1964 1965
OXY 080055 1962 1963 1964 1965
SIGT 080055 1962 1963 1964 1965
J F M A M J J A S O N D


DEPTH (m)
TMP-D 080055
SAL-D 080055
OXY-D 080055
SIGT-D 080055
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1962
1963
1964
1965

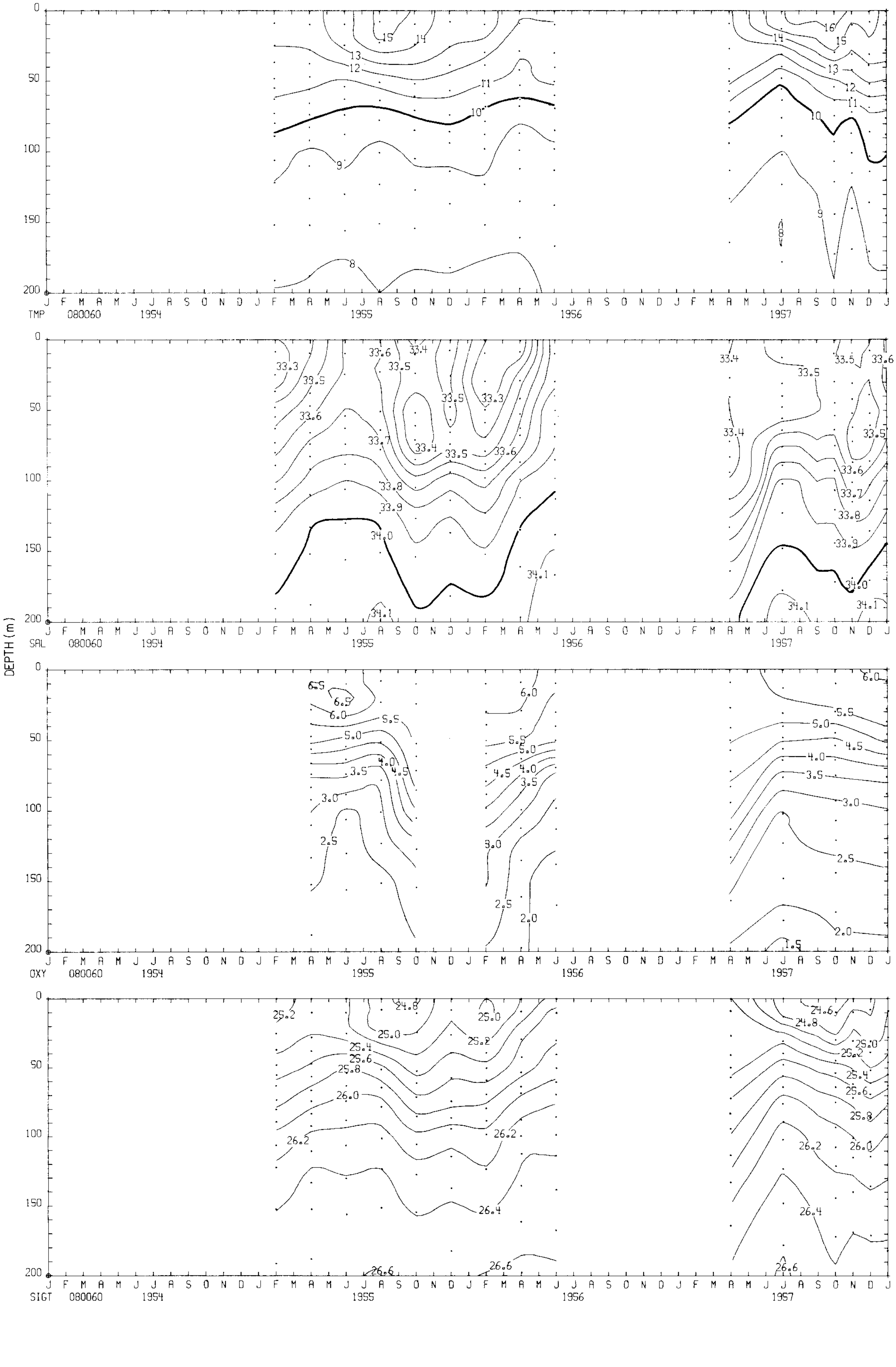

DEPTH(m)
MEAN TMP 080055 JAN-DEC
MEAN SAL 080055 JAN-DEC
MEAN OXY 080055 JAN-DEC
MEAN SIGT 080055 JAN-DEC
J F M A M J J A S O N D J
0 50 100 150 200


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J
1.00
1.25
1.50
.75
.50
.25
SDEV TMP 08005S JAN-DEC
.16
.12
.08
SDEV SAL 08005S JAN-DEC
1.0
.8
.6
.4
.2
SDEV OXY 08005S JAN-DEC
.3
.2
.1
SDEV SIGT 08005S JAN-DEC

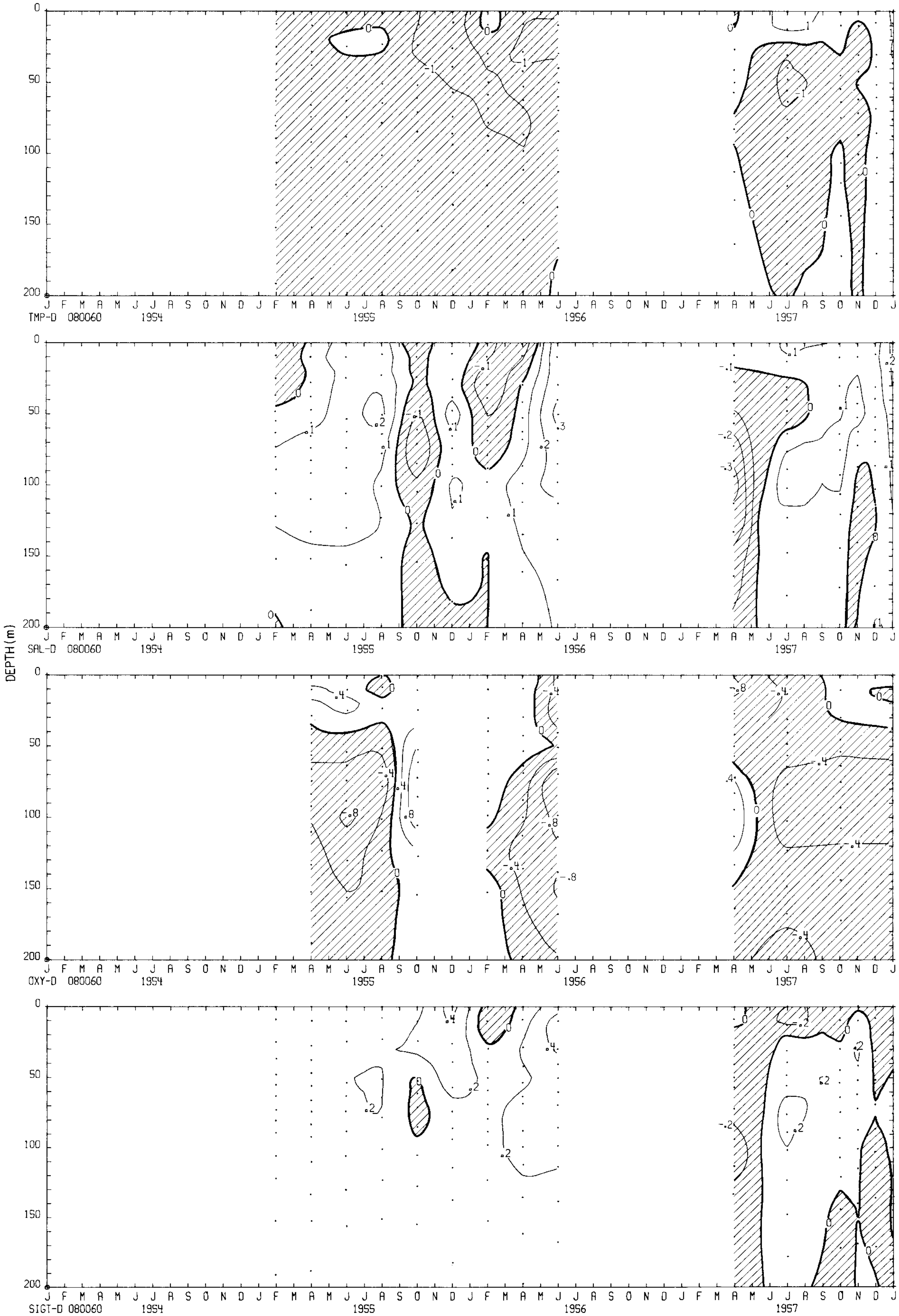

TMP 080060 1950 1951 1952 1953
SAL 080060 1950 1951 1952 1953
OXY 080060 1950 1951 1952 1953
SIGT 080060 1950 1951 1952 1953
DEPTH (m)
0 50 100 150 200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

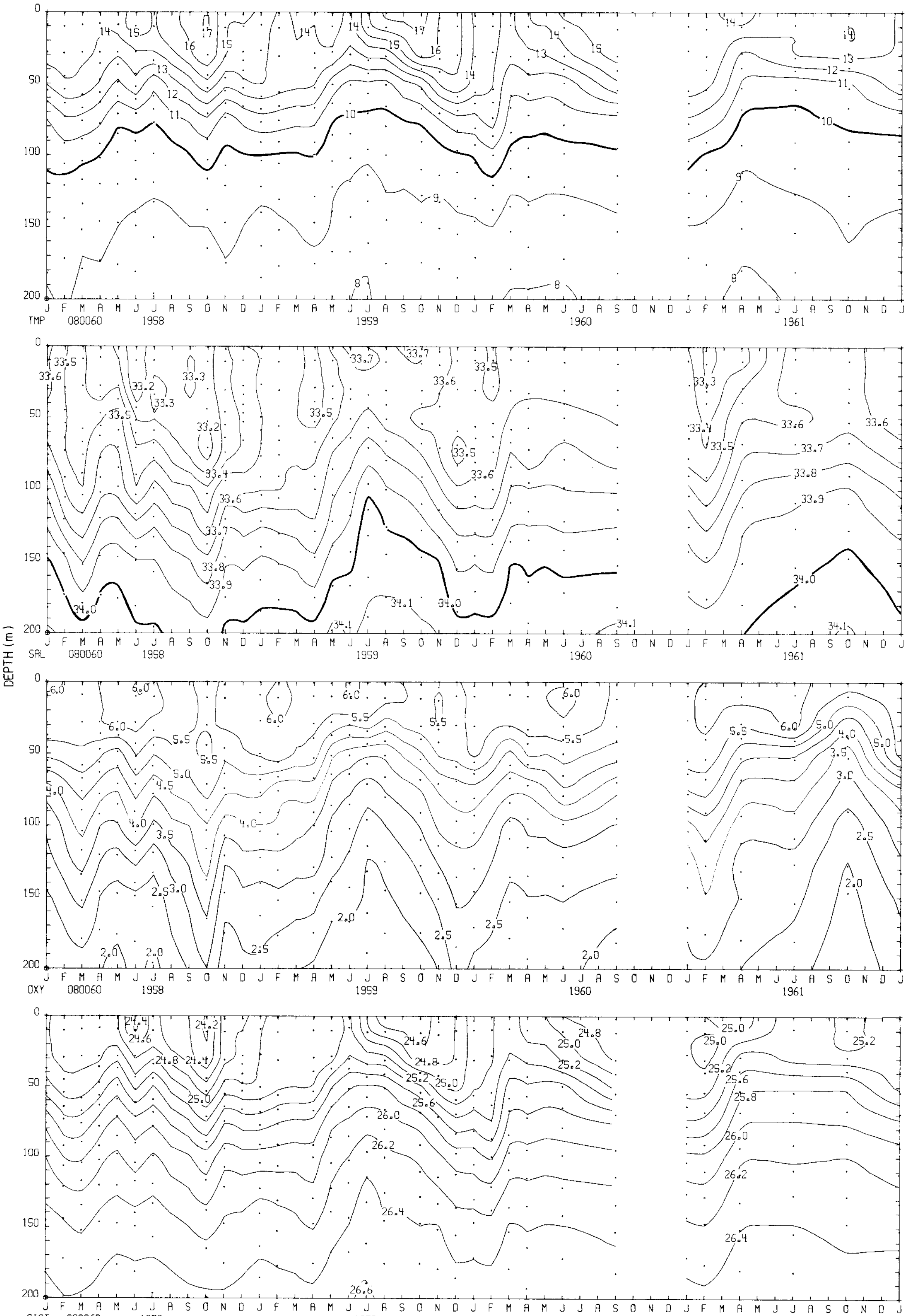


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 080060
SAL-D 080060
OXY-D 080060
SIGT-D 080060
1950
1951
1952
1953

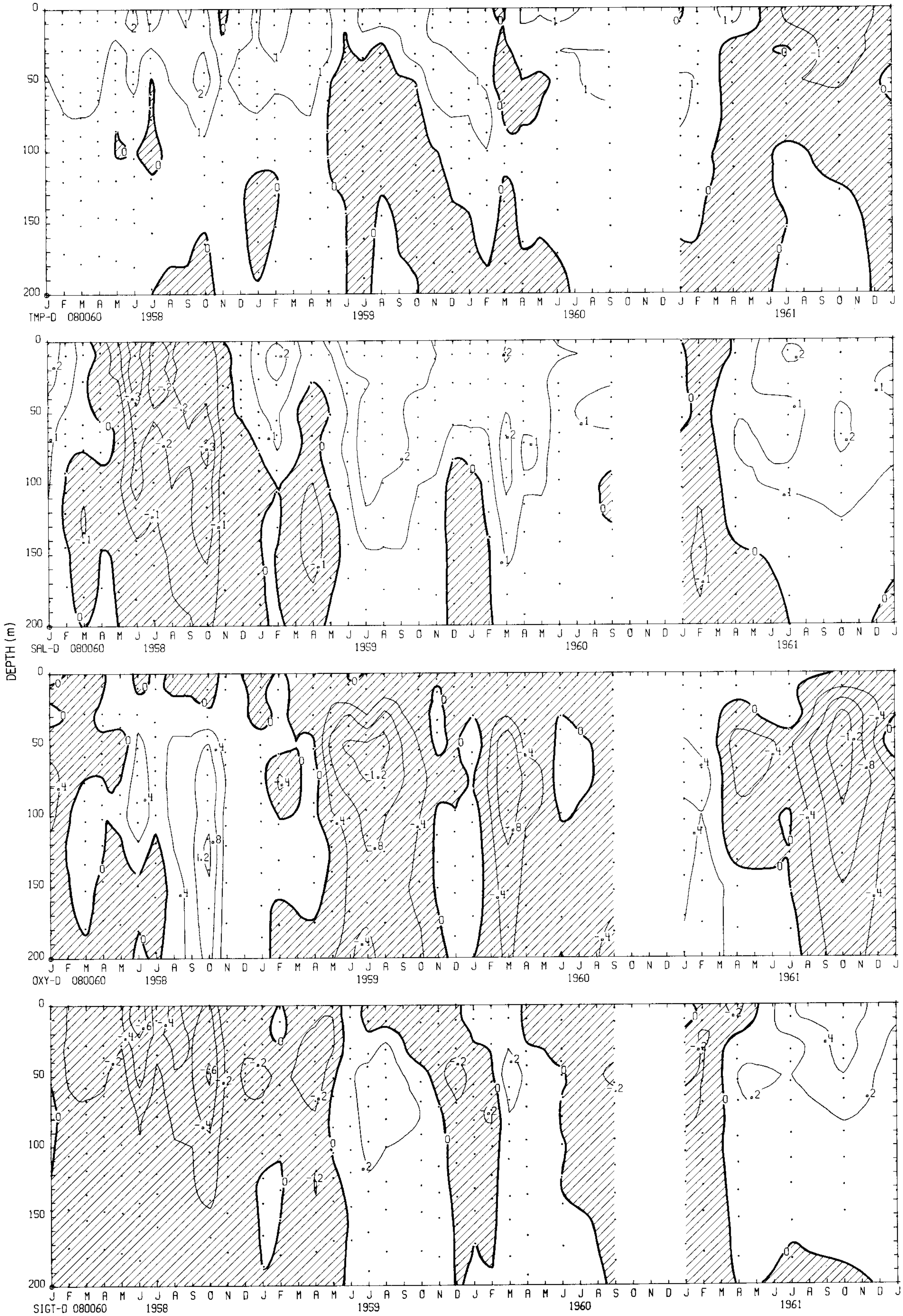


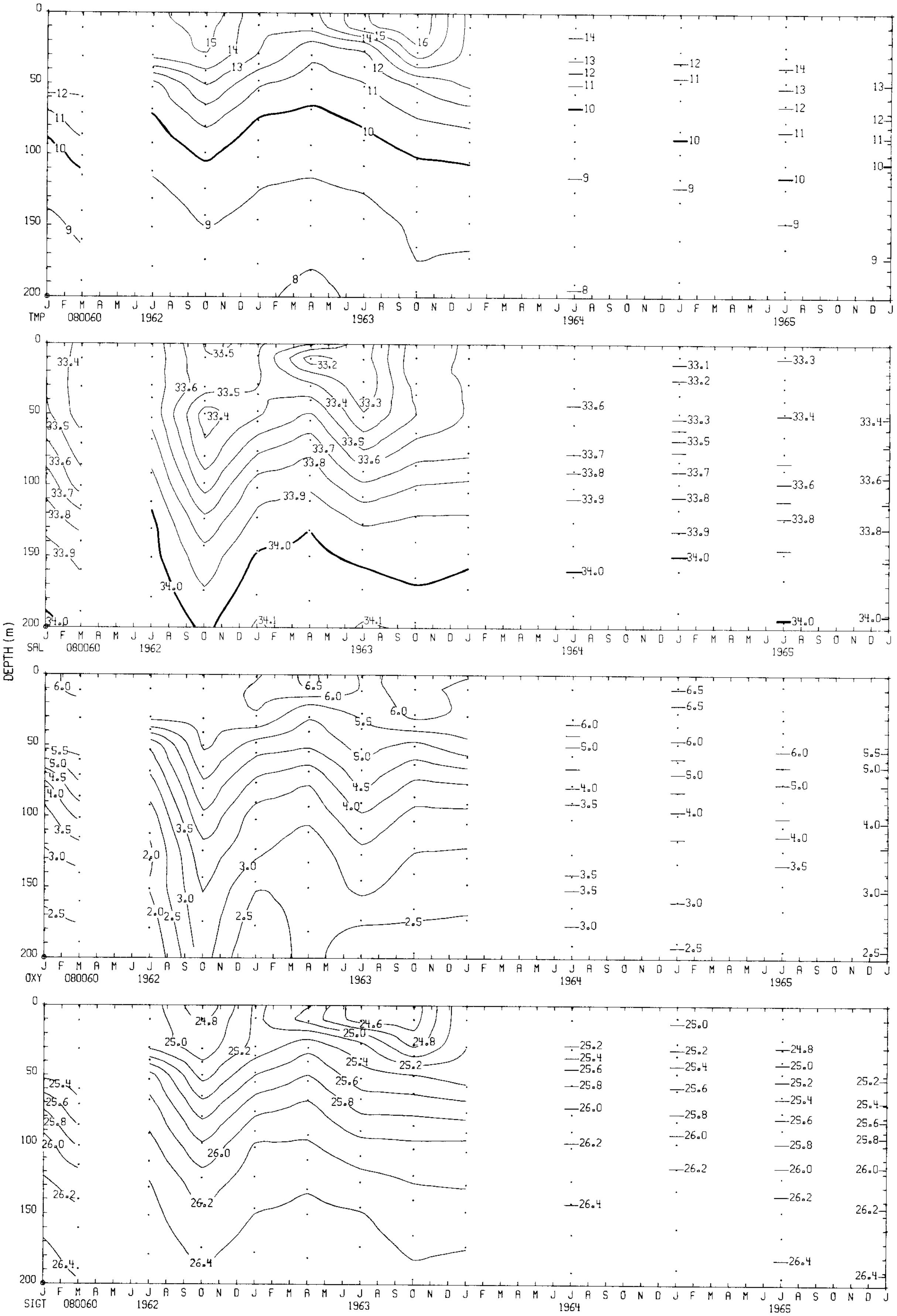
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 080060
SAL 080060
OXY 080060
SIGT 080060
1954
1955
1956
1957

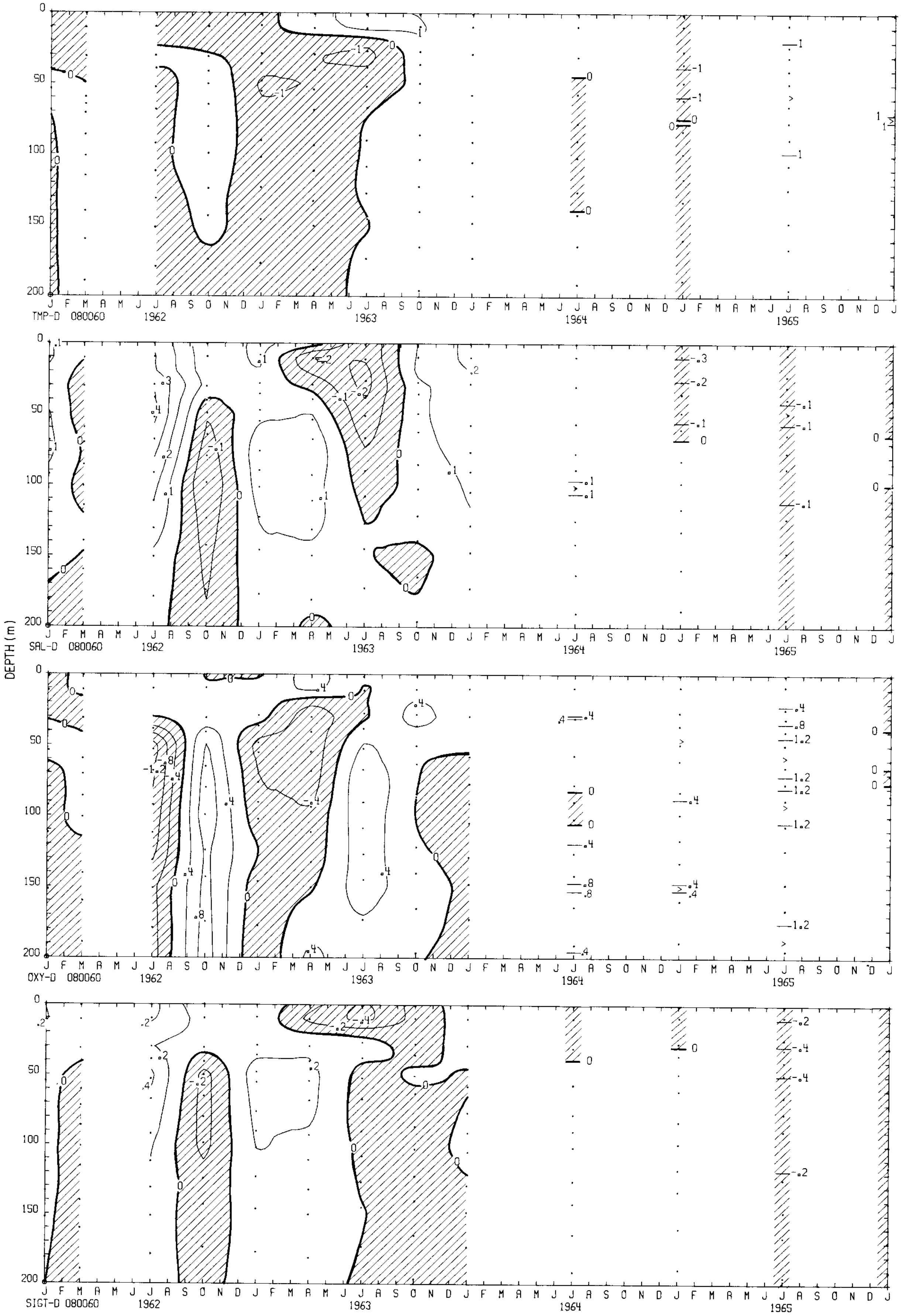

TMP-D 080060
SAL-D 080060
OXY-D 080060
SIGT-D 080060
DEPTH (m)
1954
1955
1956
1957

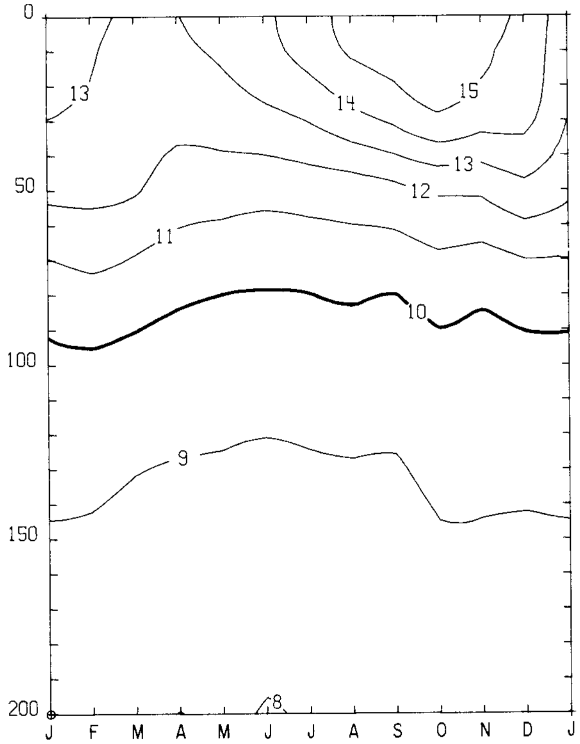


DEPTH (m)
TMP 080060 1958
1959
1960
1961
SAL 080060 1958
OXY 080060 1958
SIGT 080060 1958
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
0
50
100
150
200

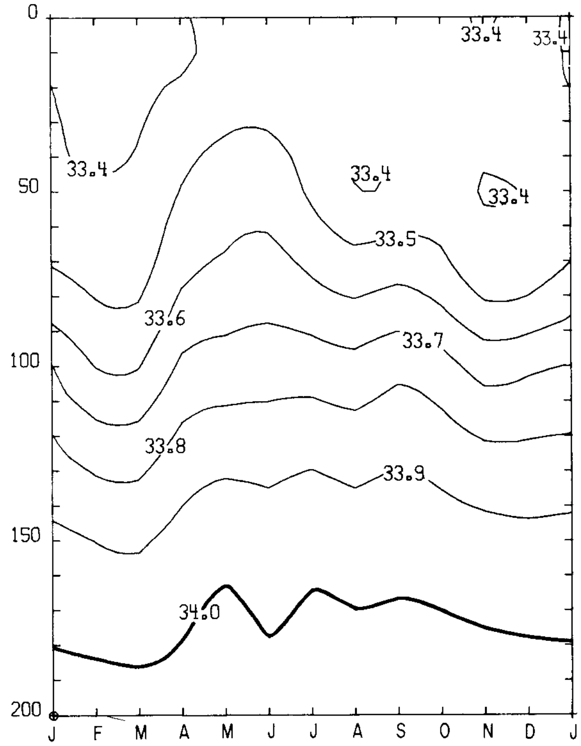

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 080060
SAL-D 080060
OXY-D 080060
SIGT-D 080060
1958
1959
1960
1961


DEPTH (m)
TMP 080060
SAL 080060
OXY 080060
SIGT 080060
1962
1963
1964
1965


TMP-D 080060
SAL-D 080060
OXY-D 080060
SIGT-D 080060
DEPTH (m)
1962
1963
1964
1965

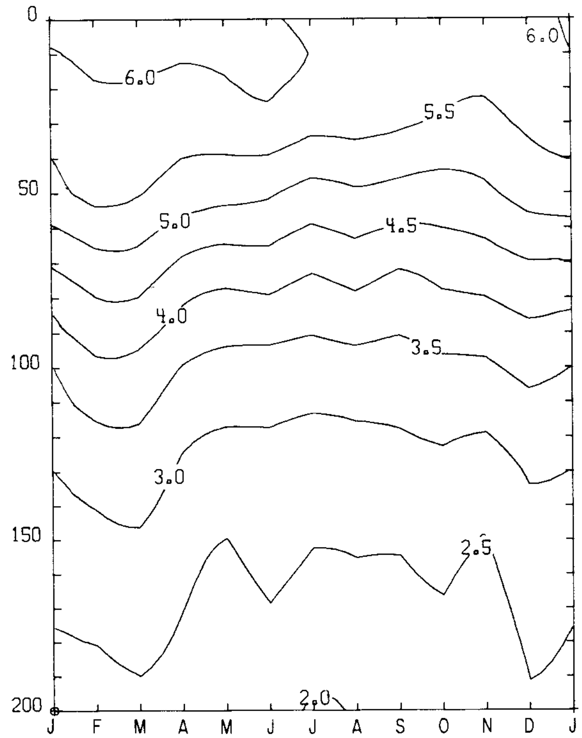


MEAN TMP 080060 JAN-DEC

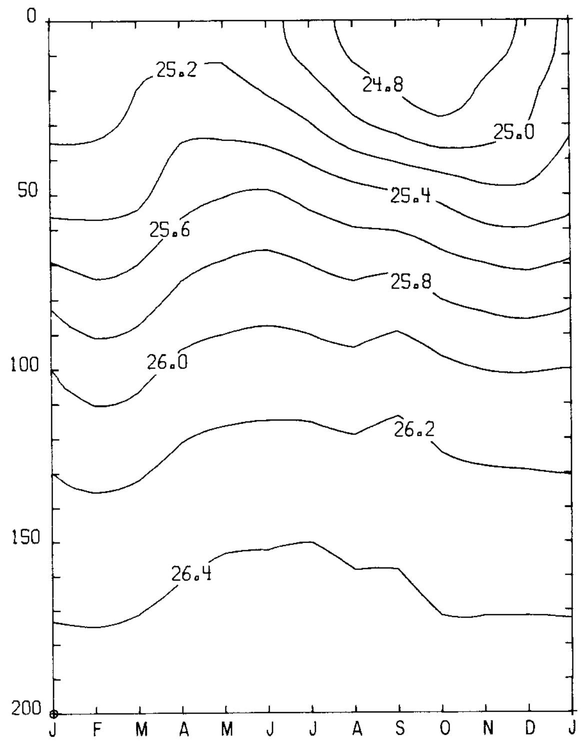


MEAN SAL 080060 JAN-DEC

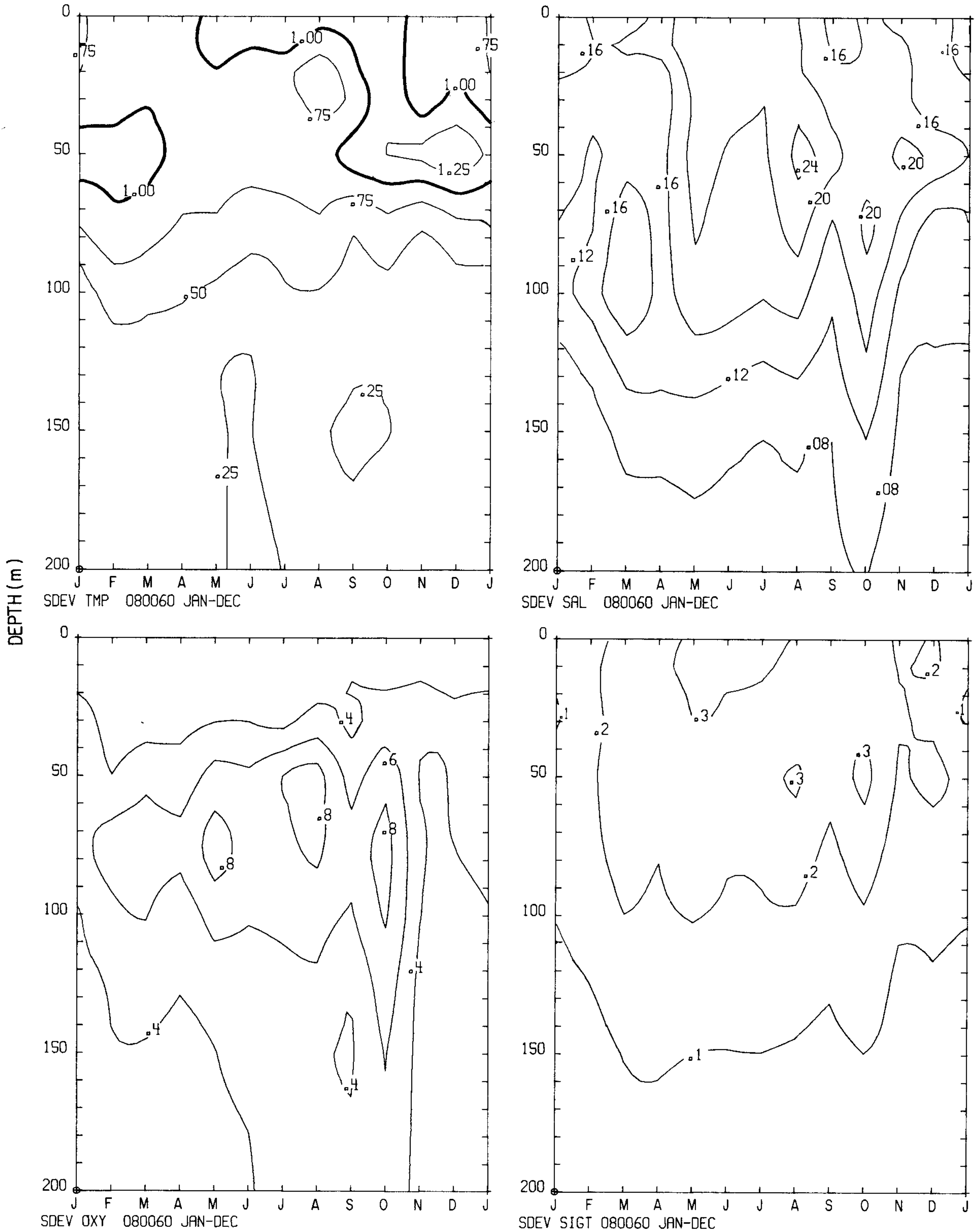
DEPTH (m)



MEAN OXY 080060 JAN-DEC



MEAN SIGT 080060 JAN-DEC


DEPTH (m)
SDEV TMP 080060 JAN-DEC
SDEV SAL 080060 JAN-DEC
SDEV OXY 080060 JAN-DEC
SDEV SIGT 080060 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200
.75
1.00
1.25
.50
.25
.16
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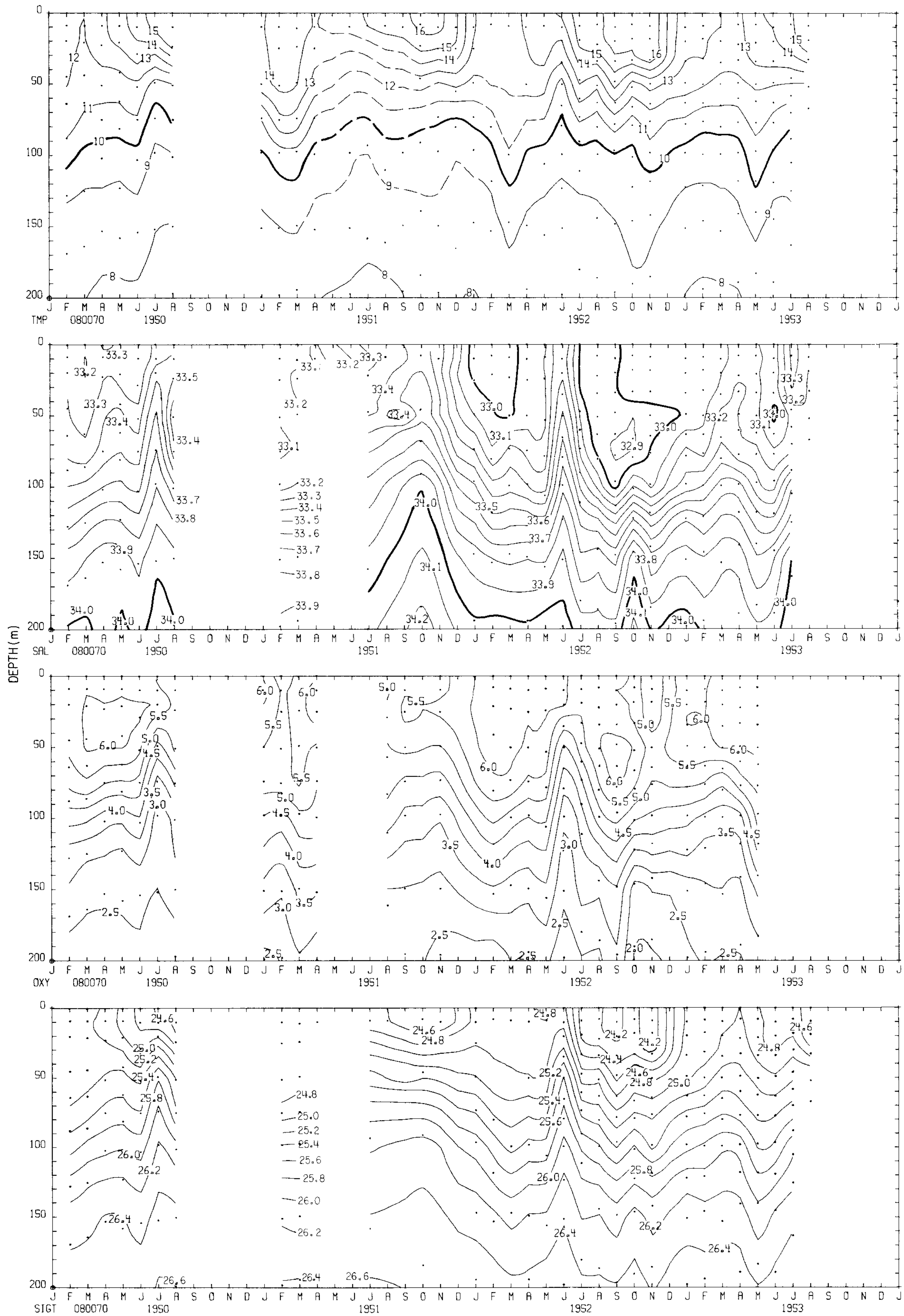
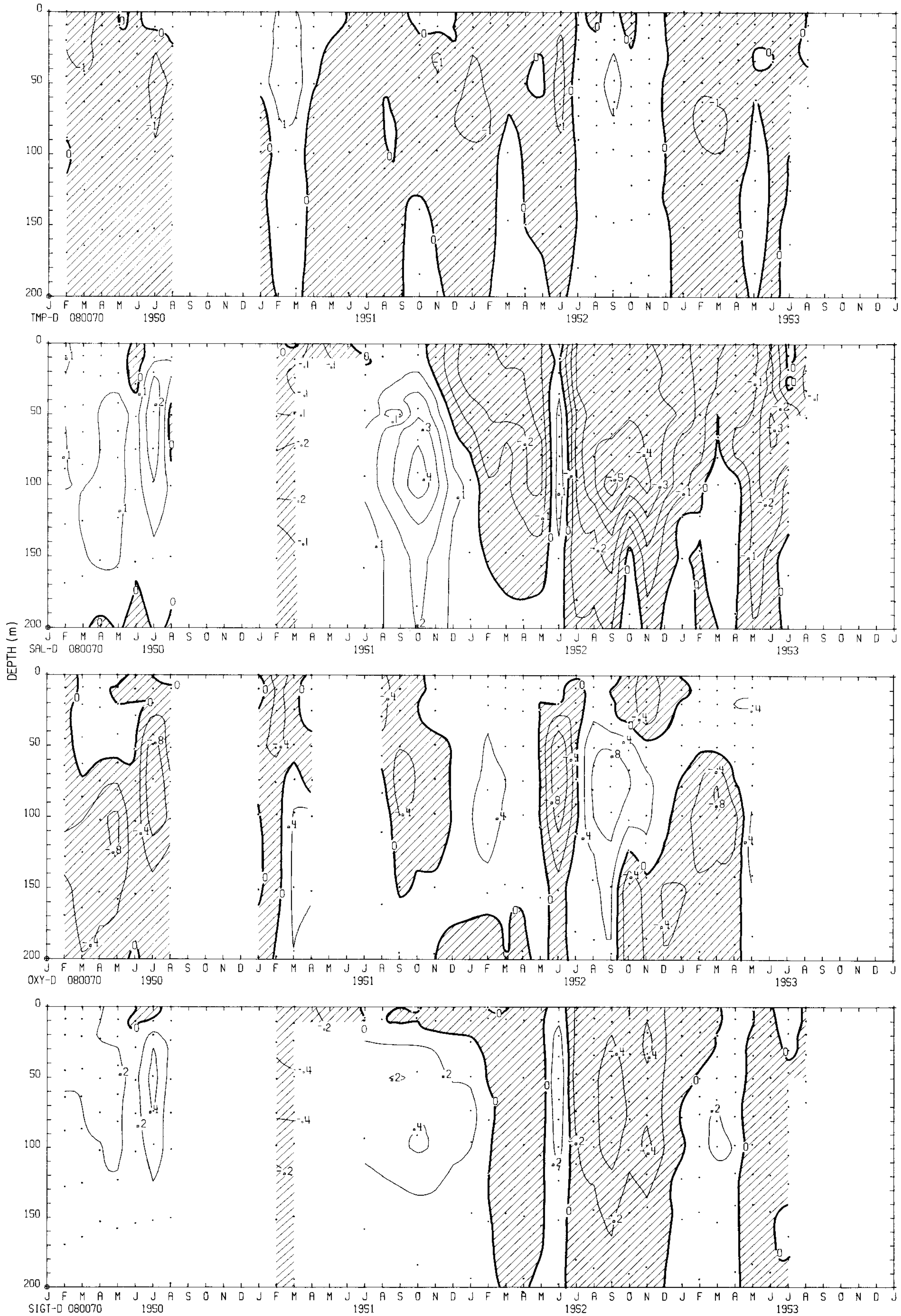
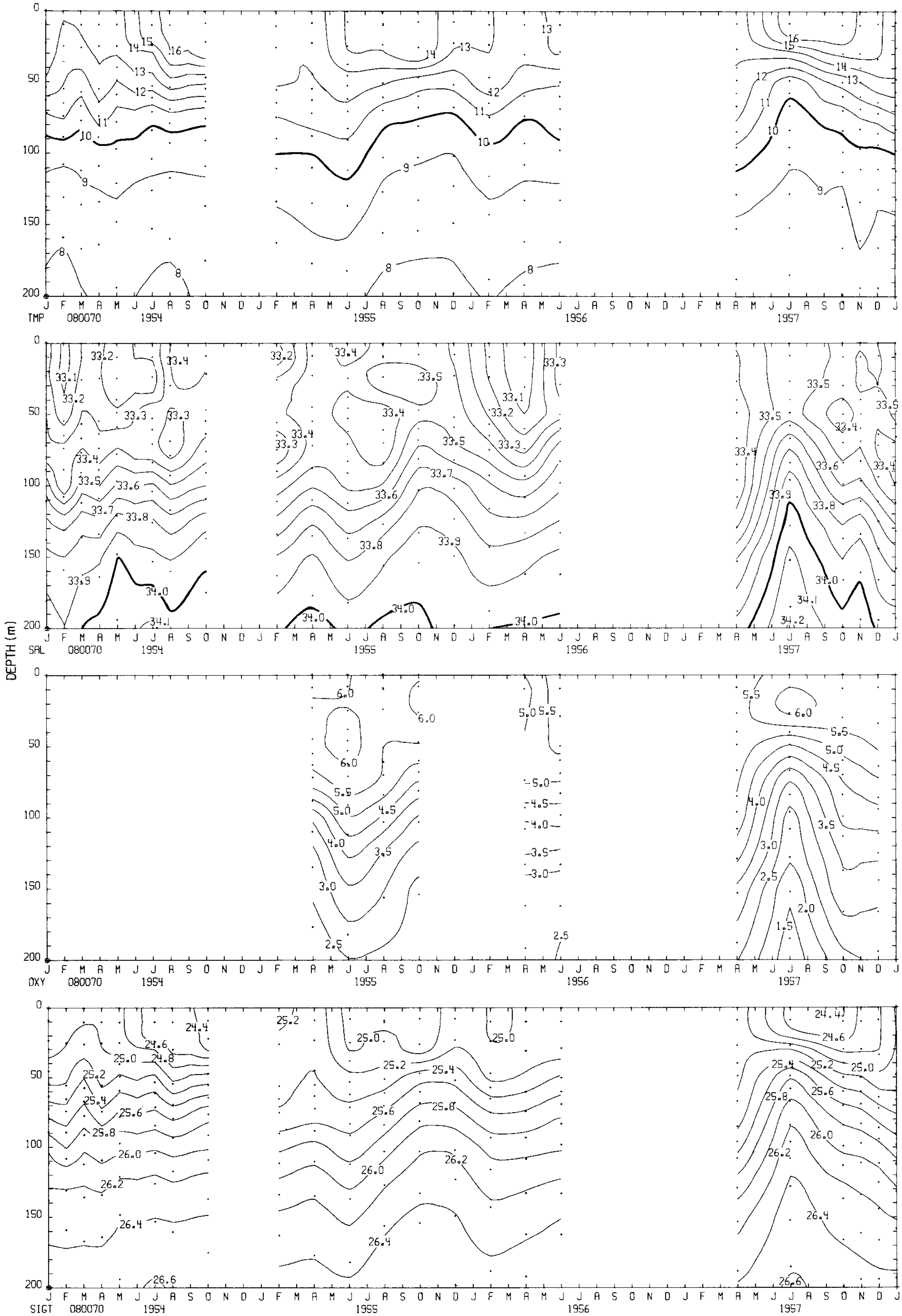
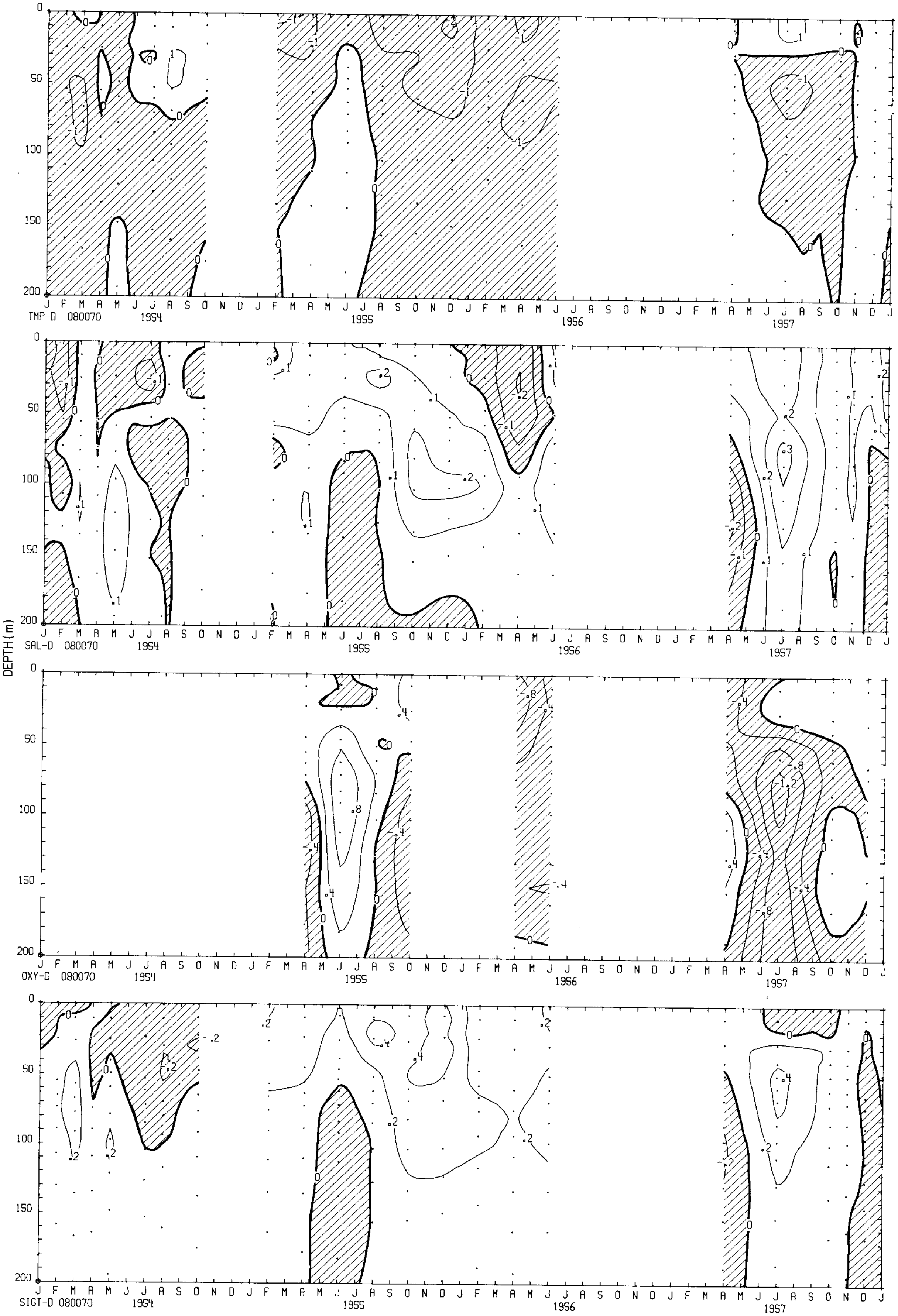
.20
.12
.08
.4
.6
.8
.1
.2
.3


DEPTH (m)
TMP 080070
SAL 080070
OXY 080070
SIGT 080070
1950
1951
1952
1953

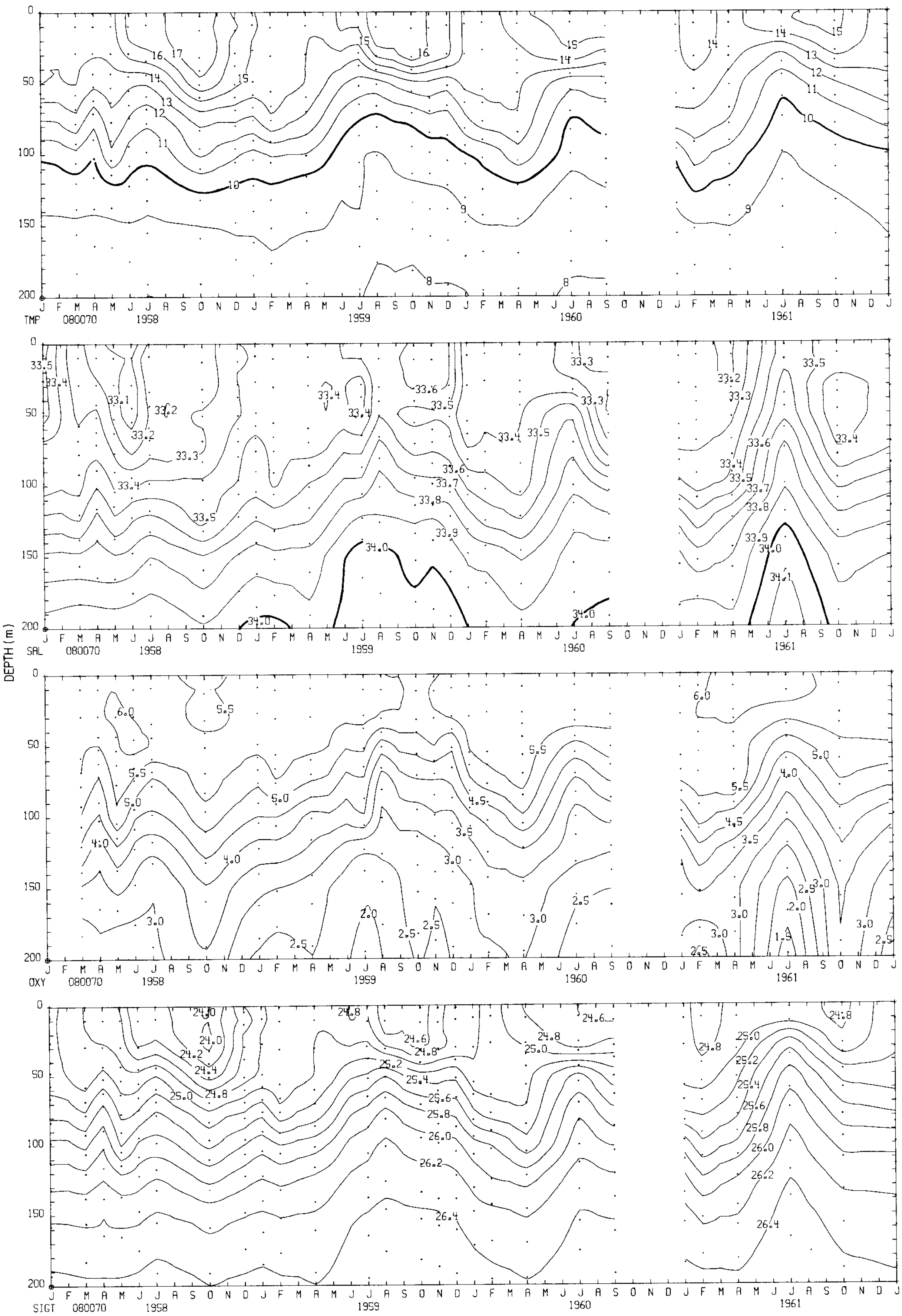


TMP-D 080070
SAL-D 080070
OXY-D 080070
SIGT-D 080070
DEPTH (m)
1950
1951
1952
1953

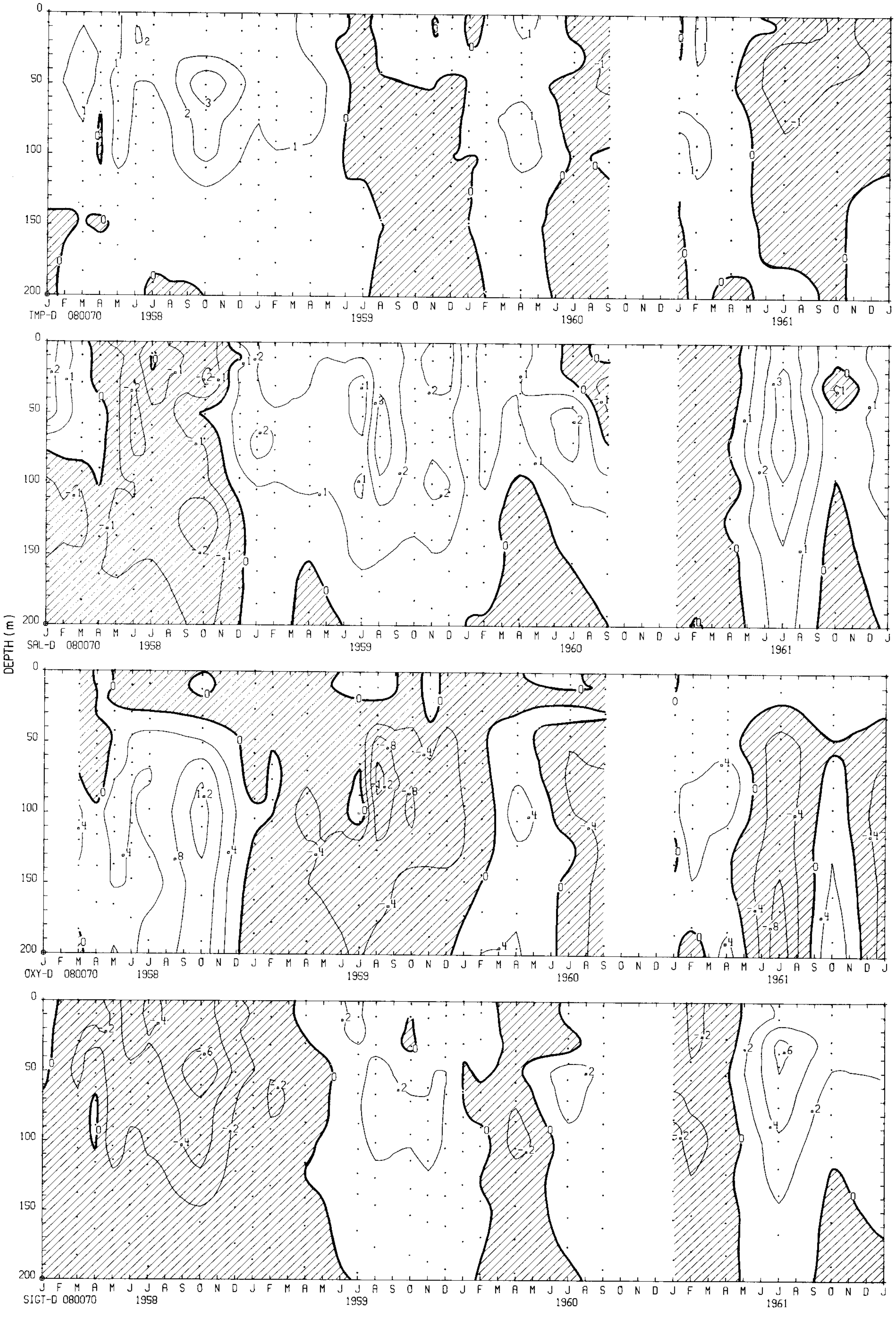

DEPTH (m)
TMP 080070 1954 1955 1956 1957
SAL 080070 1954 1955 1956 1957
OXY 080070 1954 1955 1956 1957
SIGT 080070 1954 1955 1956 1957
J F M A M J J A S O N D



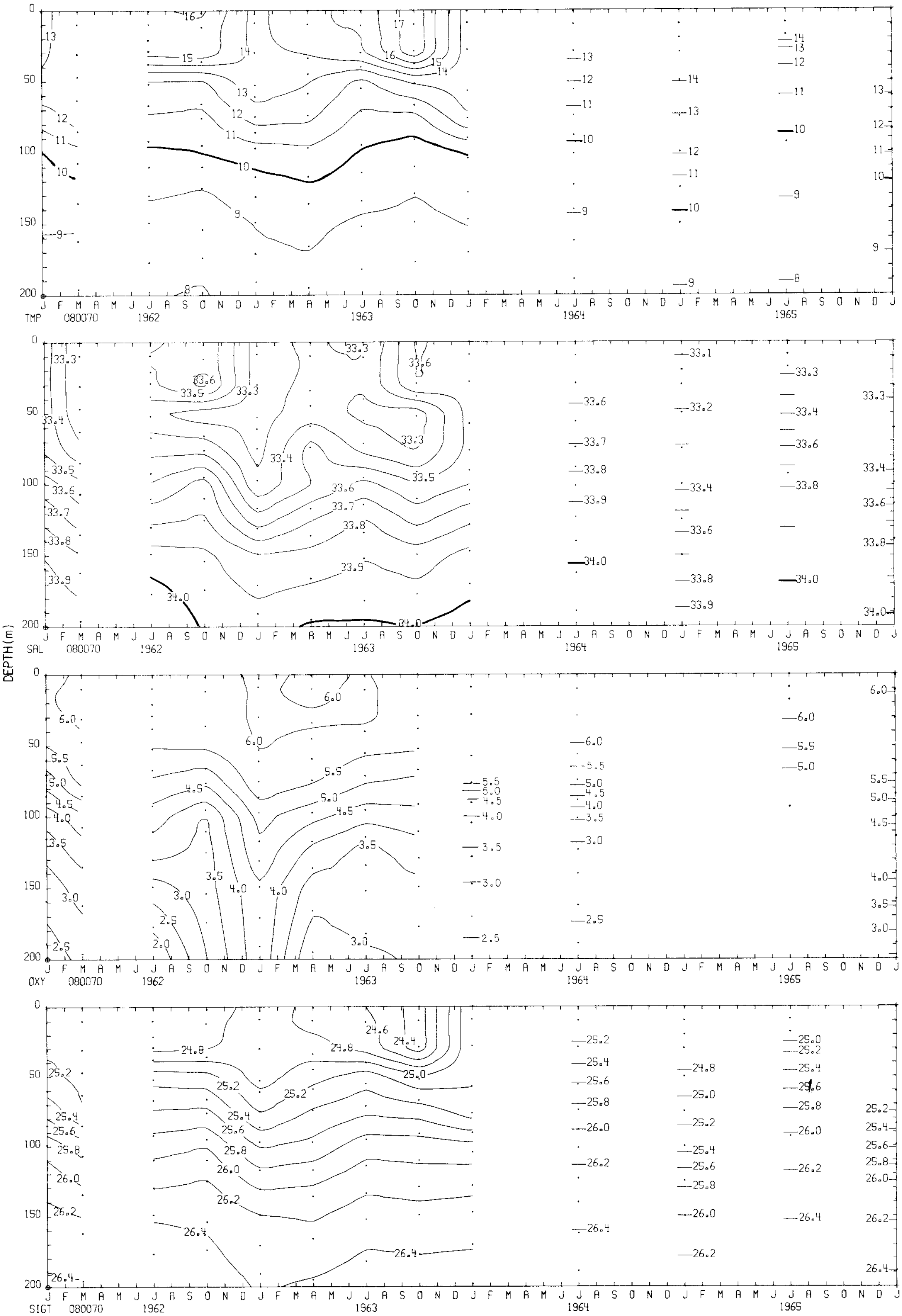
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 080070
1954
1955
1956
1957
SAL-D 080070
OXY-D 080070
SIGT-D 080070

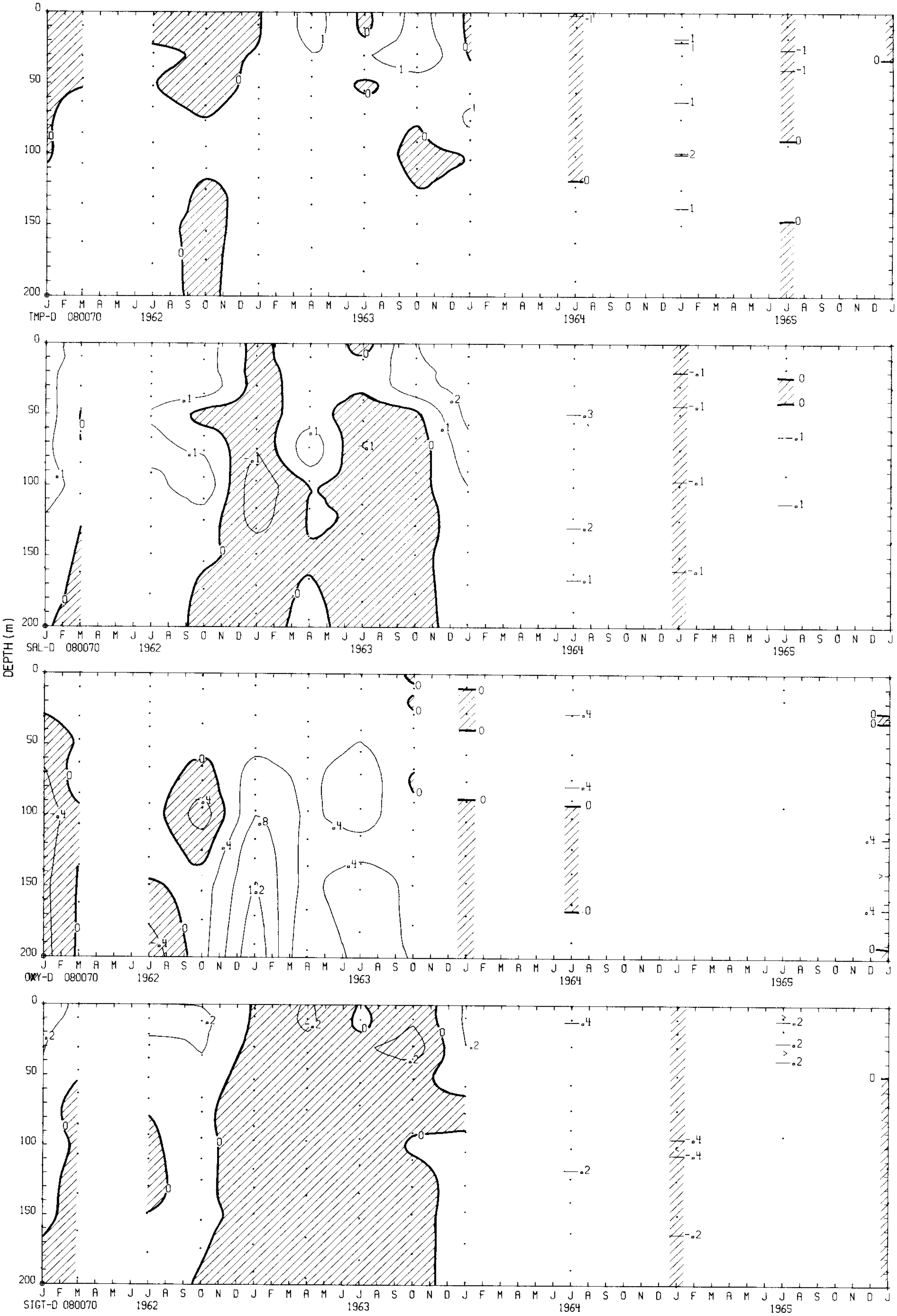


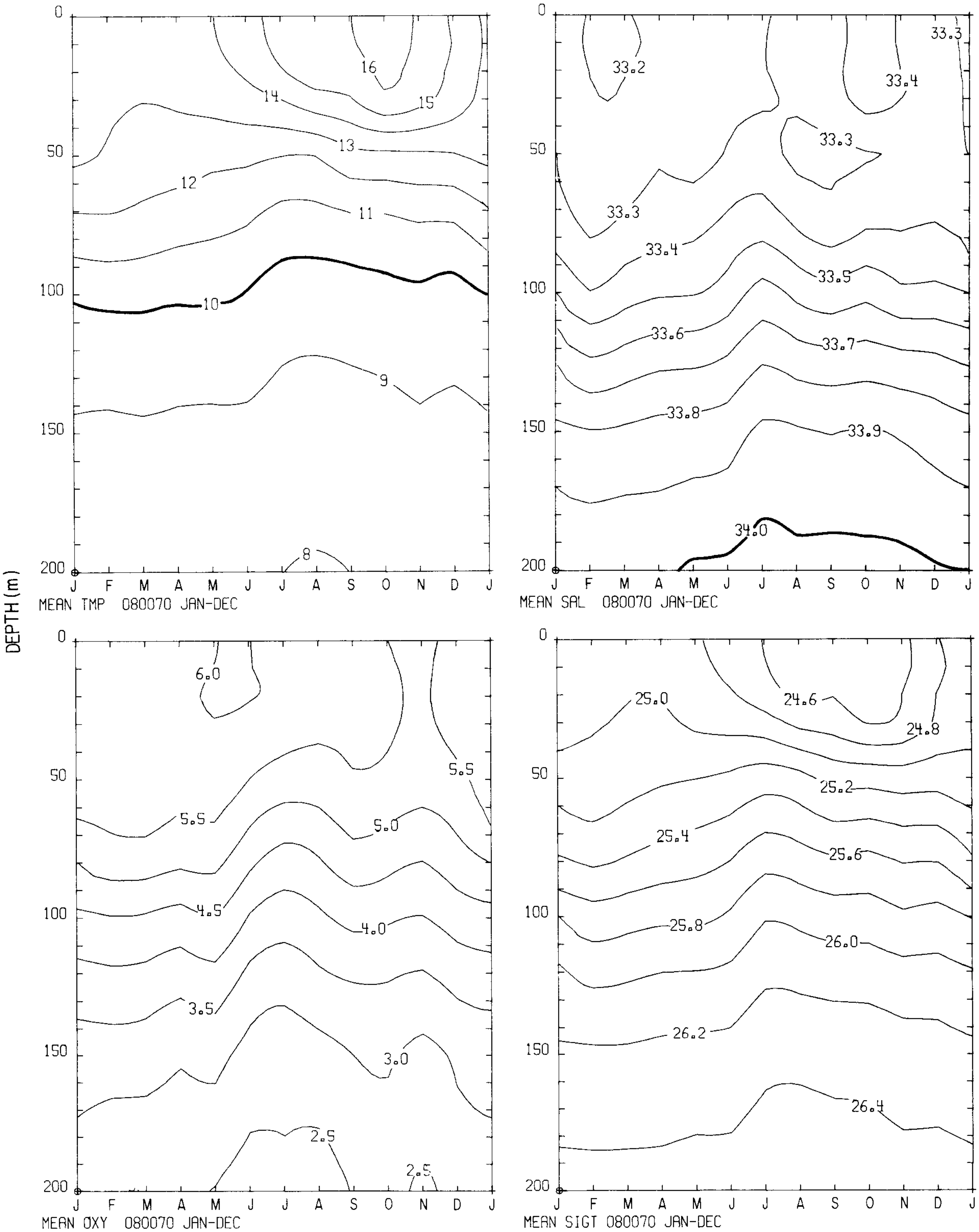
TMP 080070 1958
1959
1960
1961
SAL 080070 1958
OXY 080070 1958
SIGT 080070 1958
DEPTH (m)
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
0
50
100
150
200



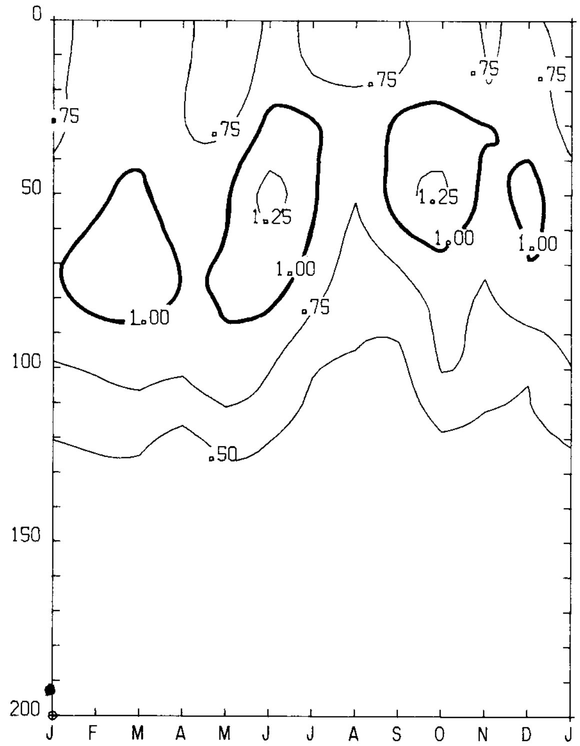
DEPTH (m)
TMP-D 080070
SAL-D 080070
OXY-D 080070
SIGT-D 080070
1958
1959
1960
1961
J F M A M J J A S O N D


TMP 080070
SAL 080070
OXY 080070
SIGT 080070
DEPTH (m)
1962
1963
1964
1965

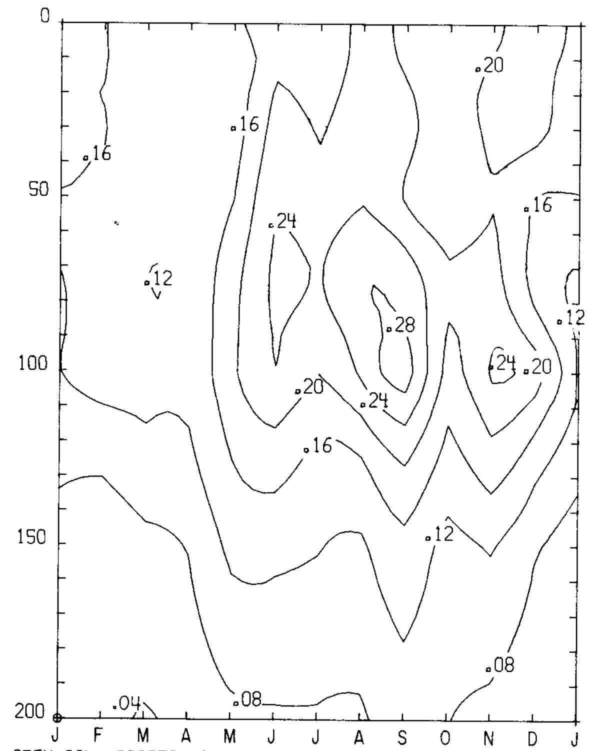

DEPTH (m)
TMP-D 080070
SAL-D 080070
OXY-D 080070
SIGT-D 080070
1962
1963
1964
1965


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J
16
14
15
13
12
11
10
9
8
MEAN TMP 080070 JAN-DEC
33.3
33.2
33.4
33.3
33.3
33.4
33.5
33.6
33.7
33.8
33.9
34.0
MEAN SAL 080070 JAN-DEC
6.0
5.5
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.5
MEAN OXY 080070 JAN-DEC
25.0
24.6
24.8
25.2
25.4
25.6
25.8
26.0
26.2
26.4
MEAN SIGT 080070 JAN-DEC

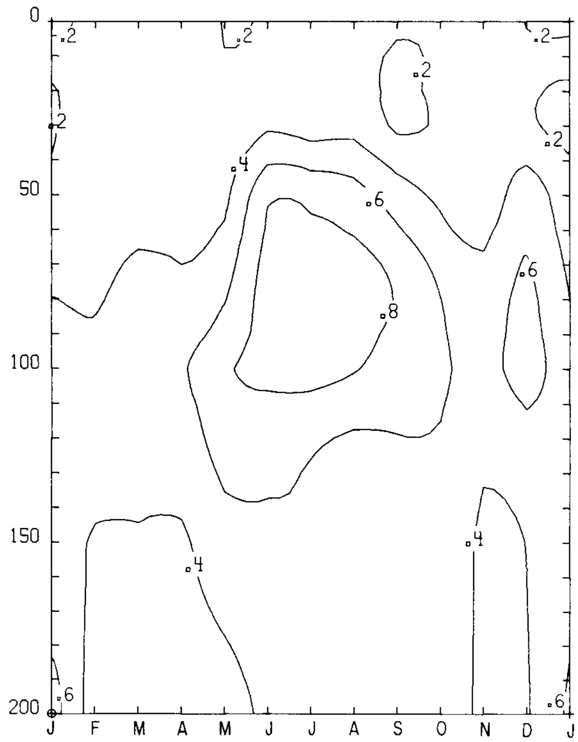
DEPTH (m)



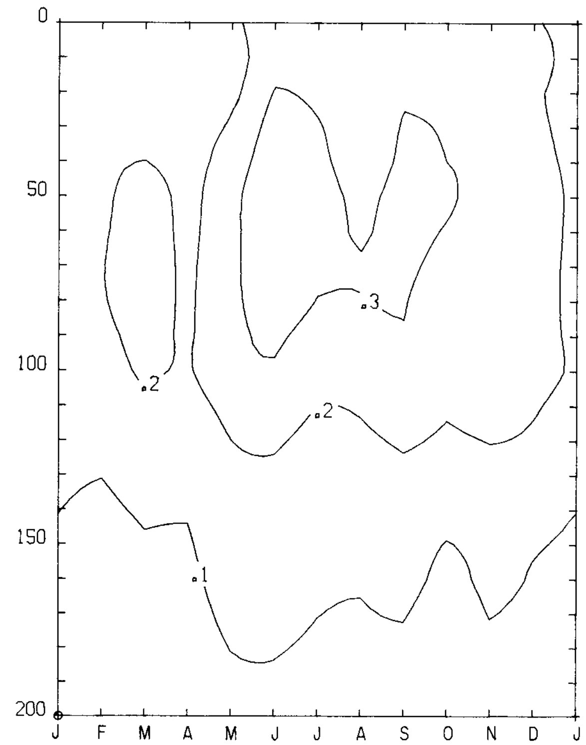
SDEV TMP 080070 JAN-DEC



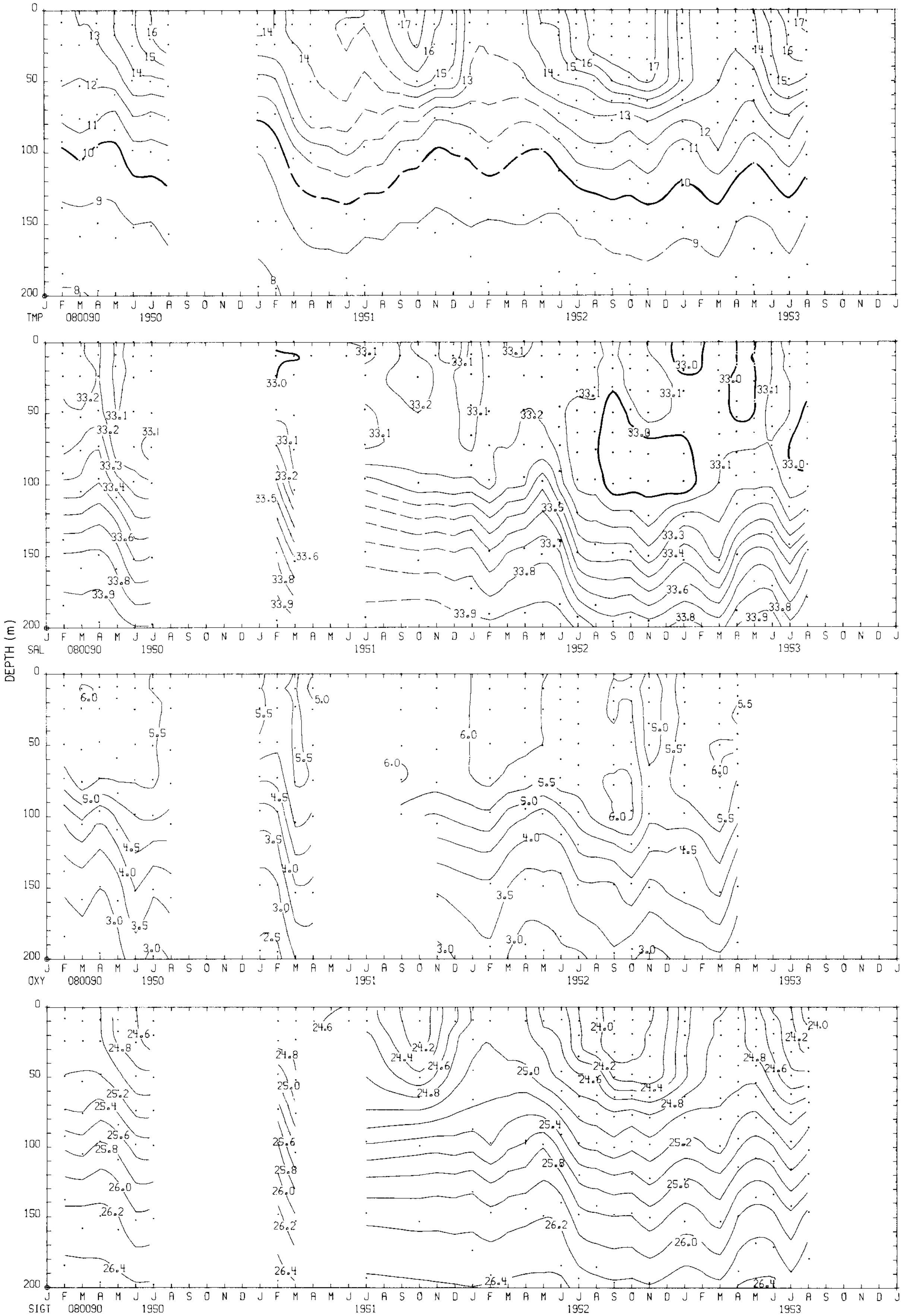
SDEV SAL 080070 JAN-DEC

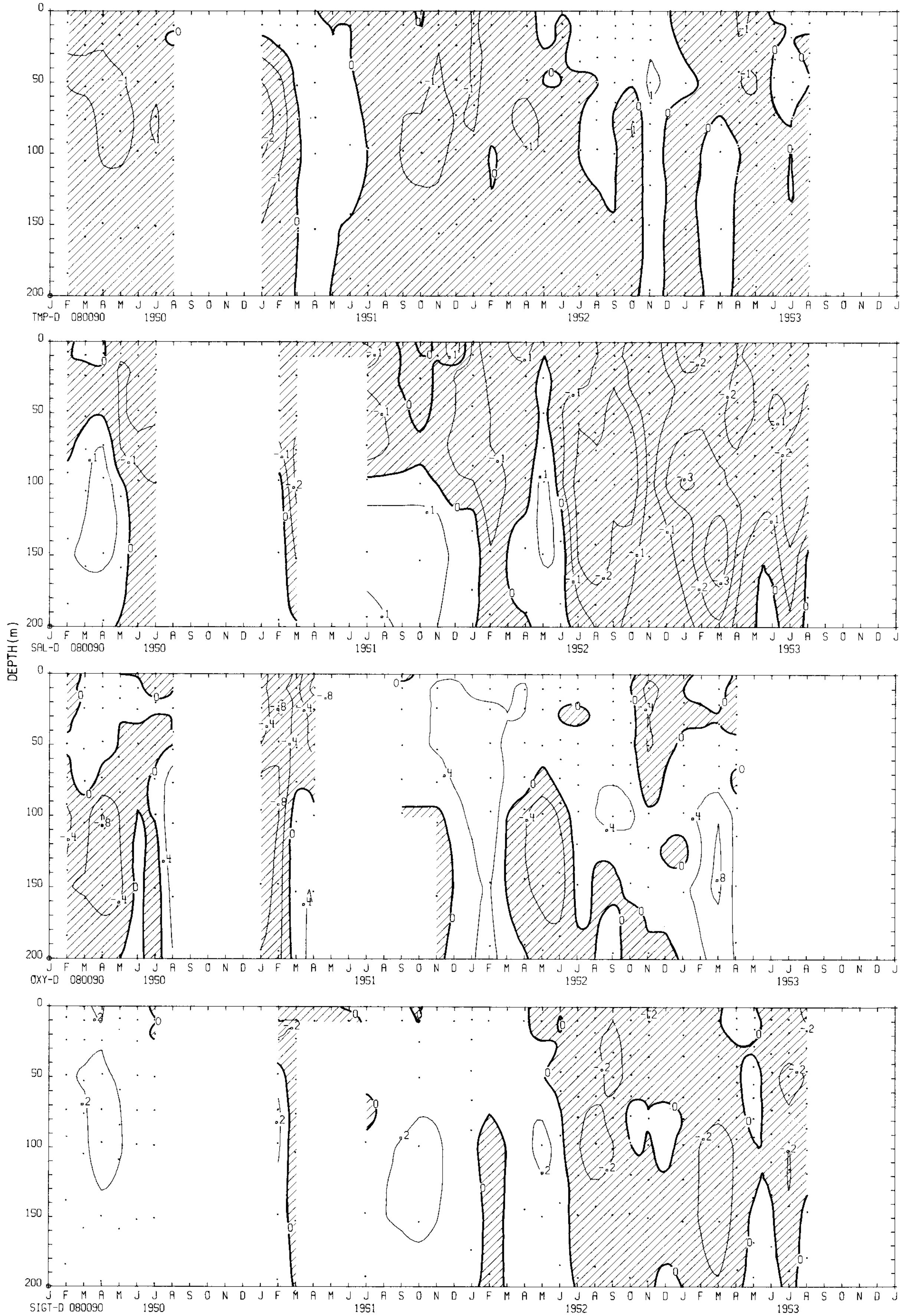


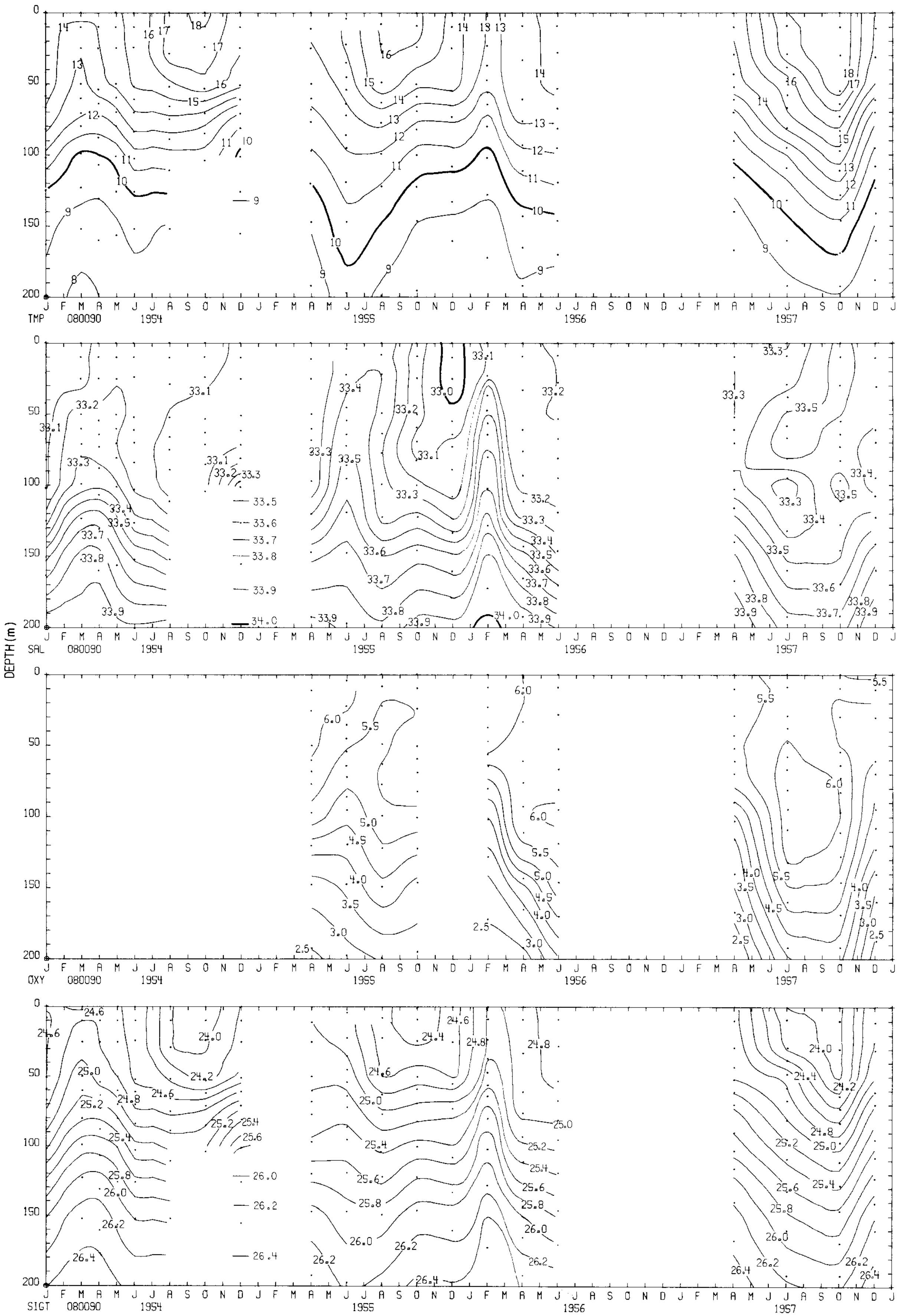
SDEV OXY 080070 JAN-DEC

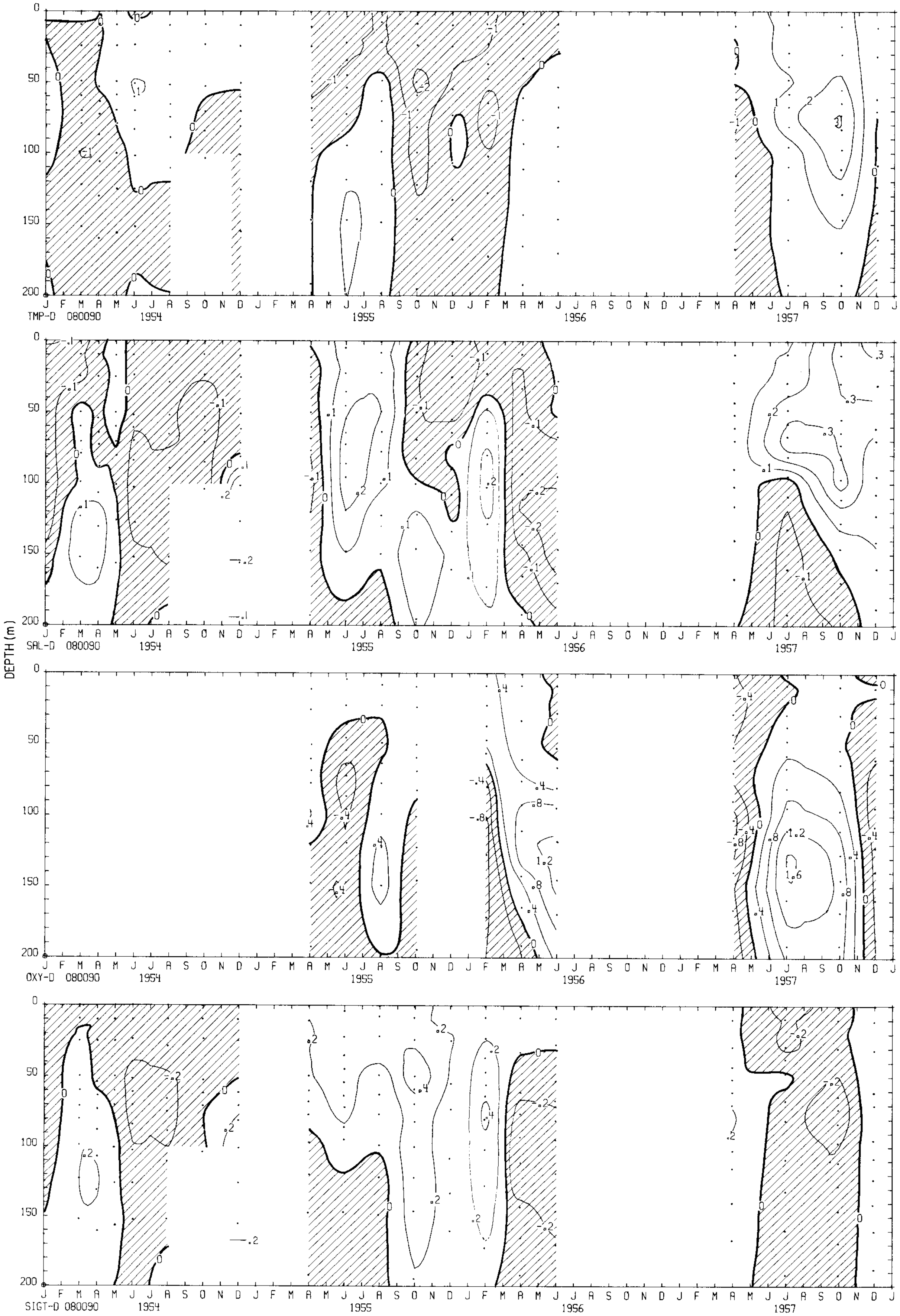


SDEV SIGT 080070 JAN-DEC

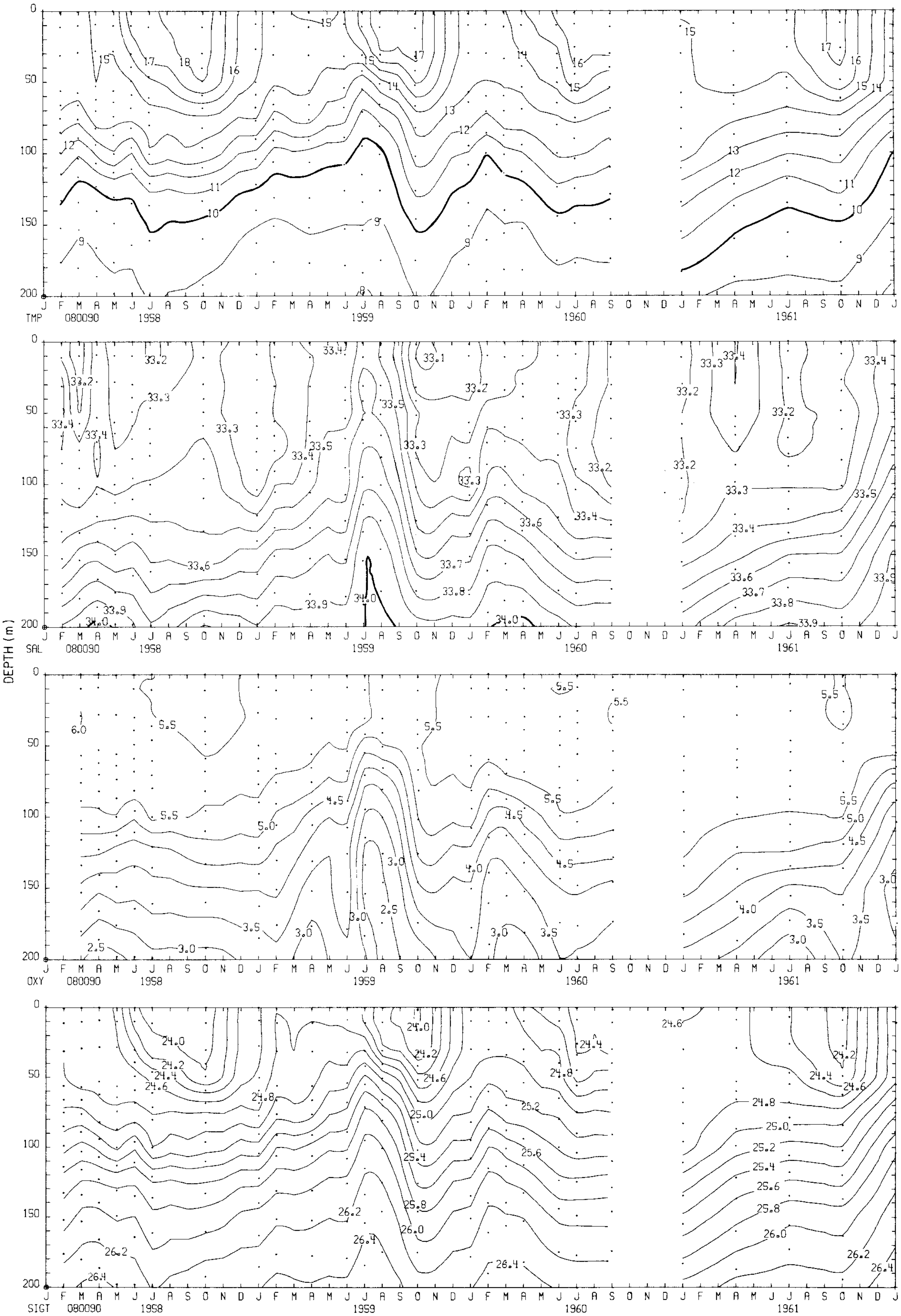

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 080090 1950 1951 1952 1953
SAL 080090 1950 1951 1952 1953
OXY 080090 1950 1951 1952 1953
SIGT 080090 1950 1951 1952 1953

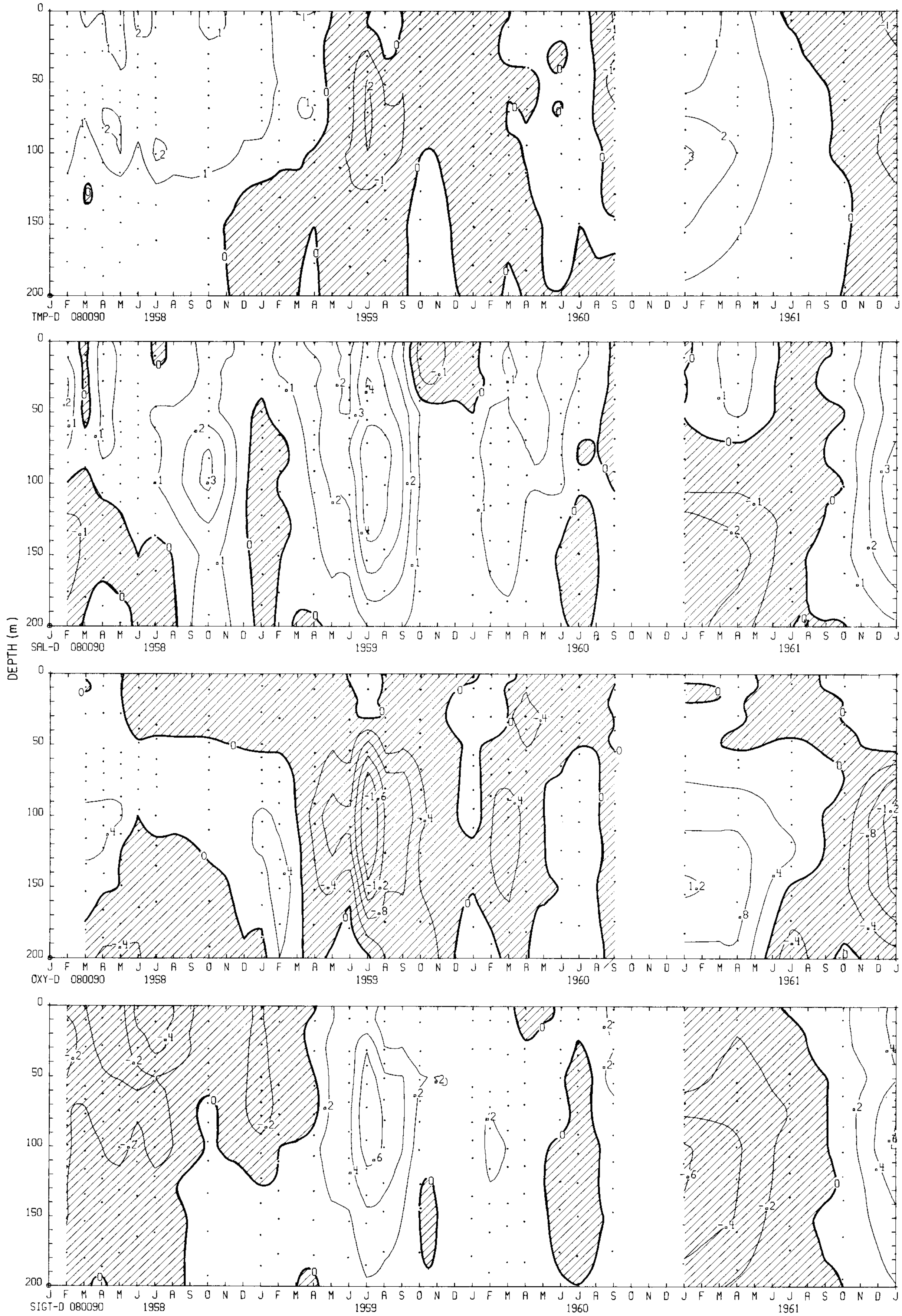

DEPTH(m)
TMP-D 080090
SAL-D 080090
OXY-D 080090
SIGT-D 080090
1950
1951
1952
1953

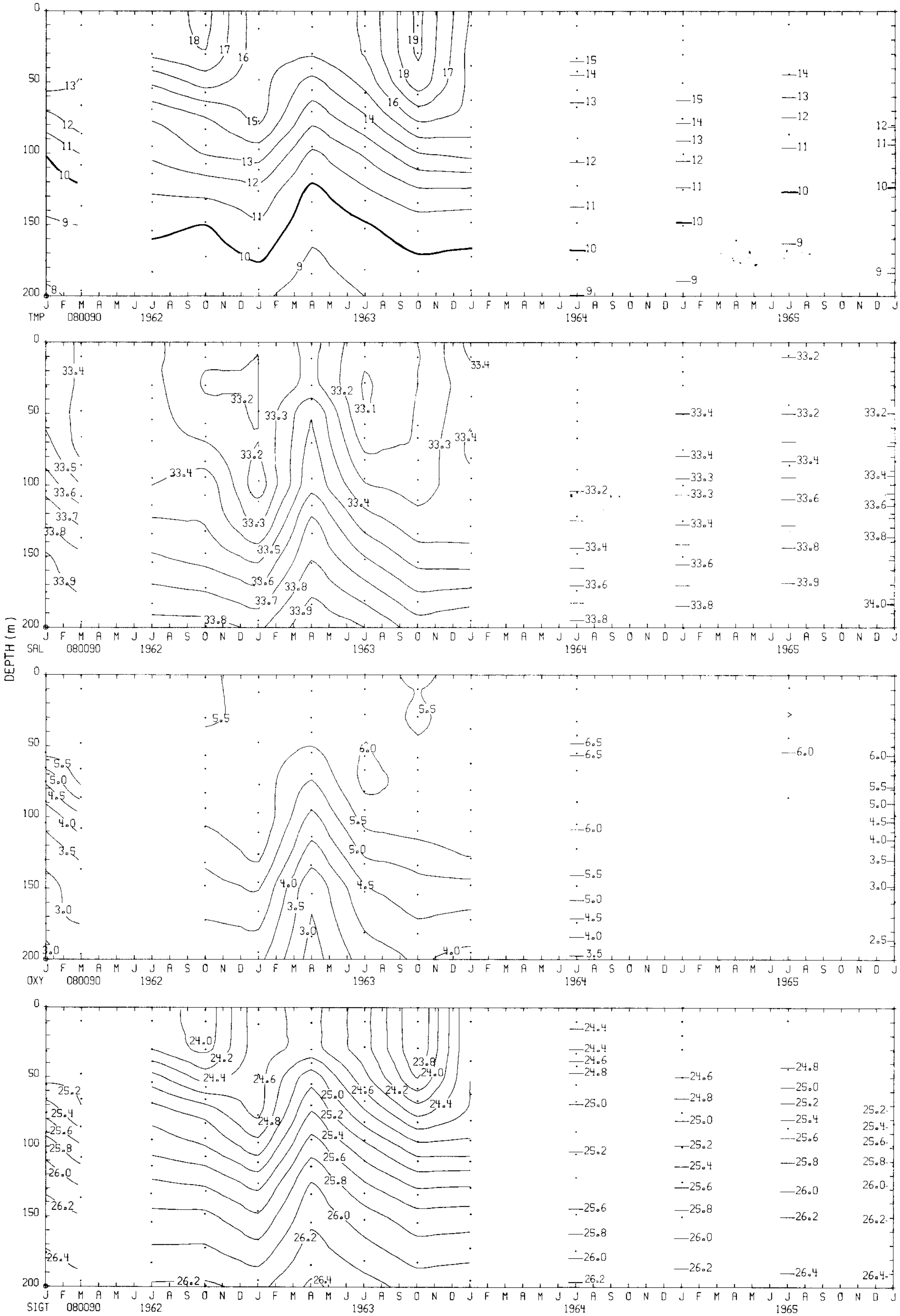

DEPTH (m)
TMP 080090 1954 1955 1956 1957
SAL 080090 1954 1955 1956 1957
OXY 080090 1954 1955 1956 1957
SIGT 080090 1954 1955 1956 1957
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

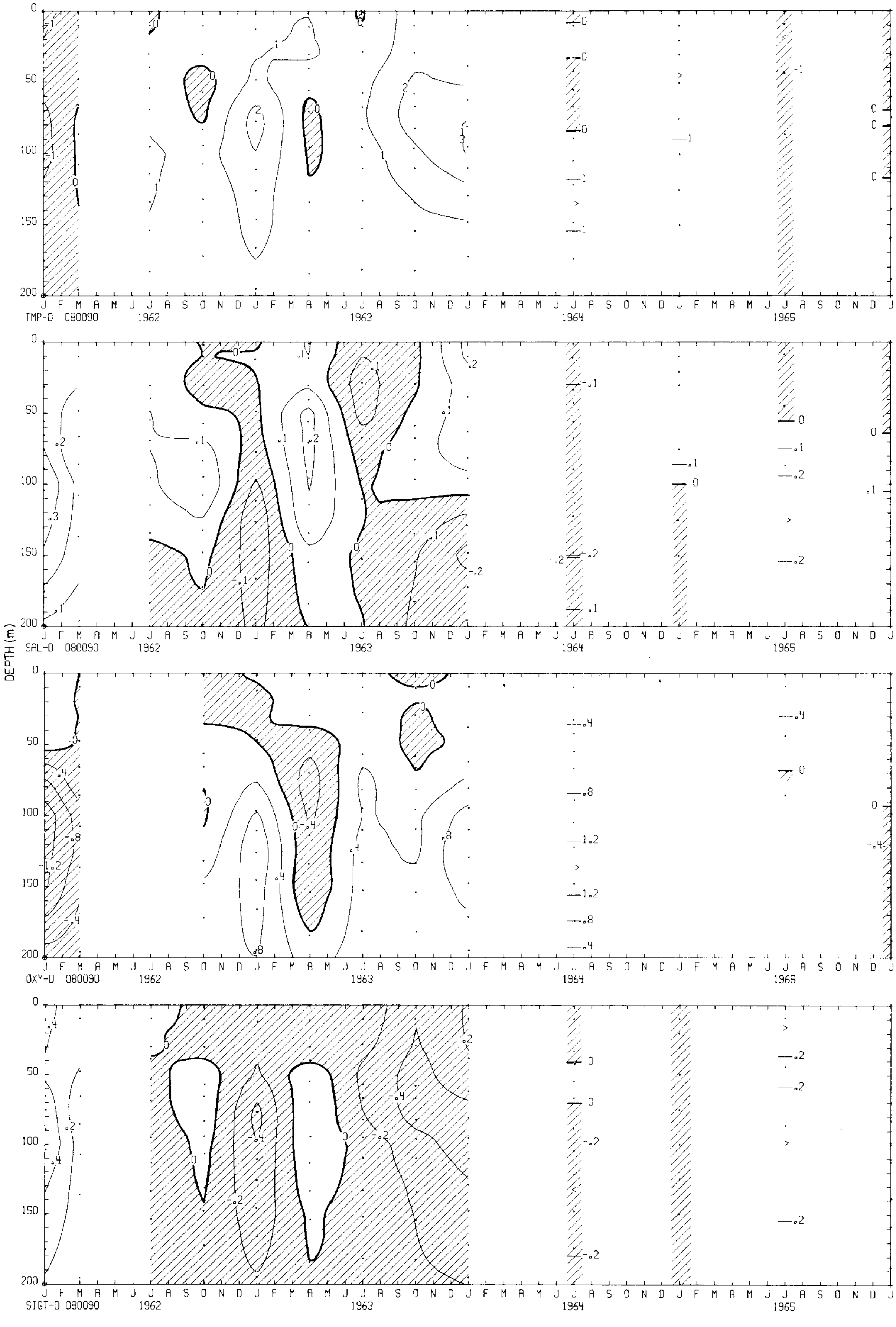


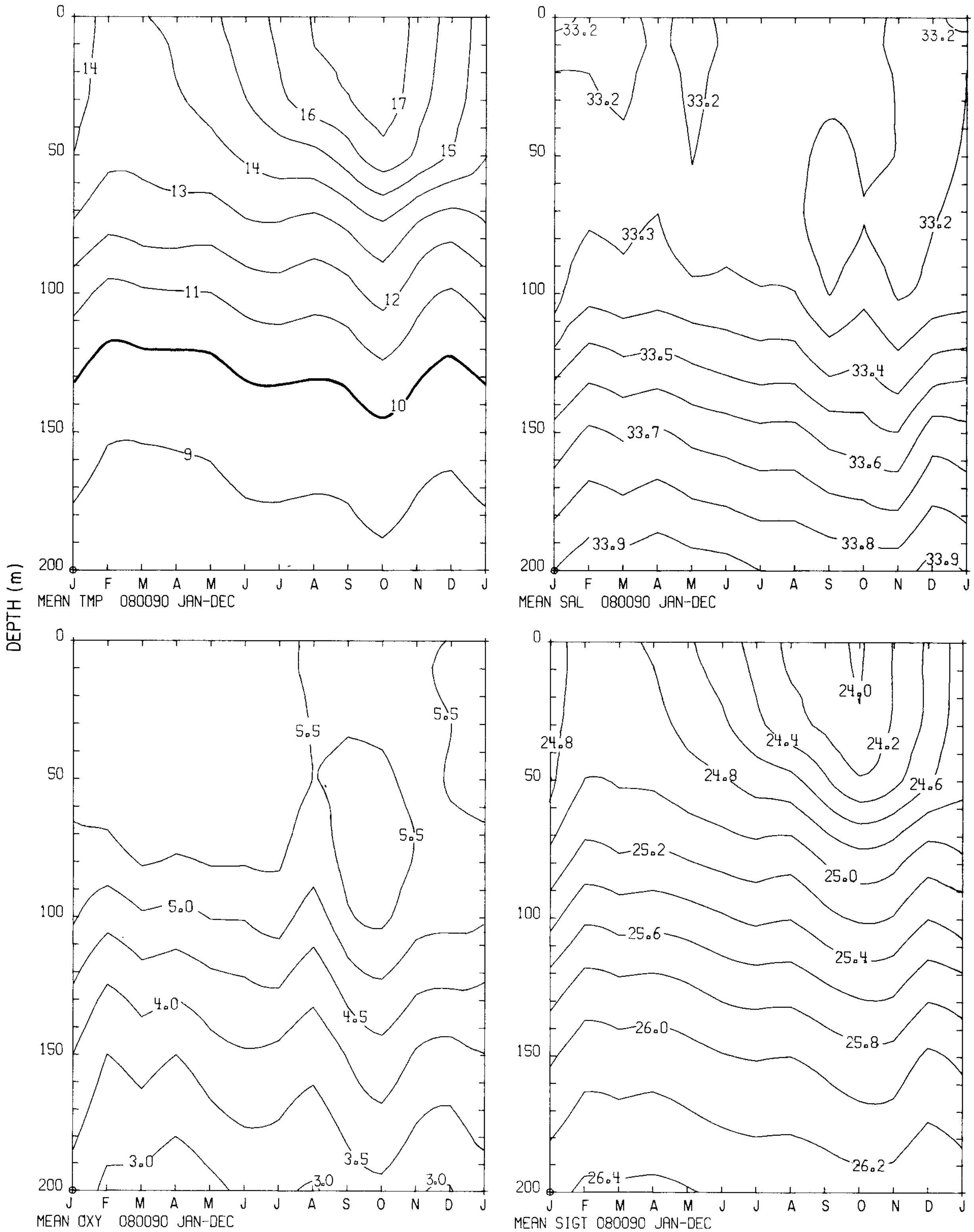
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 080090
SAL-D 080090
OXY-D 080090
SIGT-D 080090
1954
1955
1956
1957

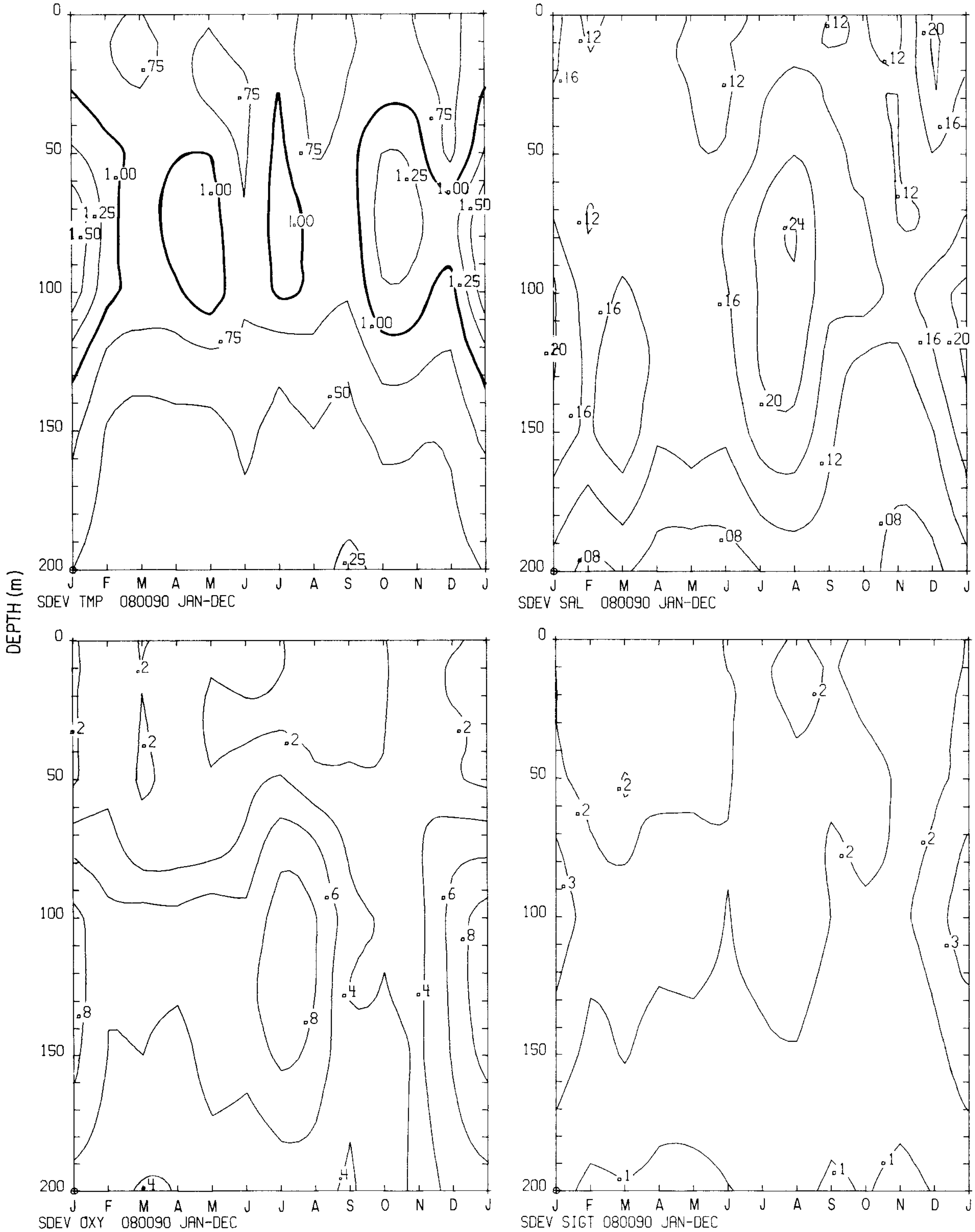

DEPTH (m)
TMP 080090 1958 1959 1960 1961
SAL 080090 1958 1959 1960 1961
OXY 080090 1958 1959 1960 1961
SIGT 080090 1958 1959 1960 1961
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

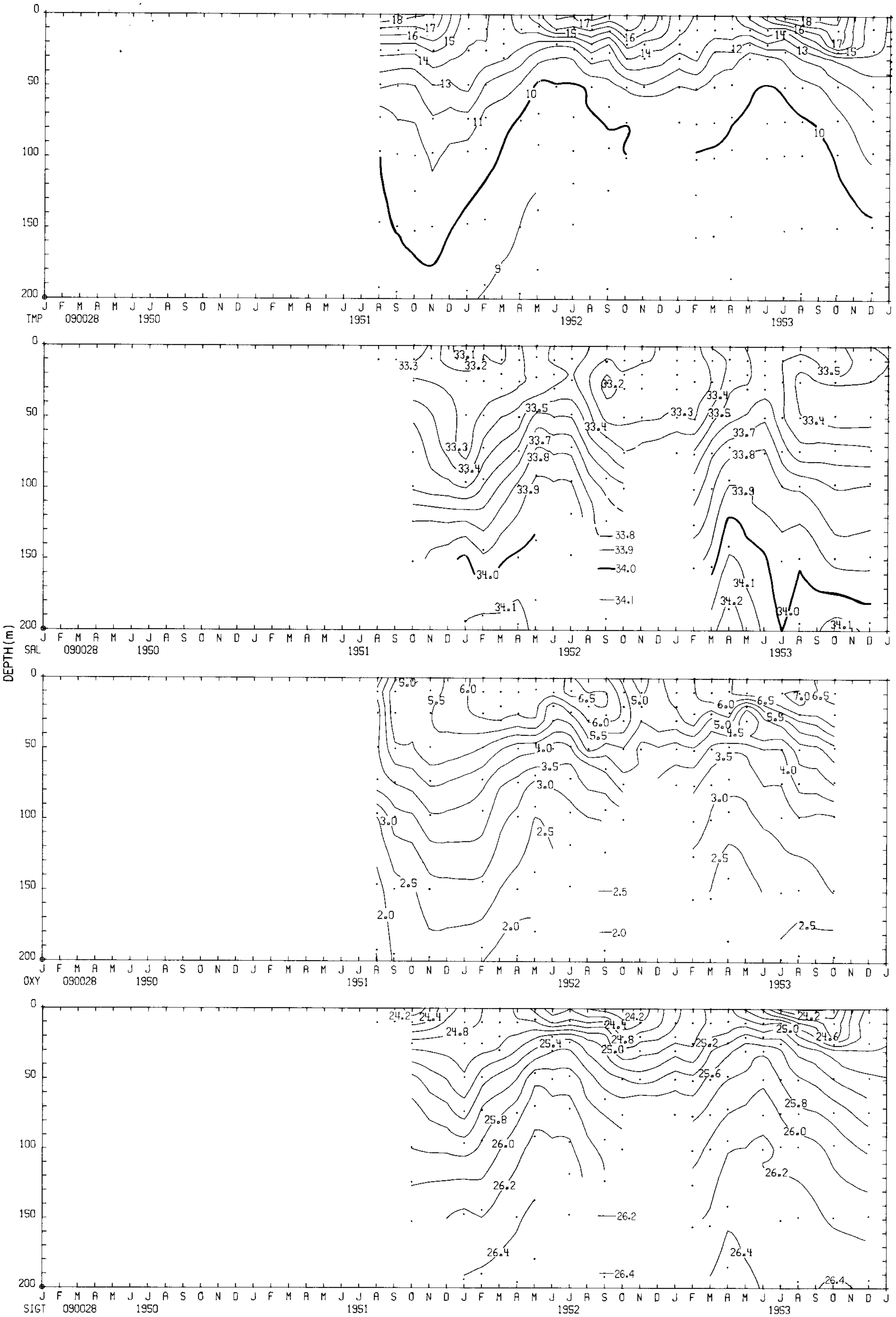

DEPTH (m)
TMP-D 080090
SAL-D 080090
OXY-D 080090
SIGT-D 080090
1958
1959
1960
1961
J F M A M J J A S O N D

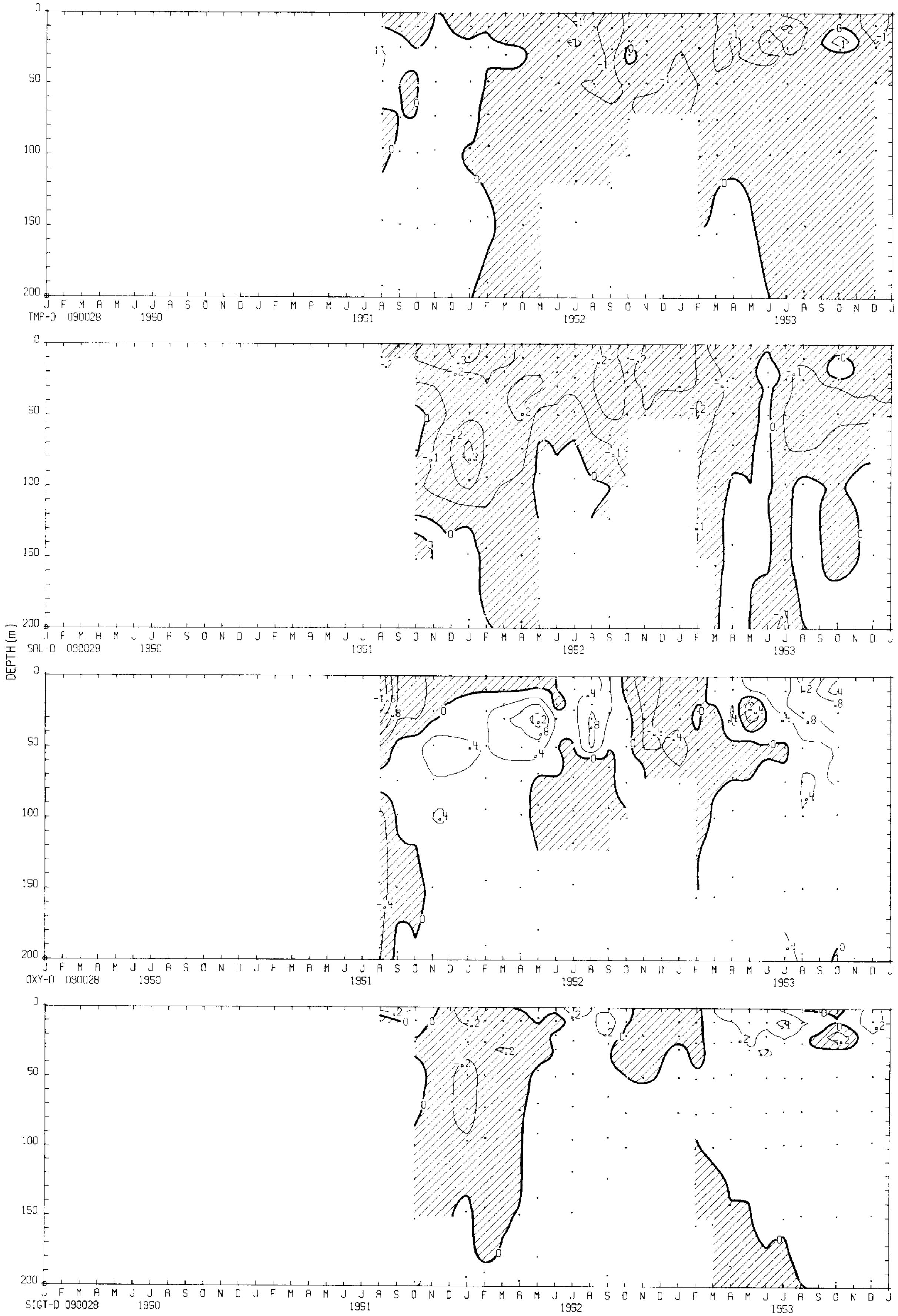

DEPTH (m)
TMP 080090
SAL 080090
OXY 080090
SIGT 080090
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1962
1963
1964
1965

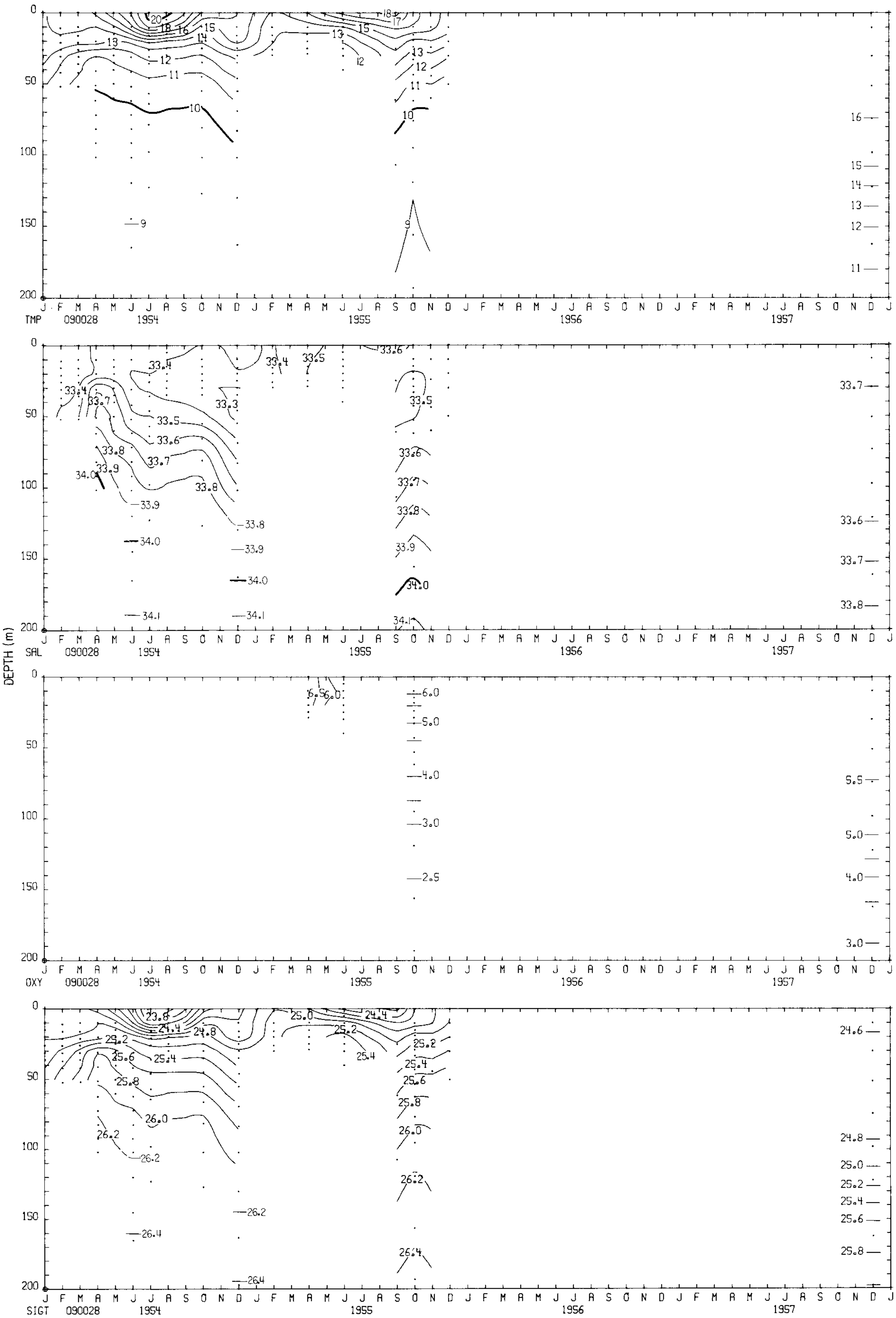

DEPTH (m)
TMP-D 080090
SAL-D 080090
OXY-D 080090
SIGT-D 080090
1962
1963
1964
1965

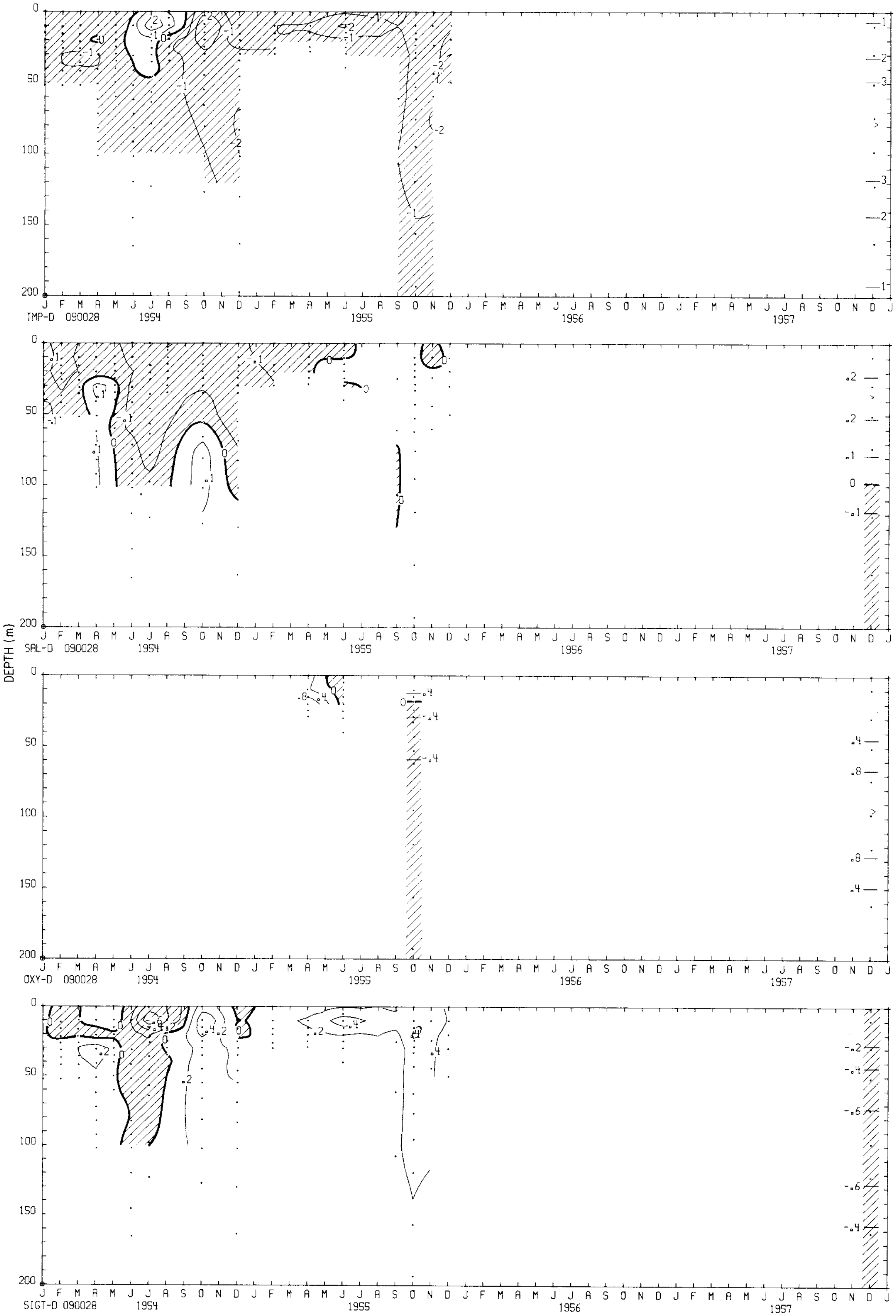

DEPTH (m)
MEAN TMP 080090 JAN-DEC
MEAN SAL 080090 JAN-DEC
MEAN OXY 080090 JAN-DEC
MEAN SIGT 080090 JAN-DEC


DEPTH (m)
SDEV TMP 080090 JAN-DEC
SDEV SAL 080090 JAN-DEC
SDEV OXY 080090 JAN-DEC
SDEV SIGT 080090 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200

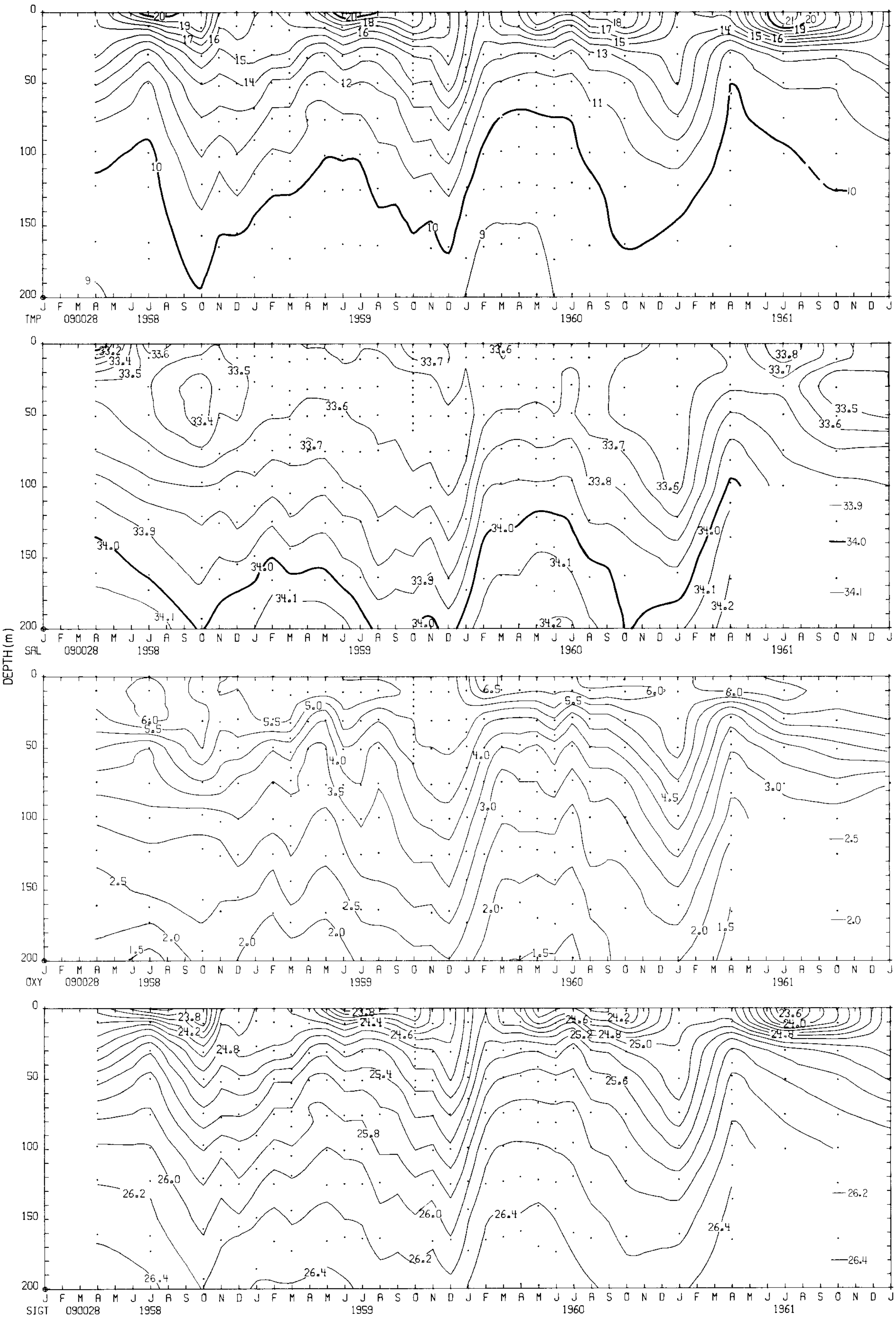

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 090028
1950
1951
1952
1953
SAL 090028
OXY 090028
SIGT 090028


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090028
1950
1951
1952
1953
SAL-D 090028
OXY-D 090028
SIGT-D 090028

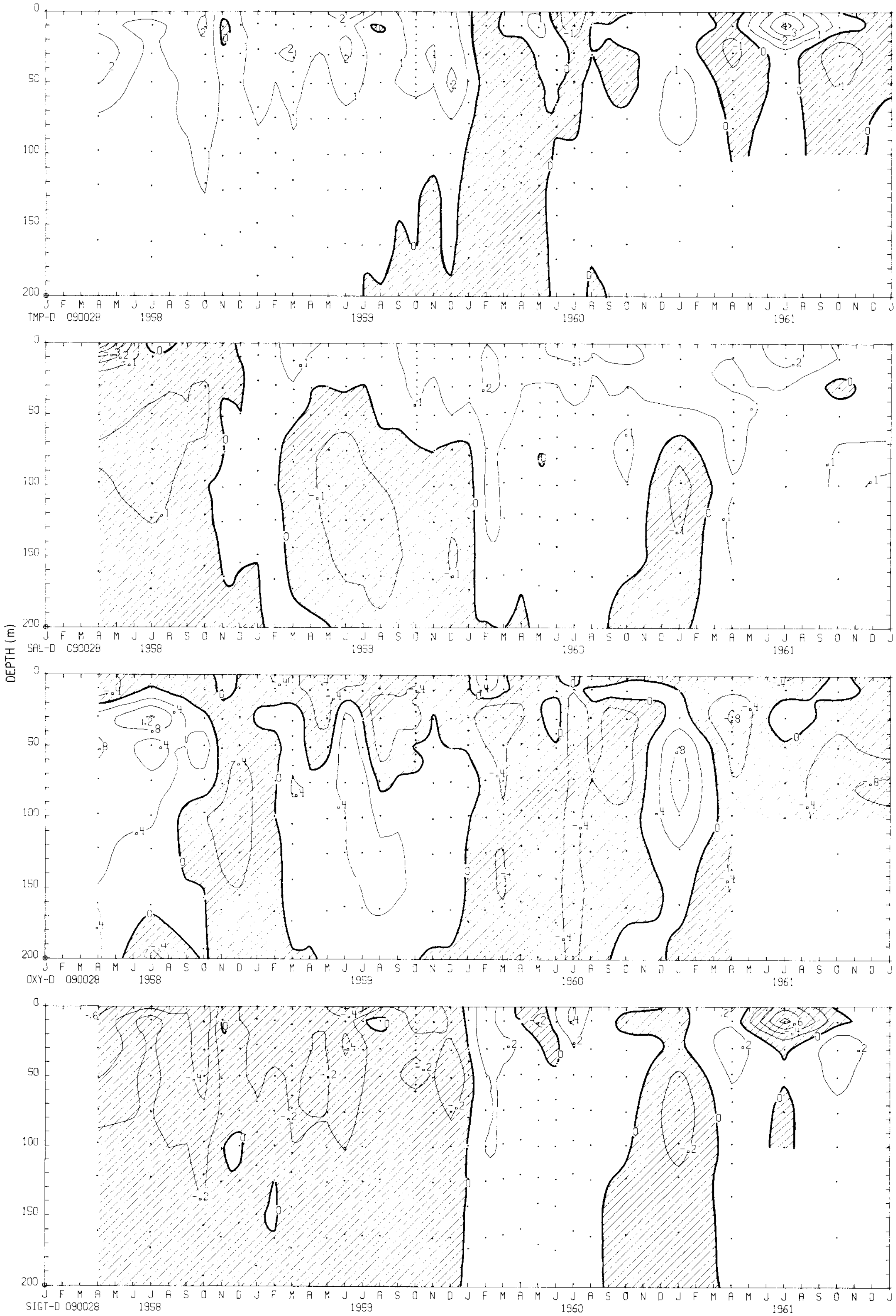

DEPTH (m)
TMP 090028 1954
1955
1956
1957
SAL 090028 1954
OXY 090028 1954
SIGT 090028 1954
J F M A M J J A S O N D

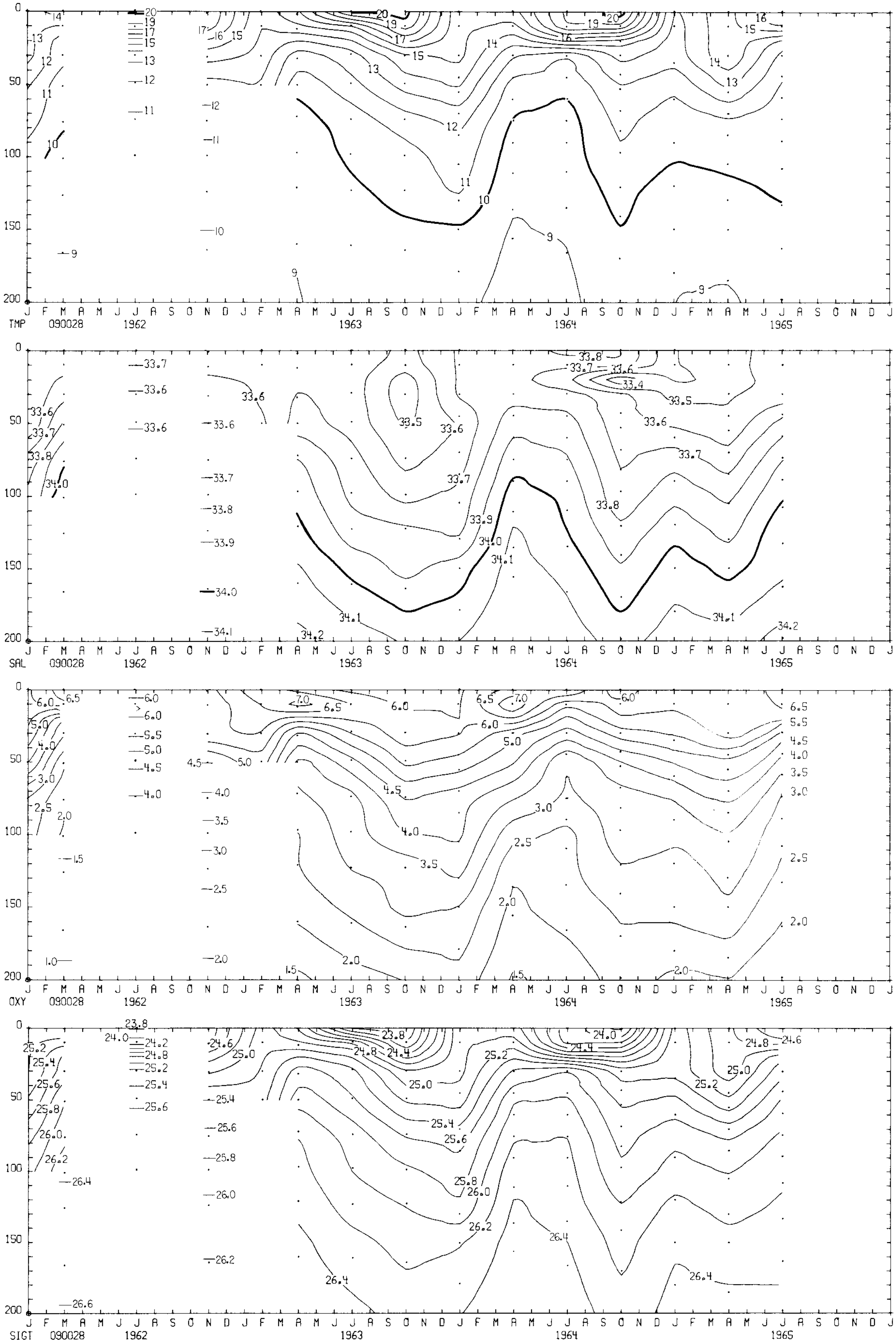


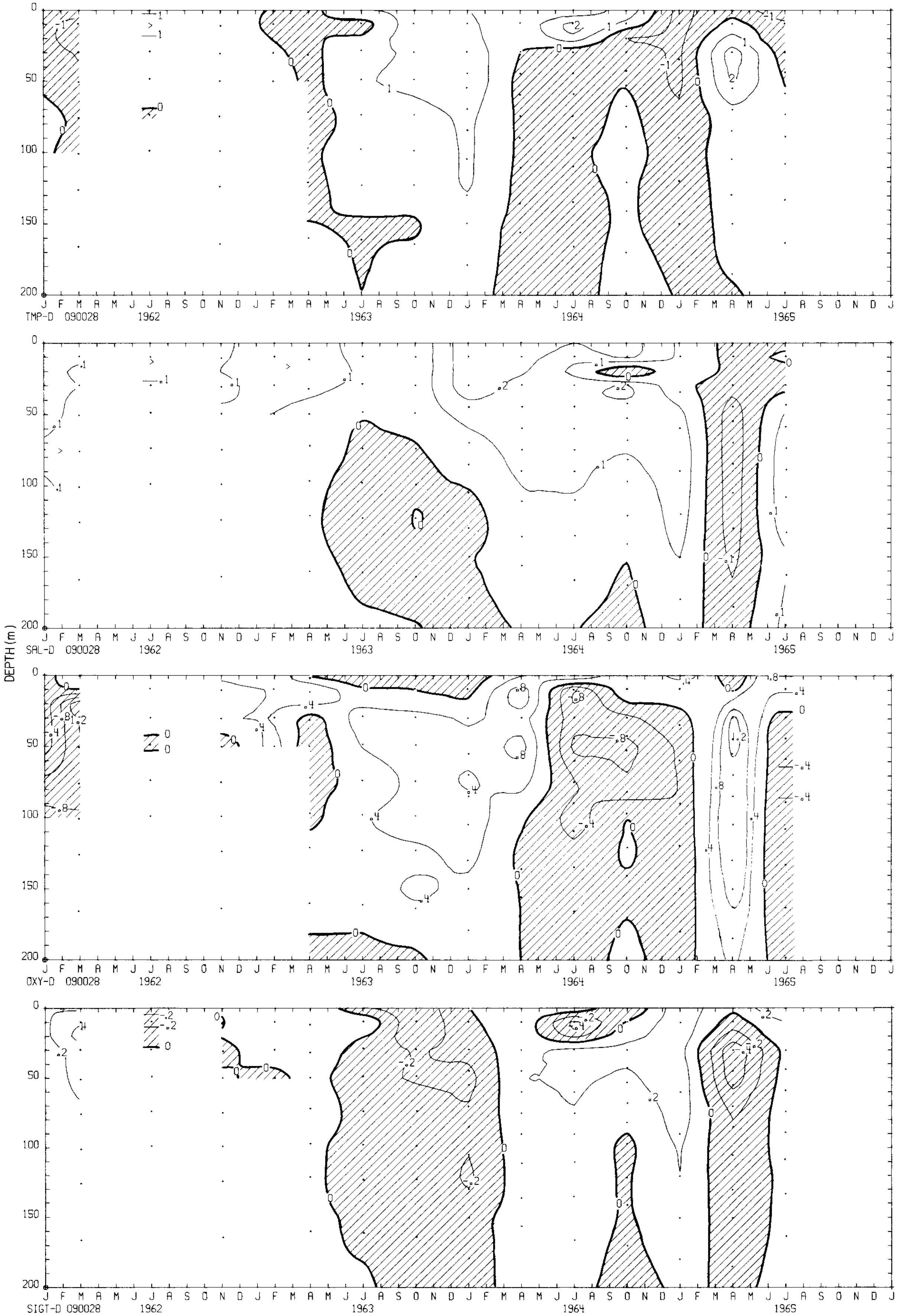
DEPTH (m)
TMP-D 090028
SAL-D 090028
OXY-D 090028
SIGT-D 090028
1954
1955
1956
1957

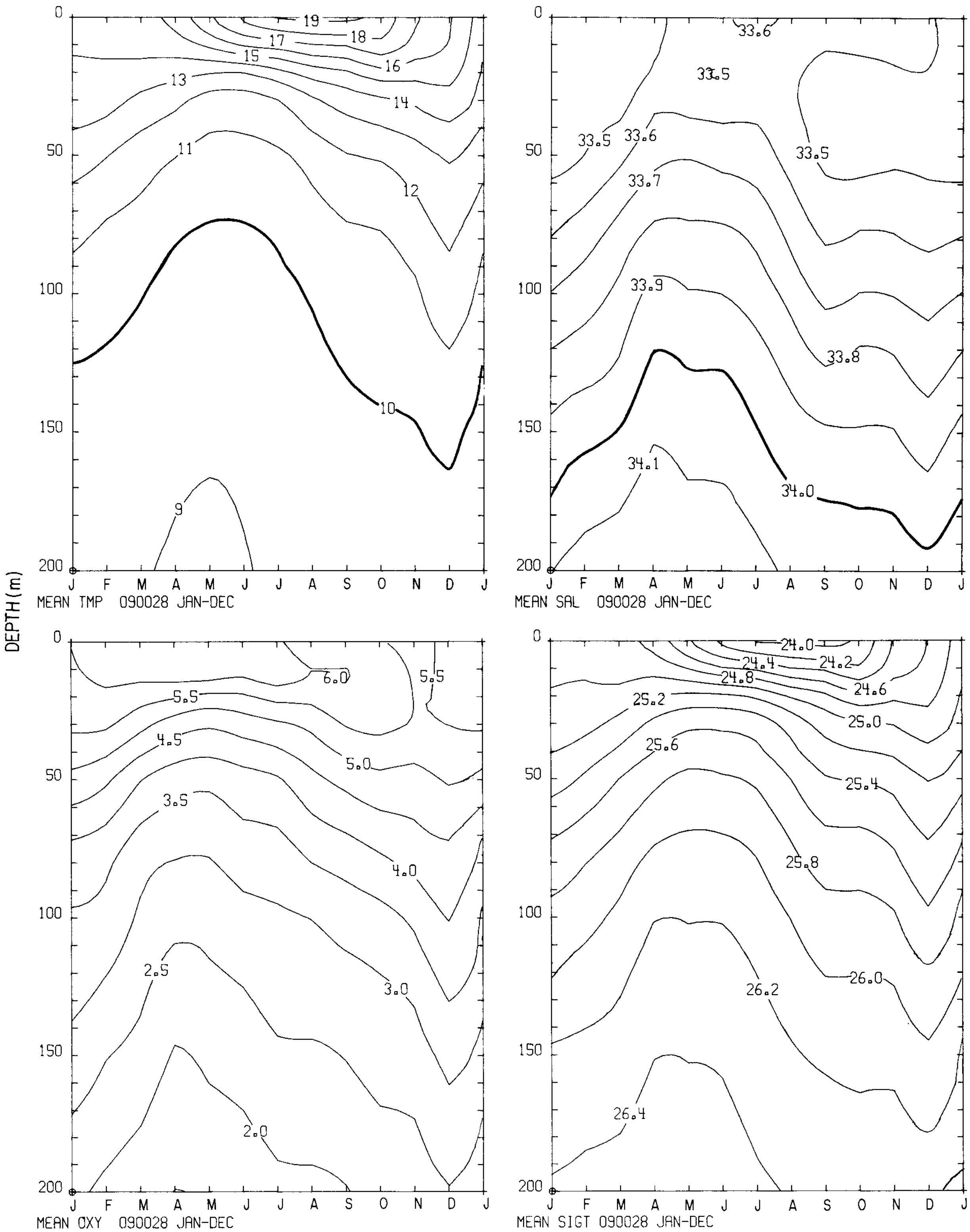


DEPTH (m)
TMP 090028
SAL 090028
OXY 090028
SIGT 090028
1958
1959
1960
1961

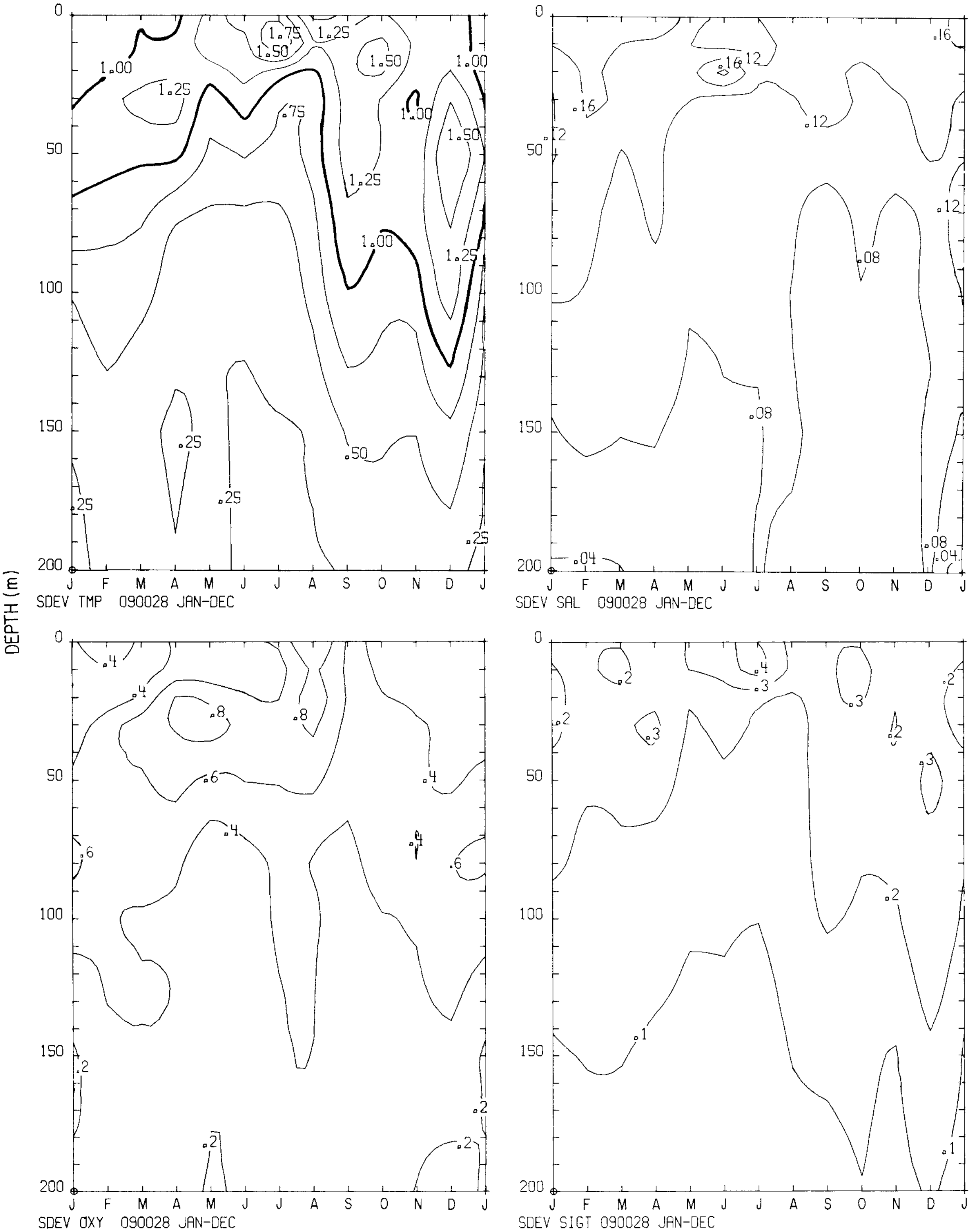

DEPTH (m)
TMP-D 090028 1958 1959 1960 1961
SAL-D 090028 1958 1959 1960 1961
OXY-D 090028 1958 1959 1960 1961
SIGT-D 090028 1958 1959 1960 1961
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

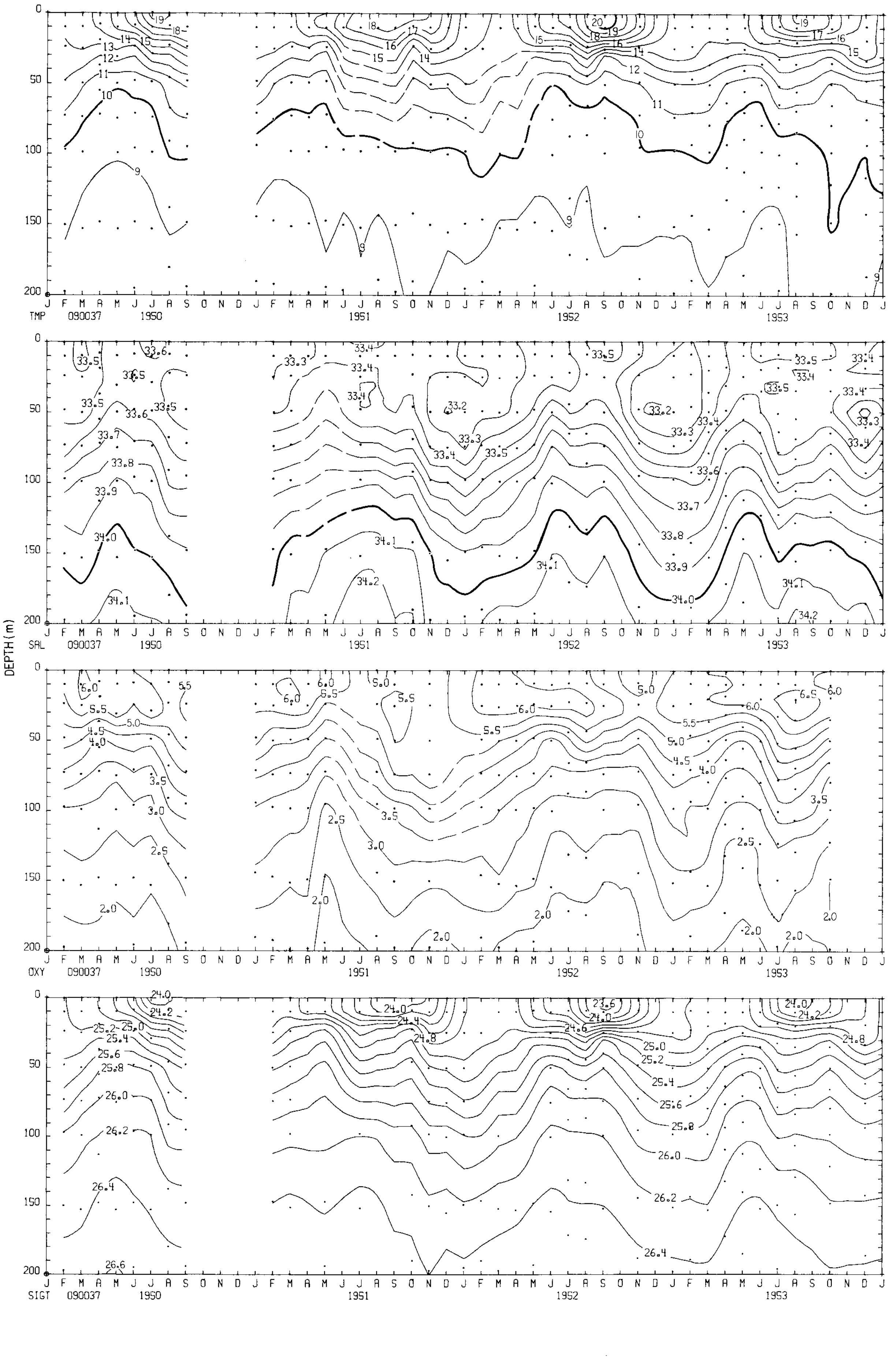

DEPTH (m)
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 090028 1962 1963 1964 1965
SAL 090028 1962 1963 1964 1965
OXY 090028 1962 1963 1964 1965
SIGT 090028 1962 1963 1964 1965

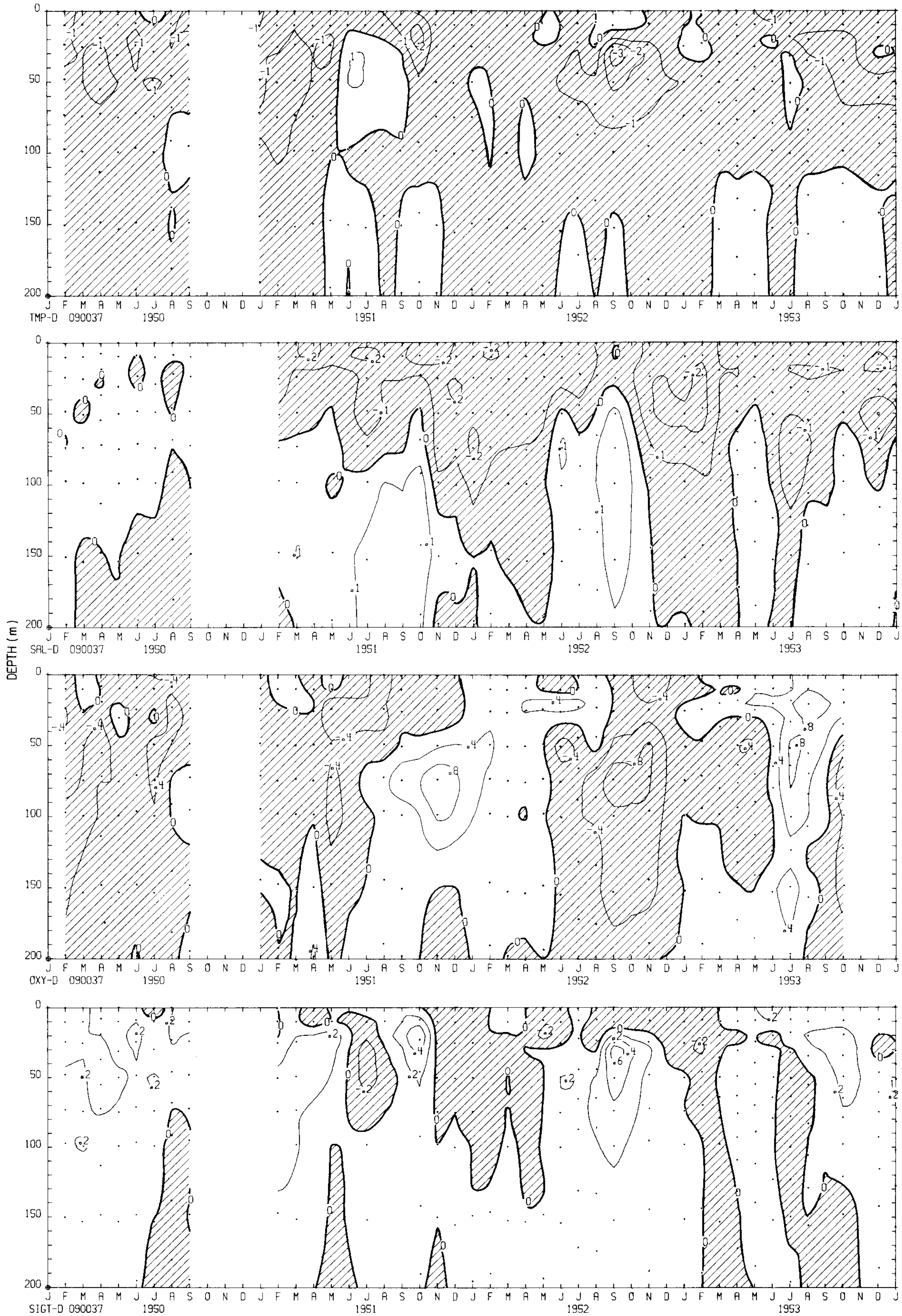

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090028
SAL-D 090028
OXY-D 090028
SIGT-D 090028
1962
1963
1964
1965



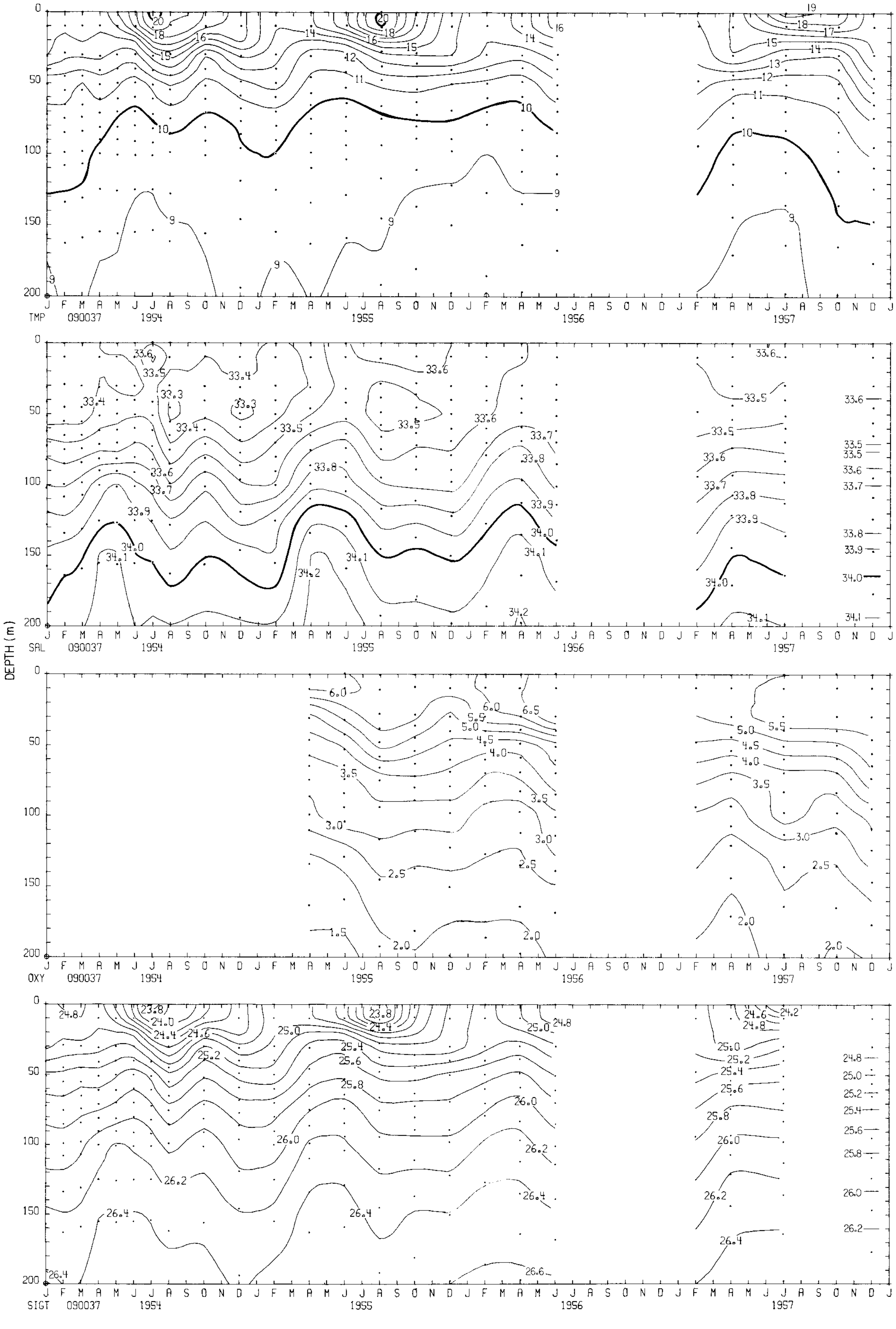
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J
19
18
17
16
15
14
13
12
11
10
9
MEAN TMP 090028 JAN-DEC
33.6
33.5
33.5
33.6
33.5
33.7
33.9
33.8
34.1
34.0
MEAN SAL 090028 JAN-DEC
6.0
5.5
5.5
4.5
5.0
3.5
4.0
2.5
3.0
2.0
MEAN OXY 090028 JAN-DEC
24.0
24.4
24.2
24.8
24.6
25.2
25.0
25.6
25.4
25.8
26.0
26.2
26.4
MEAN SIGT 090028 JAN-DEC

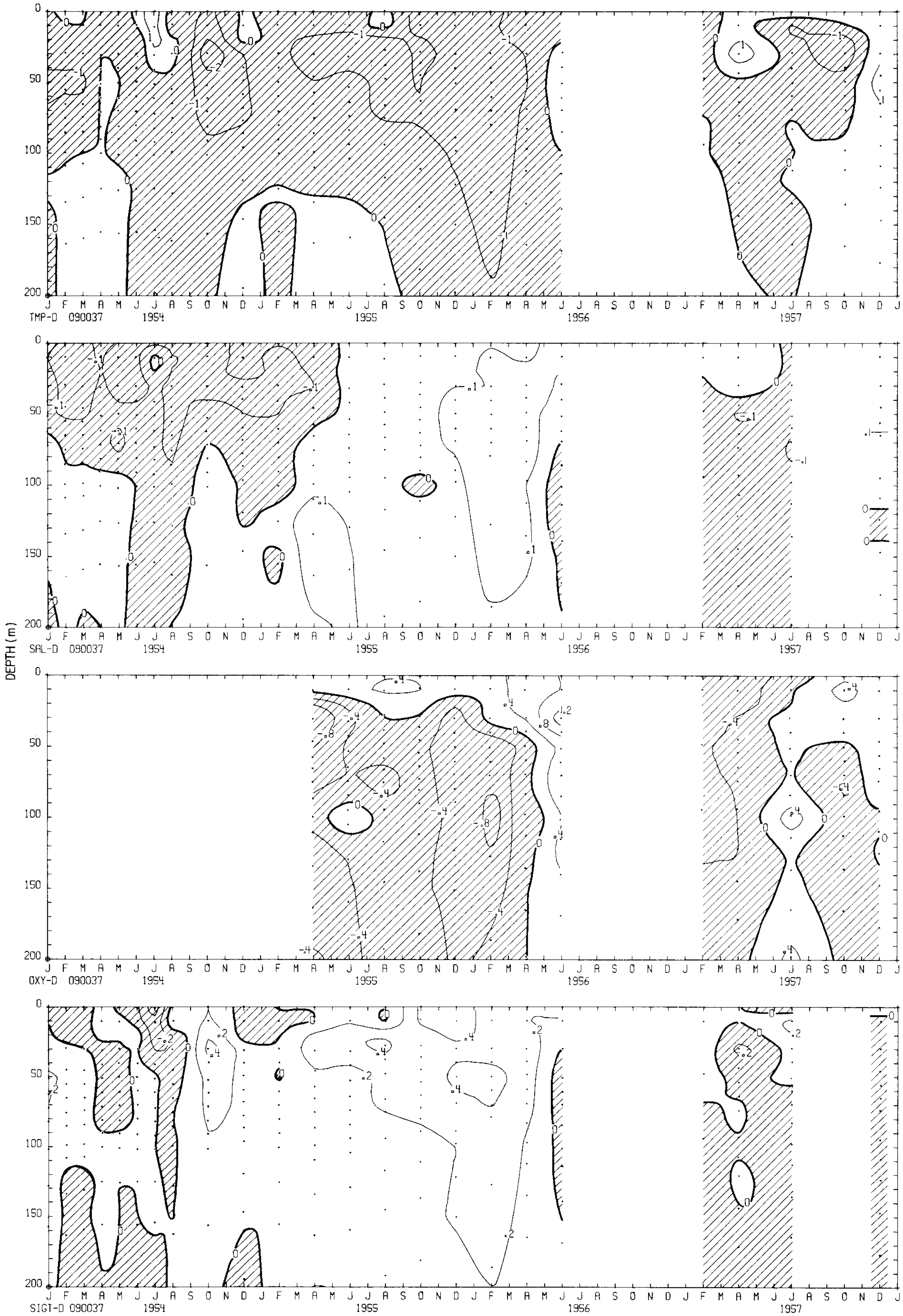

DEPTH (m)
SDEV TMP 090028 JAN-DEC
SDEV SAL 090028 JAN-DEC
SDEV OXY 090028 JAN-DEC
SDEV SIGT 090028 JAN-DEC
J F M A M J J A S O N D J
0 50 100 150 200

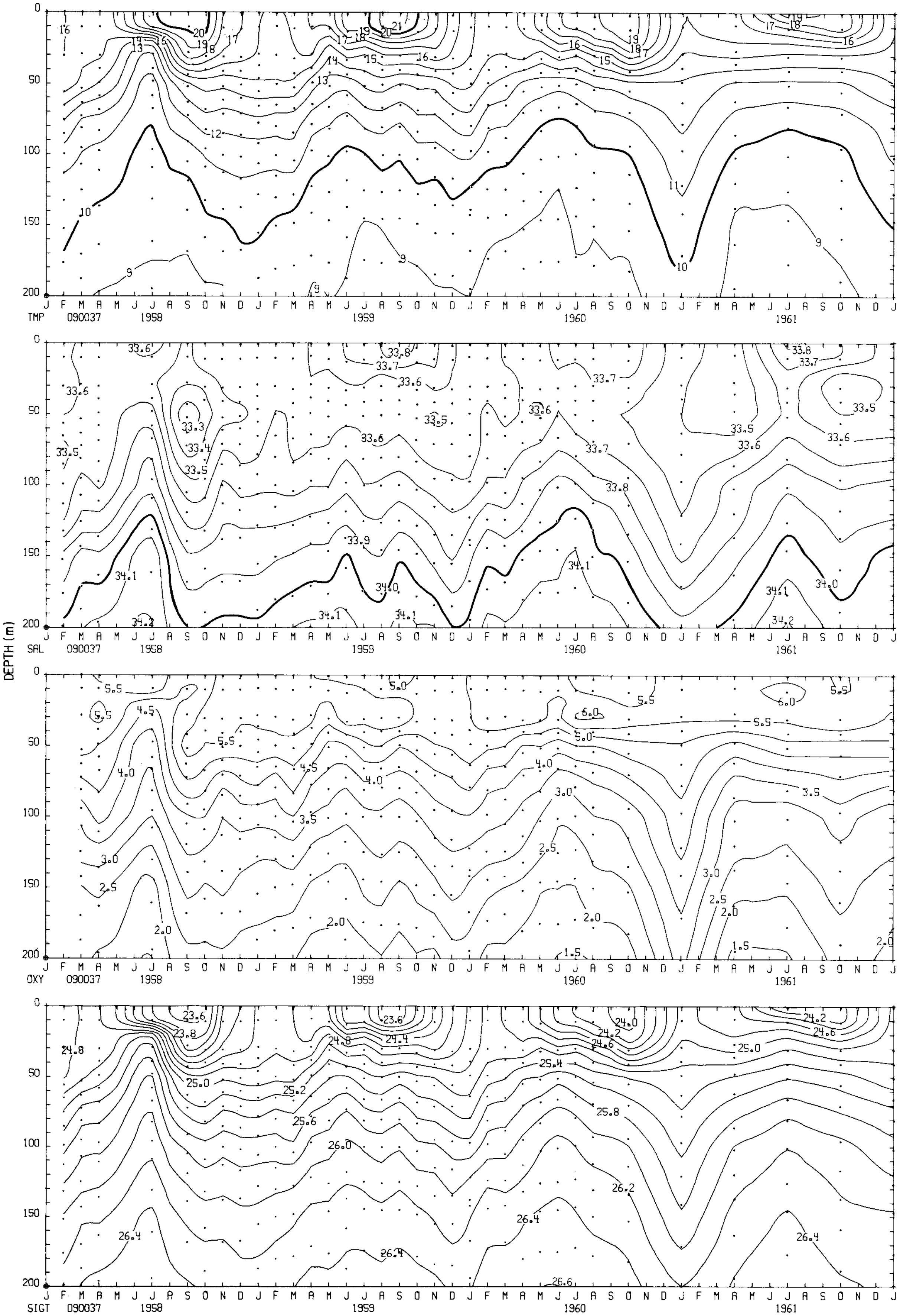

TMP 090037 1950
1951
1952
1953
SAL 090037 1950
OXY 090037 1950
SIGT 090037 1950
DEPTH (m)
J F M A M J J A S O N D

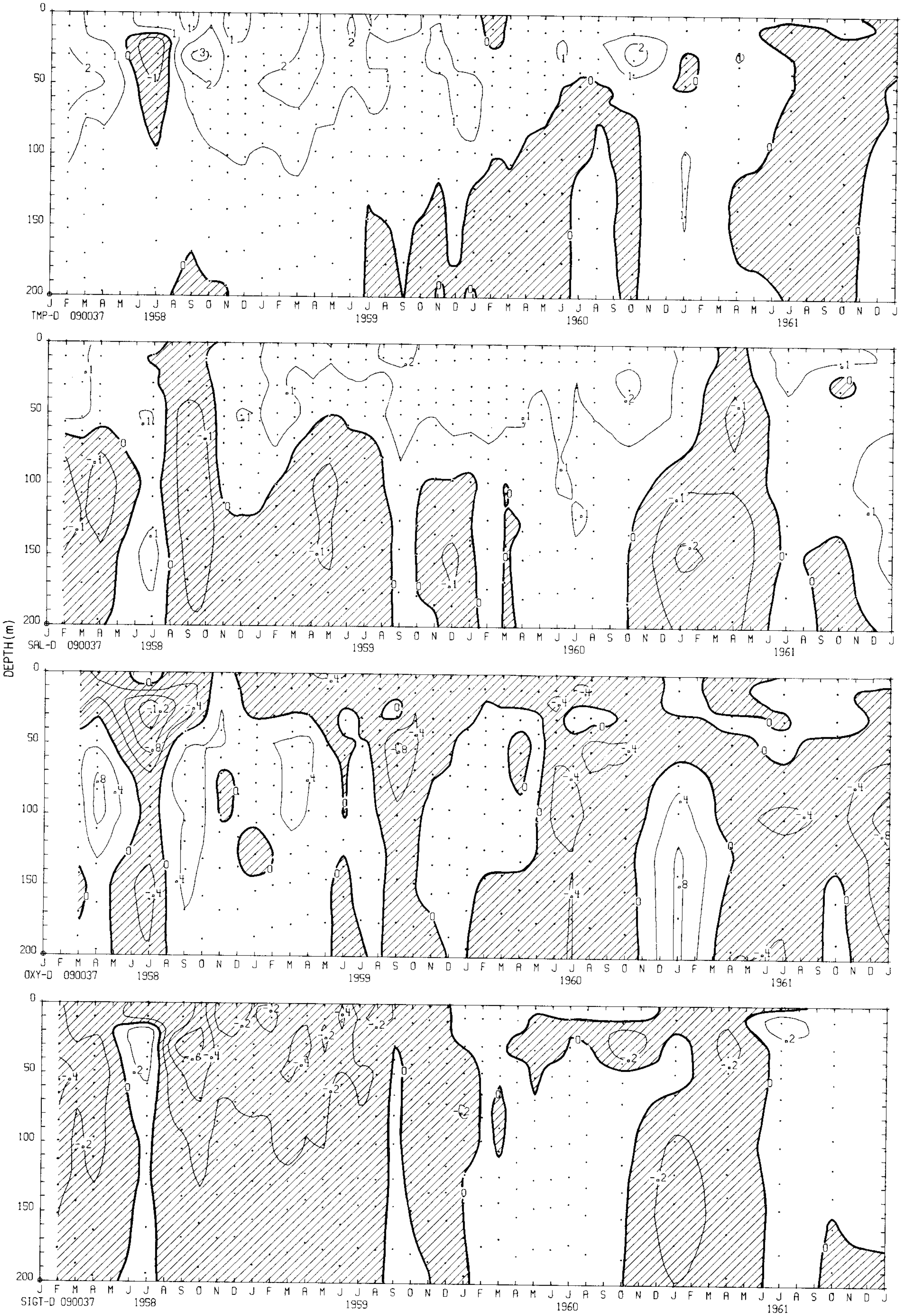


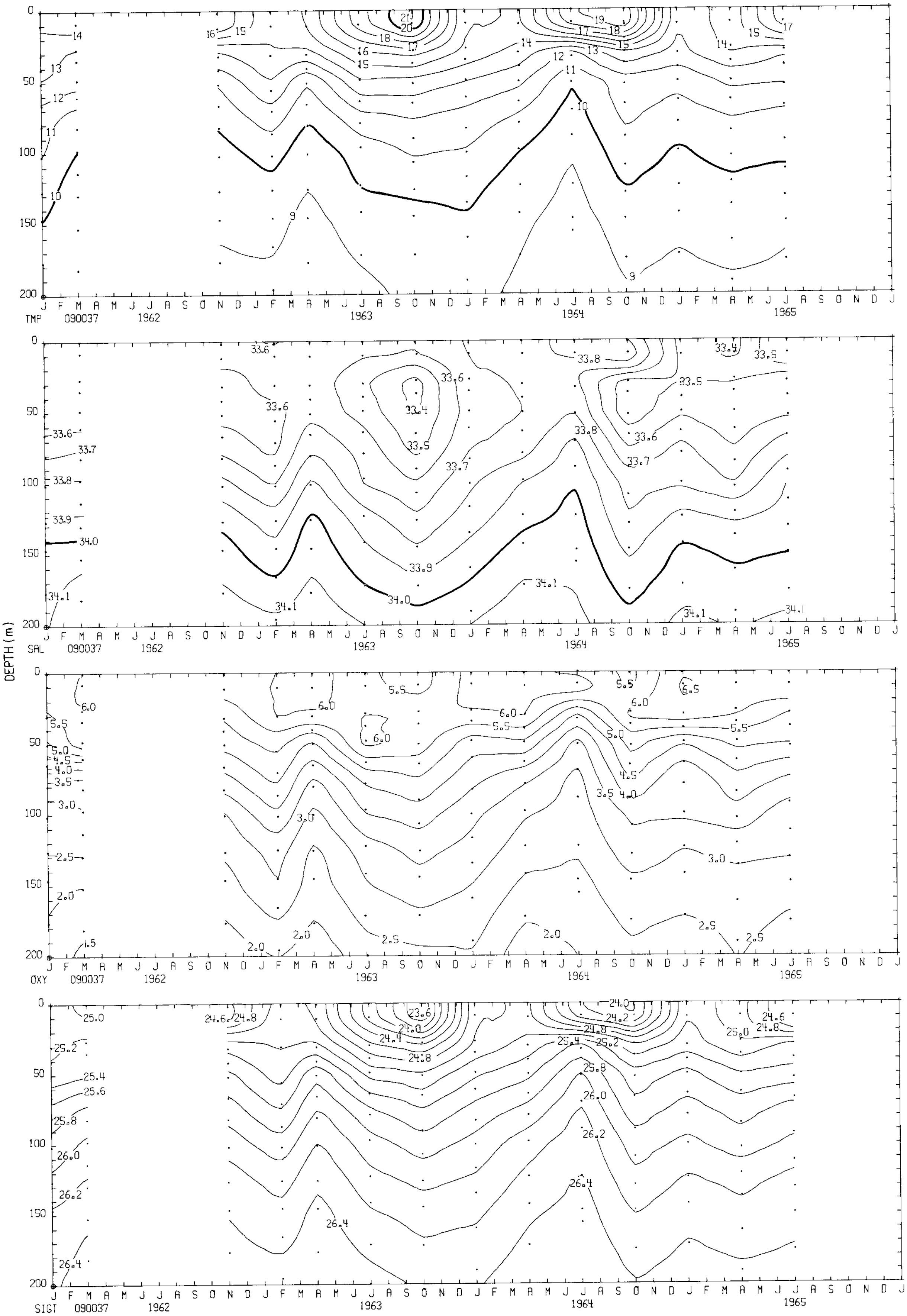
DEPTH (m)
TMP-D 090037
1950
1951
1952
1953
SAL-D 090037
OXY-D 090037
SIGT-D 090037
J F M A M J J A S O N D

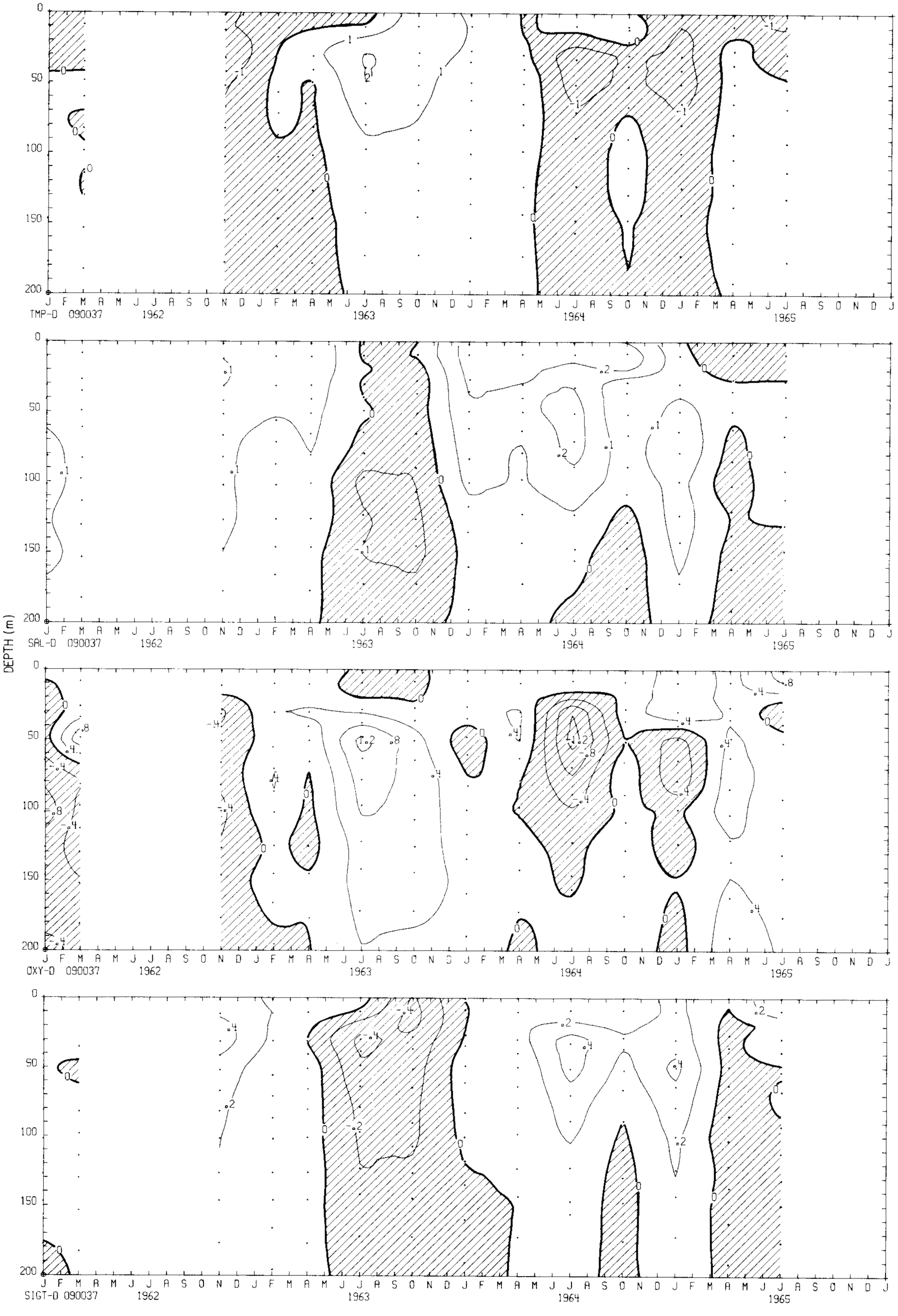

DEPTH (m)
TMP 090037 1954 1955 1956 1957
SAL 090037 1954 1955 1956 1957
OXY 090037 1954 1955 1956 1957
SIGT 090037 1954 1955 1956 1957
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

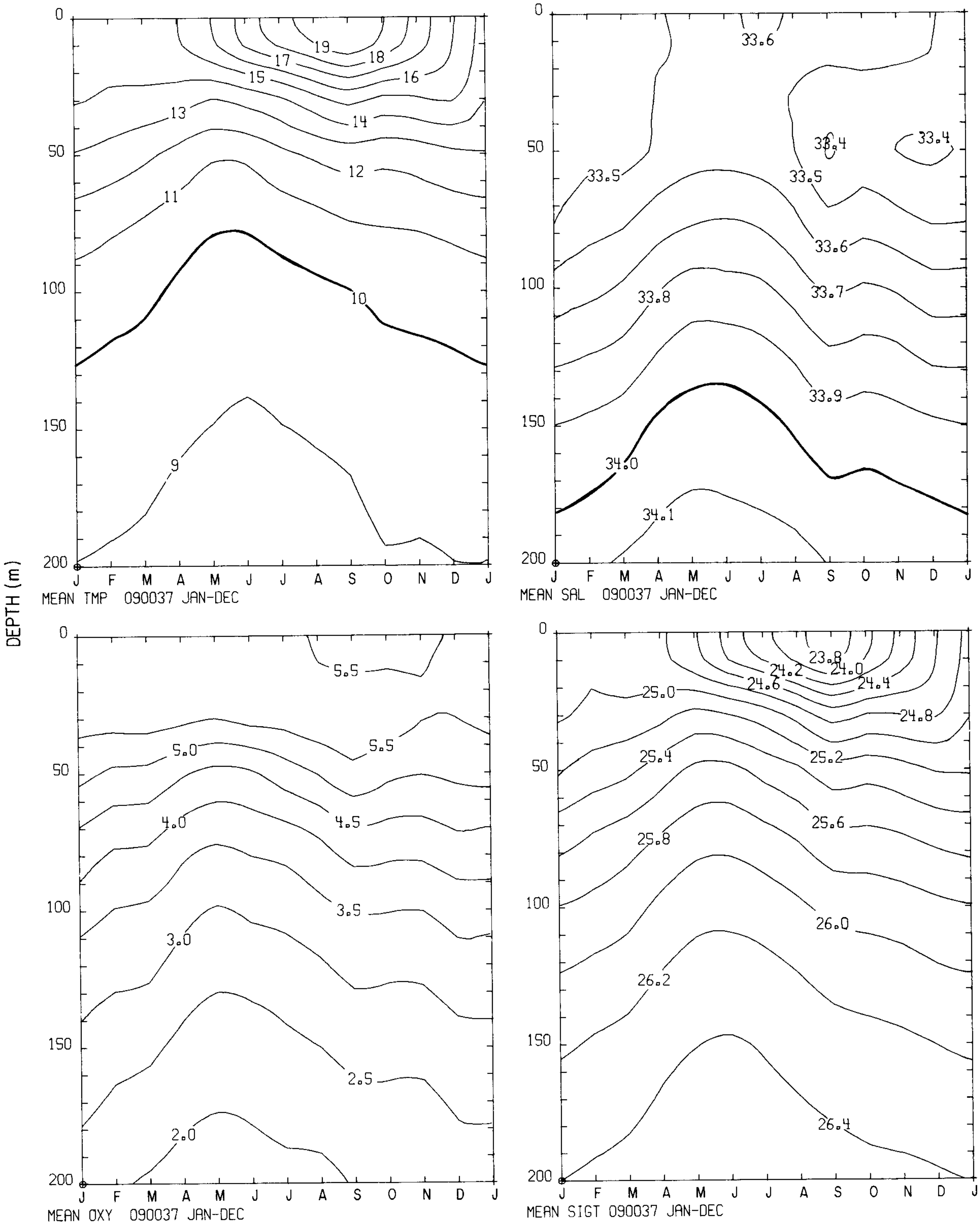

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090037
1954
1955
1956
1957
SAL-D 090037
1954
1955
1956
1957
OXY-D 090037
1954
1955
1956
1957
SIGT-D 090037
1954
1955
1956
1957


DEPTH (m)
TMP 090037 1958 1959 1960 1961
SAL 090037 1958 1959 1960 1961
OXY 090037 1958 1959 1960 1961
SIGT 090037 1958 1959 1960 1961
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J


TMP-D 090037
SAL-D 090037
OXY-D 090037
SIGT-D 090037
DEPTH (m)
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1958
1959
1960
1961


DEPTH (m)
TMP 090037 1962 1963 1964 1965
SAL 090037 1962 1963 1964 1965
OXY 090037 1962 1963 1964 1965
SIGT 090037 1962 1963 1964 1965
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
0
50
100
150
200


DEPTH (m)
TMP-D 090037
SAL-D 090037
OXY-D 090037
SIGT-D 090037
1962
1963
1964
1965
J F M A M J J A S O N D


DEPTH (m)
MEAN TMP 090037 JAN-DEC
MEAN SAL 090037 JAN-DEC
MEAN OXY 090037 JAN-DEC
MEAN SIGT 090037 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200
19
18
17
16
15
14
13
12
11
10
9
33.6
33.4
33.5
33.7
33.8
33.9
34.0
34.1
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
23.8
24.0
24.2
24.4
24.6
24.8
25.0
25.2
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25.6
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26.0
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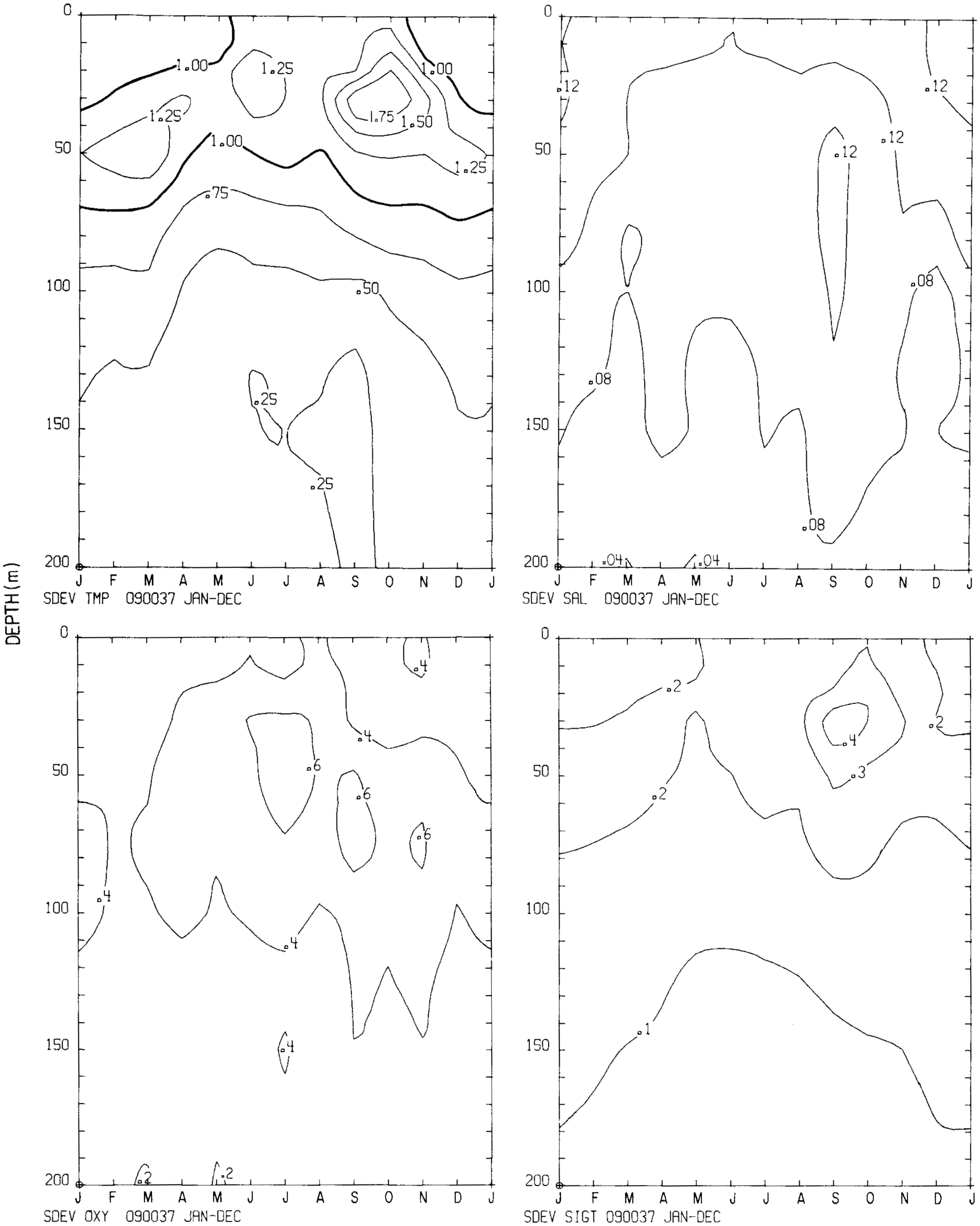
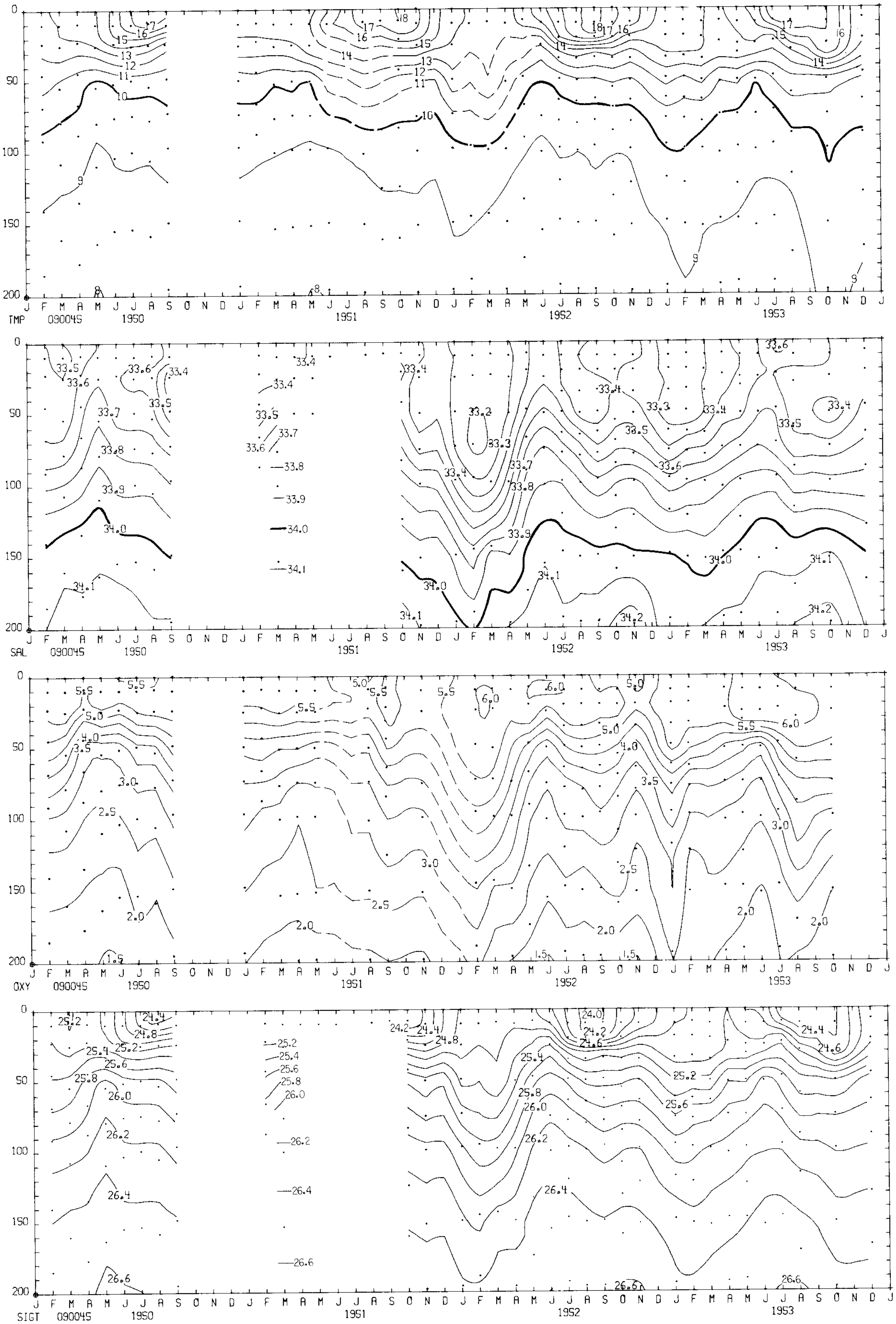
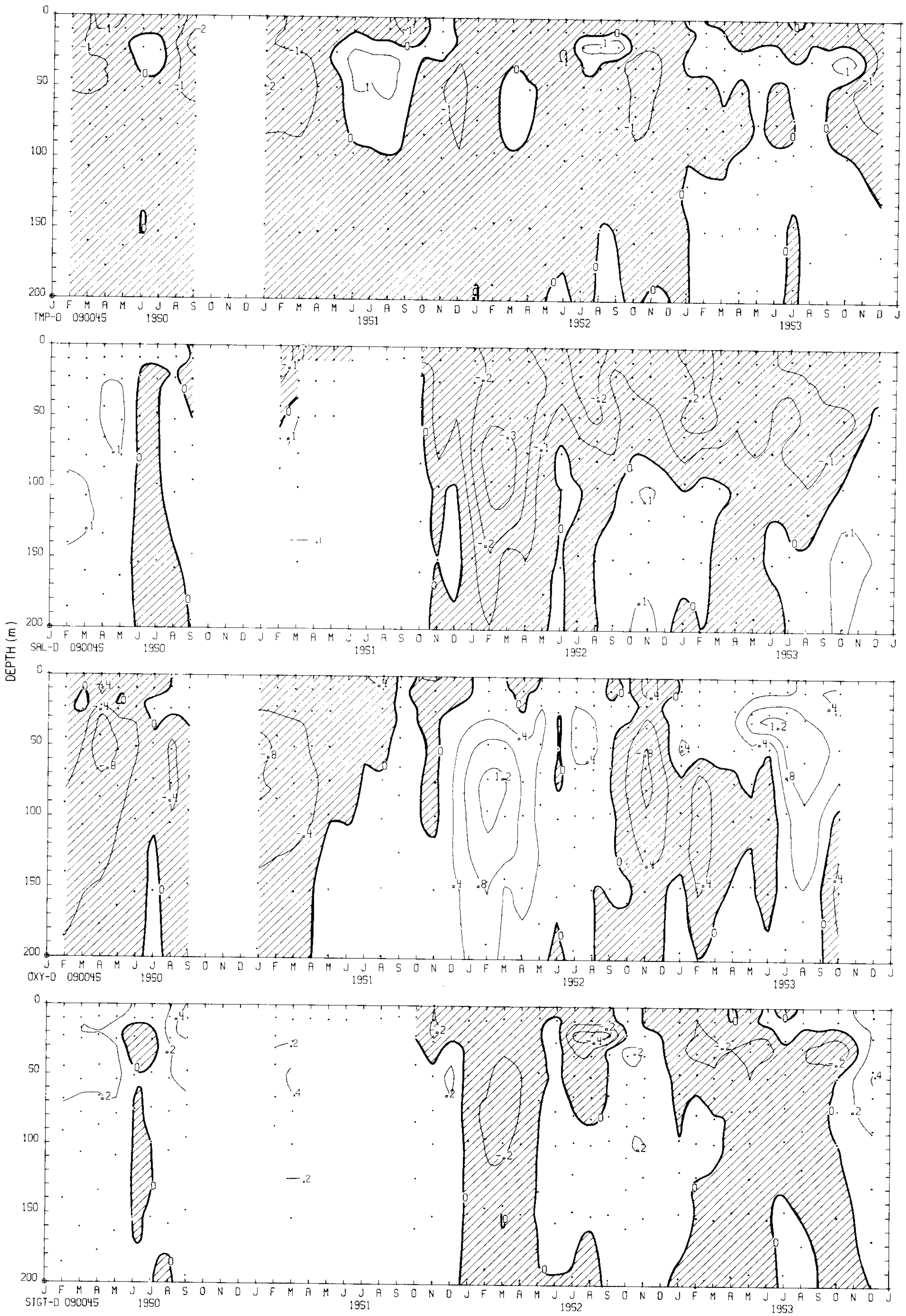
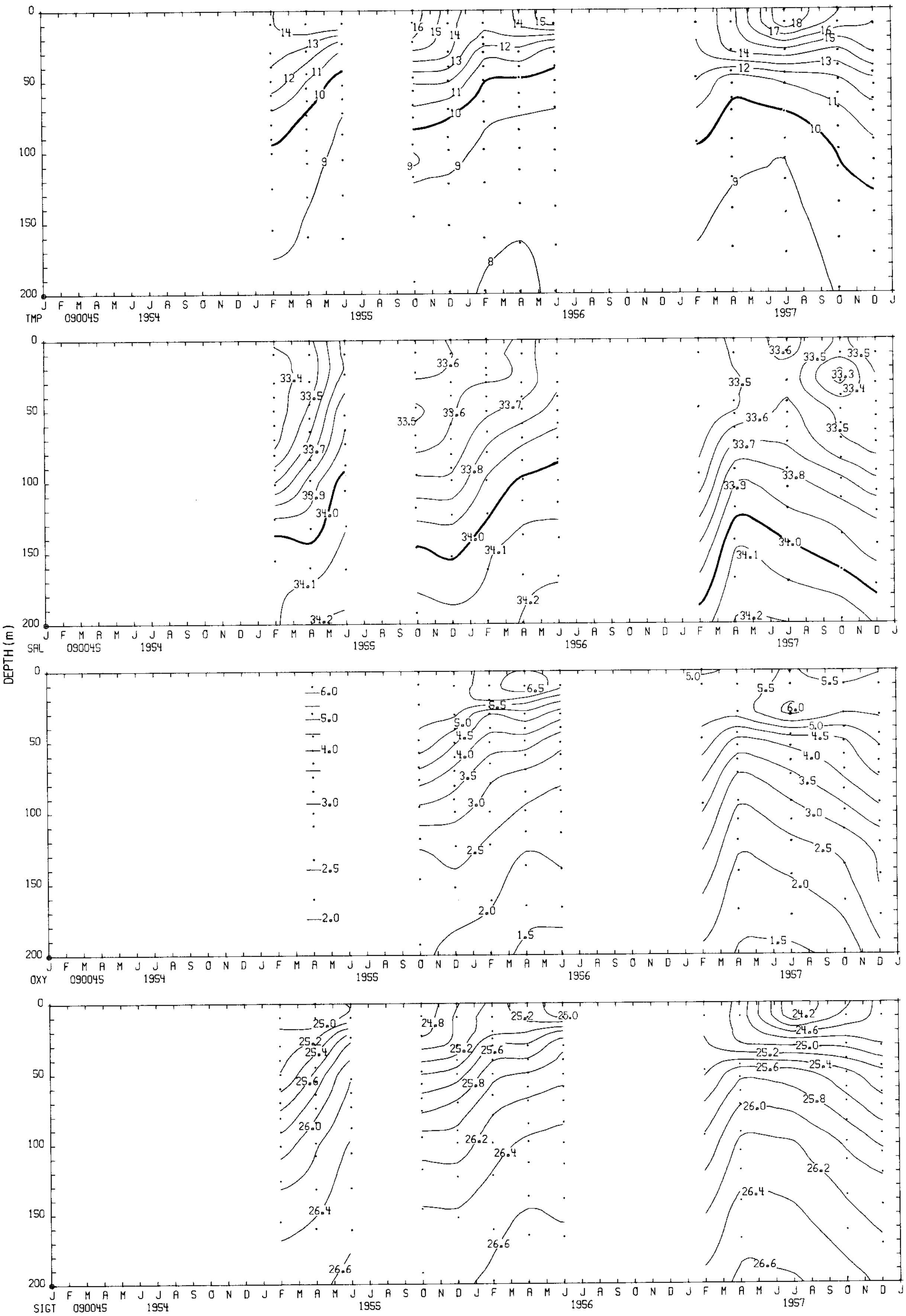
26.4


DEPTH (m)
SDEV TMP 090037 JAN-DEC
SDEV SAL 090037 JAN-DEC
SDEV OXY 090037 JAN-DEC
SDEV SIGT 090037 JAN-DEC
J F M A M J J A S O N D J



DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 090045 1950
1951
1952
1953
SAL 090045 1950
1951
1952
1953
OXY 090045 1950
1951
1952
1953
SIGT 090045 1950
1951
1952
1953


DEPTH (m)
TMP-D 090045
SAL-D 090045
OXY-D 090045
SIGT-D 090045
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1950
1951
1952
1953


DEPTH (m)
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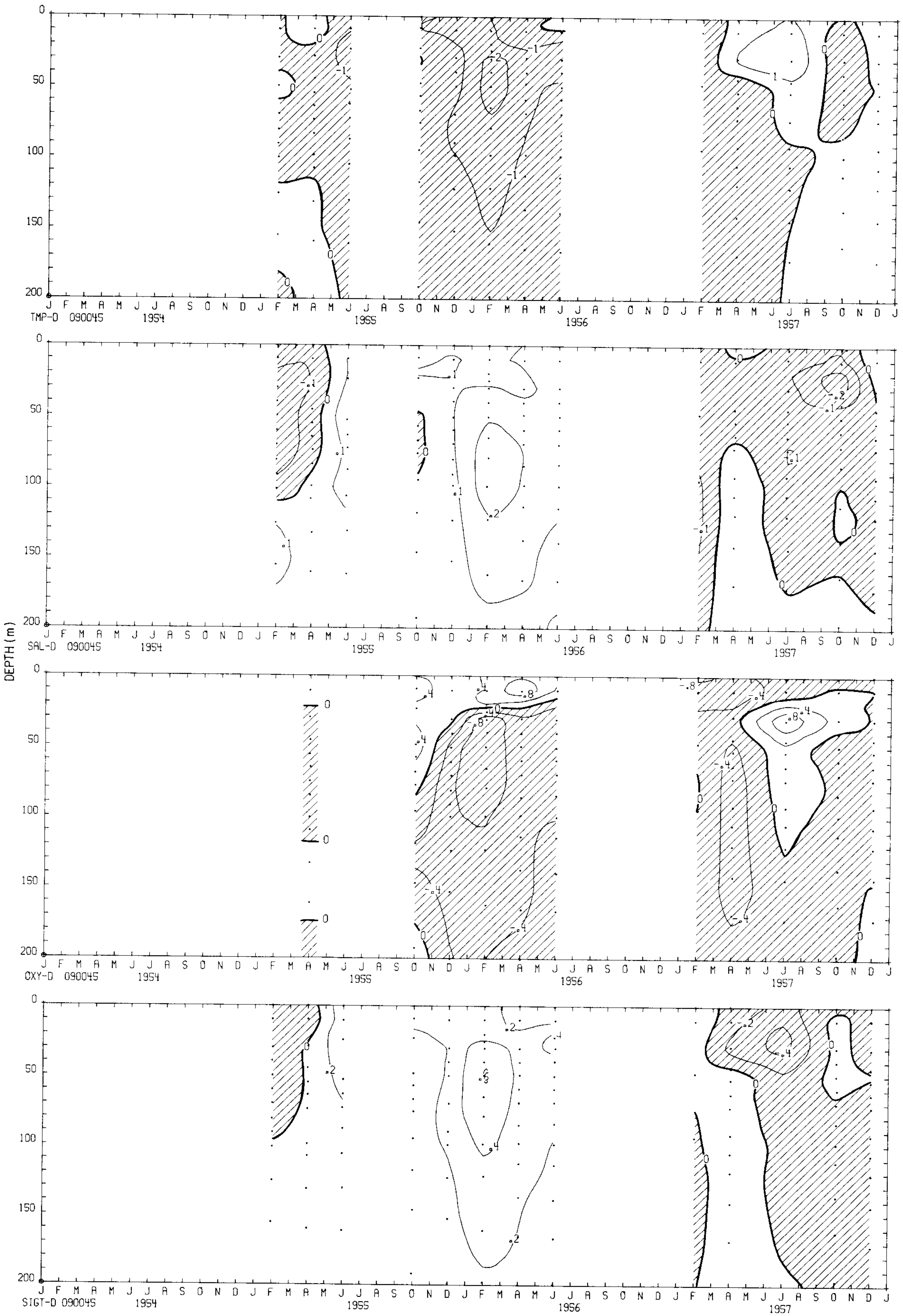
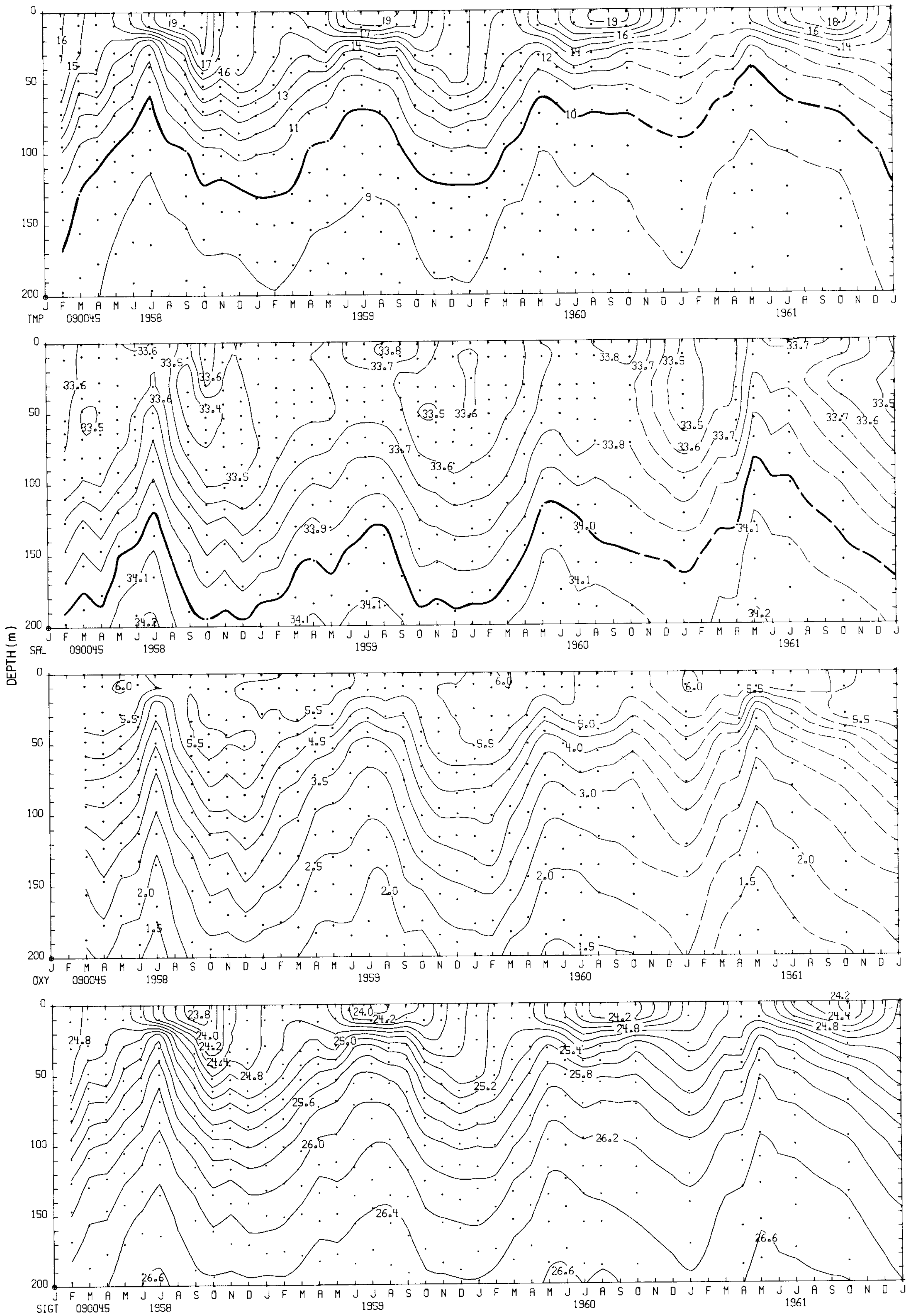
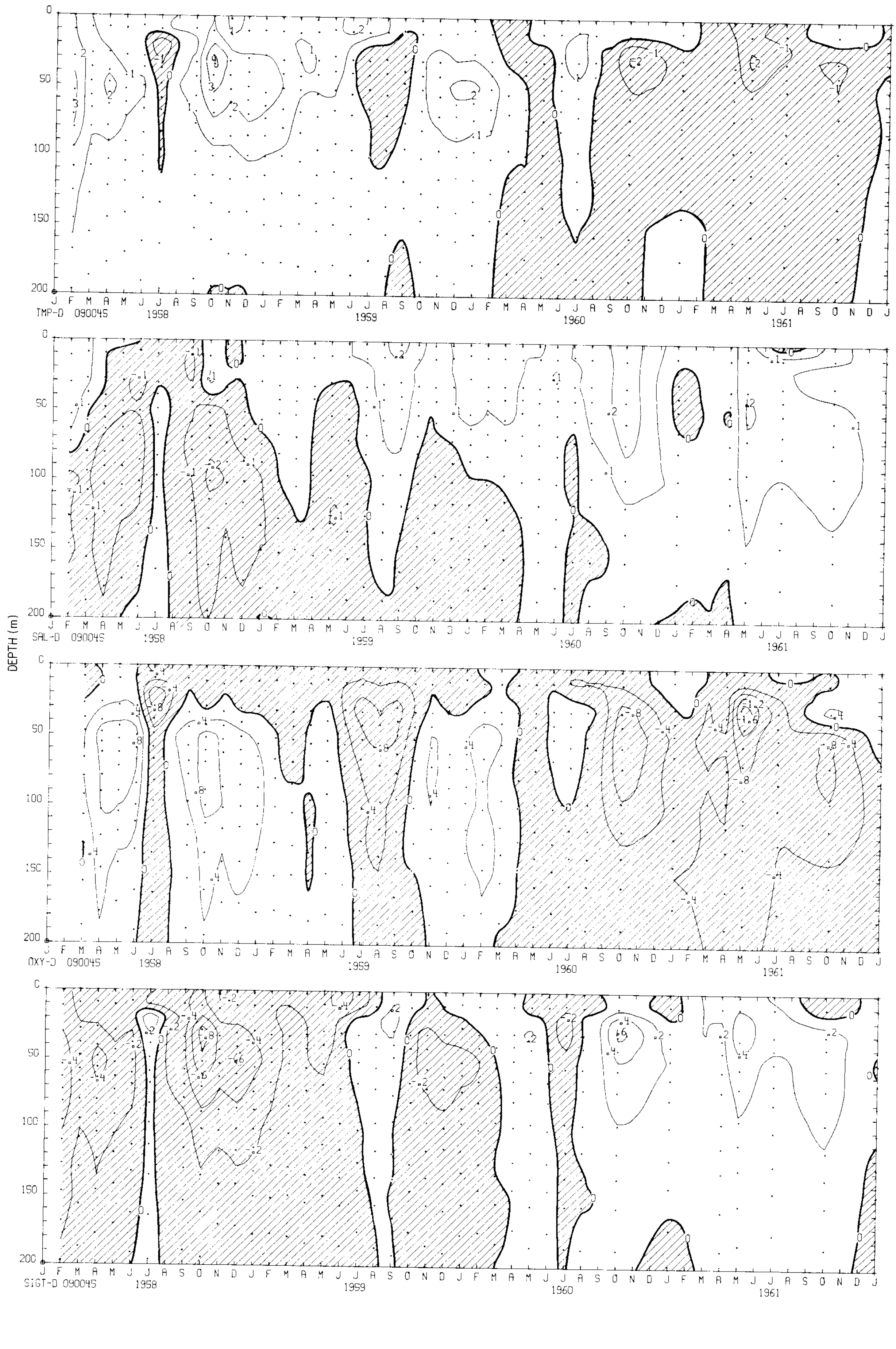
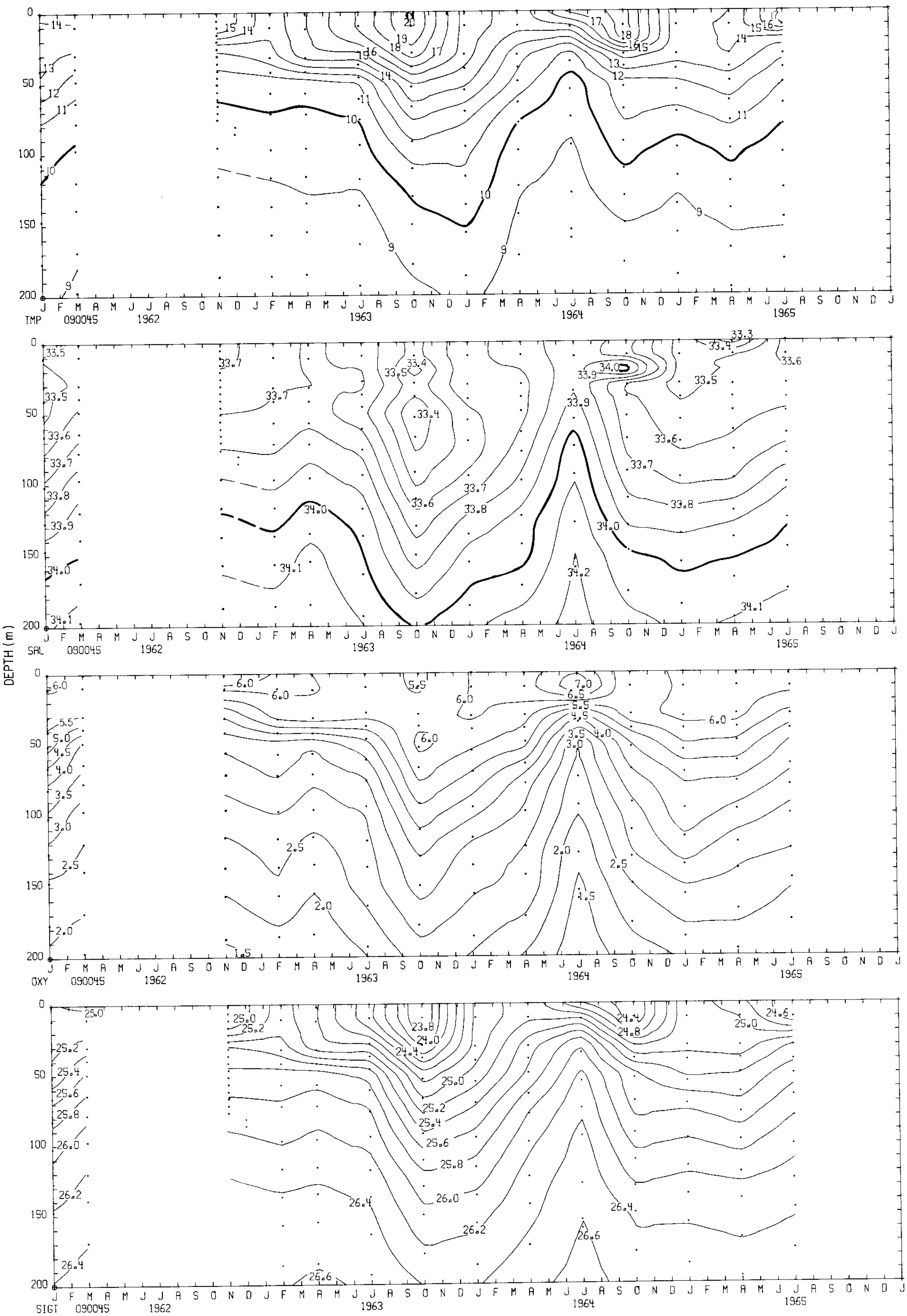
SAL 090045 1954 1955 1956 1957
OXY 090045 1954 1955 1956 1957
SIGT 090045 1954 1955 1956 1957

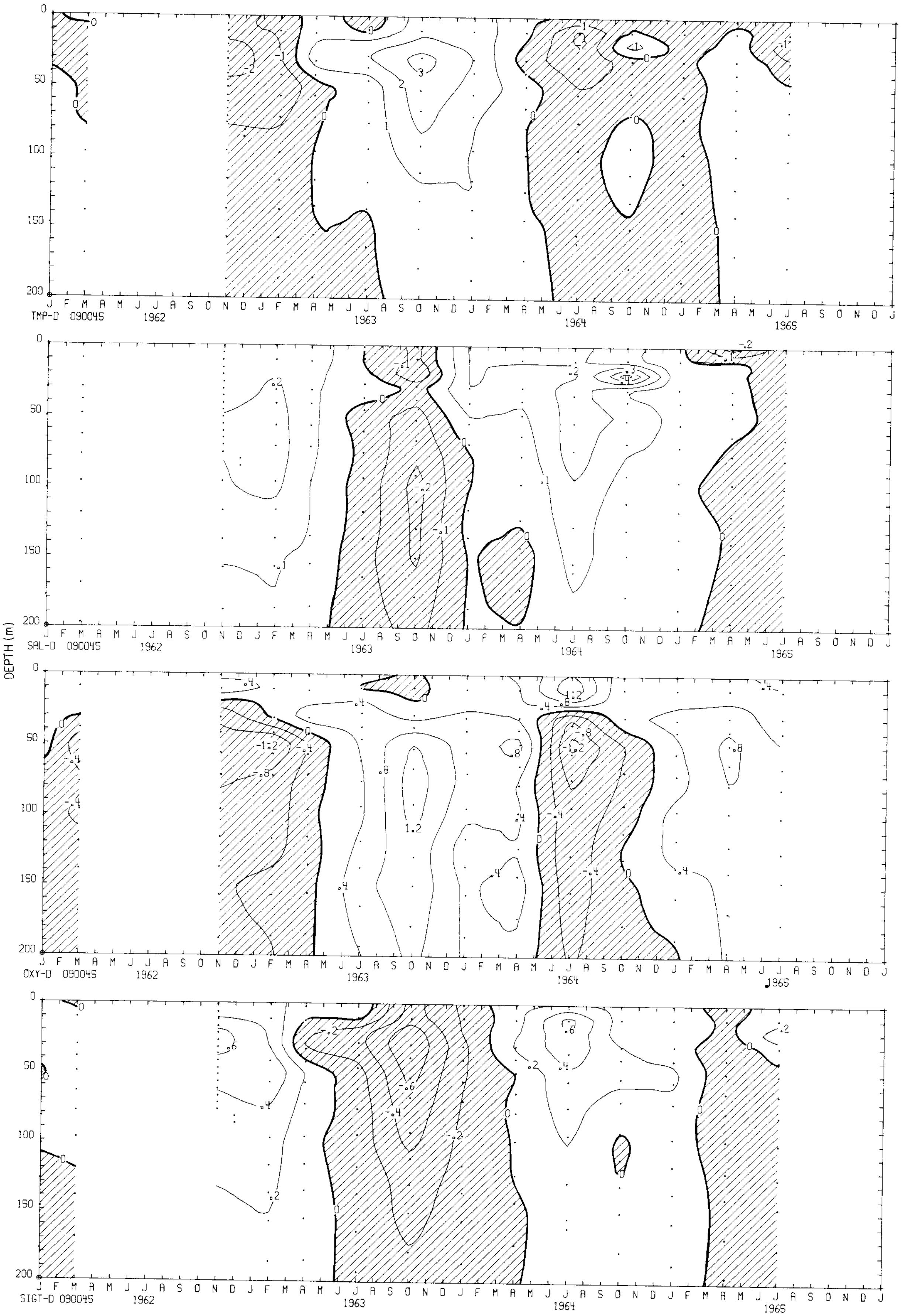

DEPTH (m)
TMP-D 090045
SAL-D 090045
OXY-D 090045
SIGT-D 090045
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1954
1955
1956
1957
0
50
100
150
200

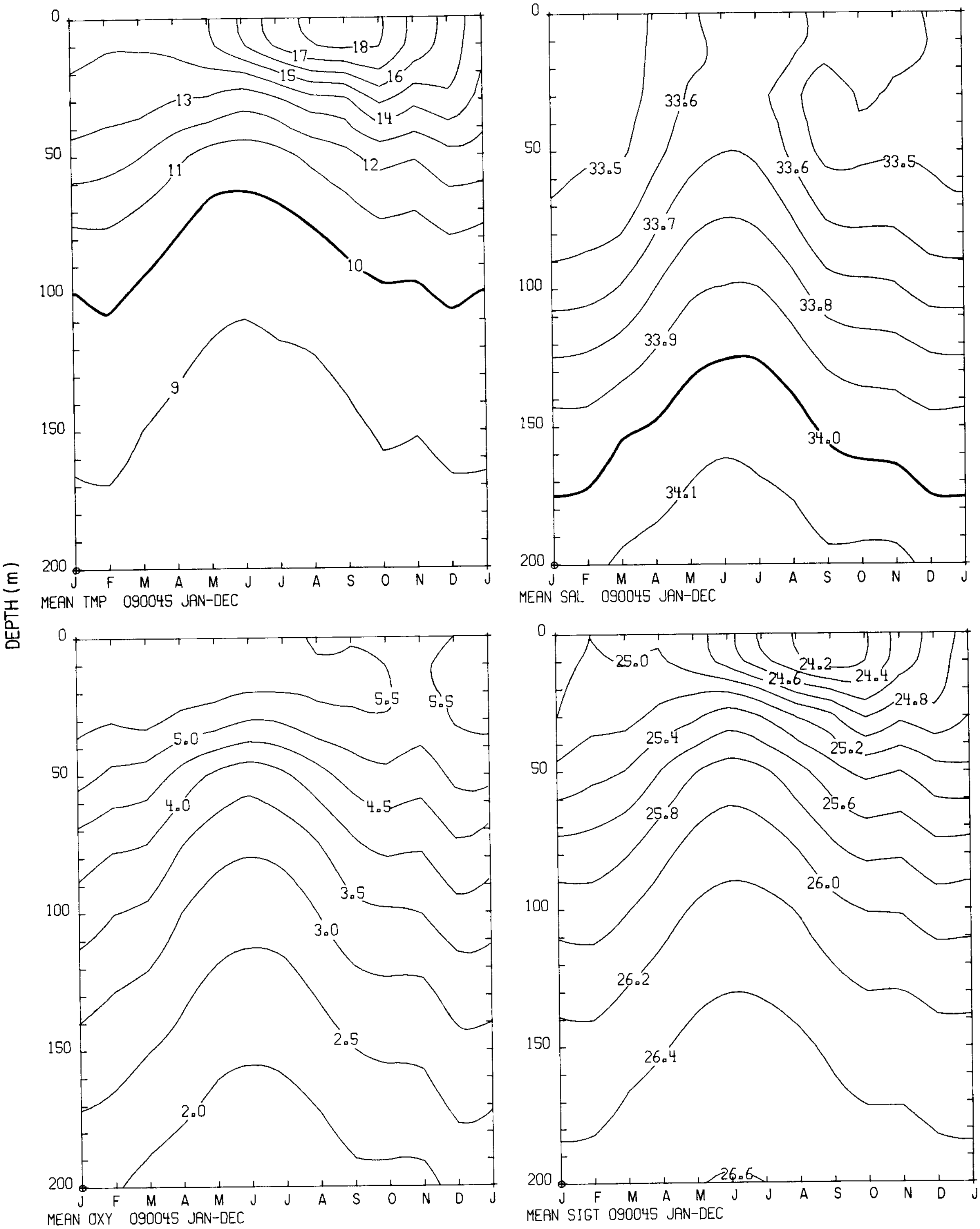


TMP 090045
SAL 090045
OXY 090045
SIGT 090045
DEPTH (m)
1958
1959
1960
1961
J F M A M J J A S O N D

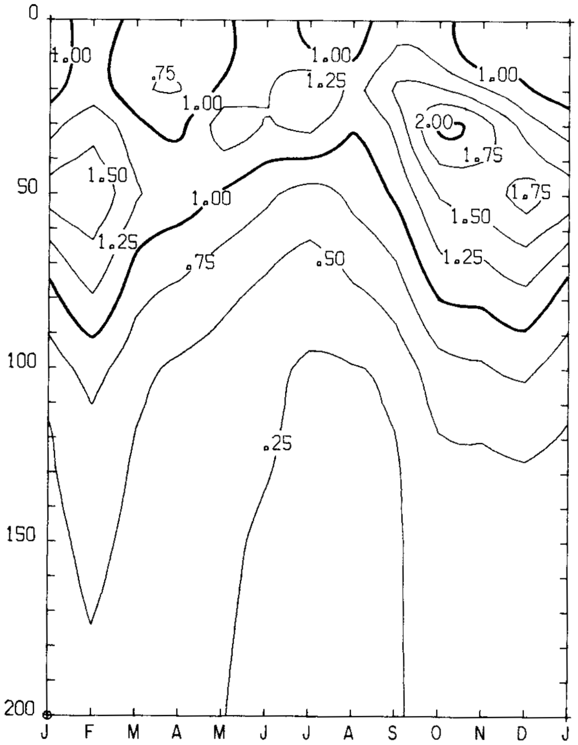

DEPTH (m)
TMP-D 090045
SAL-D 090045
OXY-D 090045
SIGT-D 090045
1958
1959
1960
1961
J F M A M J J A S O N D


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 090045 1962
1963
1964
1965
SAL 090045 1962
1963
1964
1965
OXY 090045 1962
1963
1964
1965
SIGT 090045 1962
1963
1964
1965

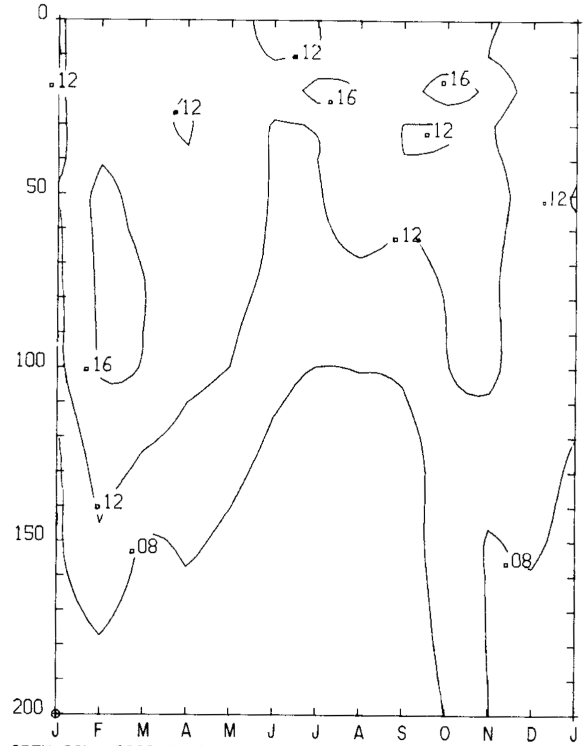

DEPTH (m)
TMP-D 09004S
SAL-D 09004S
OXY-D 09004S
SIGT-D 09004S
1962
1963
1964
1965
J F M A M J J A S O N D



DEPTH (m)
MEAN TMP 090045 JAN-DEC
MEAN SAL 090045 JAN-DEC
MEAN OXY 090045 JAN-DEC
MEAN SIGT 090045 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200
18
17
16
15
14
13
12
11
10
9
33.5
33.6
33.7
33.8
33.9
34.0
34.1
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
24.2
24.4
24.6
24.8
25.0
25.2
25.4
25.6
25.8
26.0
26.2
26.4
26.6

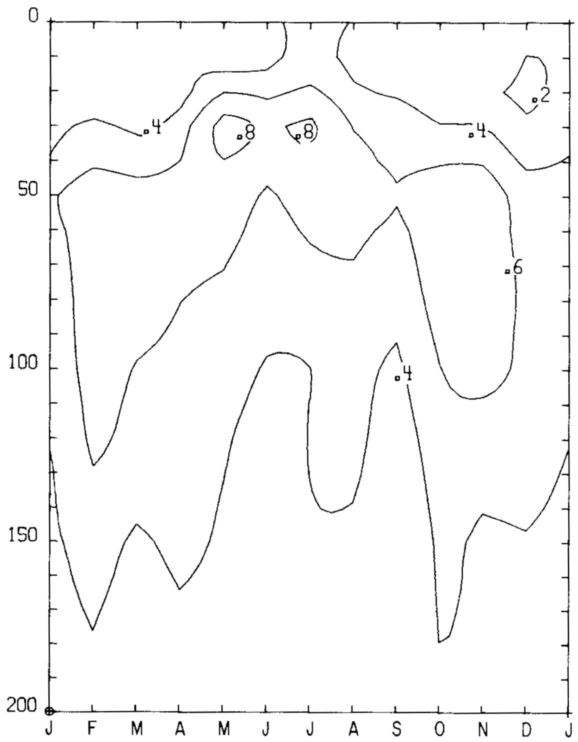


SDEV TMP 090045 JAN-DEC

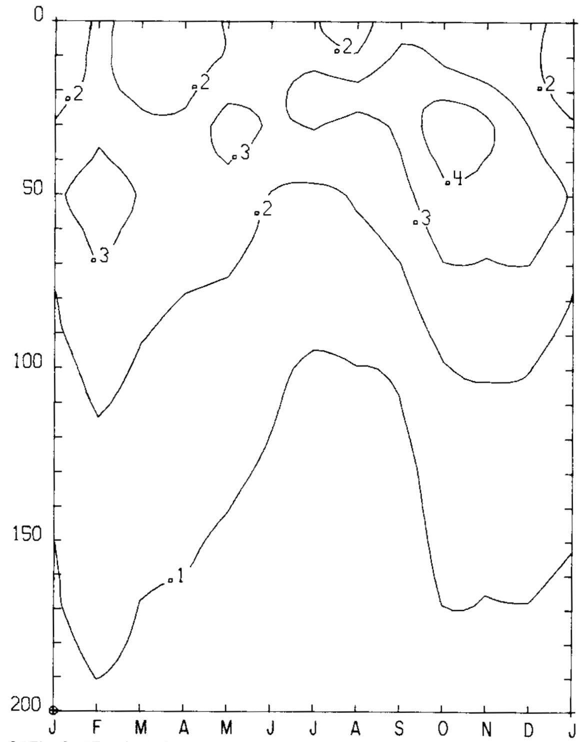


SDEV SAL 090045 JAN-DEC

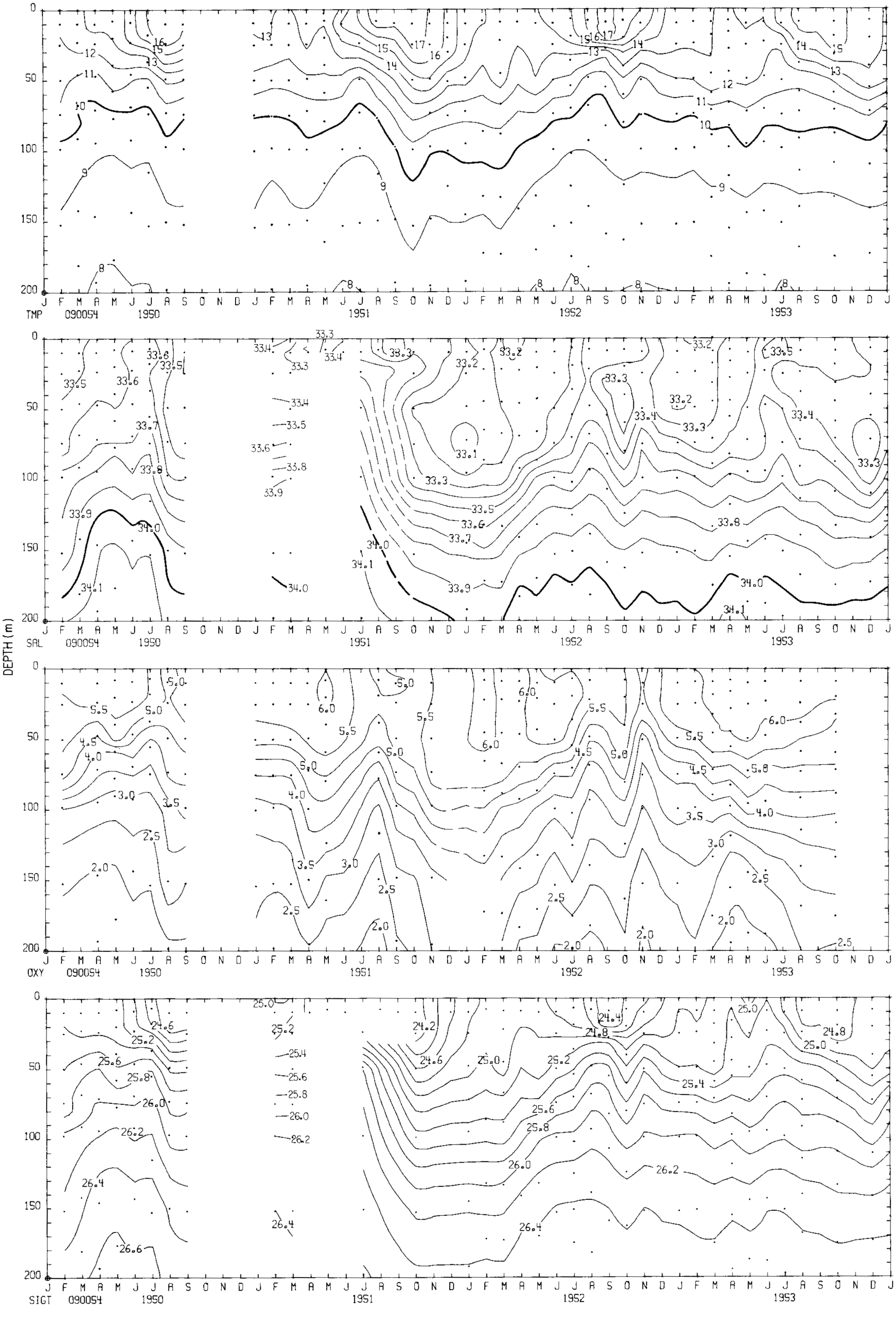
DEPTH (m)

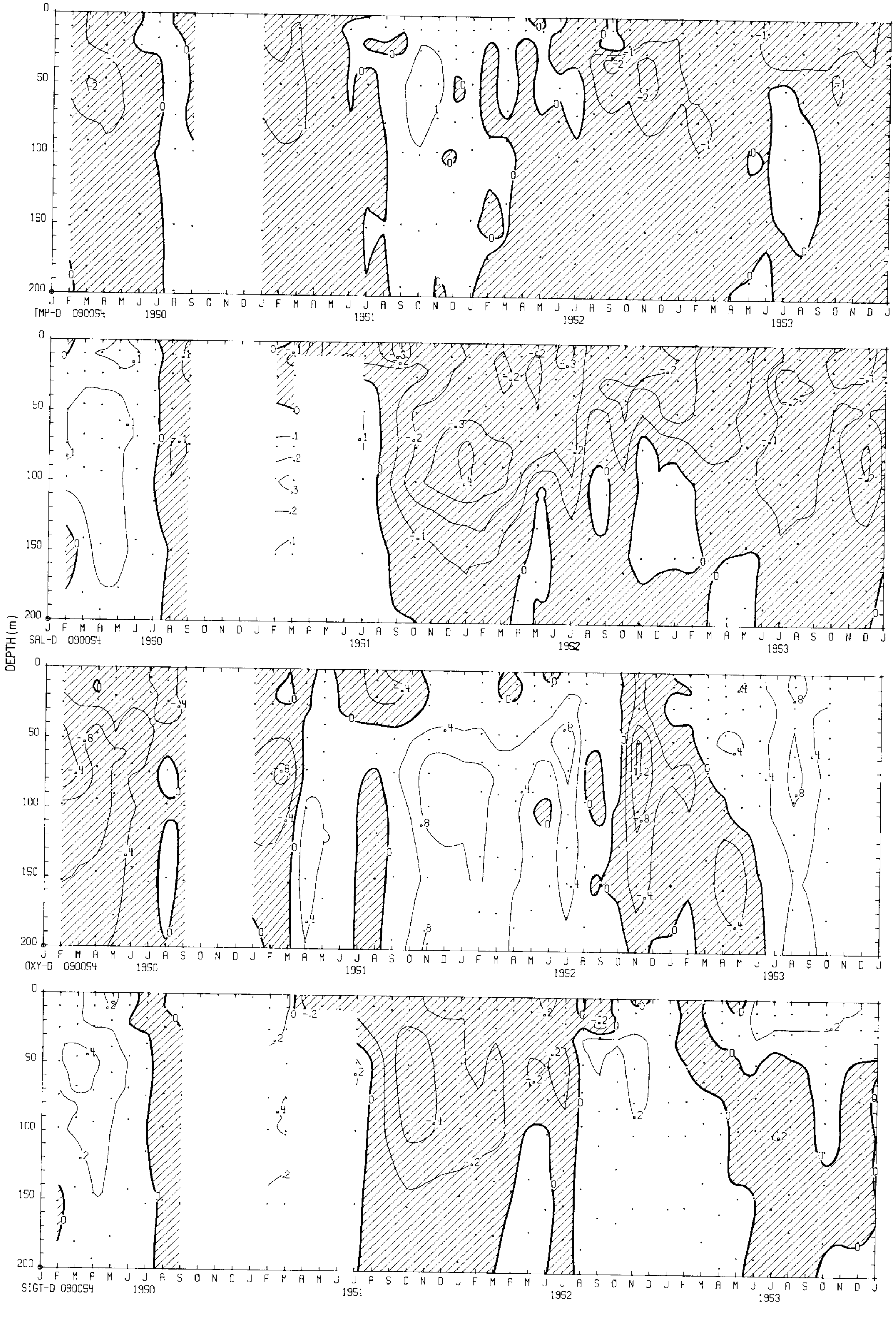


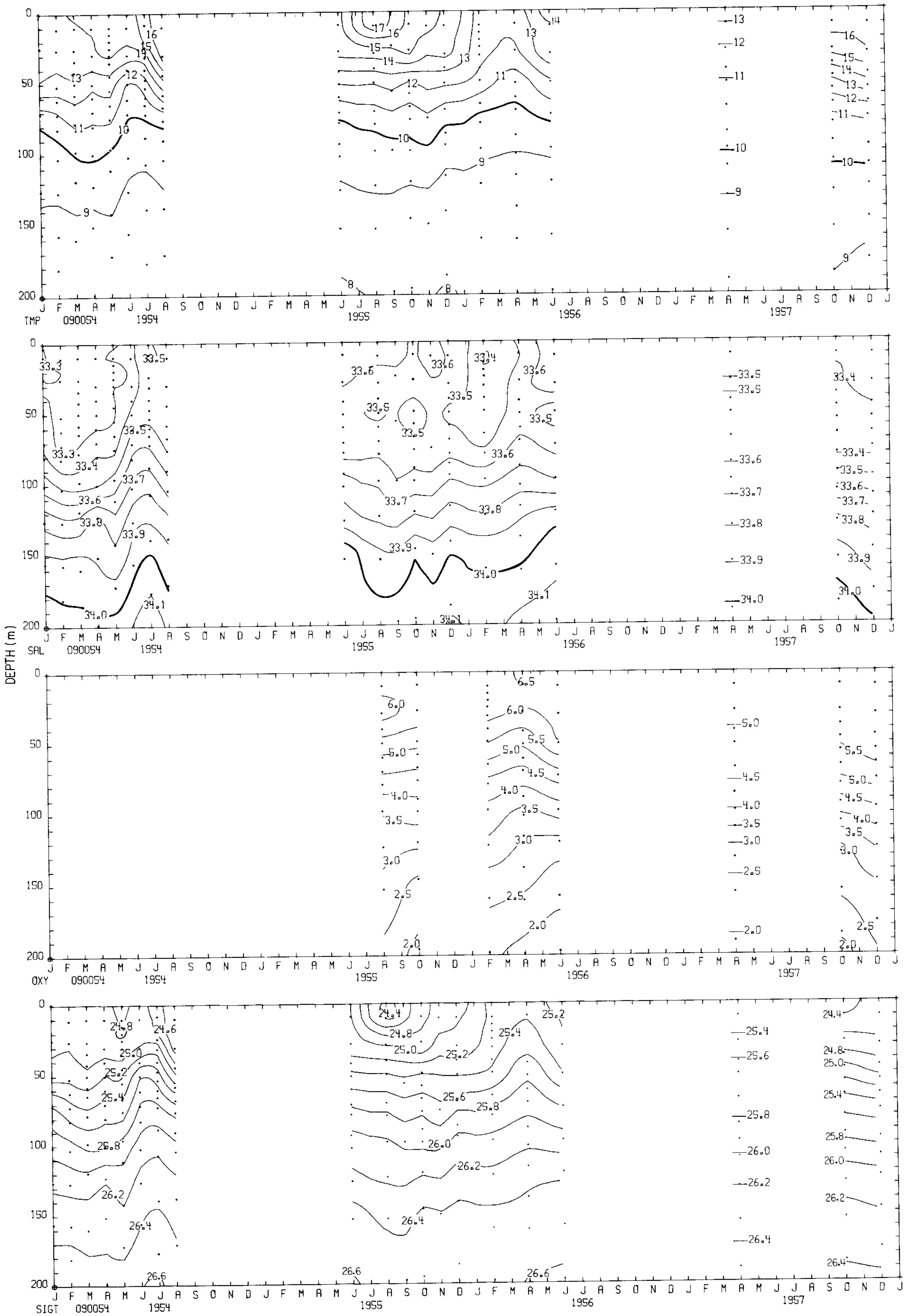
SDEV OXY 090045 JAN-DEC

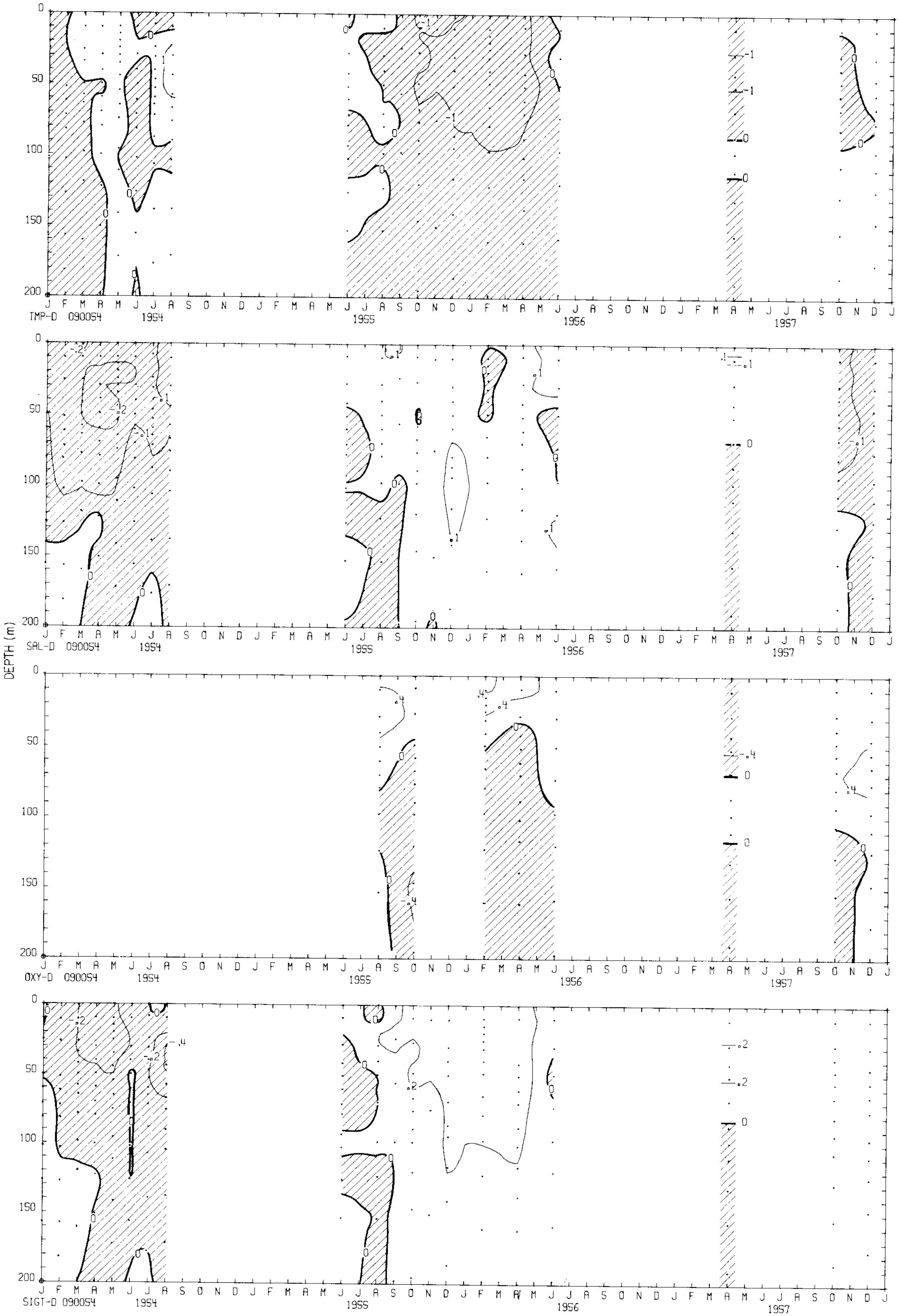


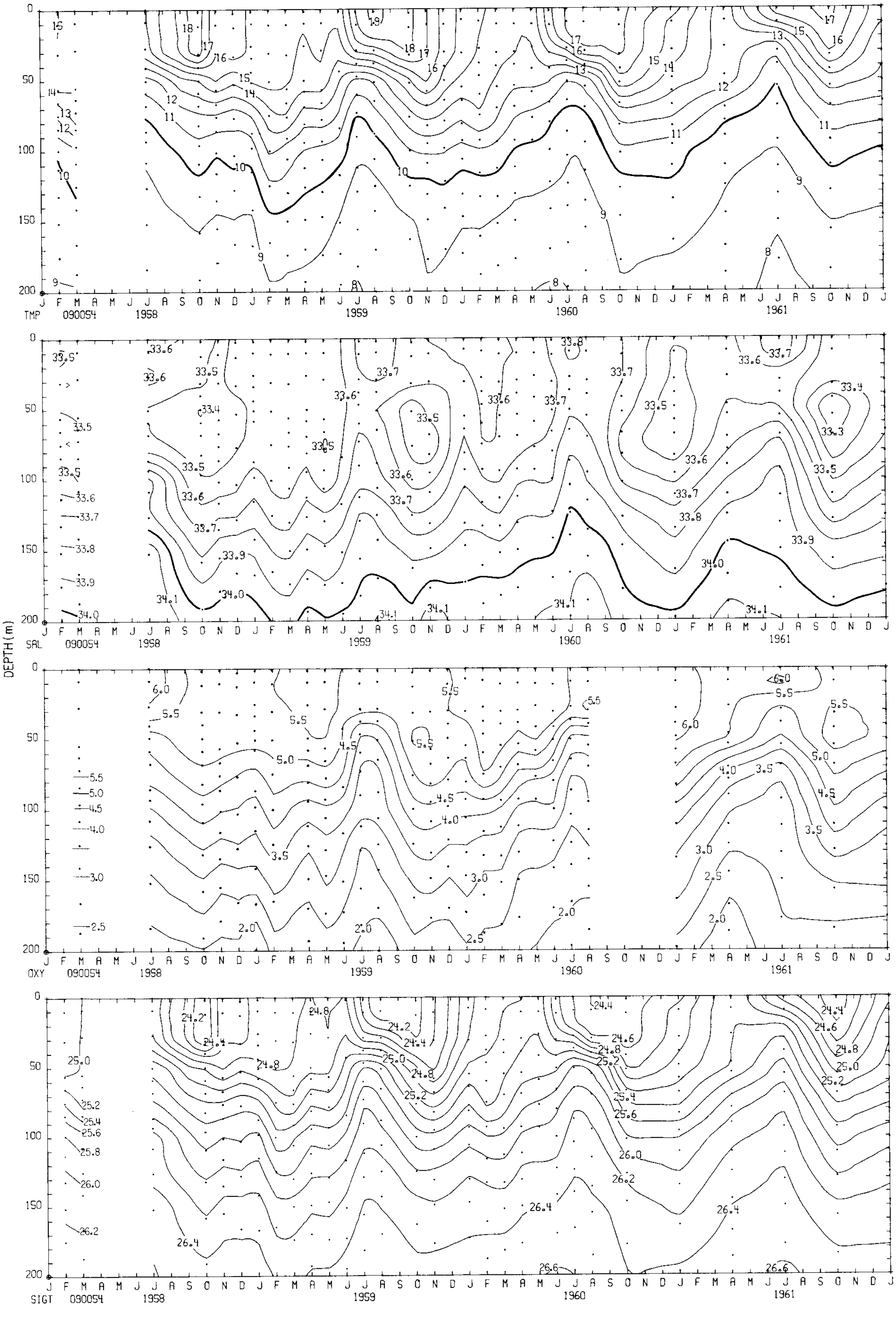
SDEV SIGT 090045 JAN-DEC

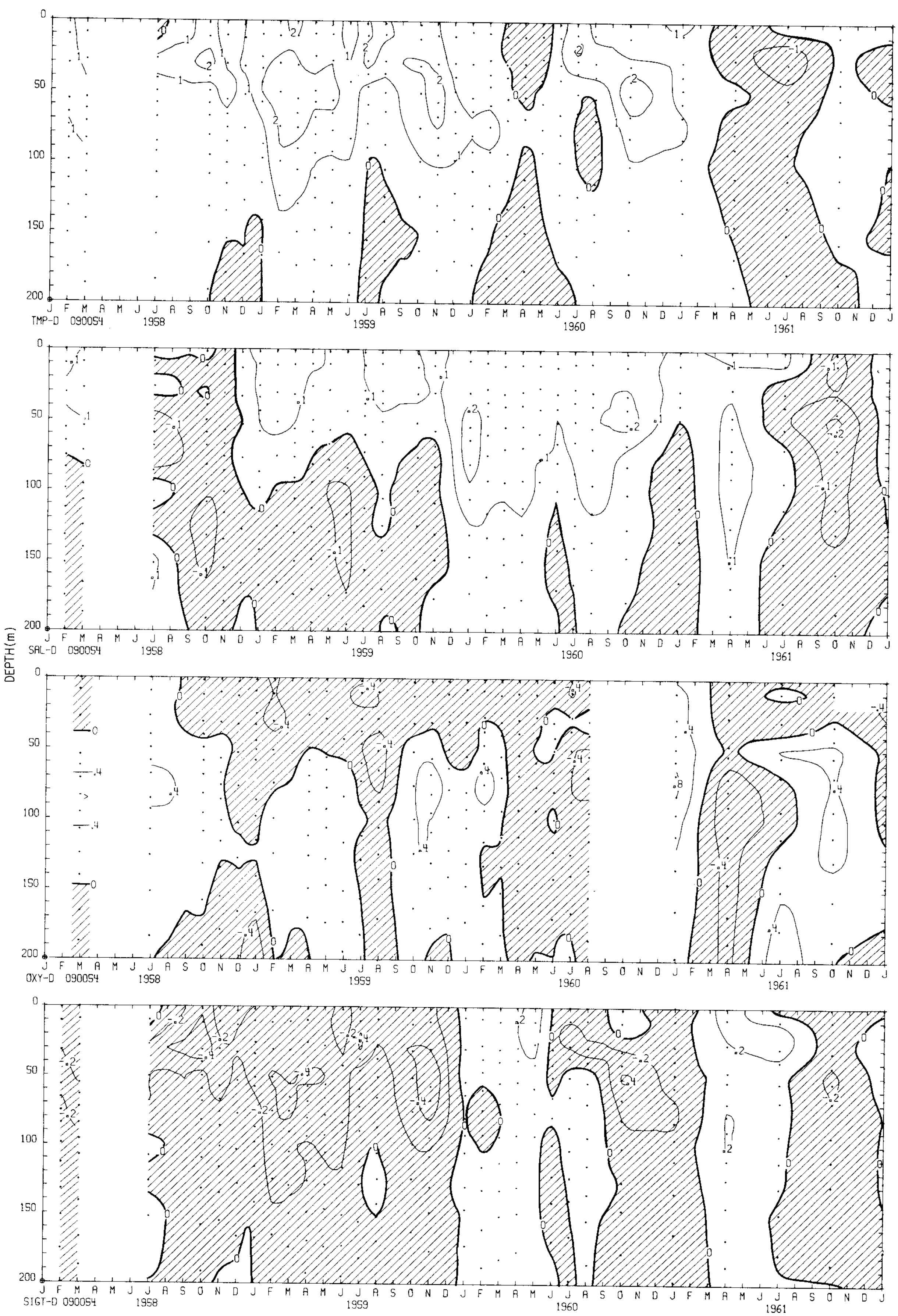

DEPTH (m)
TMP 090054 1950 1951 1952 1953
SAL 090054 1950 1951 1952 1953
OXY 090054 1950 1951 1952 1953
SIGT 090054 1950 1951 1952 1953
J F M A M J J A S O N D

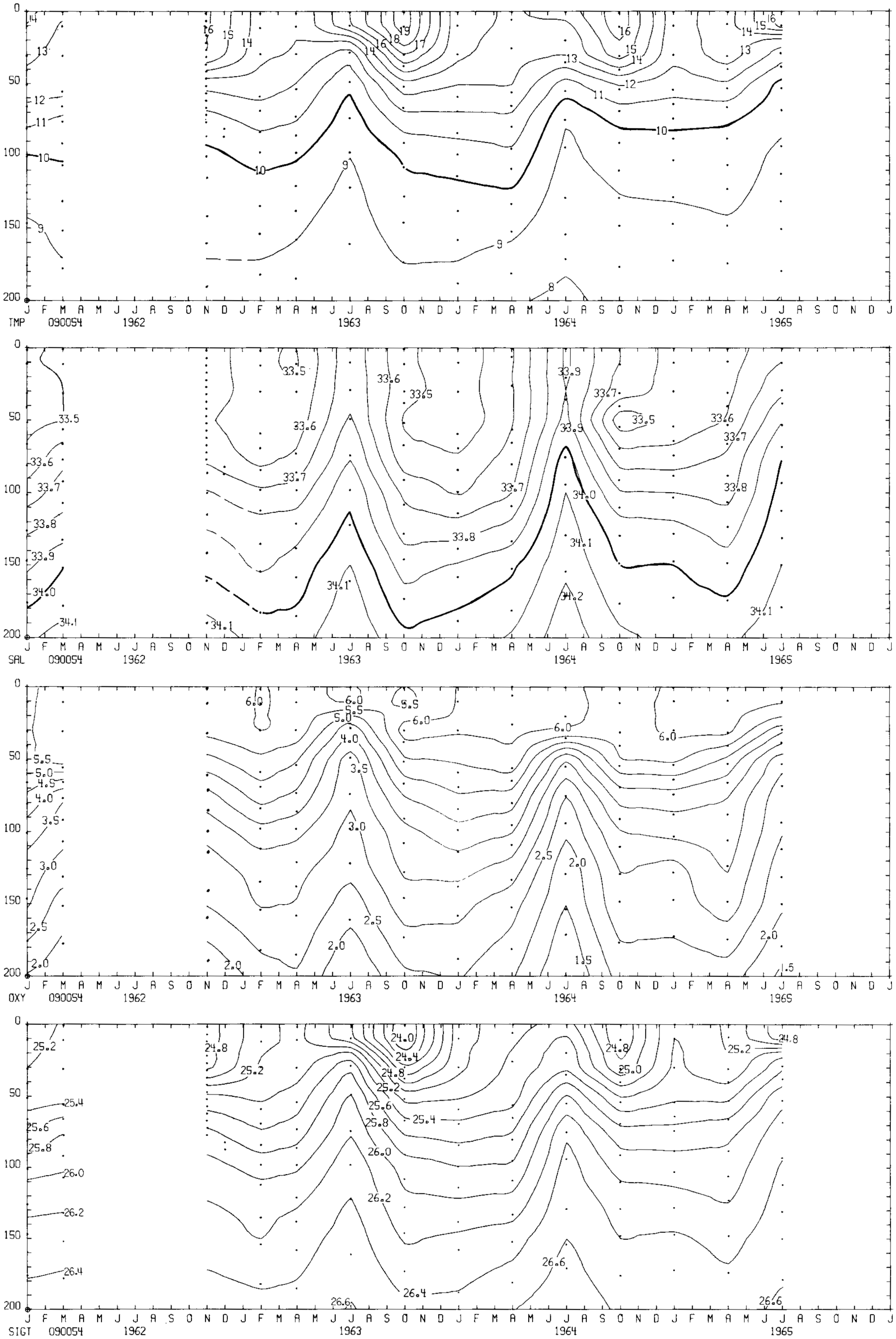

TMP-D 090054
SAL-D 090054
OXY-D 090054
SIGT-D 090054
DEPTH (m)
1950
1951
1952
1953


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 090054
SAL 090054
OXY 090054
SIGT 090054
1954
1955
1956
1957

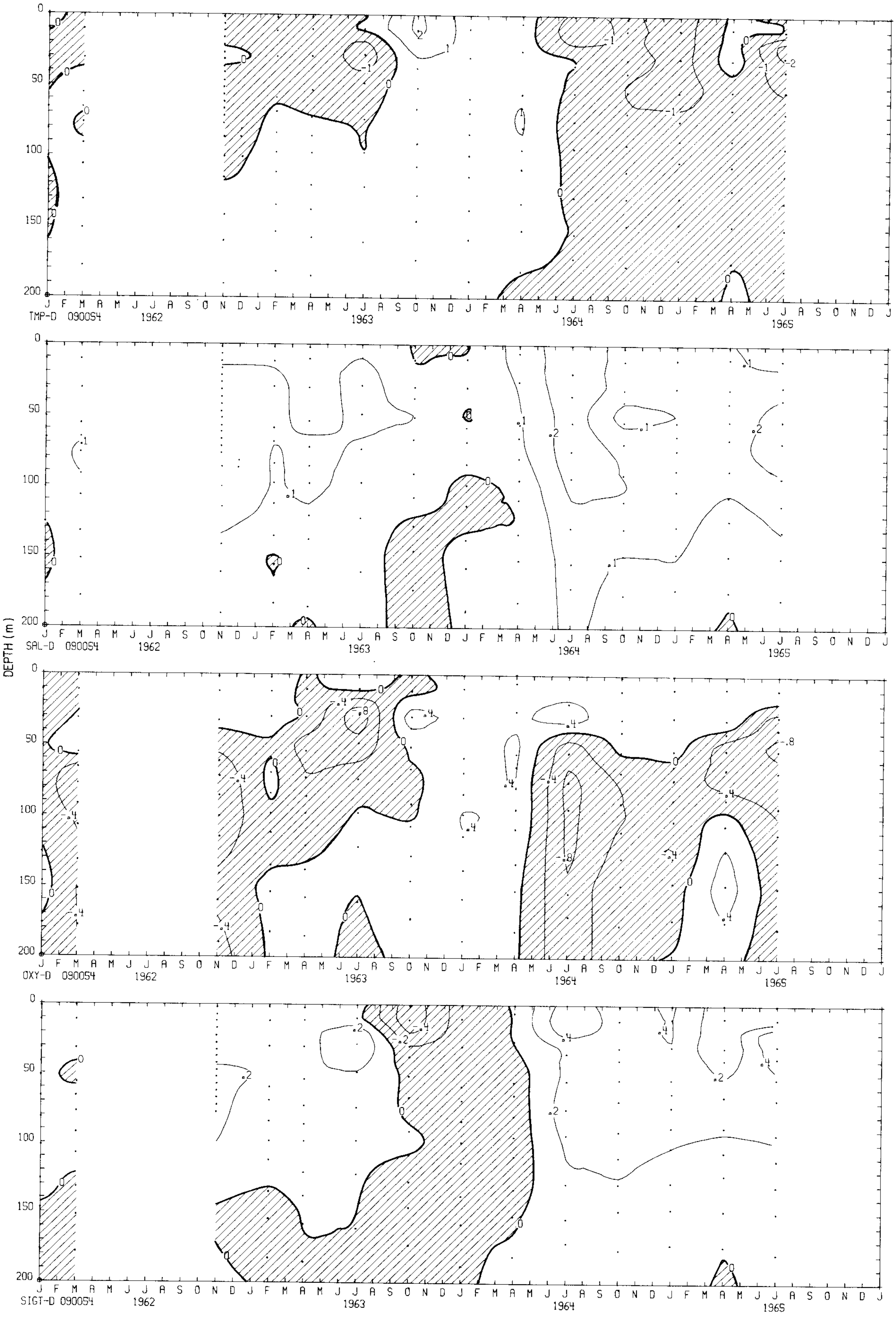

DEPTH (m)
TMP-D 090054
SAL-D 090054
OXY-D 090054
SIGT-D 090054
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1954
1955
1956
1957
0
50
100
150
200

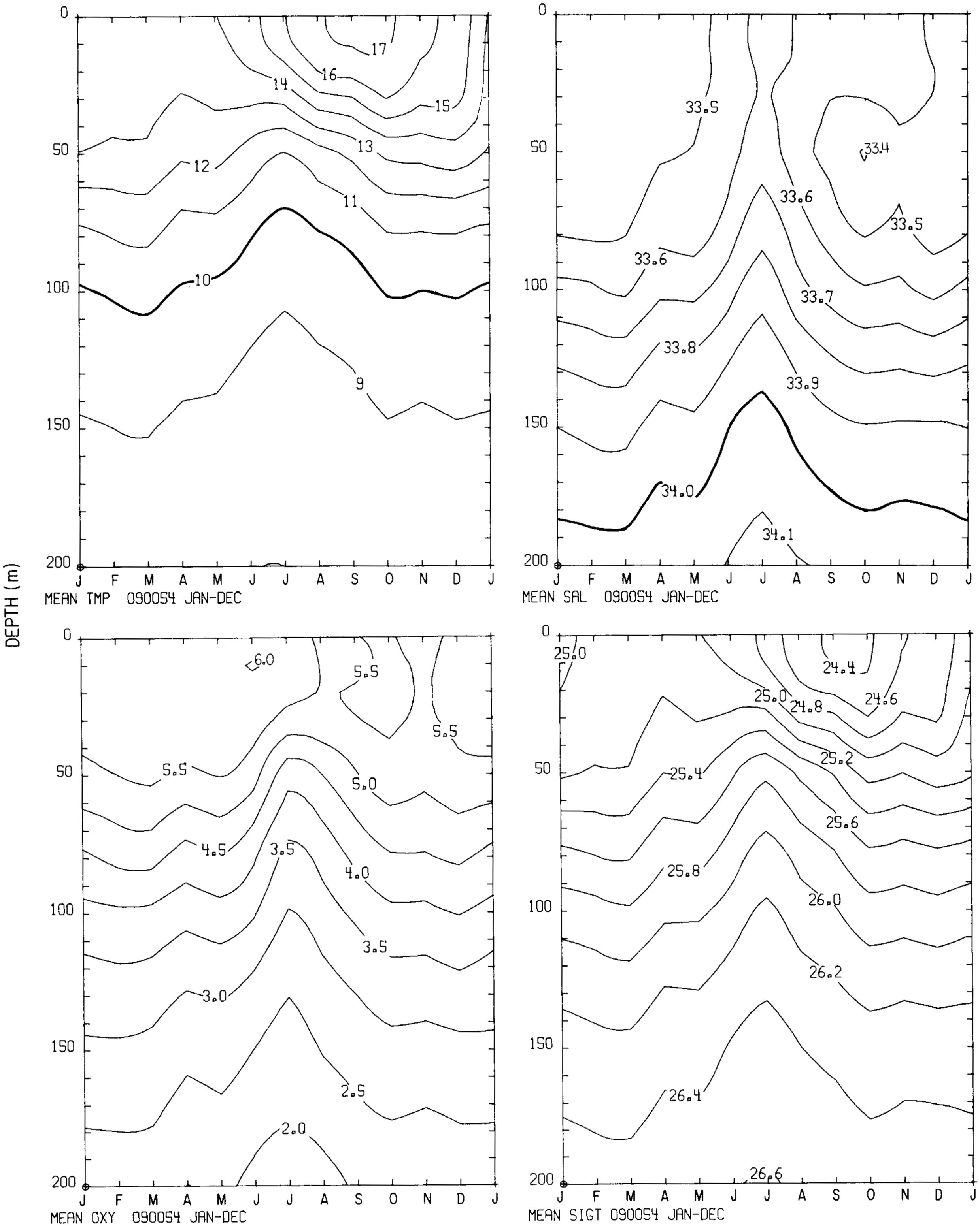

TMP 090054
SAL 090054
OXY 090054
SIGT 090054
DEPTH (m)
1958
1959
1960
1961

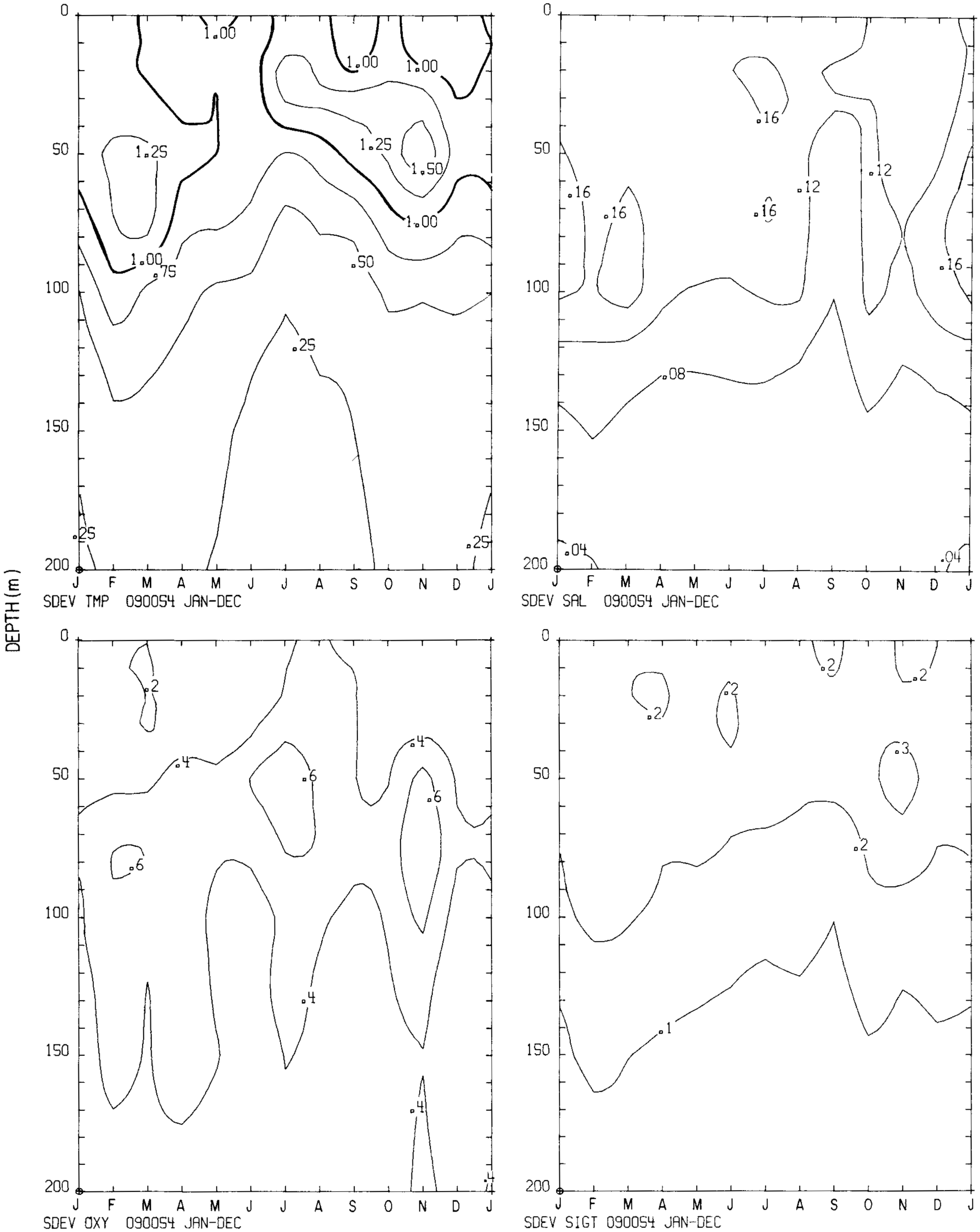

DEPTH(m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090054
1958
1959
1960
1961
SAL-D 090054
OXY-D 090054
SIGT-D 090054

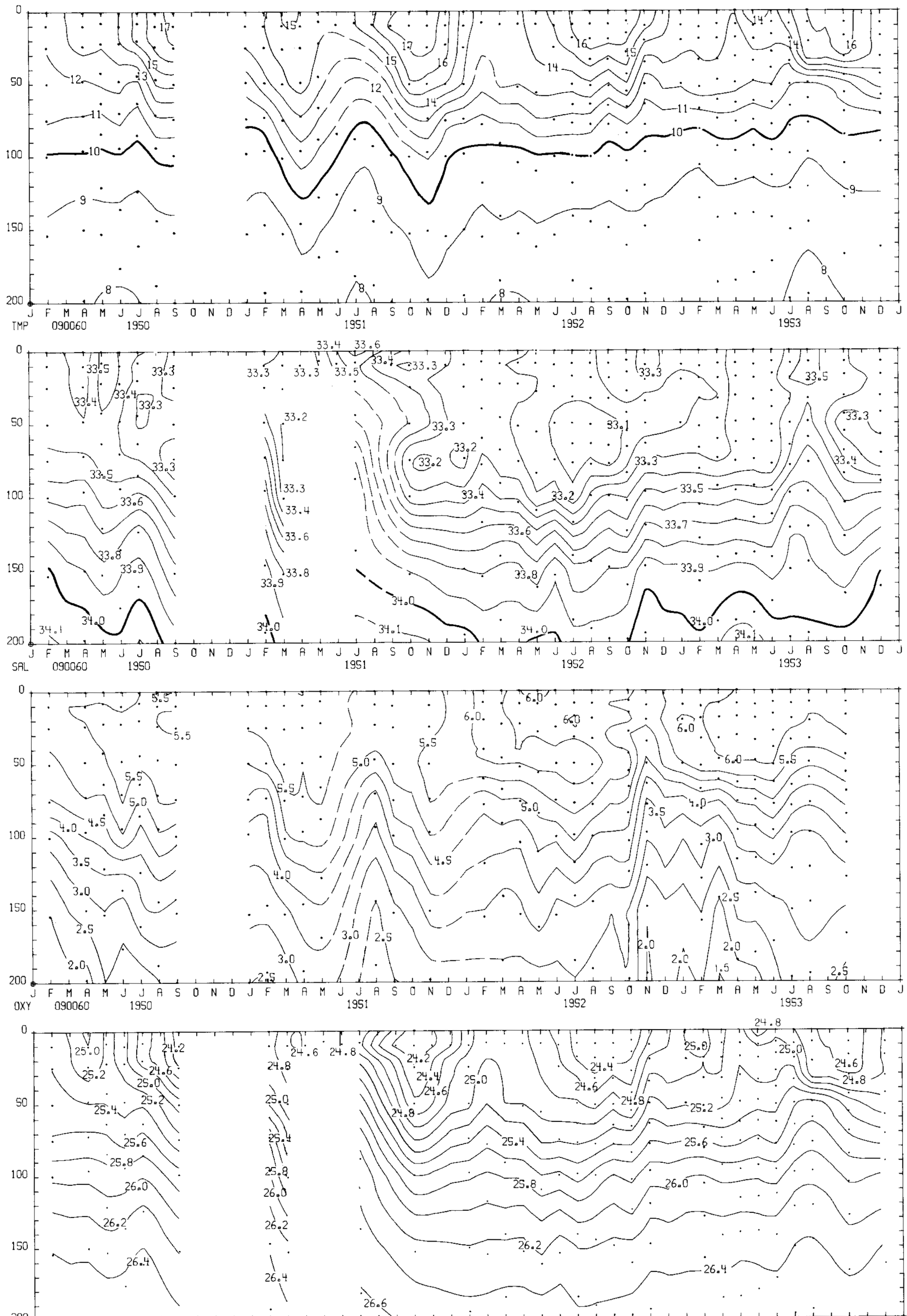


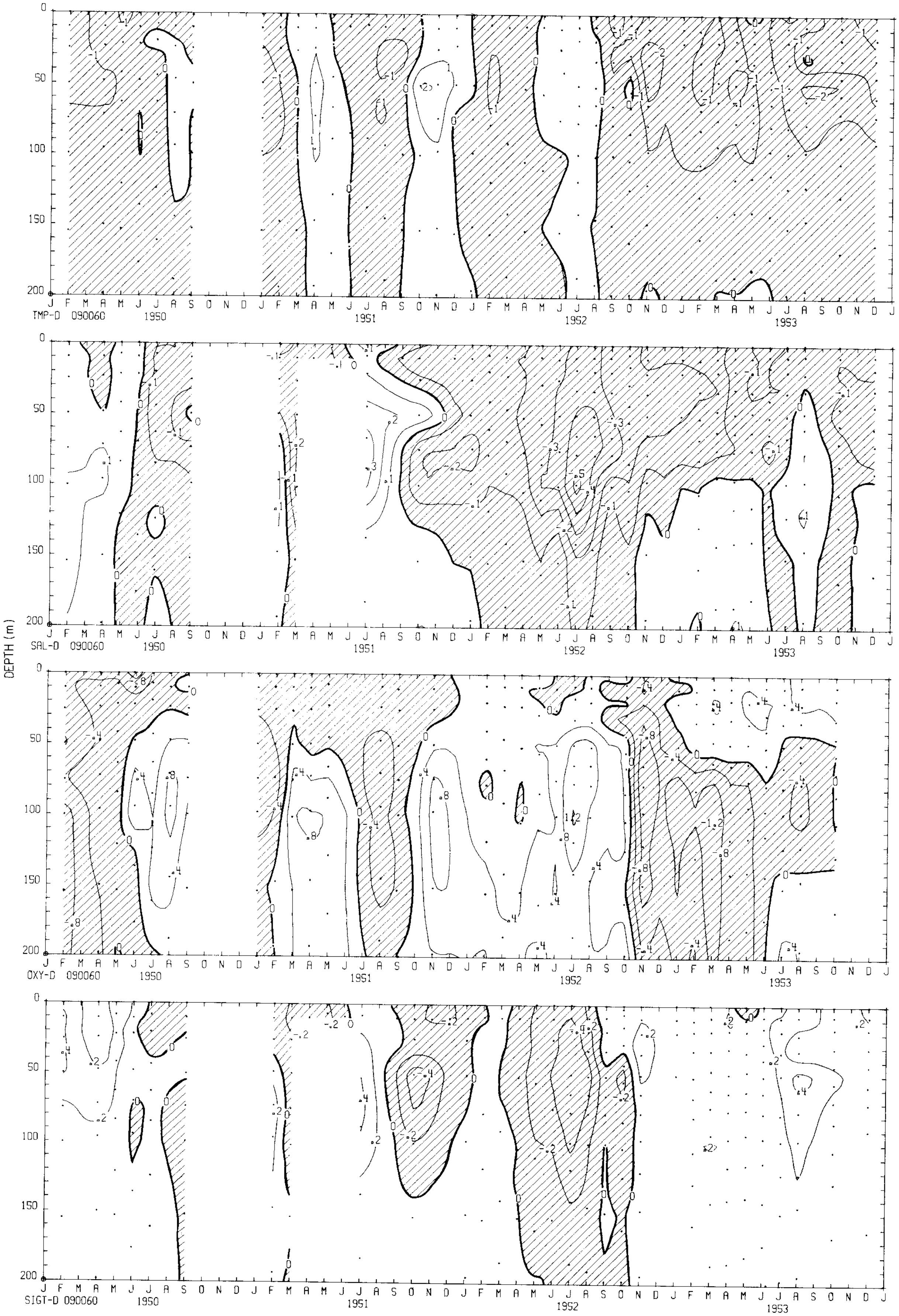
TMP 090054
SAL 090054
OXY 090054
SIGT 090054
DEPTH (m)
J F M A M J J A S O N D
1962
1963
1964
1965

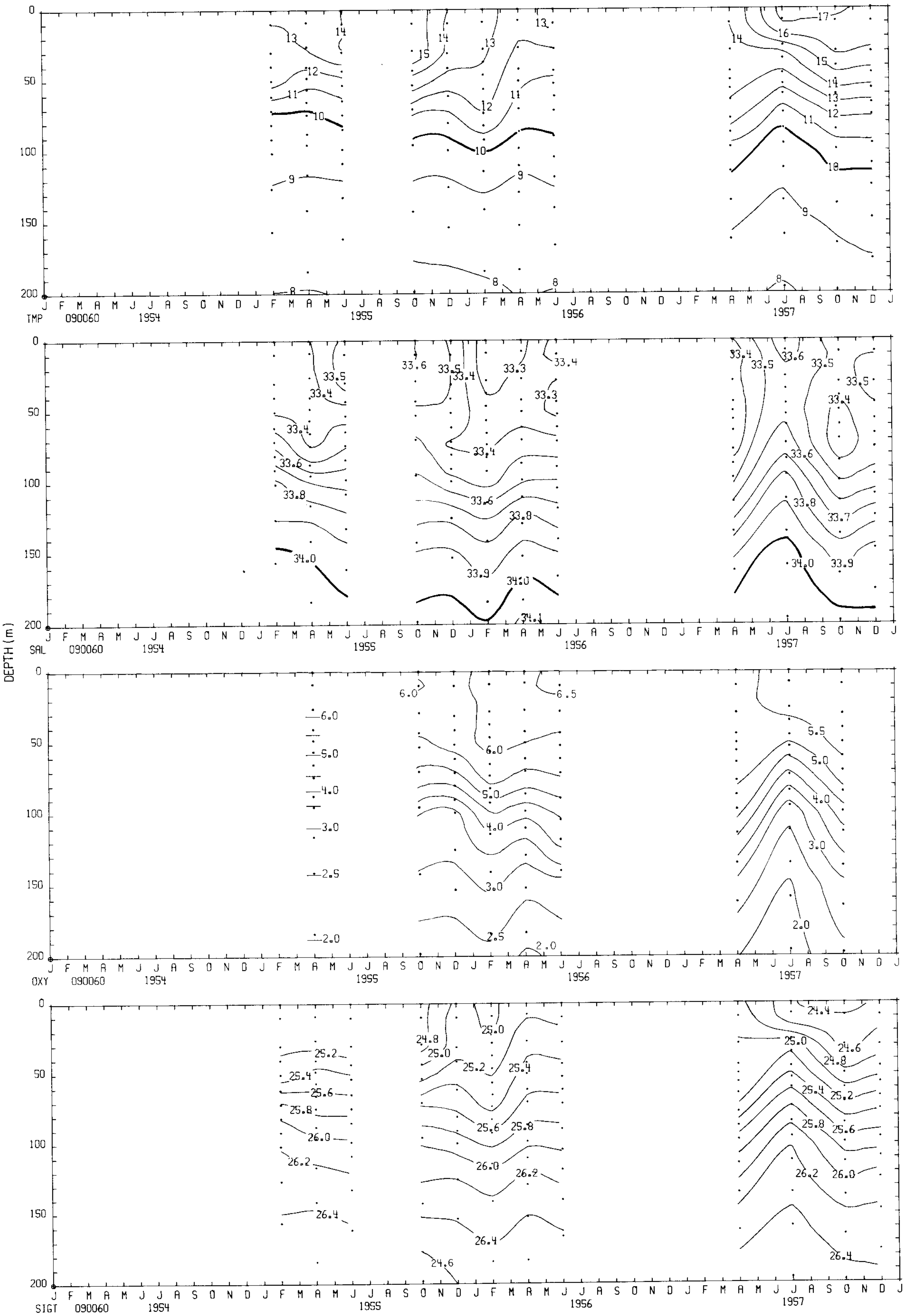

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090054
SAL-D 090054
OXY-D 090054
SIGT-D 090054
1962
1963
1964
1965

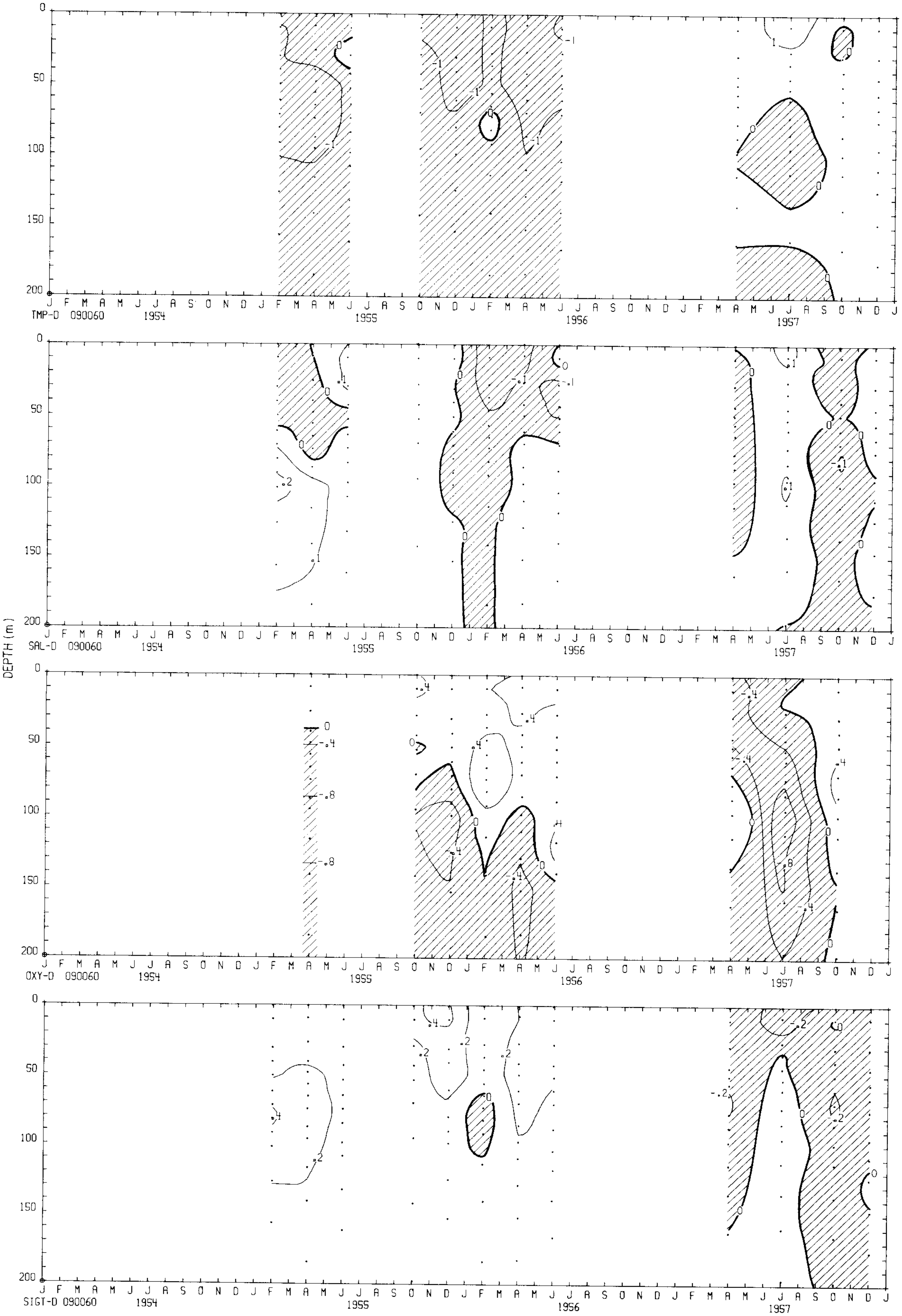

0
50
100
150
200
DEPTH (m)
J F M A M J J A S O N D J
MEAN TMP 090054 JAN-DEC
17
16
14
15
13
12
11
10
9
MEAN SAL 090054 JAN-DEC
33.5
33.4
33.6
33.5
33.6
33.7
33.8
33.9
34.0
34.1
MEAN OXY 090054 JAN-DEC
6.0
5.5
5.5
5.5
5.0
4.5
3.5
4.0
3.5
3.0
2.5
2.0
MEAN SIGT 090054 JAN-DEC
25.0
24.4
25.0
24.8
24.6
25.2
25.4
25.6
25.8
26.0
26.2
26.4
26.6

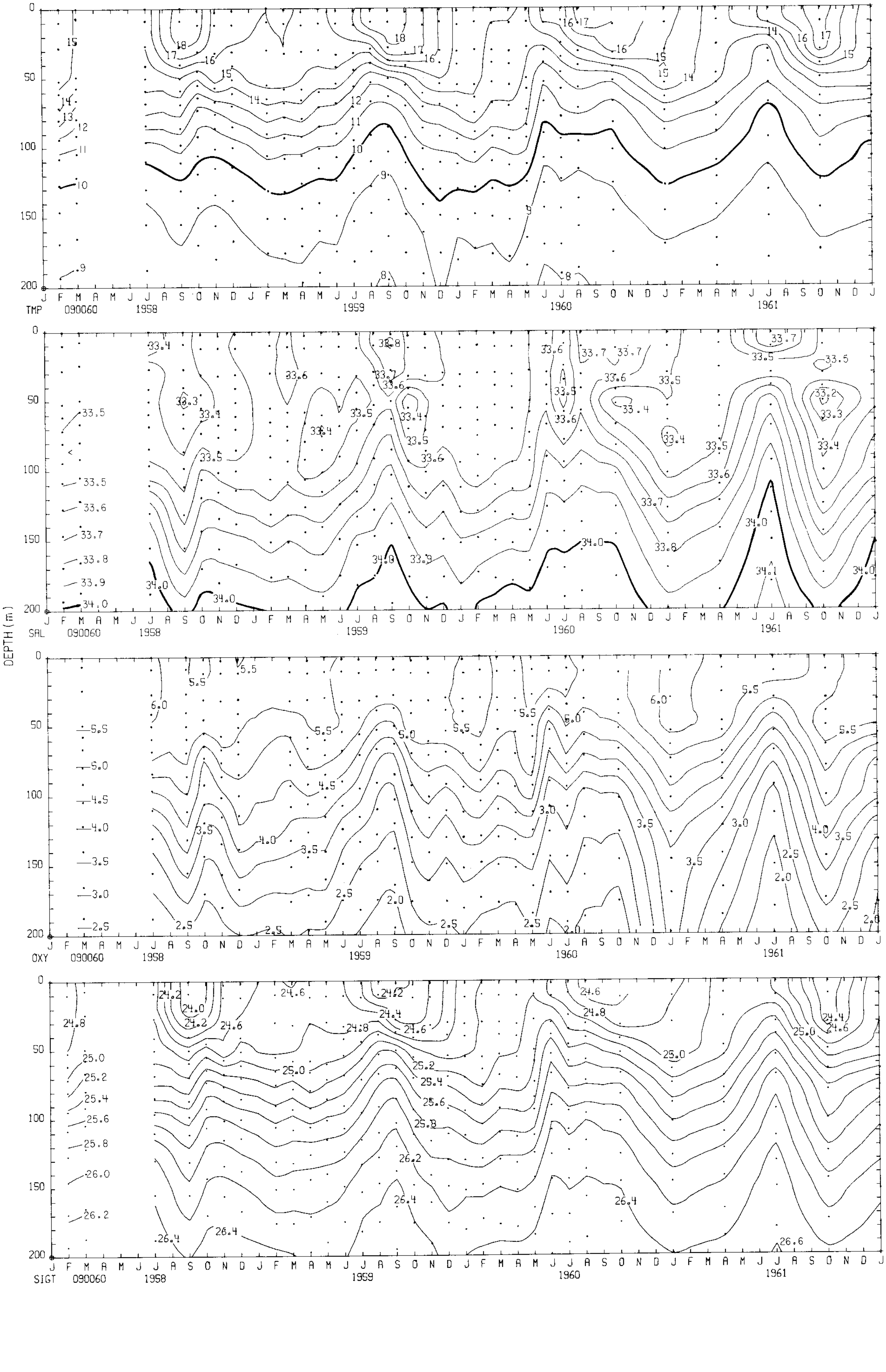

DEPTH (m)
SDEV TMP 090054 JAN-DEC
SDEV SAL 090054 JAN-DEC
SDEV OXY 090054 JAN-DEC
SDEV SIGT 090054 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200


DEPTH (m)
TMP 090060 1950
1951
1952
1953
SAL 090060 1950
OXY 090060 1950
SIGT 090060 1950
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

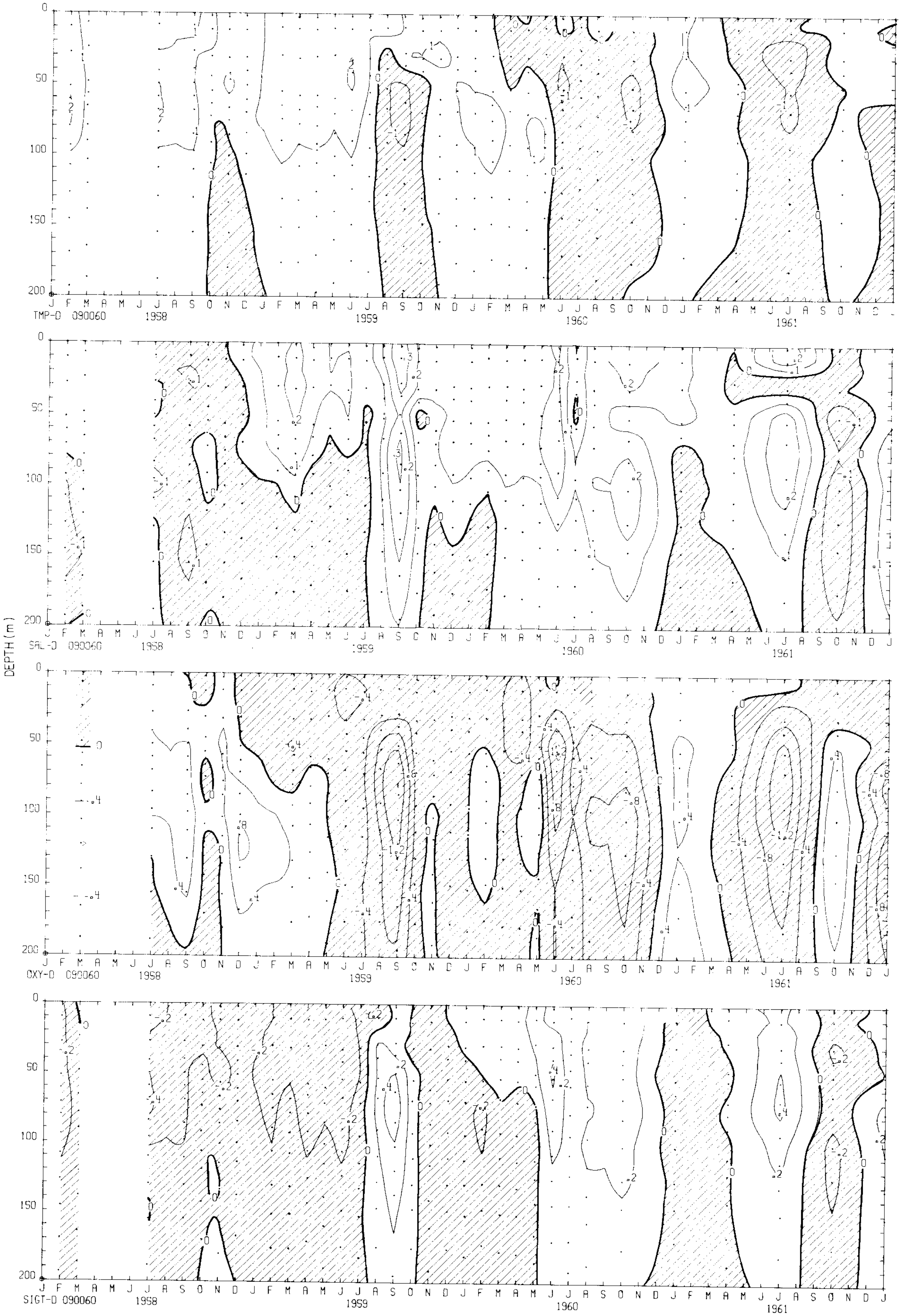

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090060
SAL-D 090060
OXY-D 090060
SIGT-D 090060
1950
1951
1952
1953


DEPTH (m)
TMP 090060
SAL 090060
OXY 090060
SIGT 090060
1954
1955
1956
1957

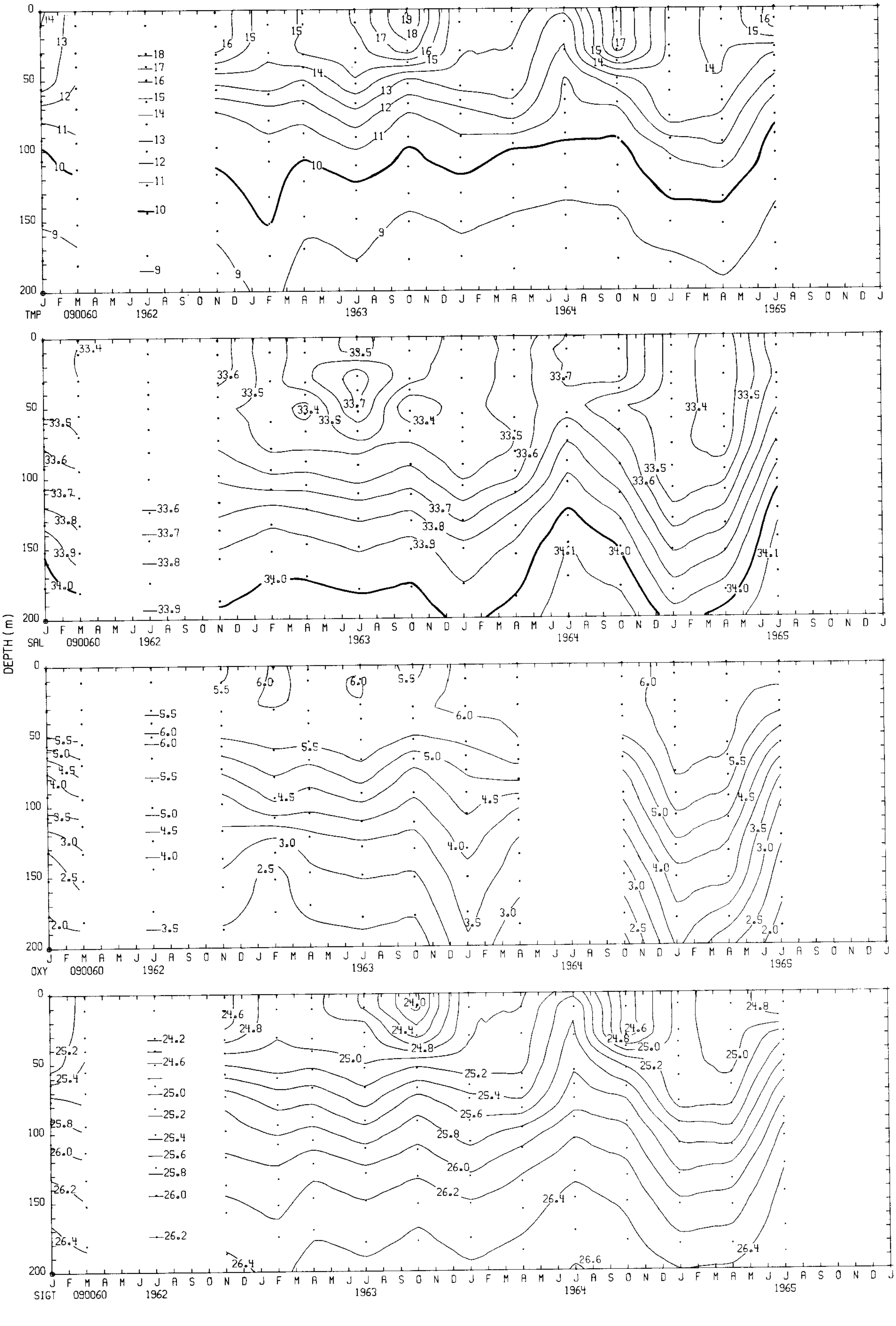

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090060
1954
1955
1956
1957
SAL-D 090060
OXY-D 090060
SIGT-D 090060

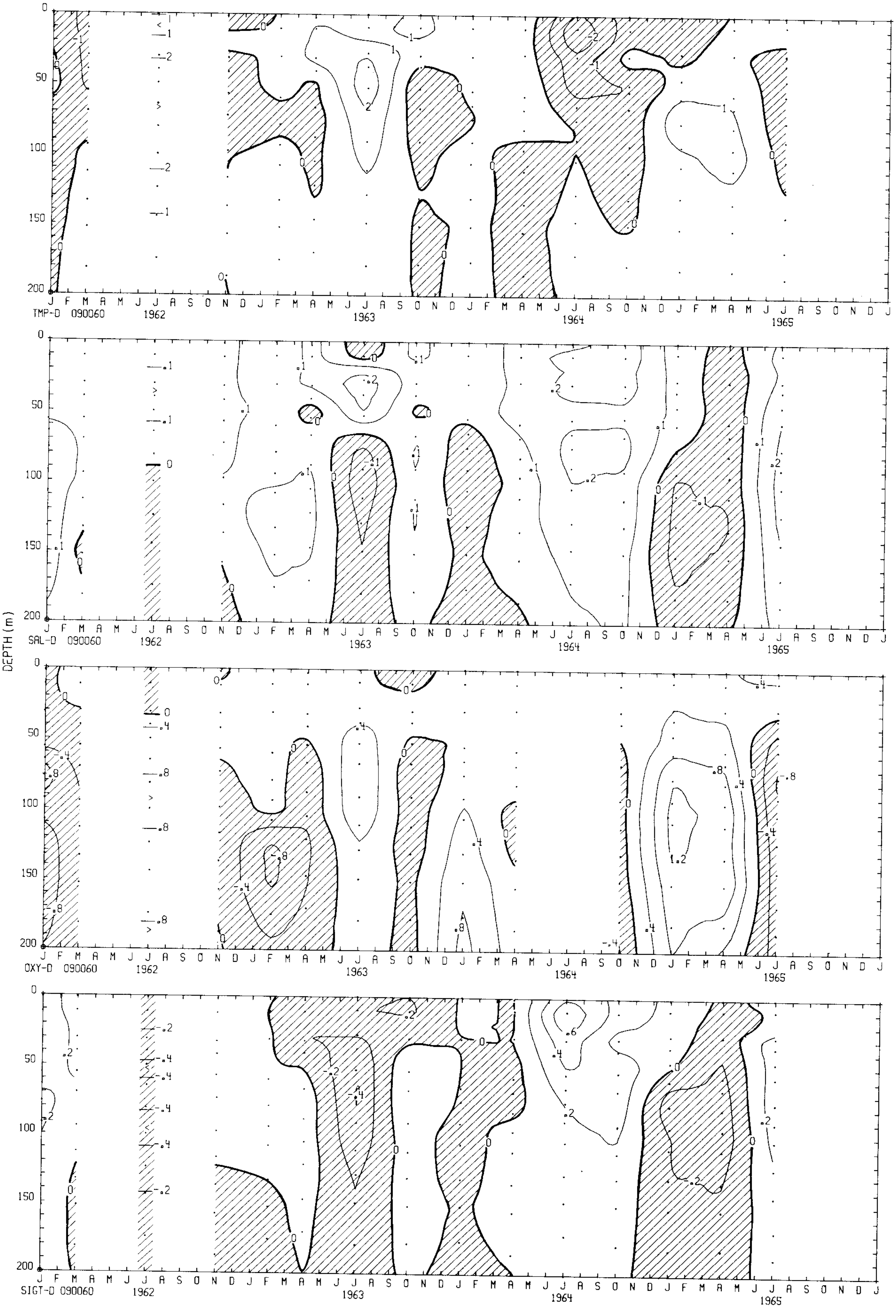


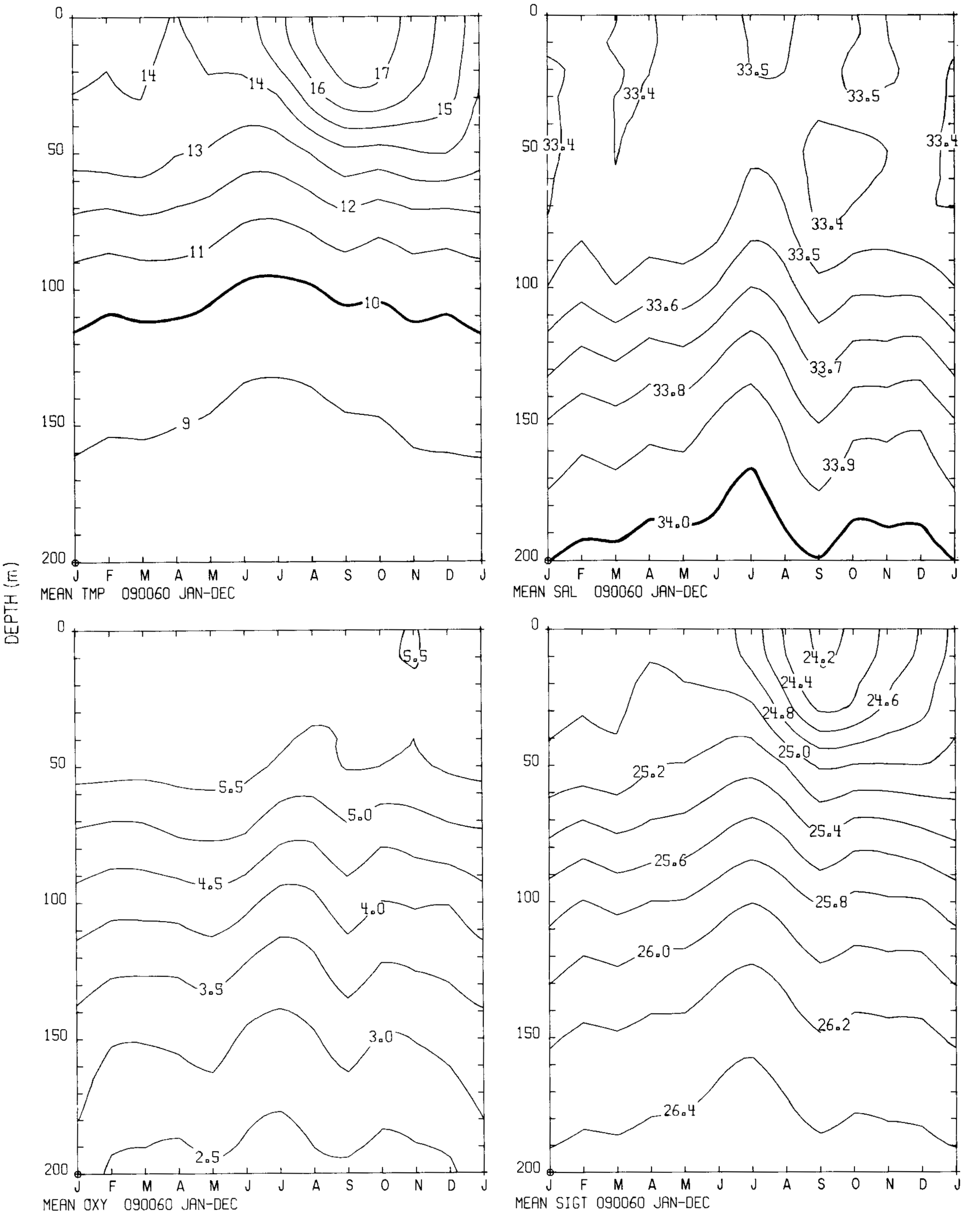
DEPTH (m)
TMP 090060
SAL 090060
OXY 090060
SIGT 090060
1958
1959
1960
1961



DEPTH (m)
TMP-D 090060
SAL-D 090060
OXY-D 090060
SIGT-D 090060
1958
1959
1960
1961
J F M A M J J A S O N D


DEPTH (m)
TMP 090060 1962 1963 1964 1965
SAL 090060 1962 1963 1964 1965
OXY 090060 1962 1963 1964 1965
SIGT 090060 1962 1963 1964 1965
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J


TMP-D 090060
SAL-D 090060
OXY-D 090060
SIGT-D 090060
DEPTH (m)
1962
1963
1964
1965


DEPTH (m)
MEAN TMP 090060 JAN-DEC
MEAN SAL 090060 JAN-DEC
MEAN OXY 090060 JAN-DEC
MEAN SIGT 090060 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200
14
15
16
17
13
12
11
10
9
33.4
33.5
33.6
33.7
33.8
33.9
34.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
24.2
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24.8
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25.6
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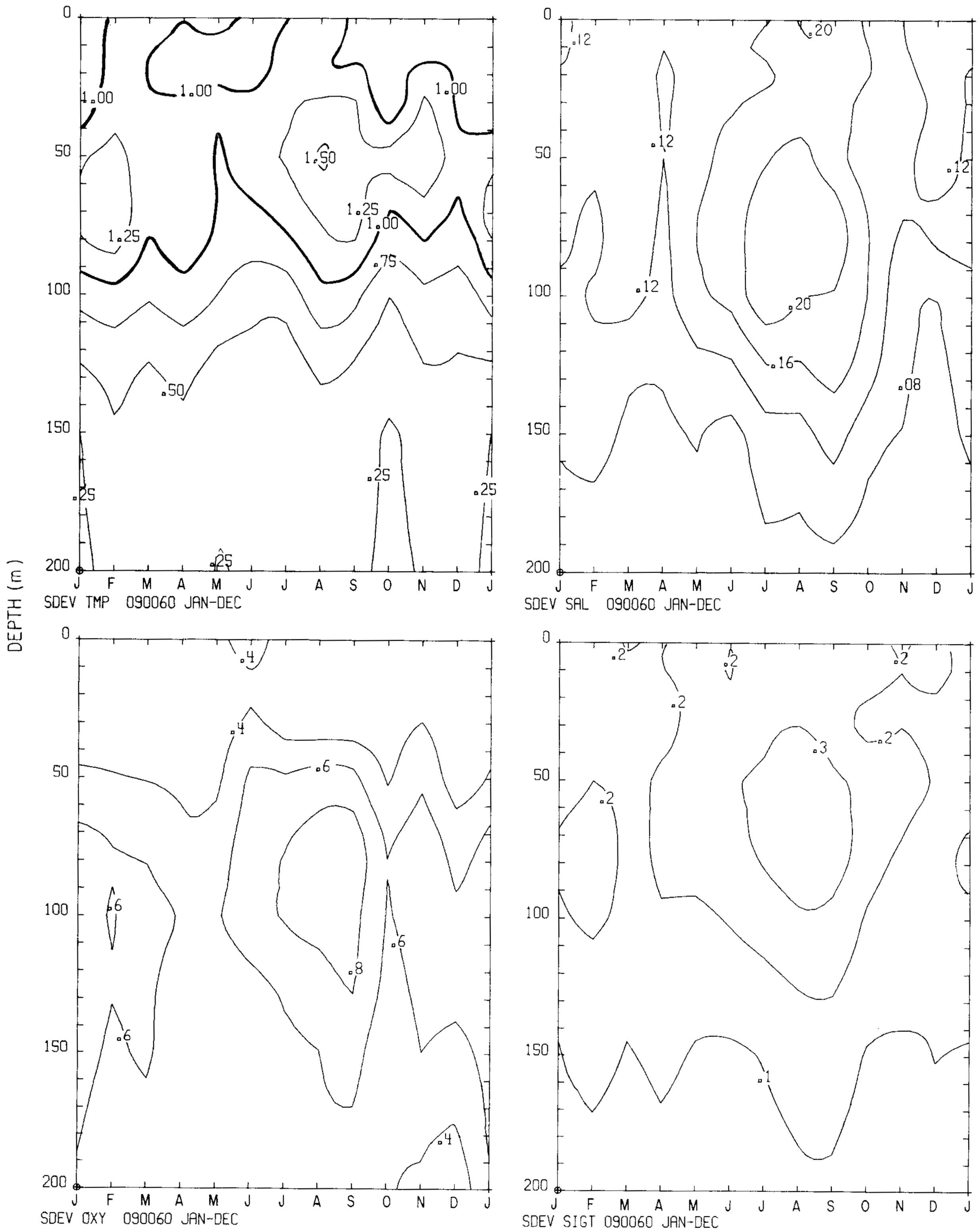
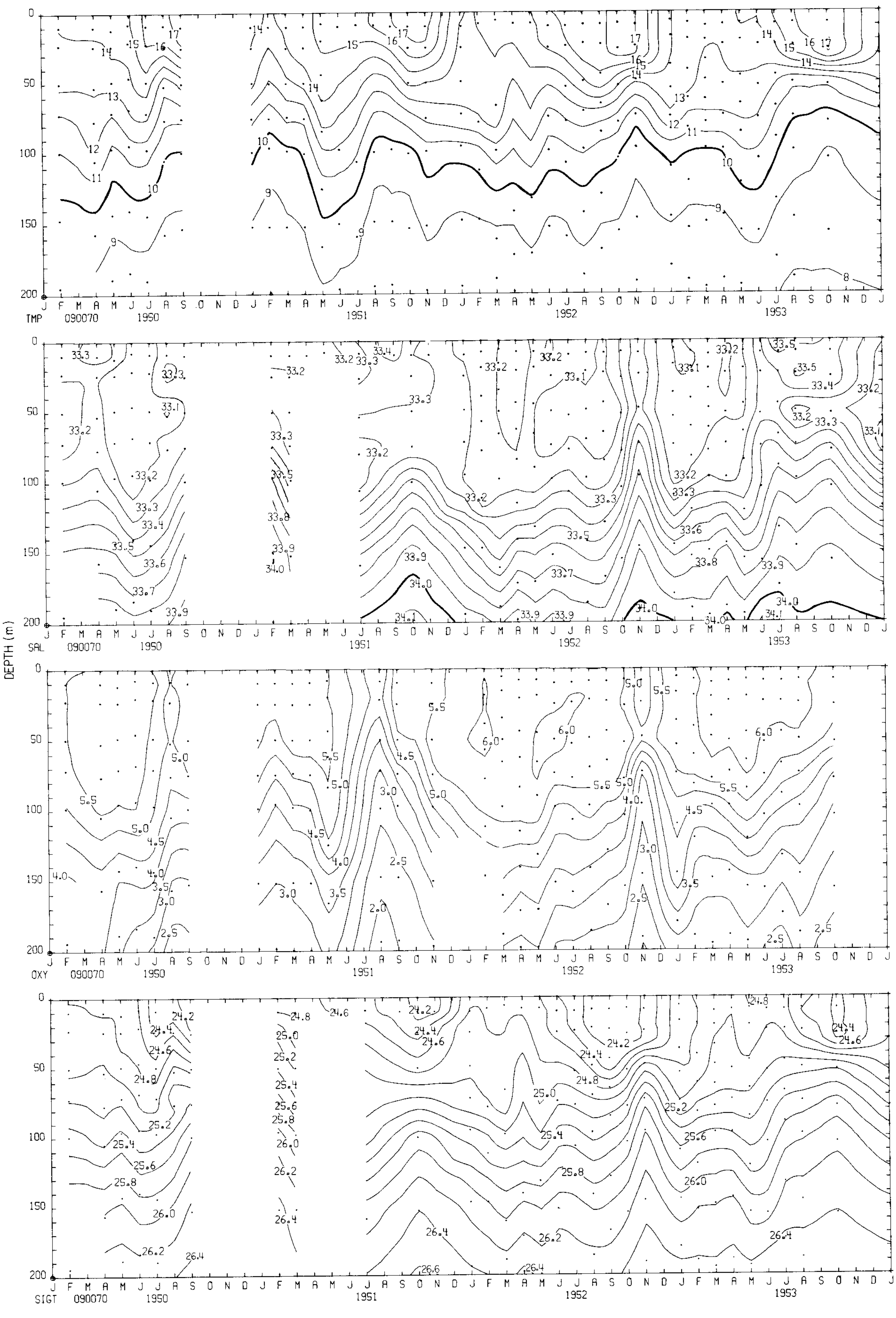
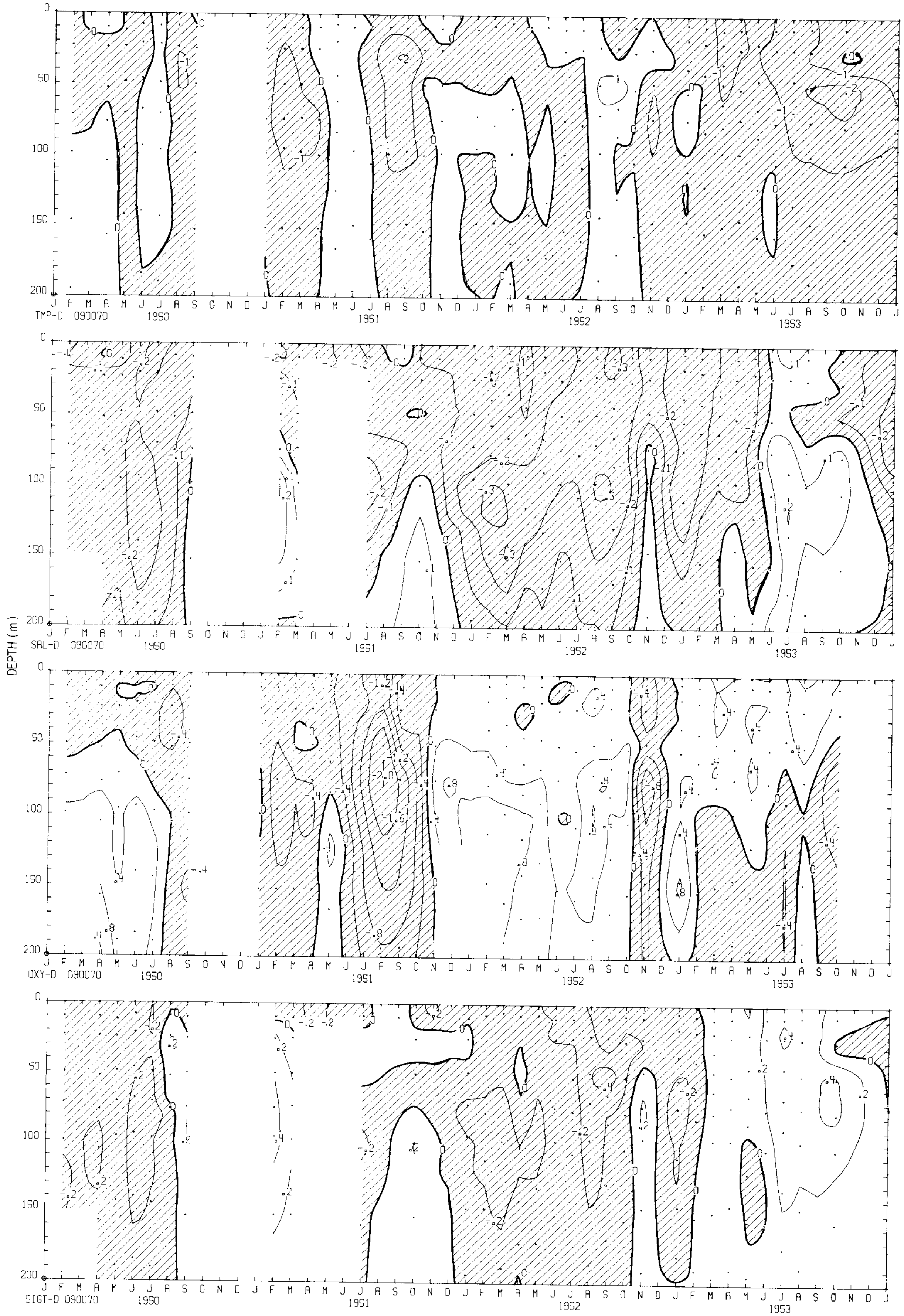
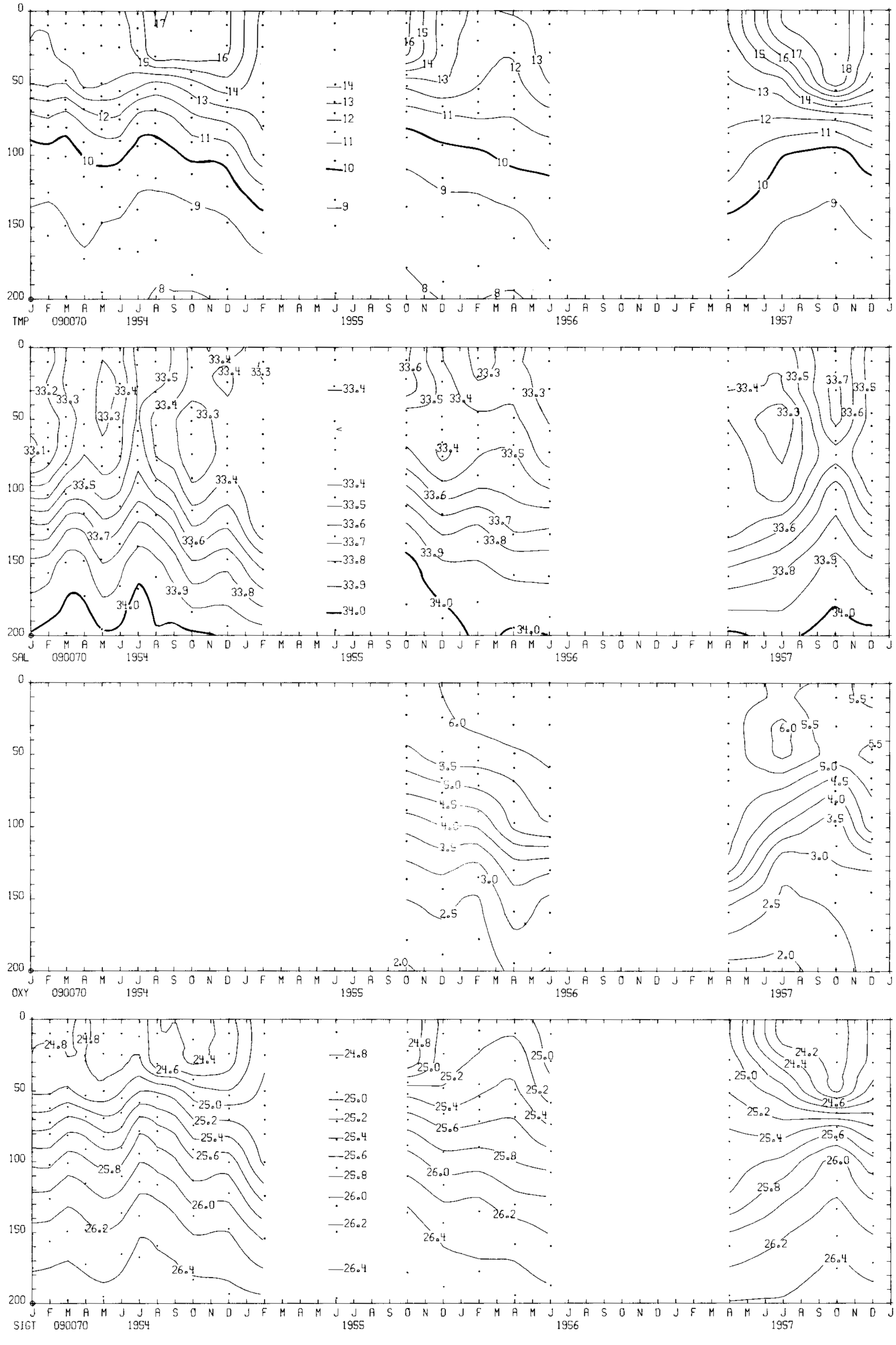
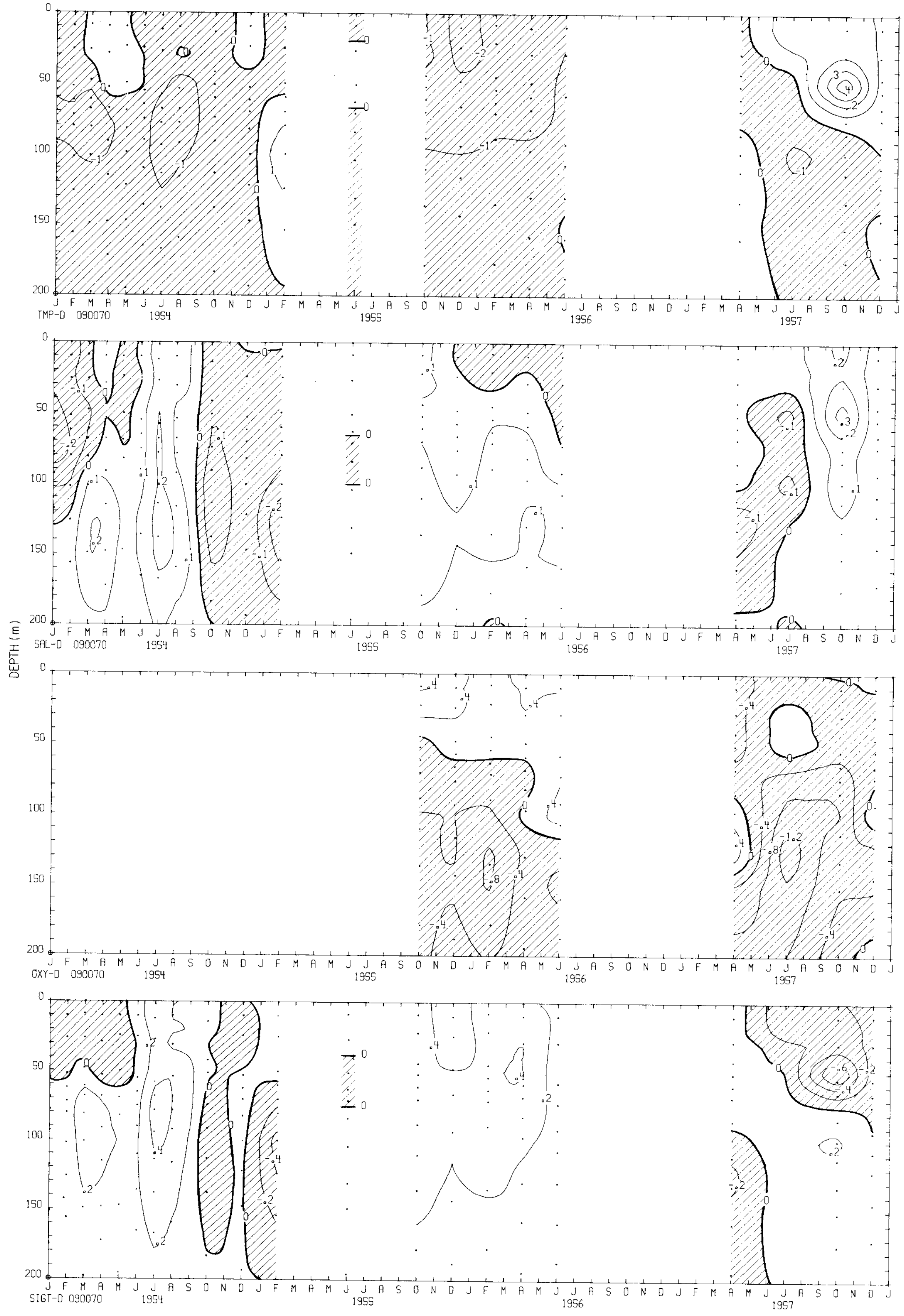
26.0
26.2
26.4


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J
SDEV TMP 090060 JAN-DEC
1.00
1.50
1.25
.75
.50
.25
SDEV SAL 090060 JAN-DEC
.12
.20
.16
.08
SDEV OXY 090060 JAN-DEC
.4
.6
.8
SDEV SIGT 090060 JAN-DEC
.2
.3
.1

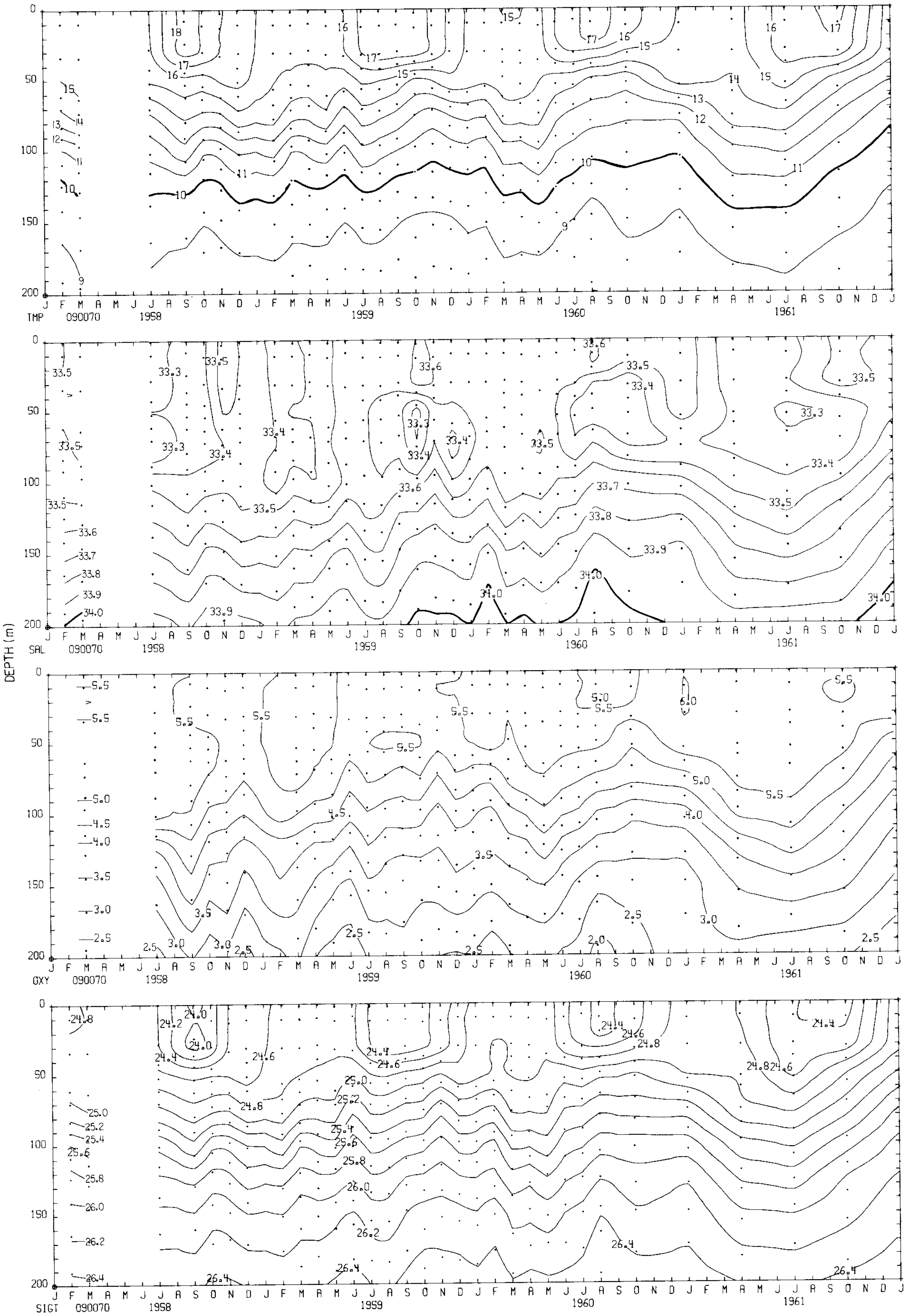

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 090070
SAL 090070
OXY 090070
SIGT 090070
1950
1951
1952
1953

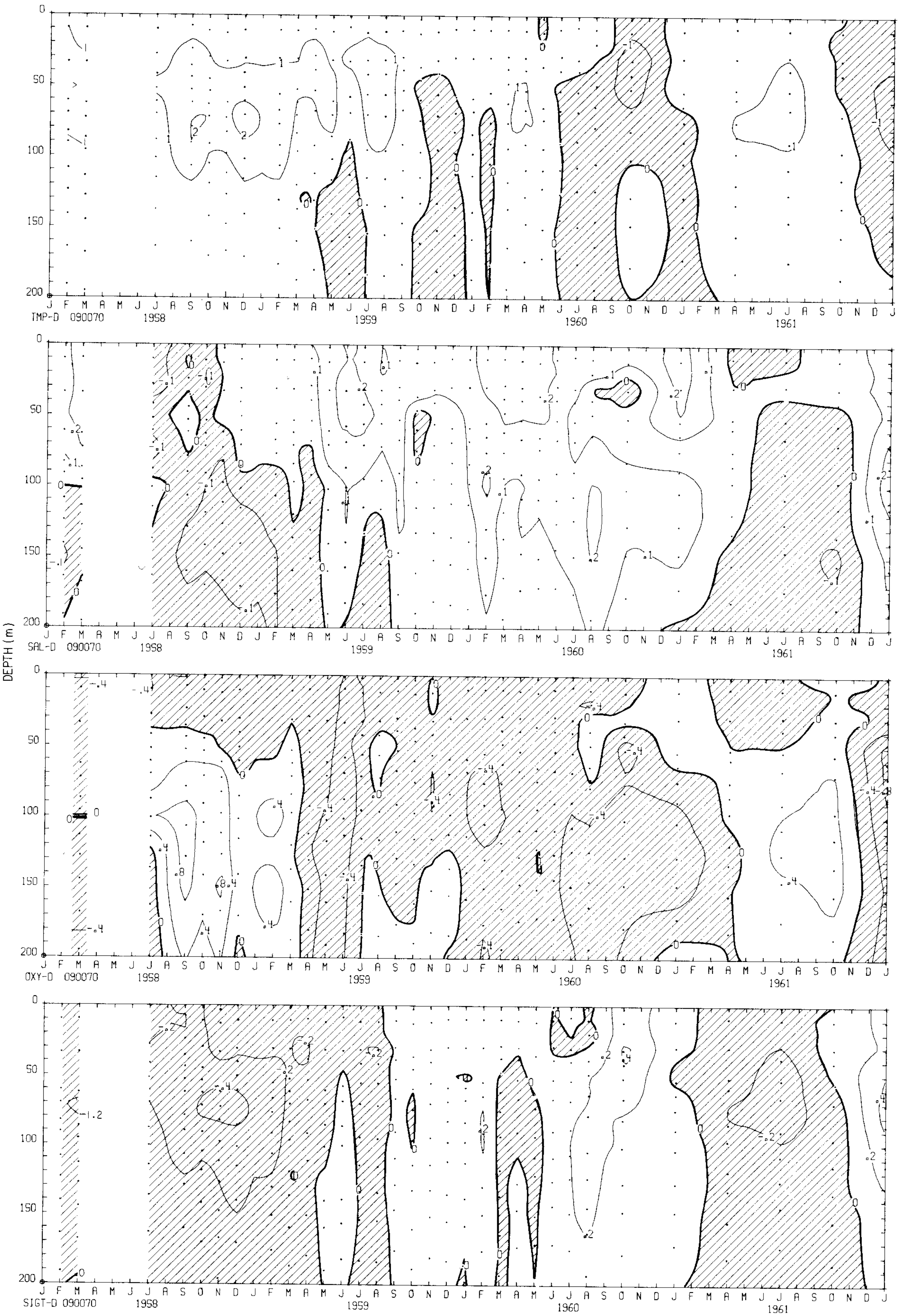

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090070
1950
1951
1952
1953
SAL-D 090070
OXY-D 090070
SIGT-D 090070

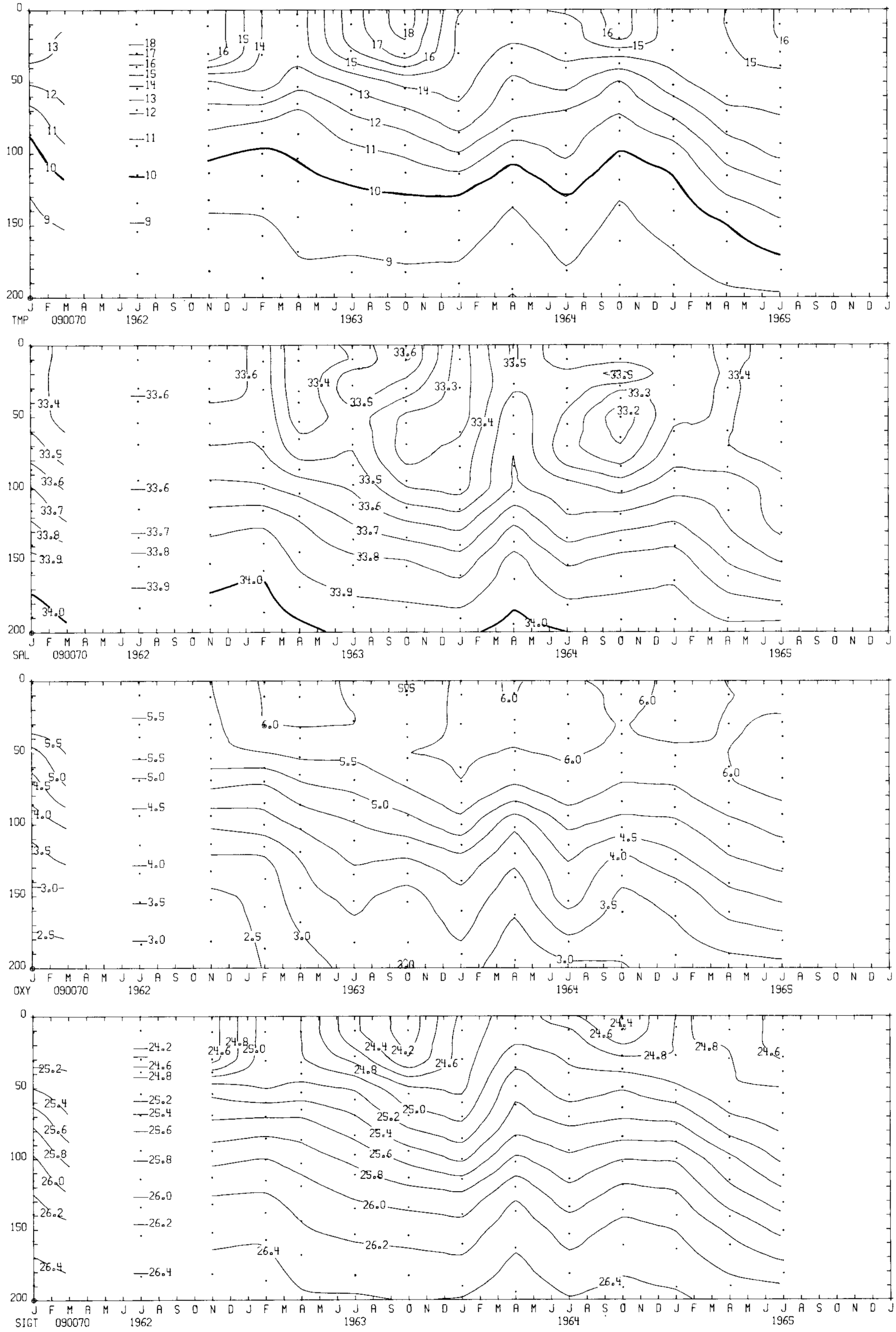

TMP 090070
SAL 090070
OXY 090070
SIGT 090070
DEPTH (m)
1954
1955
1956
1957



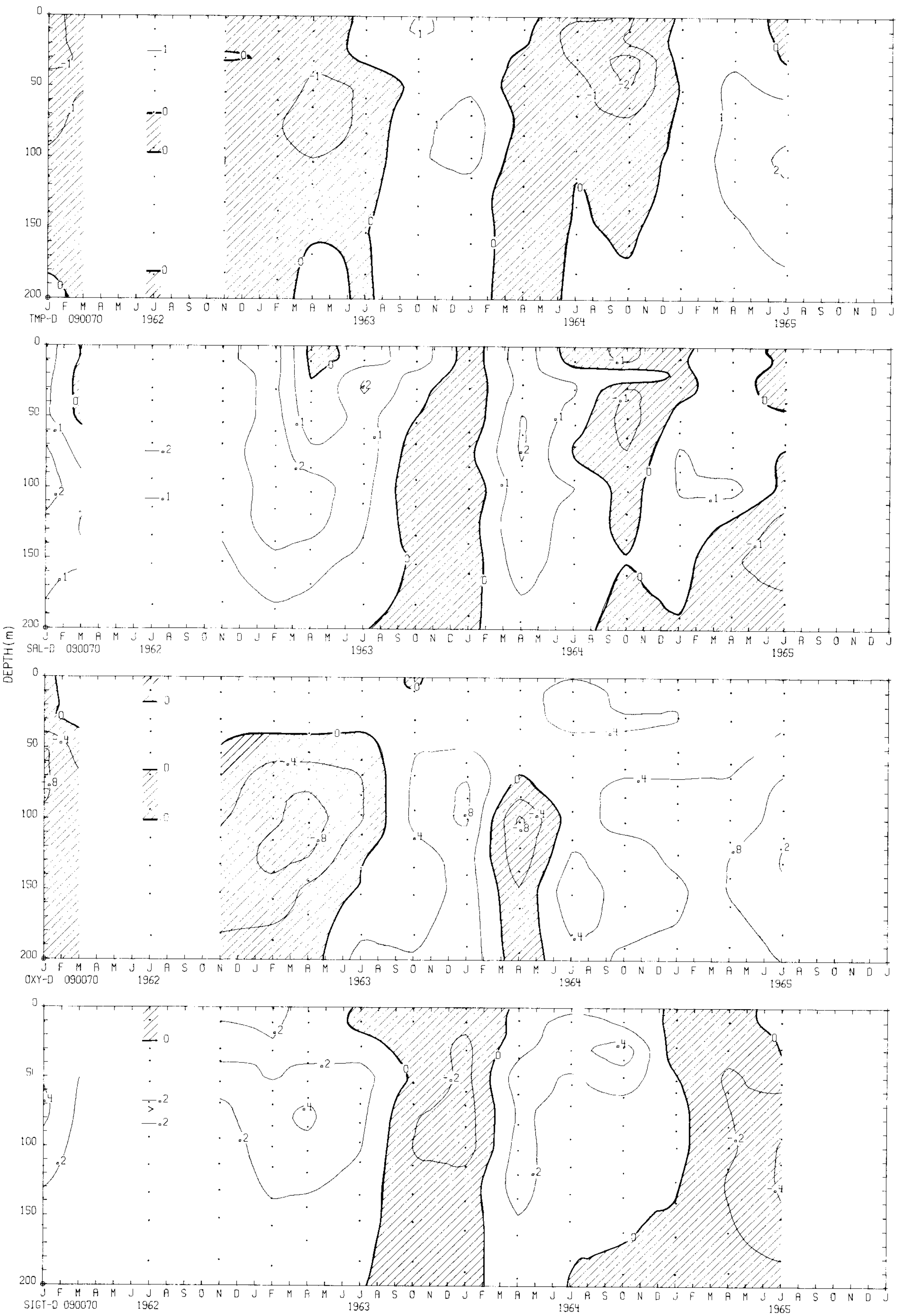
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090070
1954
1955
1956
1957
SAL-D 090070
OXY-D 090070
SIGT-D 090070
DEPTH (m)


TMP 090070
SAL 090070
OXY 090070
SIGT 090070
DEPTH (m)
1958
1959
1960
1961
J F M A M J J A S O N D

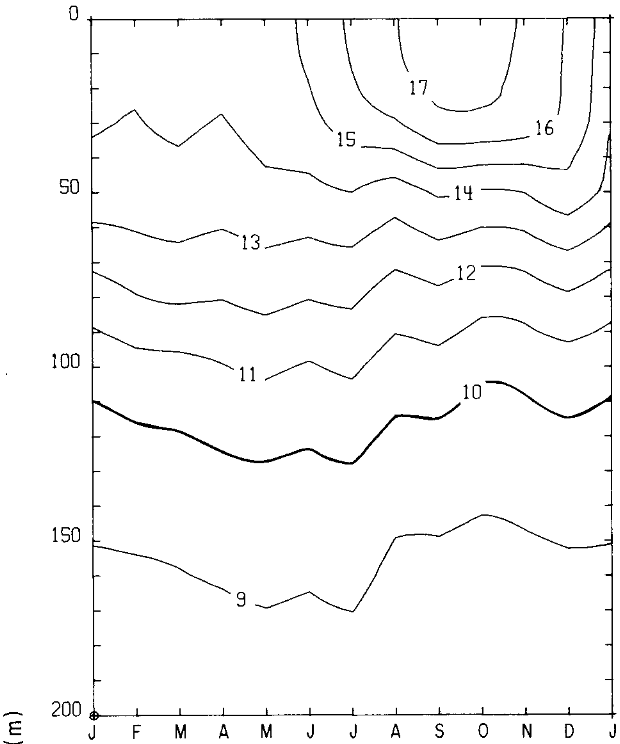

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090070
1958
1959
1960
1961
SAL-D 090070
OXY-D 090070
SIGT-D 090070



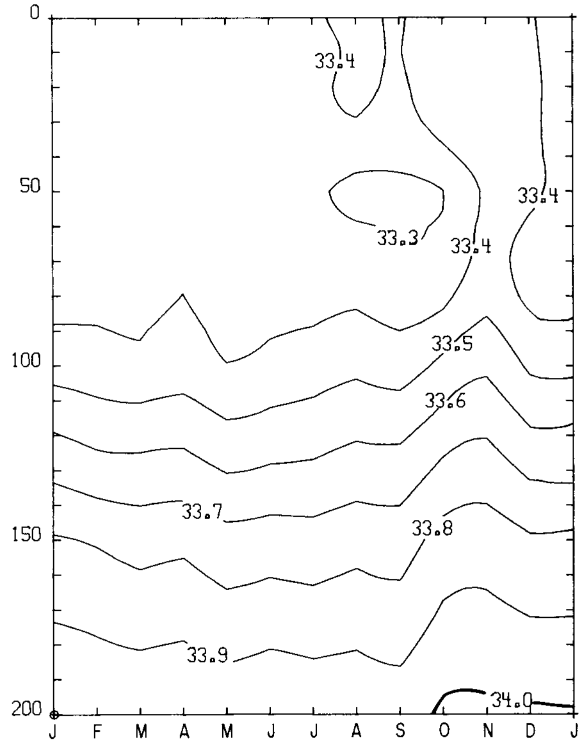
DEPTH (m)
TMP 090070
SAL 090070
OXY 090070
SIGT 090070
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1962
1963
1964
1965



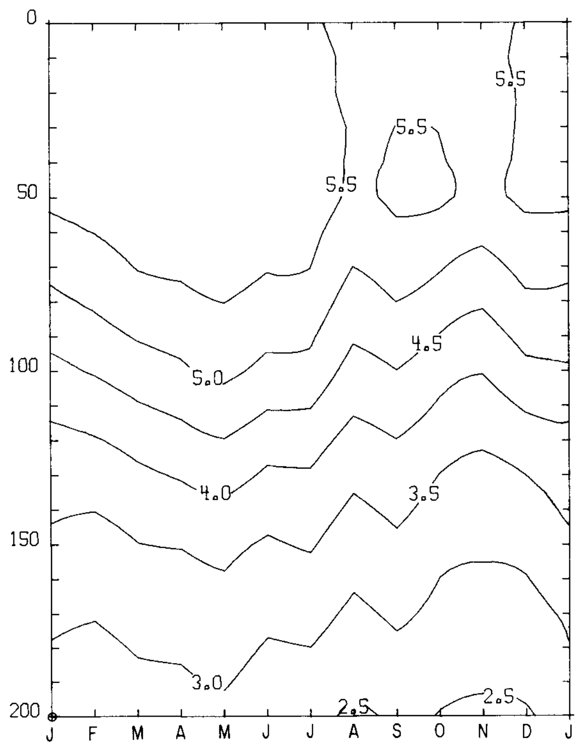
DEPTH(m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090070
SAL-D 090070
OXY-D 090070
SIGT-D 090070
1962
1963
1964
1965



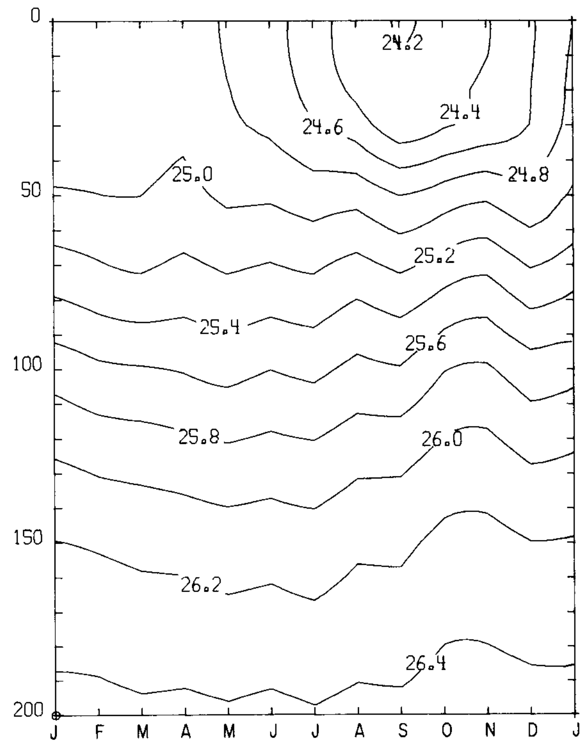
MEAN TMP 090070 JAN-DEC



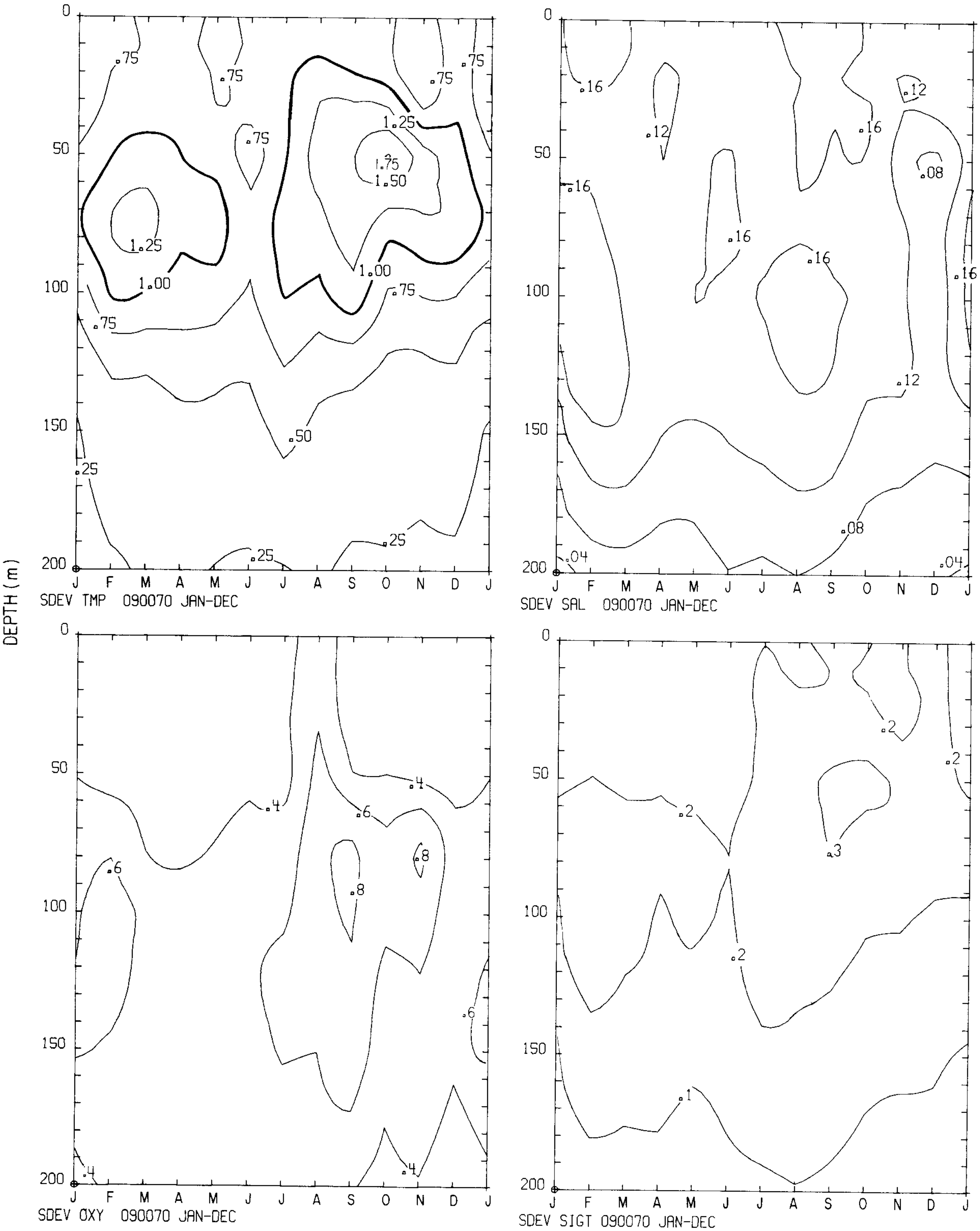
MEAN SAL 090070 JAN-DEC

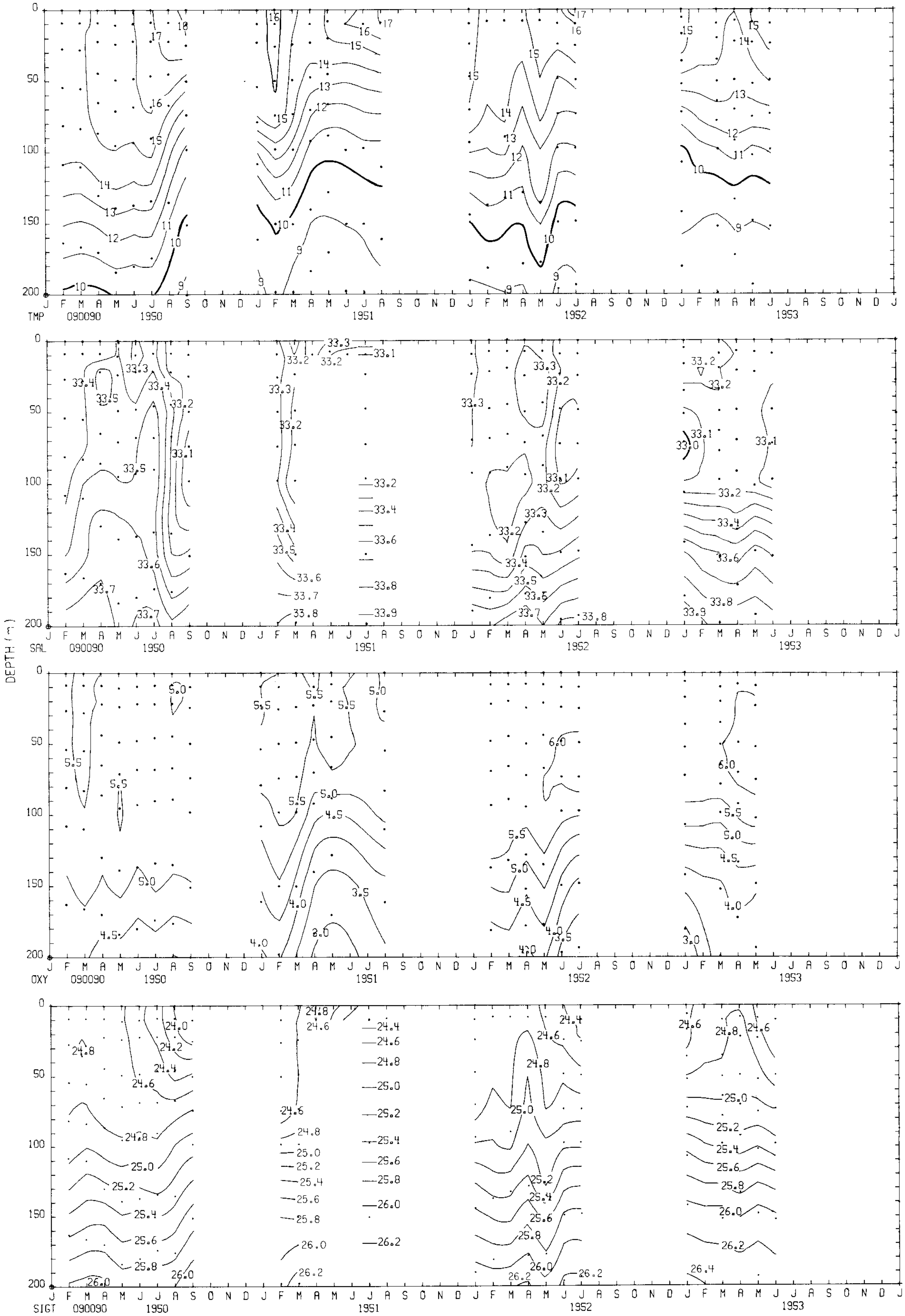


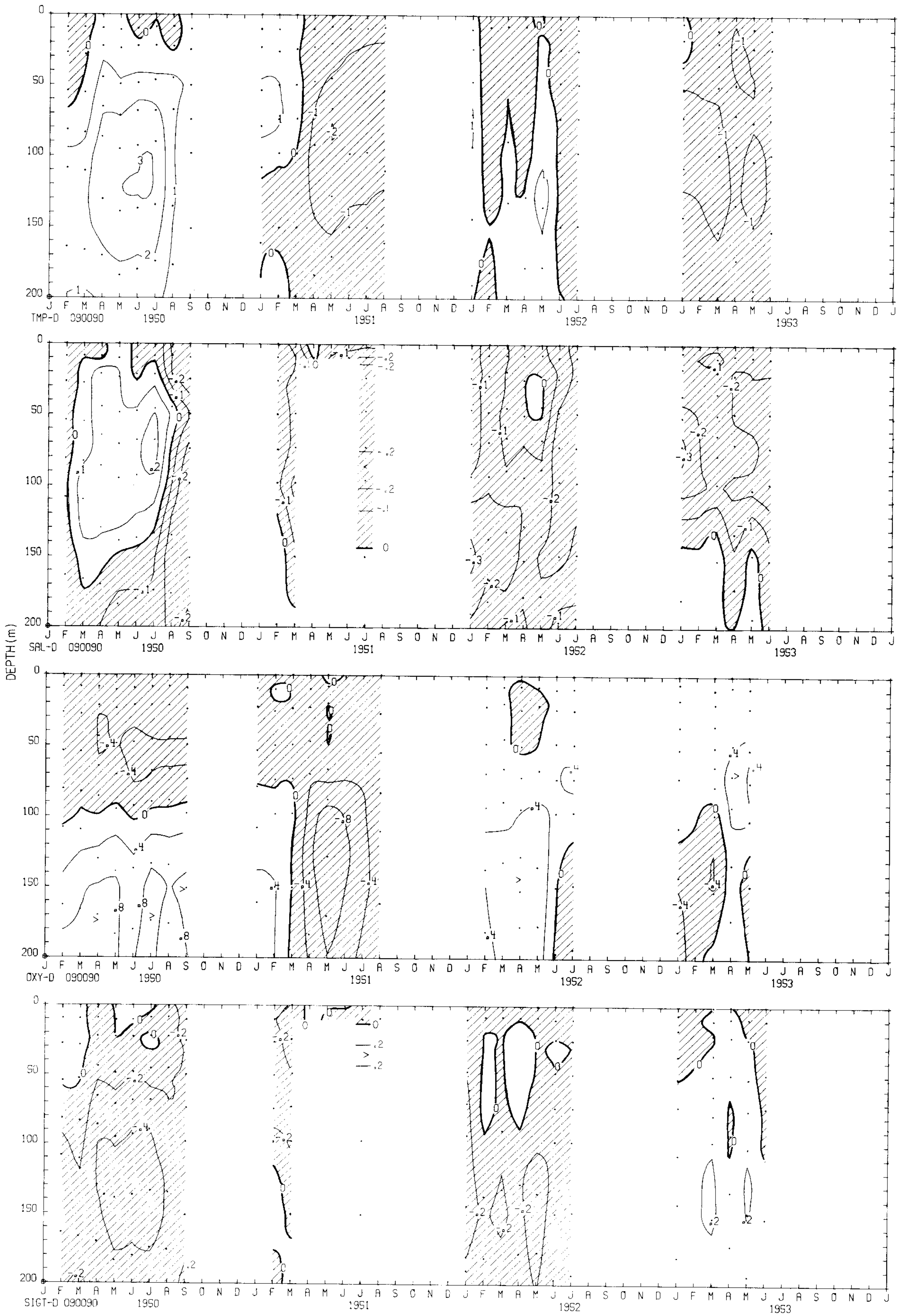
MEAN OXY 090070 JAN-DEC

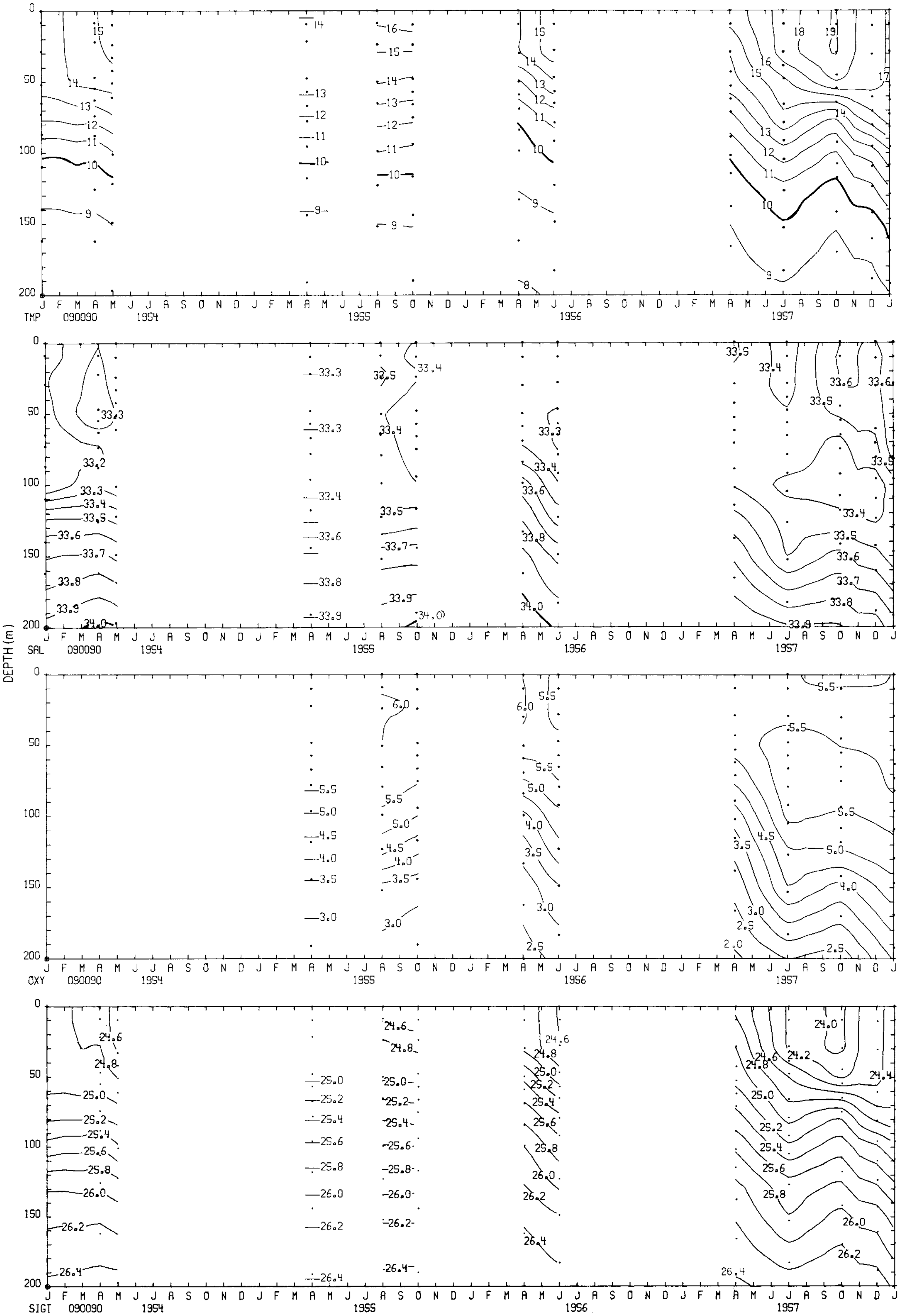


MEAN SIGT 090070 JAN-DEC

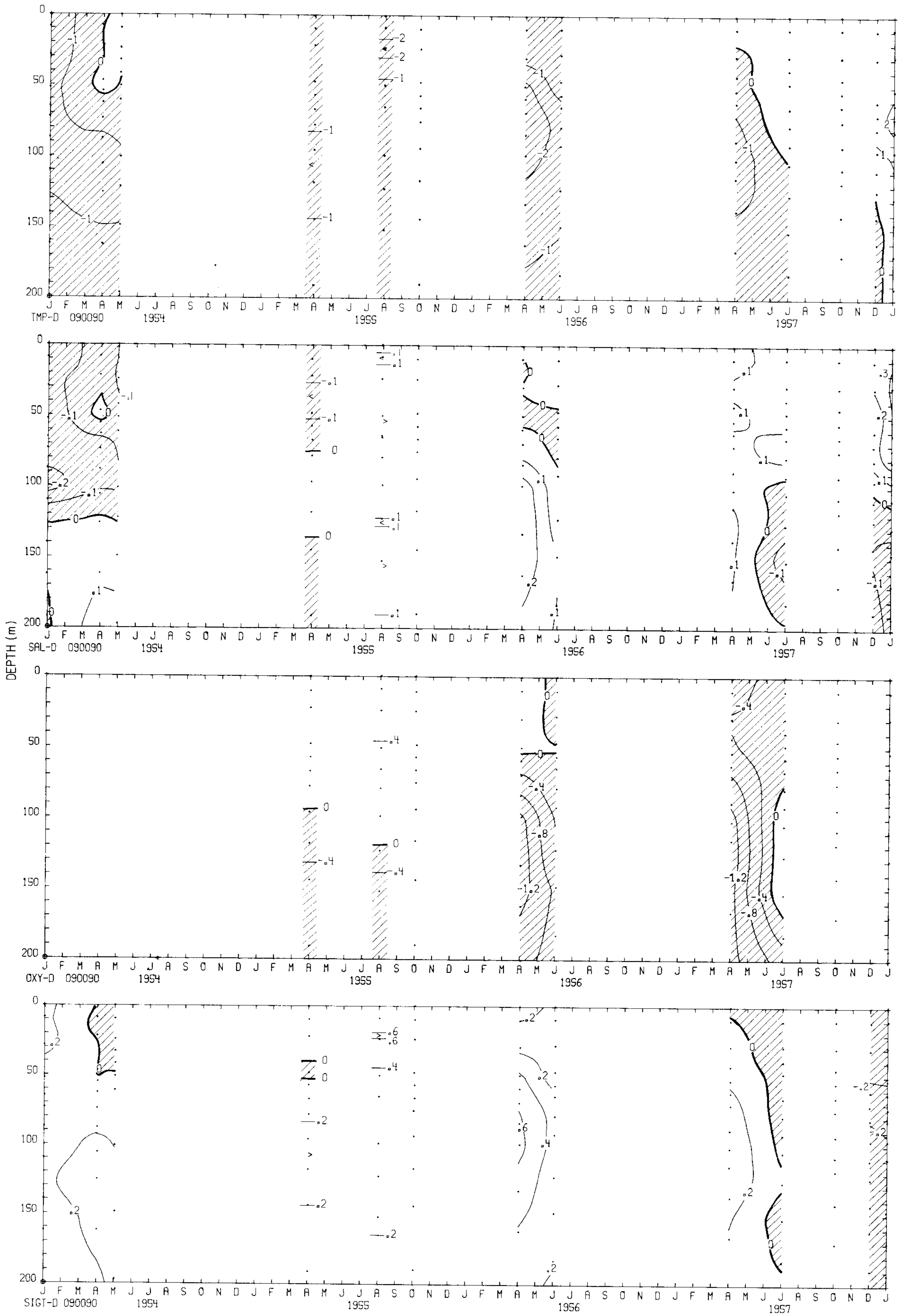

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J
SDEV TMP 090070 JAN-DEC
.75
1.00
1.25
1.50
1.75
.50
.25
SDEV SAL 090070 JAN-DEC
.16
.12
.08
.04
SDEV OXY 090070 JAN-DEC
.4
.6
.8
SDEV SIGT 090070 JAN-DEC
.1
.2
.3

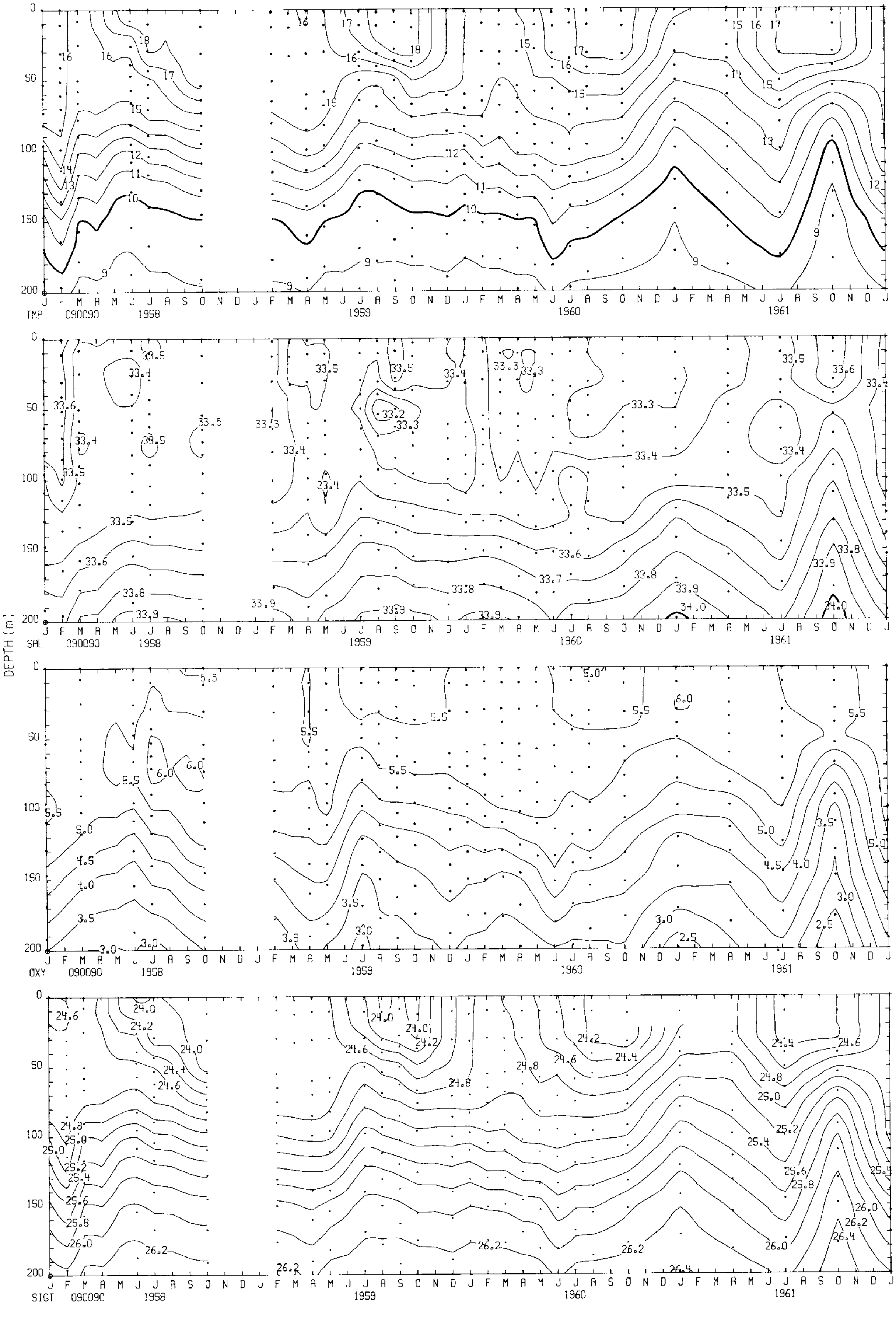

DEPTH (m)
TMP 090090
SAL 090090
OXY 090090
SIGT 090090
1950
1951
1952
1953
J F M A M J J A S O N D

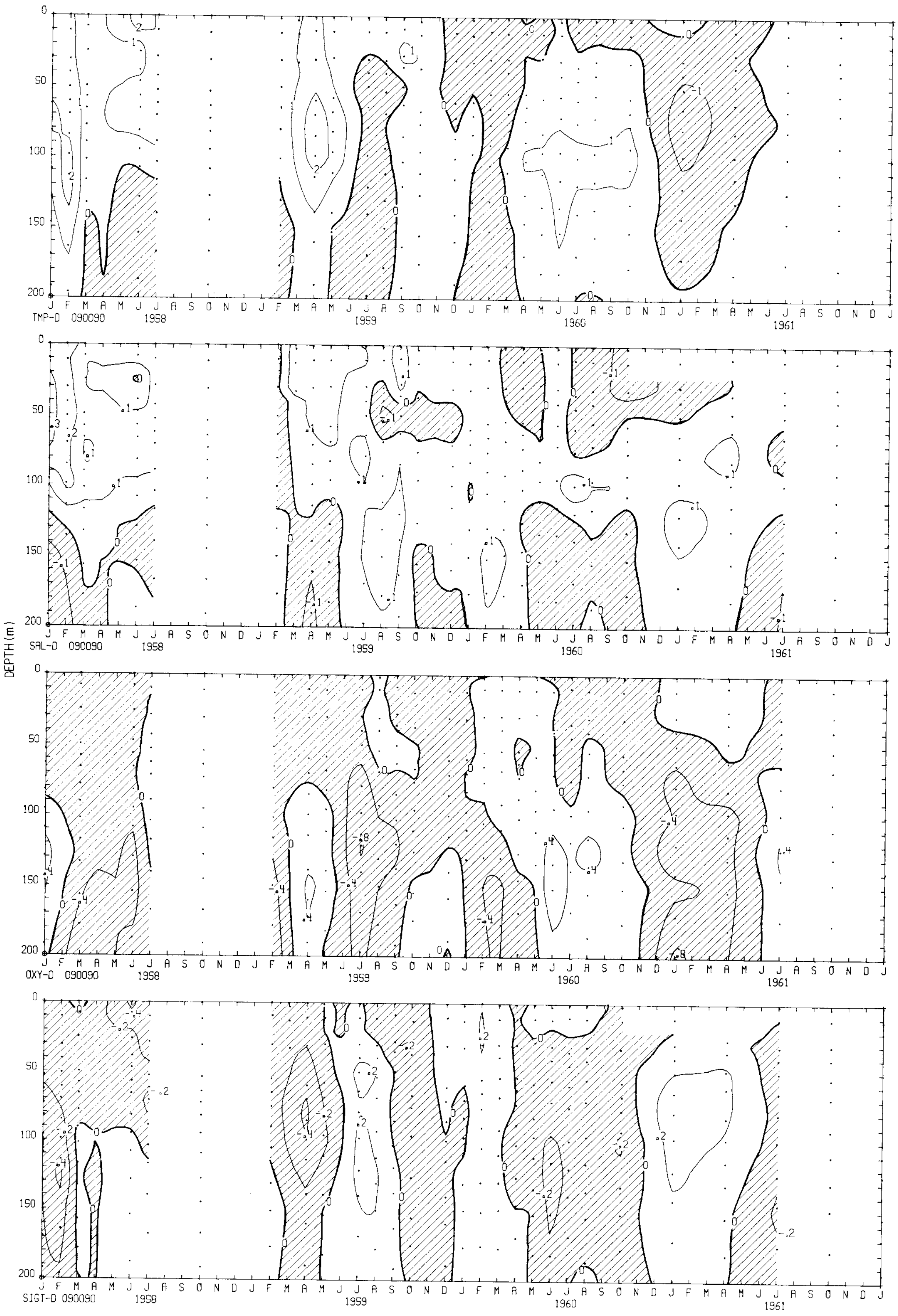

DEPTH(m)
TMP-D 090090
SAL-D 090090
OXY-D 090090
SIGT-D 090090
1950
1951
1952
1953

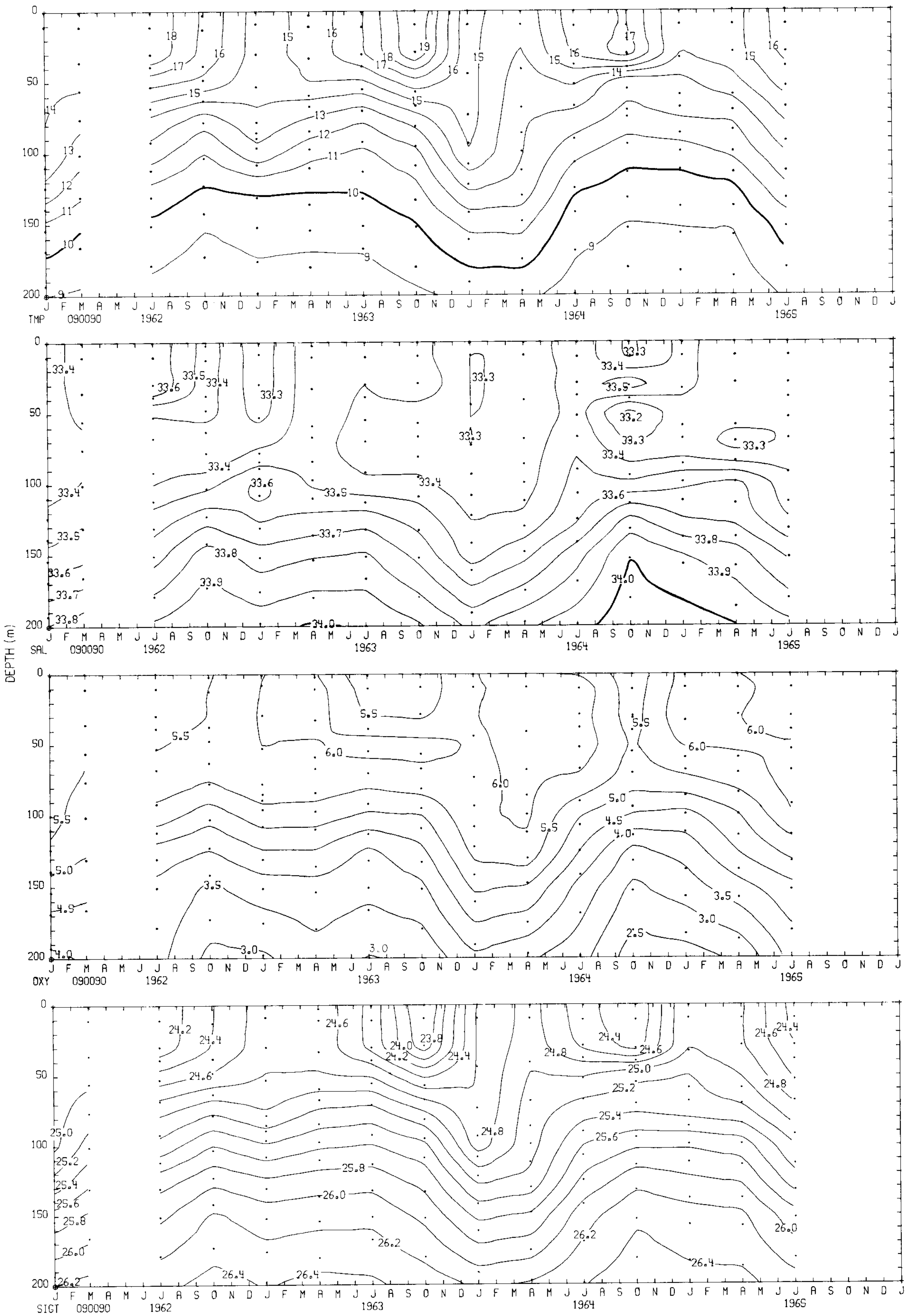


TMP 090090
SAL 090090
OXY 090090
SIGT 090090
DEPTH (m)
1954
1955
1956
1957
J F M A M J J A S O N D

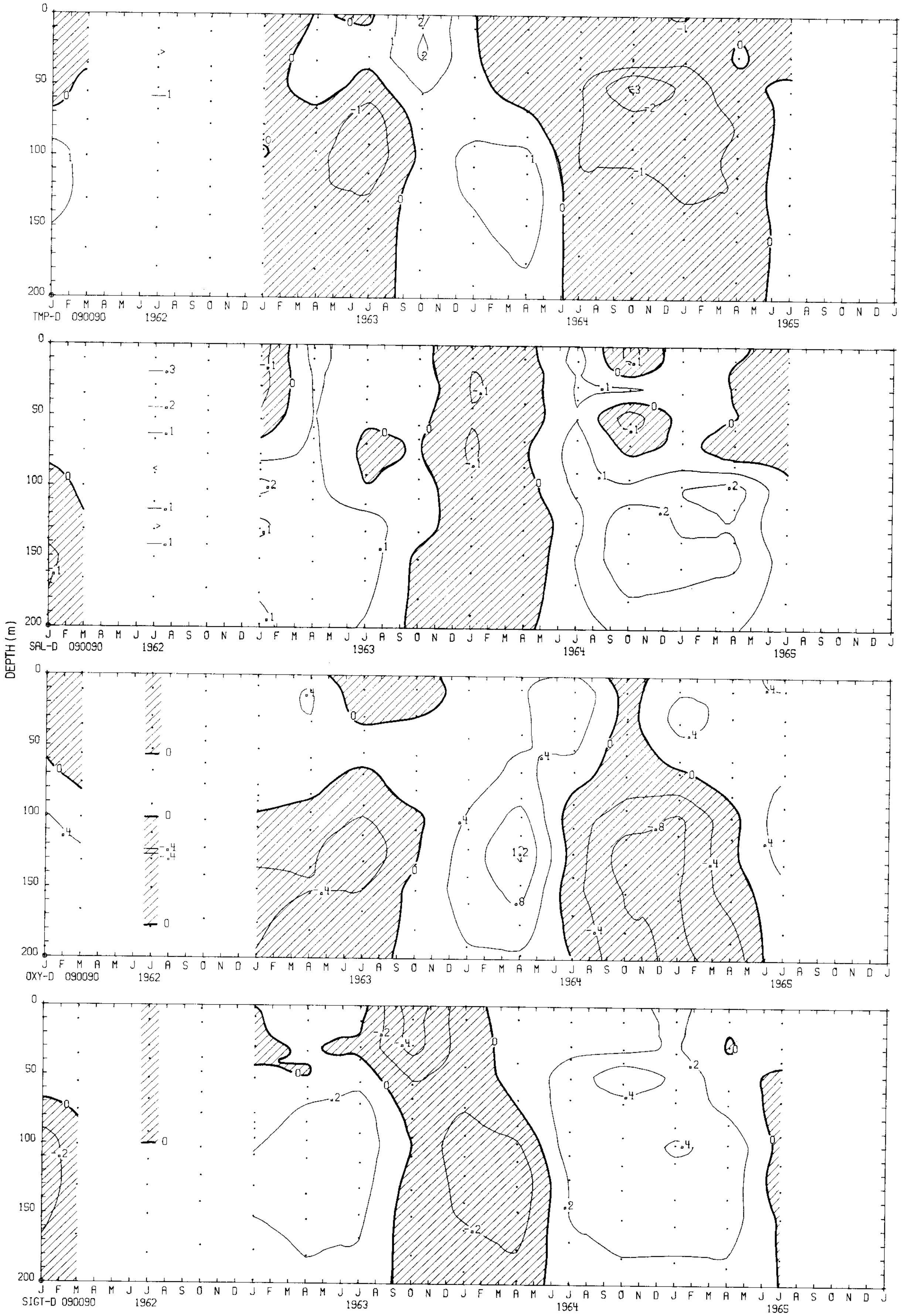

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 090090
1954
1955
1956
1957
SAL-D 090090
OXY-D 090090
SIGT-D 090090

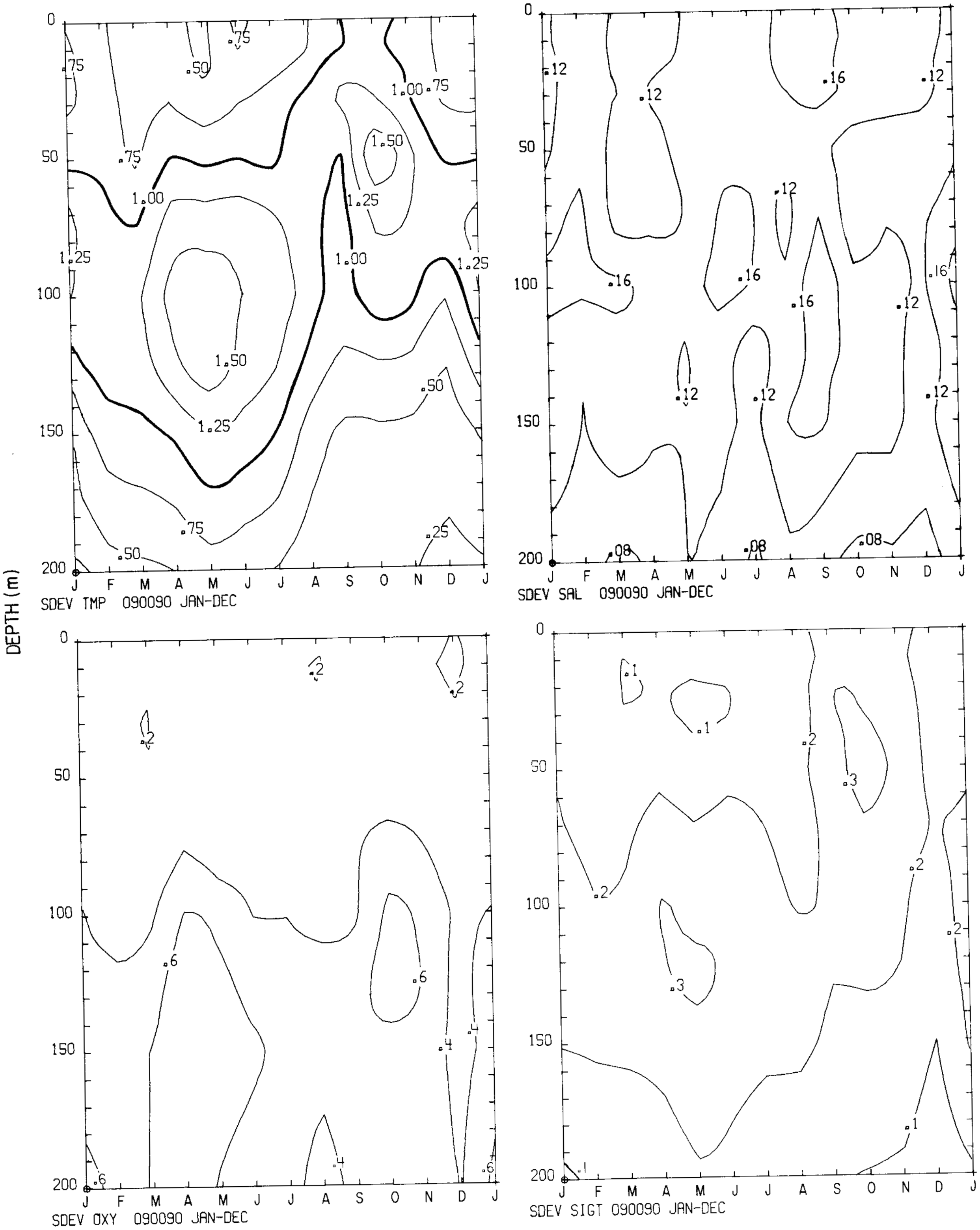

DEPTH (m)
TMP 090090 1958
1959
1960
1961
SAL 090090 1958
OXY 090090 1958
SIGT 090090 1958
J F M A M J J A S O N D

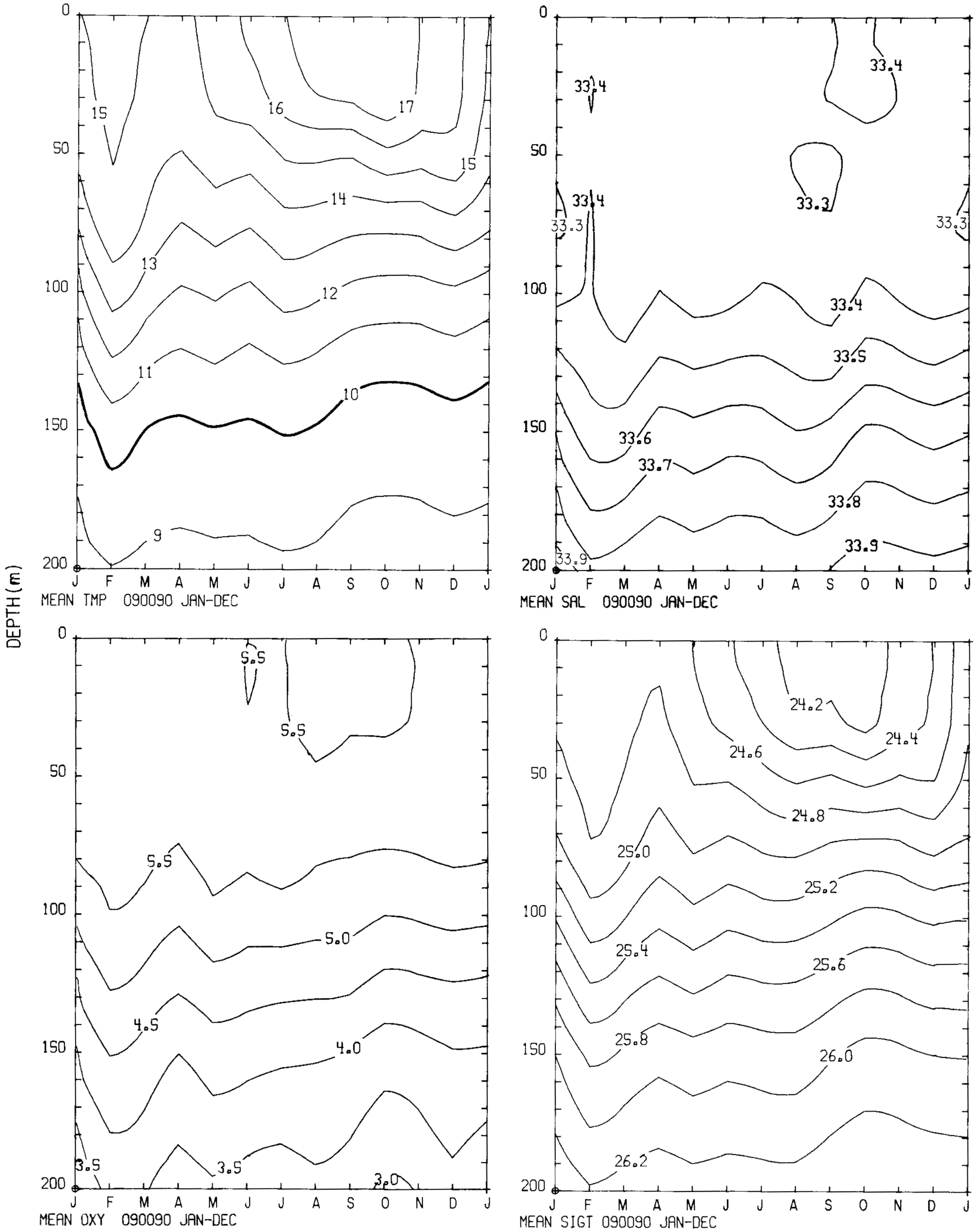

TMP-D 090090
SAL-D 090090
OXY-D 090090
SIGT-D 090090
DEPTH (m)
1958
1959
1960
1961
J F M A M J J A S O N D
0
50
100
150
200

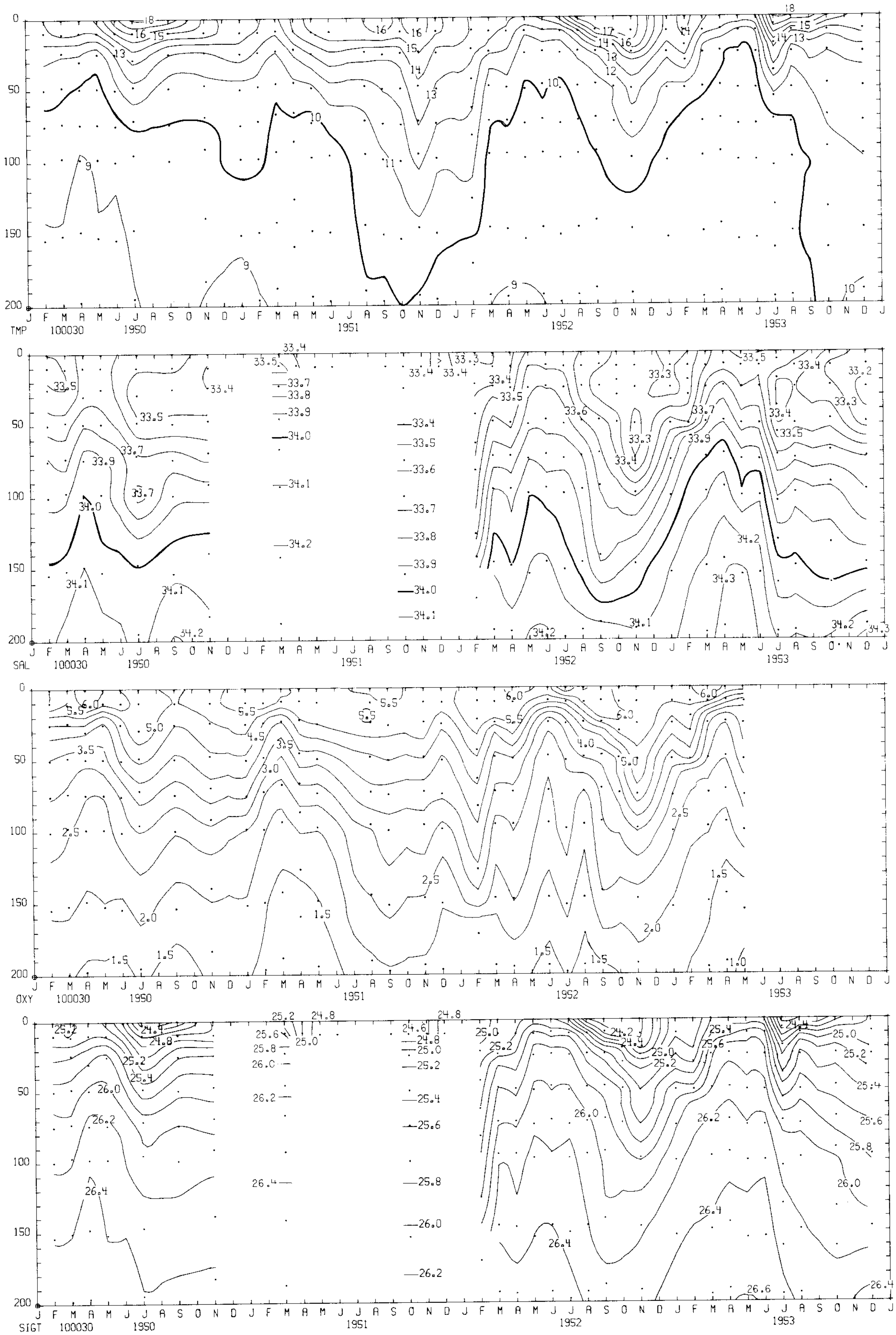


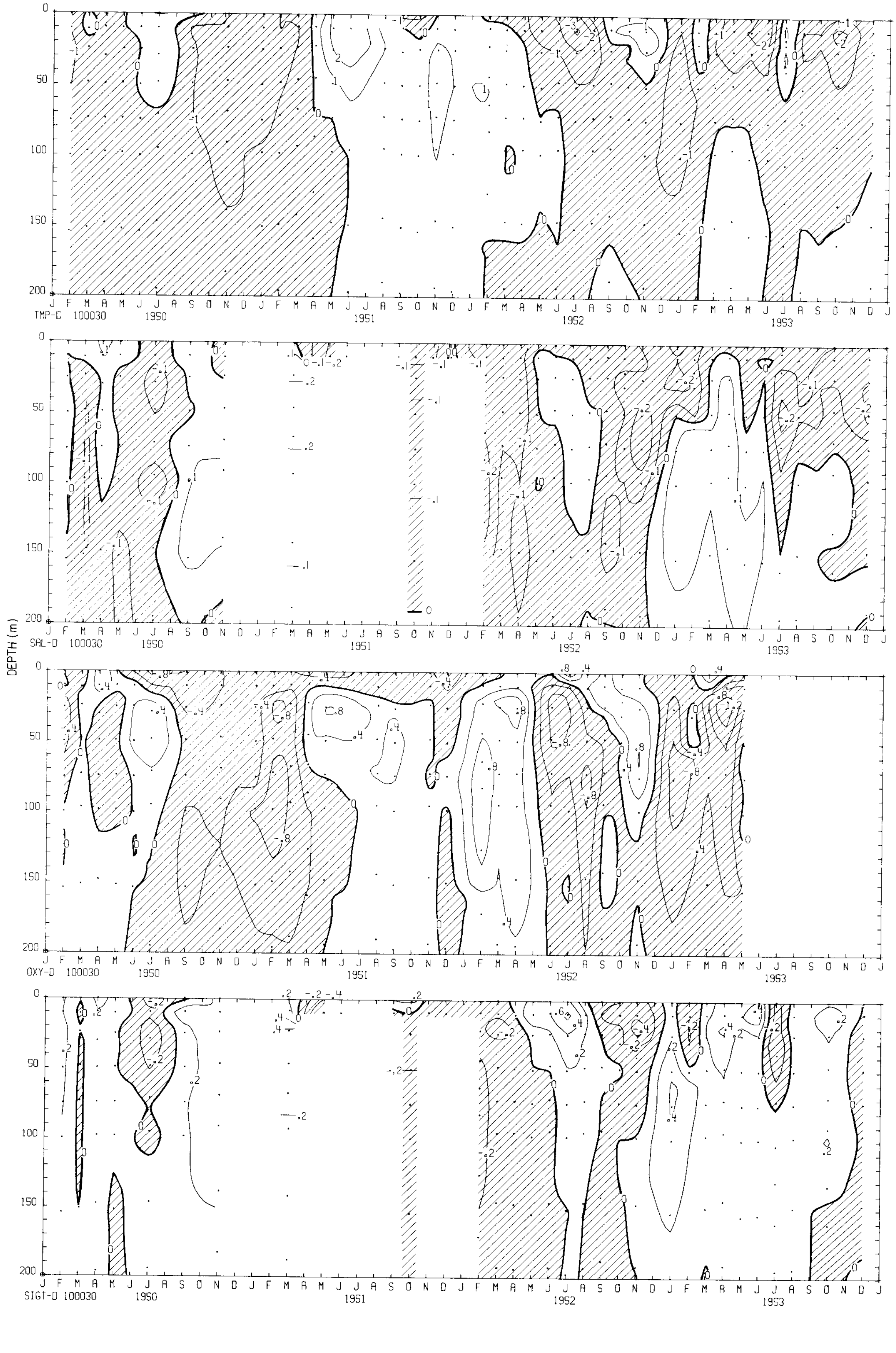
DEPTH (m)
TMP 090090
SAL 090090
OXY 090090
SIGT 090090
1962
1963
1964
1965

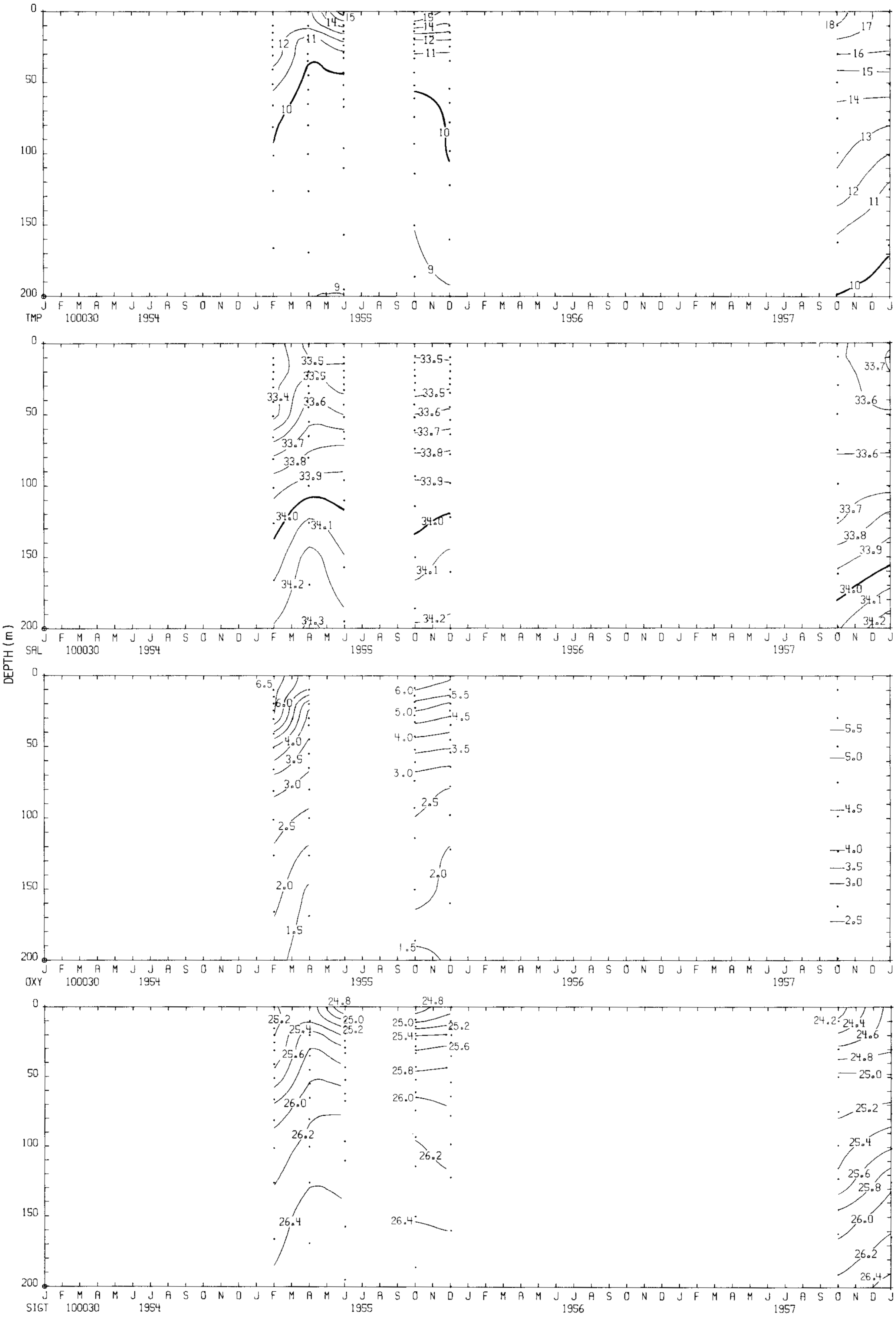

DEPTH (m)
TMP-D 090090
SAL-D 090090
OXY-D 090090
SIGT-D 090090
1962
1963
1964
1965

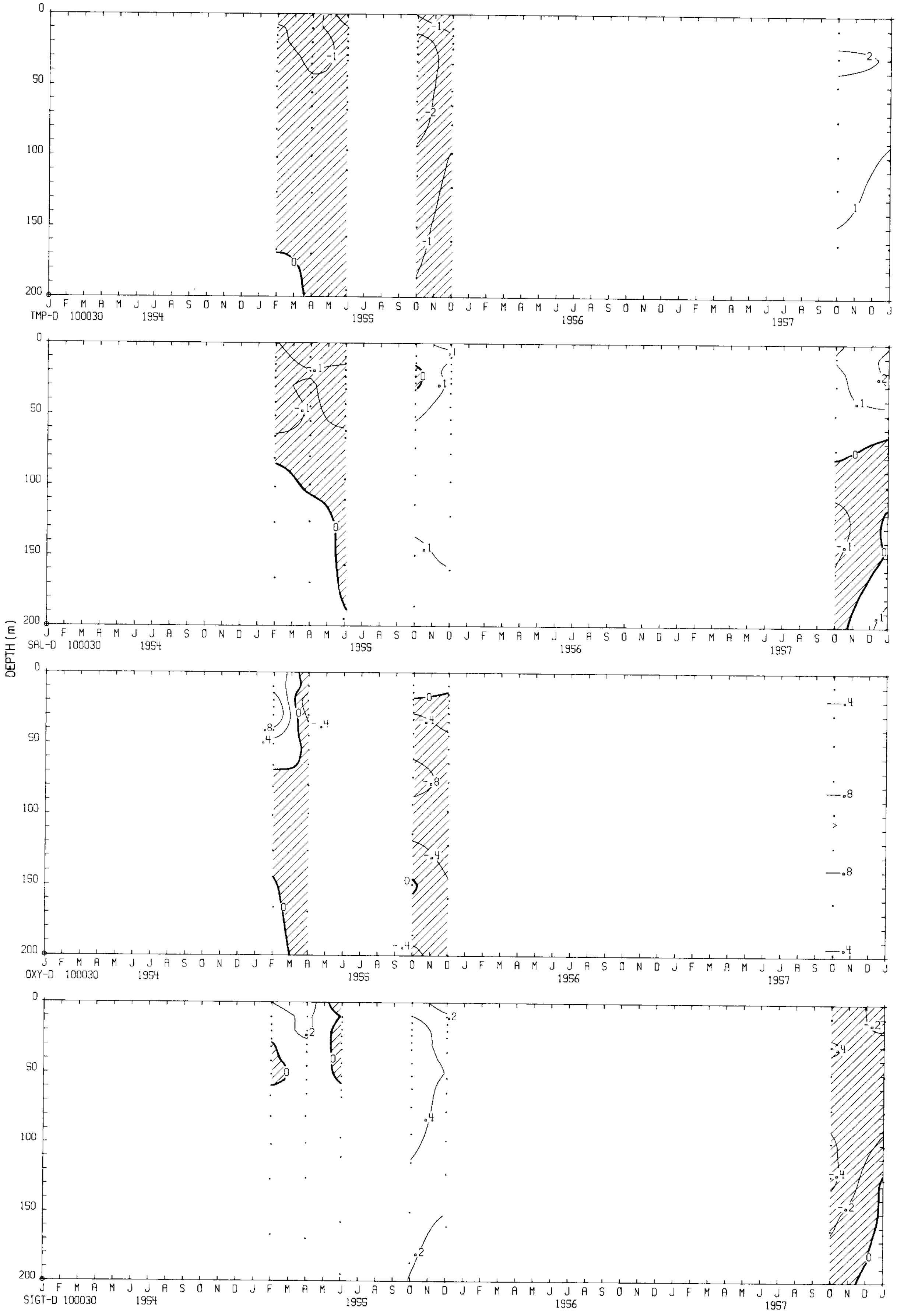

DEPTH (m)
SDEV TMP 090090 JAN-DEC
SDEV SAL 090090 JAN-DEC
SDEV OXY 090090 JAN-DEC
SDEV SIGT 090090 JAN-DEC
J F M A M J J A S O N D J


DEPTH (m)
MEAN TMP 090090 JAN-DEC
MEAN SAL 090090 JAN-DEC
MEAN OXY 090090 JAN-DEC
MEAN SIGT 090090 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200
15
16
17
14
13
12
11
10
9
33.4
33.3
33.5
33.6
33.7
33.8
33.9
5.5
5.0
4.5
4.0
3.5
3.0
24.2
24.4
24.6
24.8
25.0
25.2
25.4
25.6
25.8
26.0
26.2

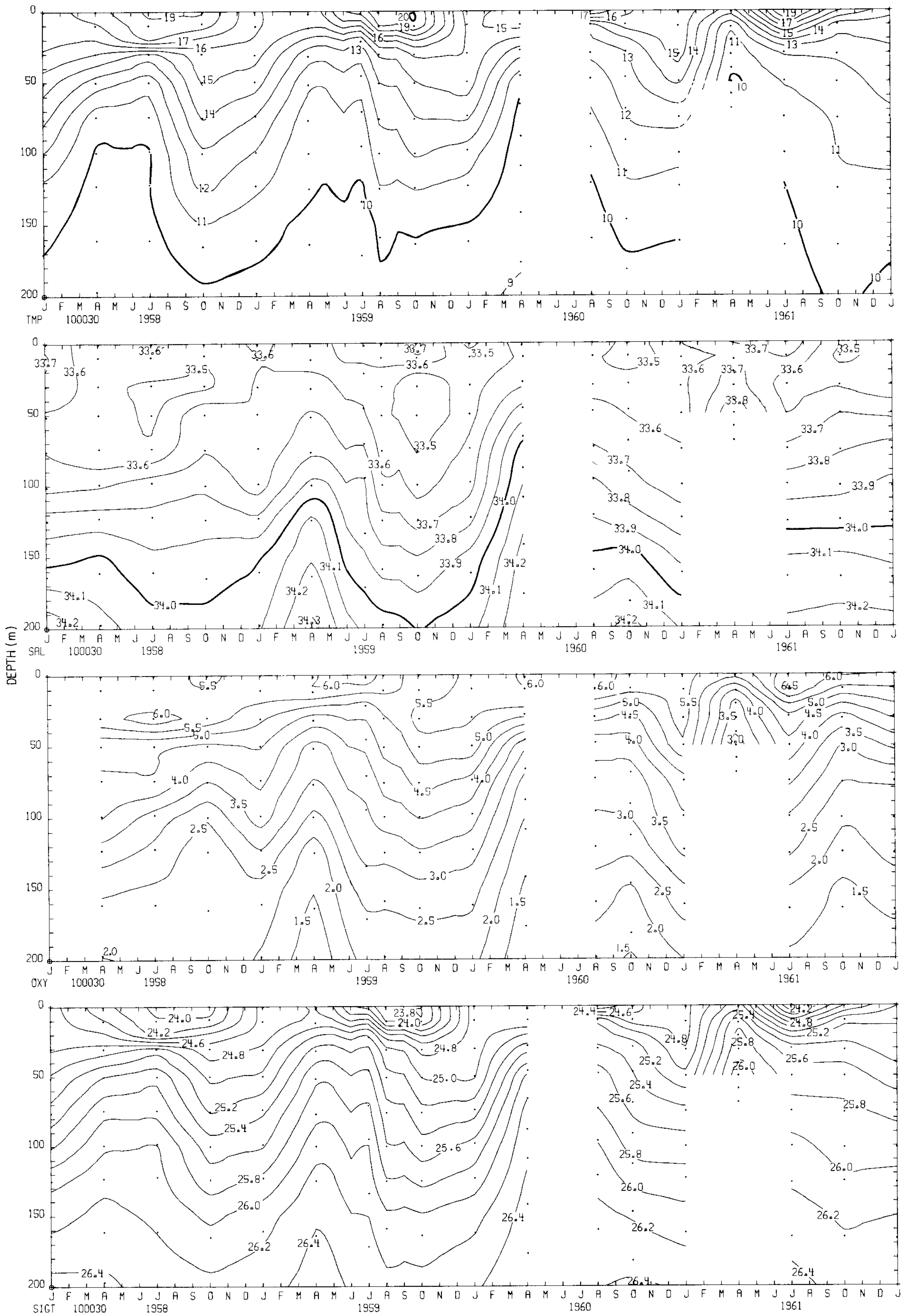

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 100030 1950
1951
1952
1953
SAL 100030 1950
OXY 100030 1950
SIGT 100030 1950


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 100030
SAL-D 100030
OXY-D 100030
SIGT-D 100030
1950
1951
1952
1953

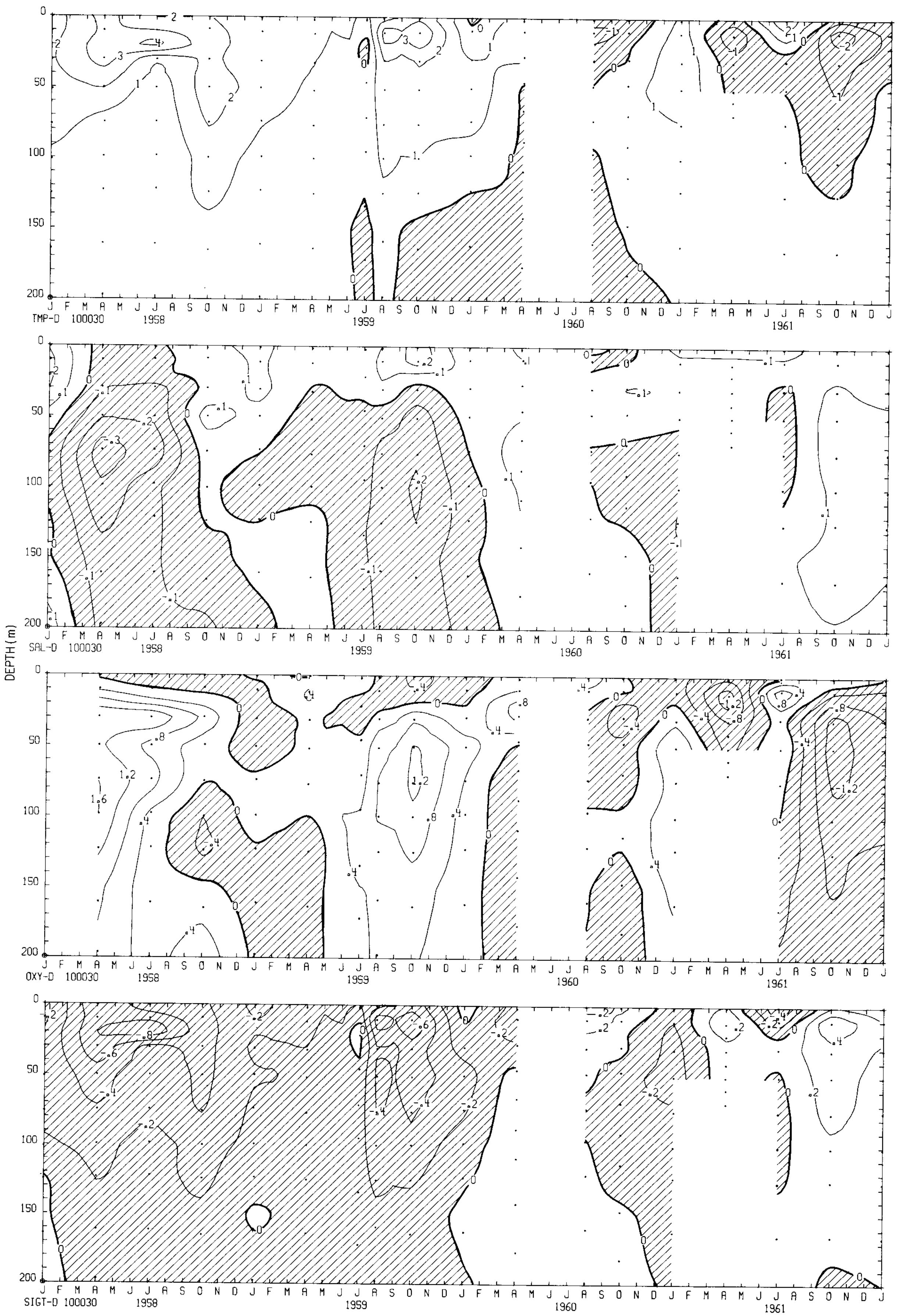

DEPTH (m)
TMP 100030 1954 1955 1956 1957
SAL 100030 1954 1955 1956 1957
OXY 100030 1954 1955 1956 1957
SIGT 100030 1954 1955 1956 1957
J F M A M J J A S O N D

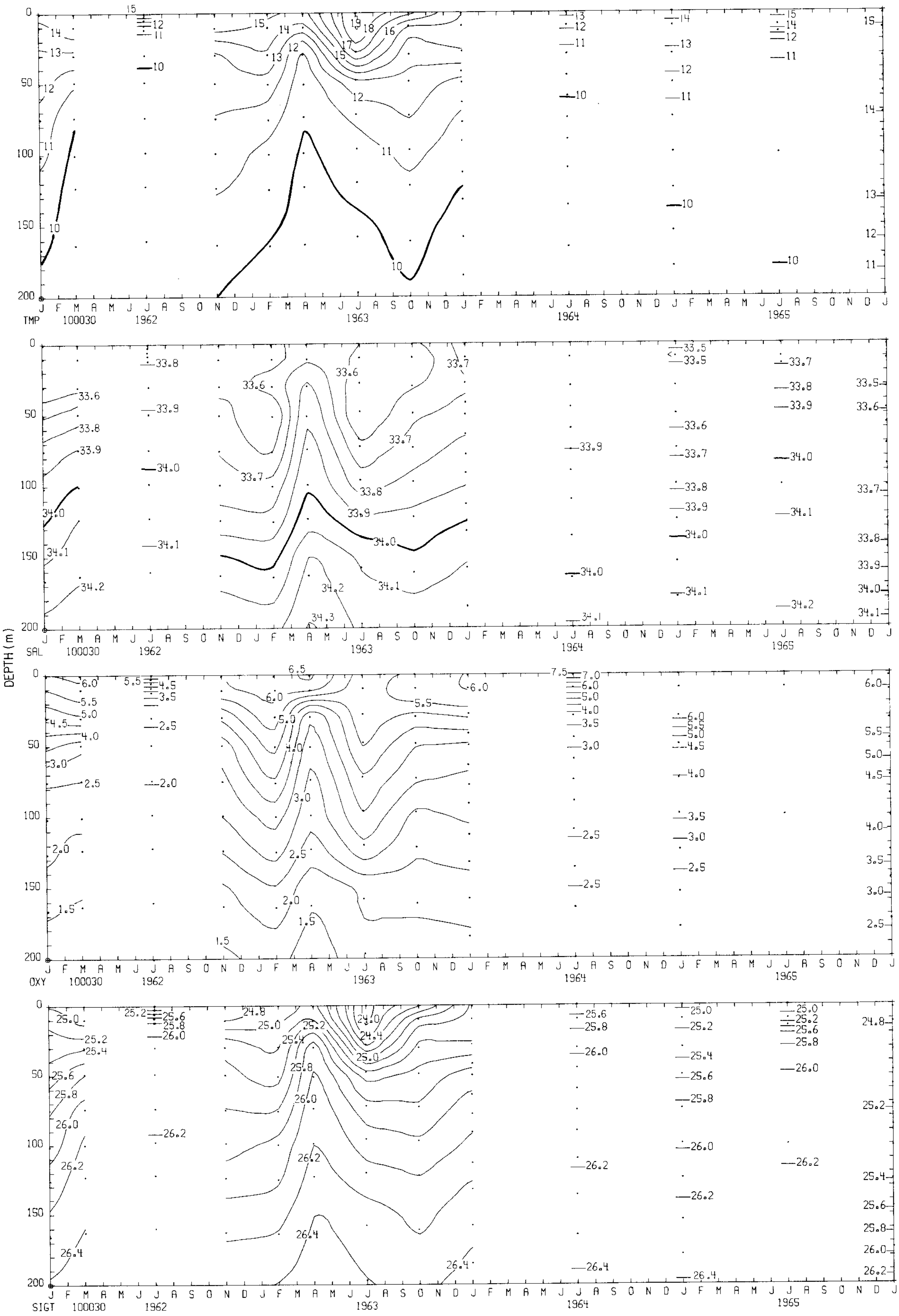


DEPTH (m)
TMP-D 100030 1954 1955 1956 1957
SAL-D 100030 1954 1955 1956 1957
OXY-D 100030 1954 1955 1956 1957
SIGT-D 100030 1954 1955 1956 1957

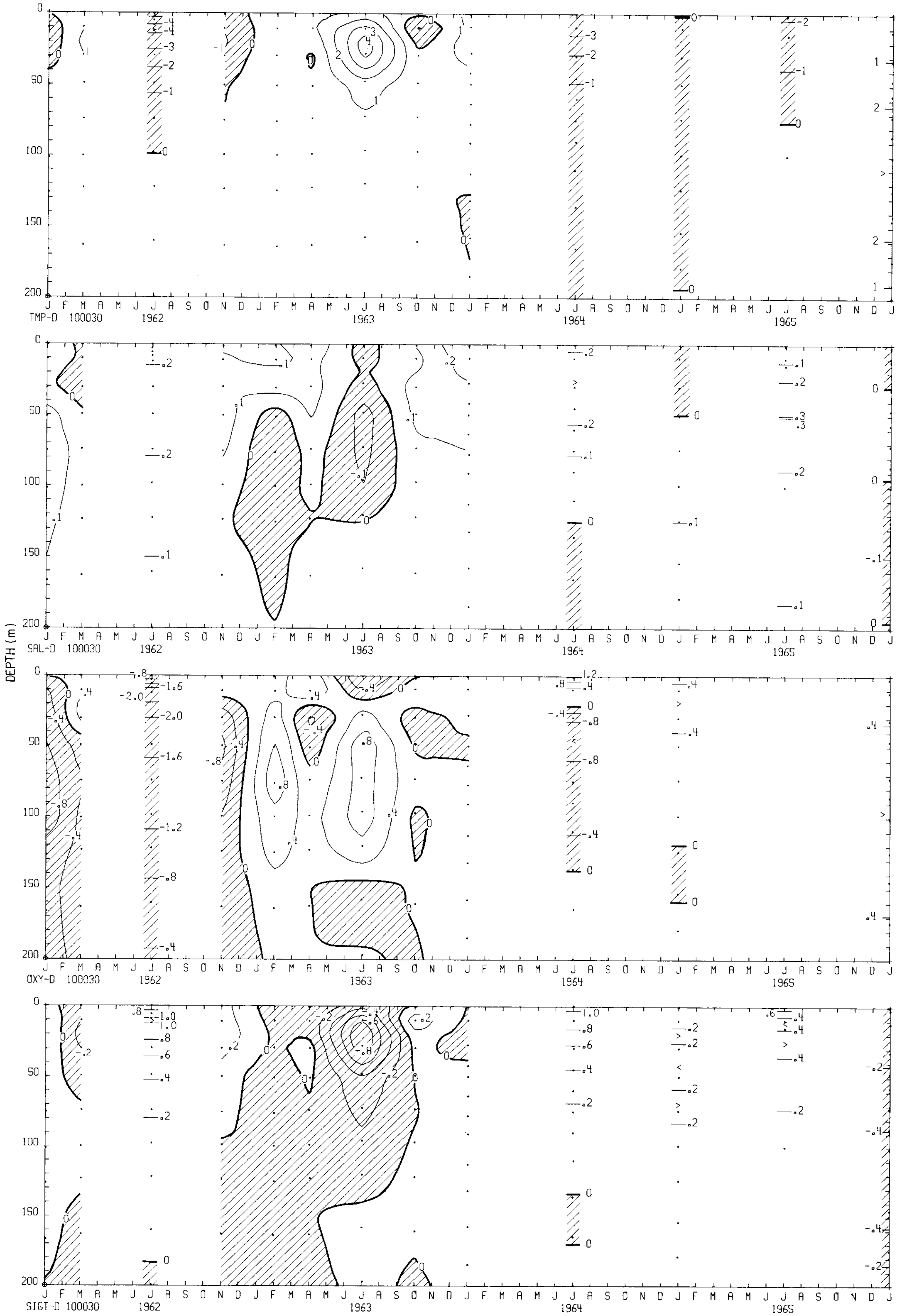


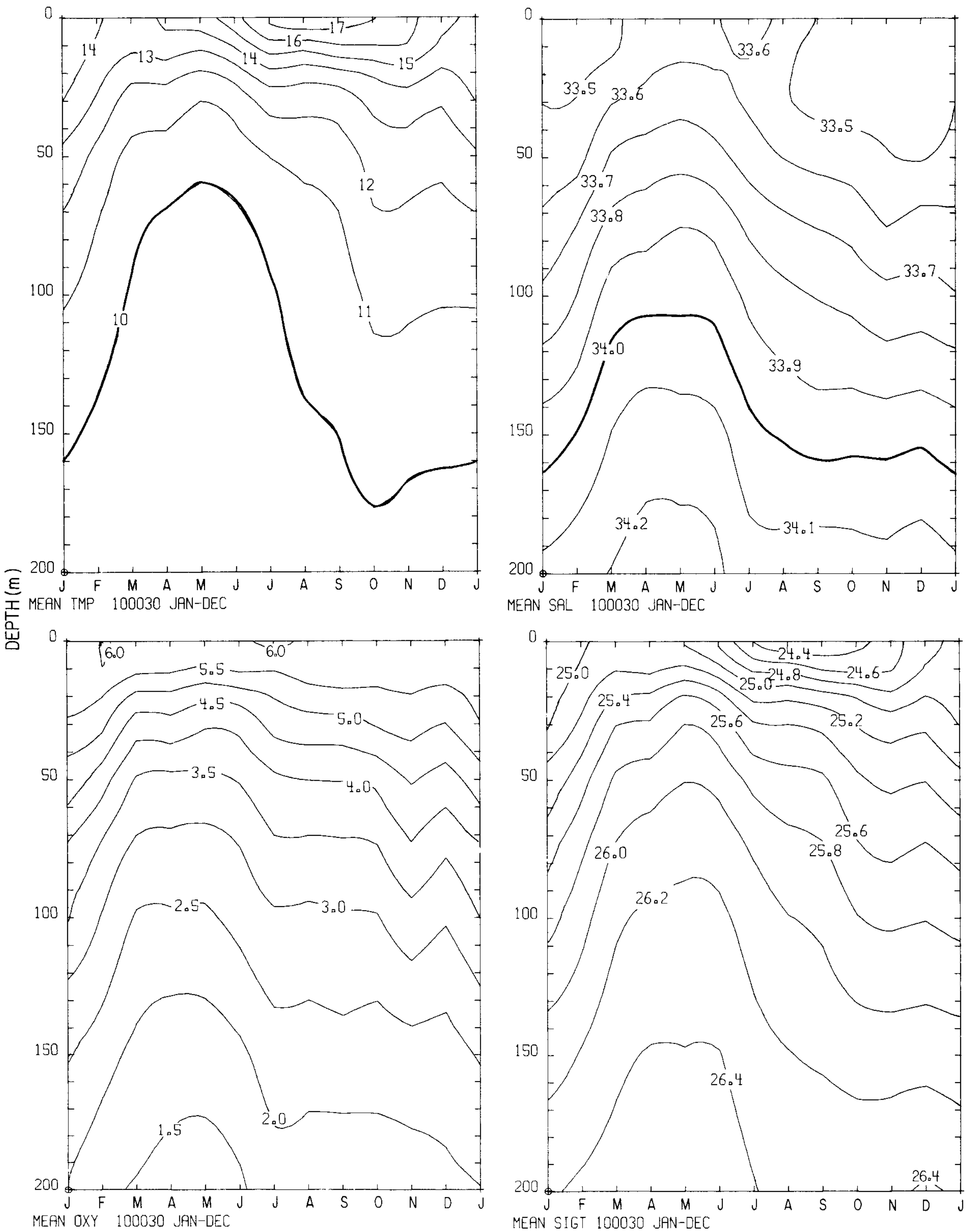
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 100030 1958 1959 1960 1961
SAL 100030 1958 1959 1960 1961
OXY 100030 1958 1959 1960 1961
SIGT 100030 1958 1959 1960 1961


DEPTH (m)
TMP-D 100030
SAL-D 100030
OXY-D 100030
SIGT-D 100030
1958
1959
1960
1961
J F M A M J J A S O N D



TMP 100030
SAL 100030
OXY 100030
SIGT 100030
DEPTH (m)
1962
1963
1964
1965


DEPTH (m)
TMP-D 100030
SAL-D 100030
OXY-D 100030
SIGT-D 100030
1962
1963
1964
1965
J F M A M J J A S O N D


DEPTH (m)
MEAN TMP 100030 JAN-DEC
MEAN SAL 100030 JAN-DEC
MEAN OXY 100030 JAN-DEC
MEAN SIGT 100030 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200
17
16
15
14
13
12
11
10
33.5
33.6
33.7
33.8
33.9
34.0
34.1
34.2
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
24.4
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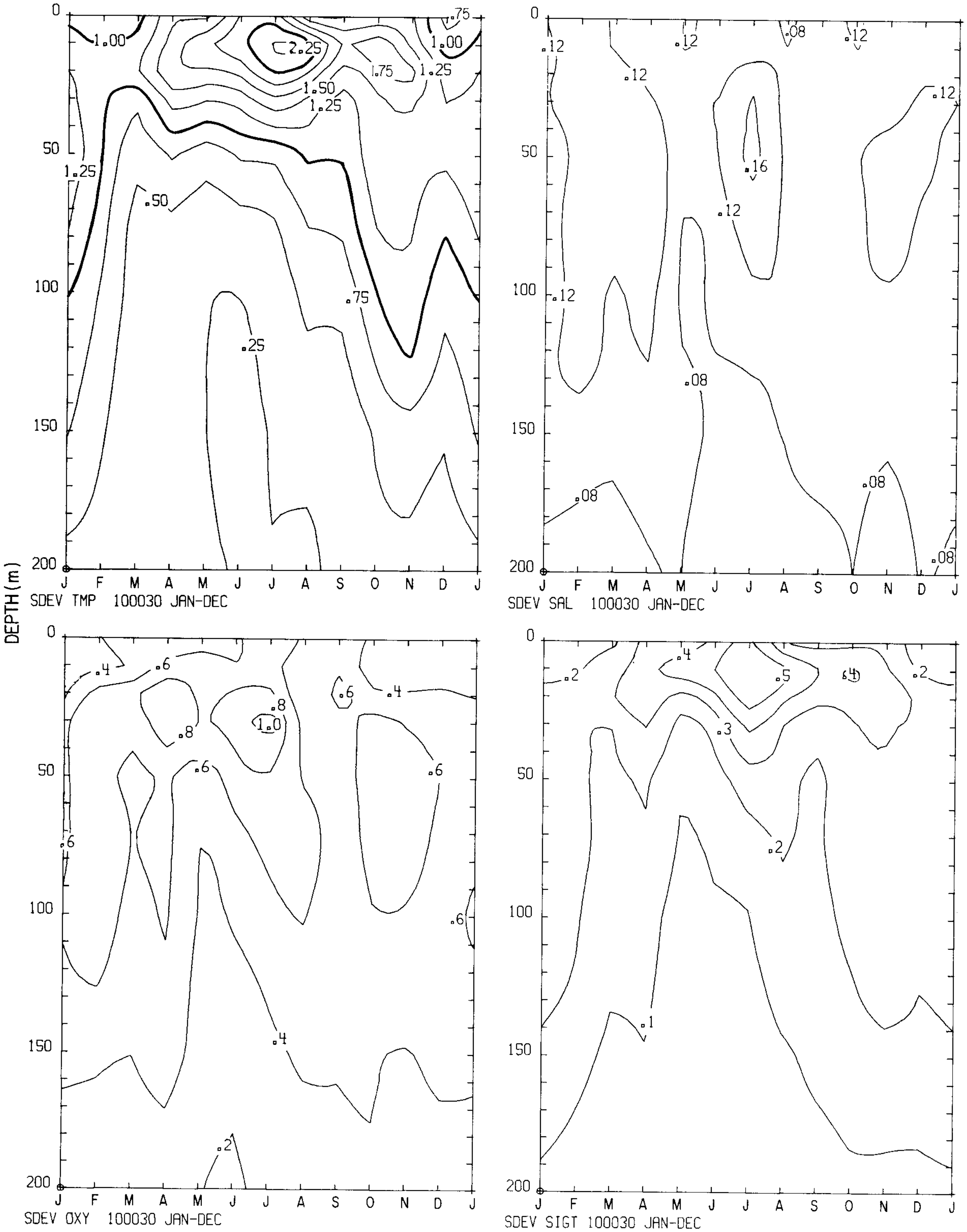
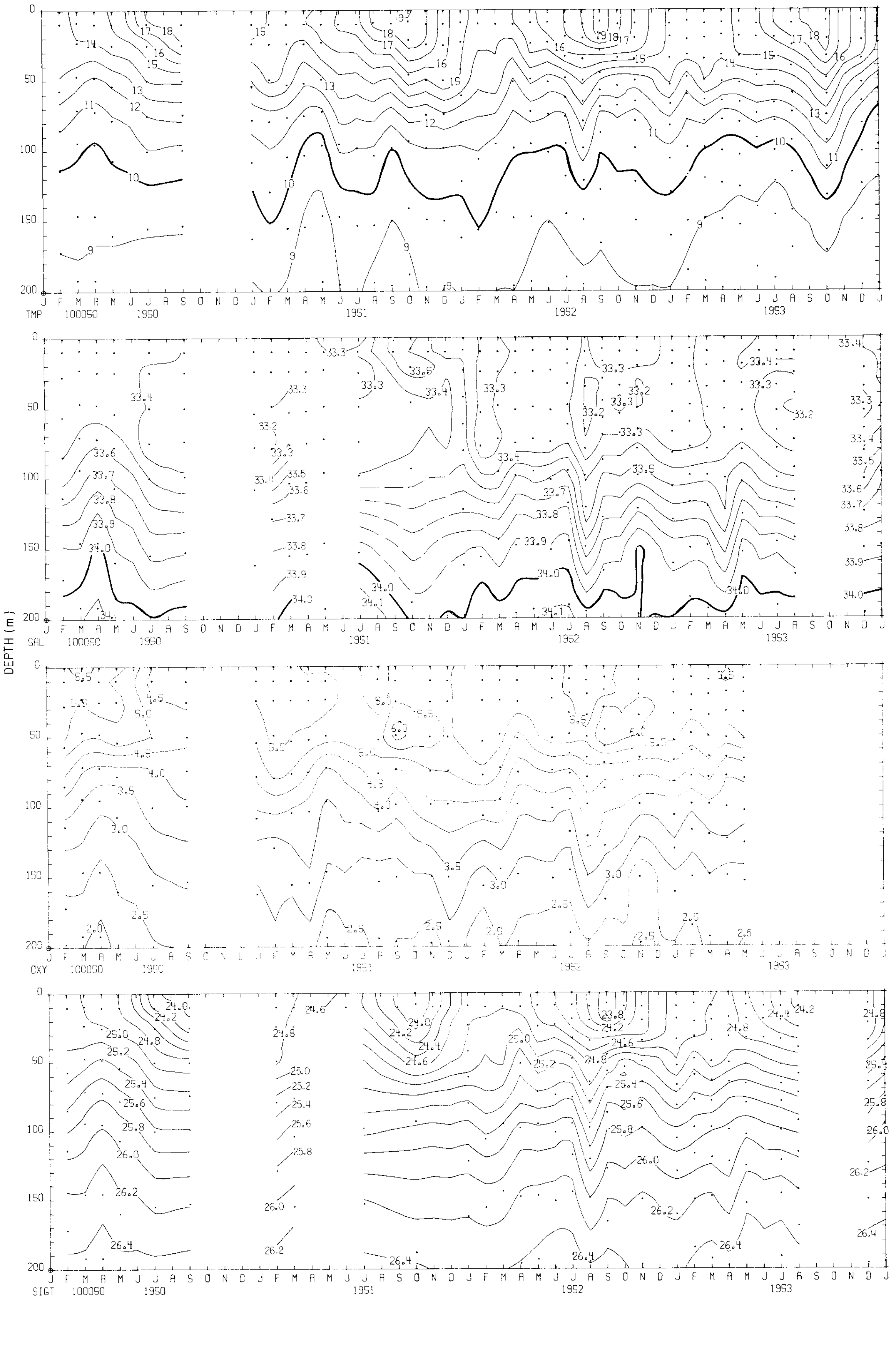
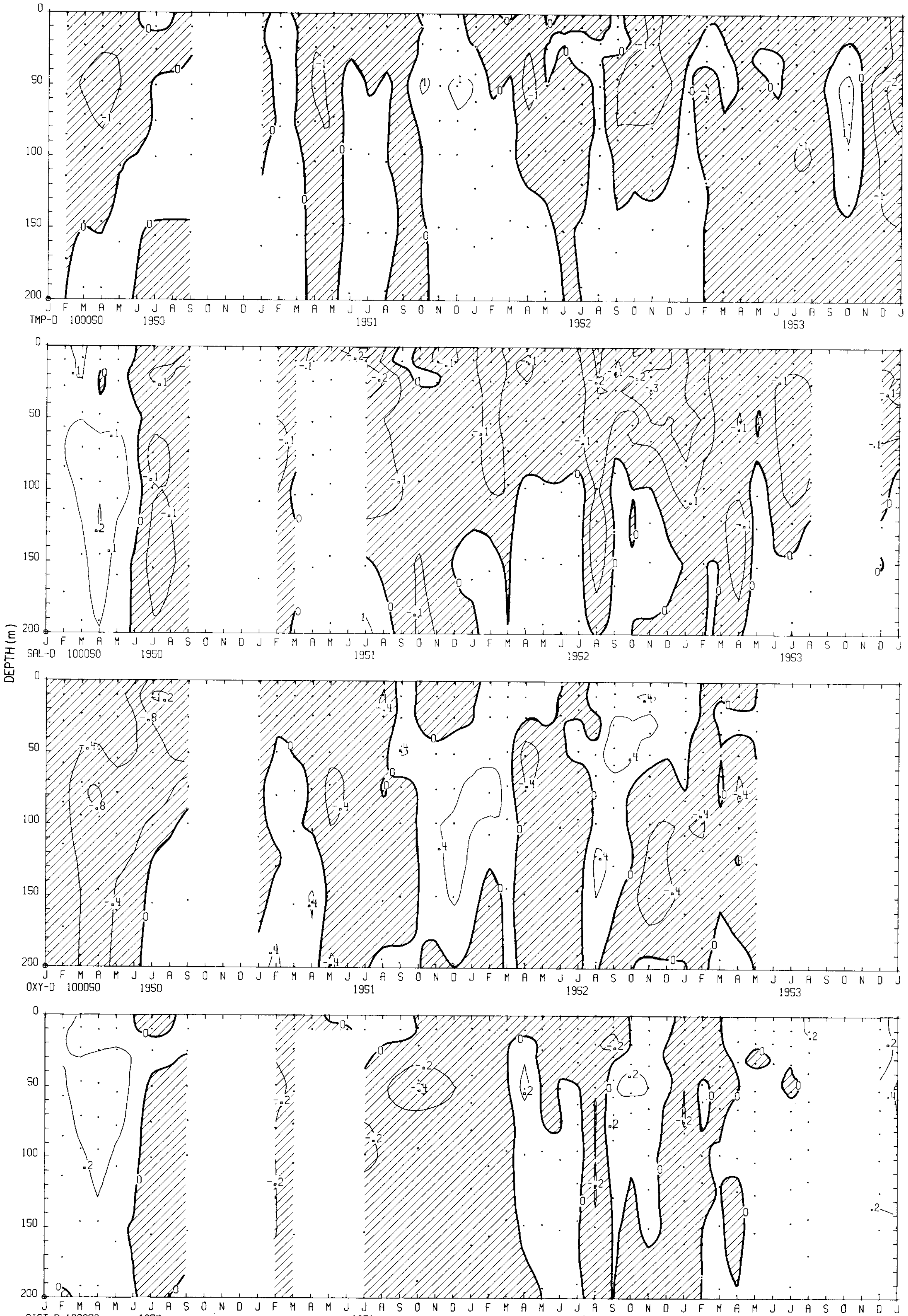
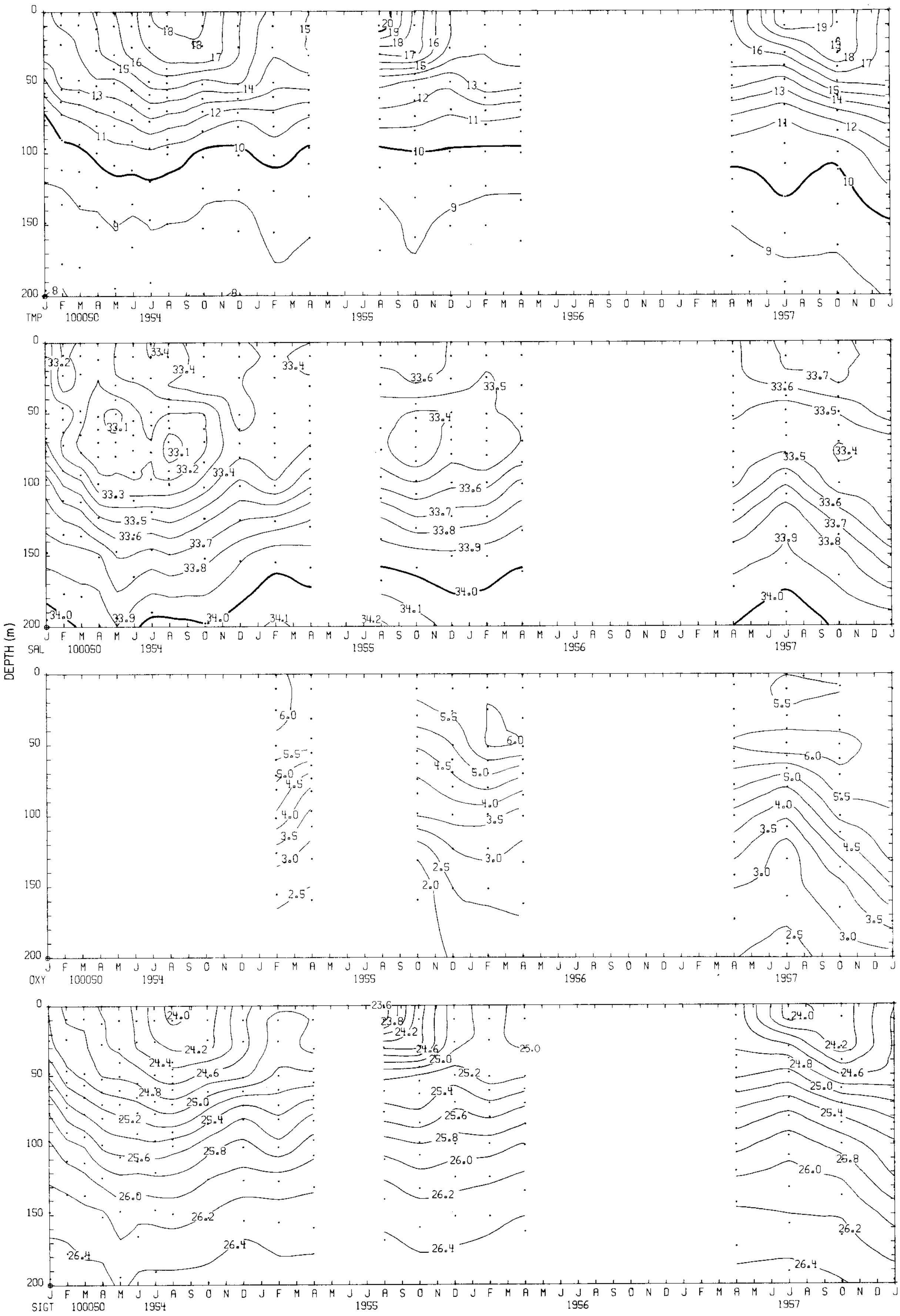
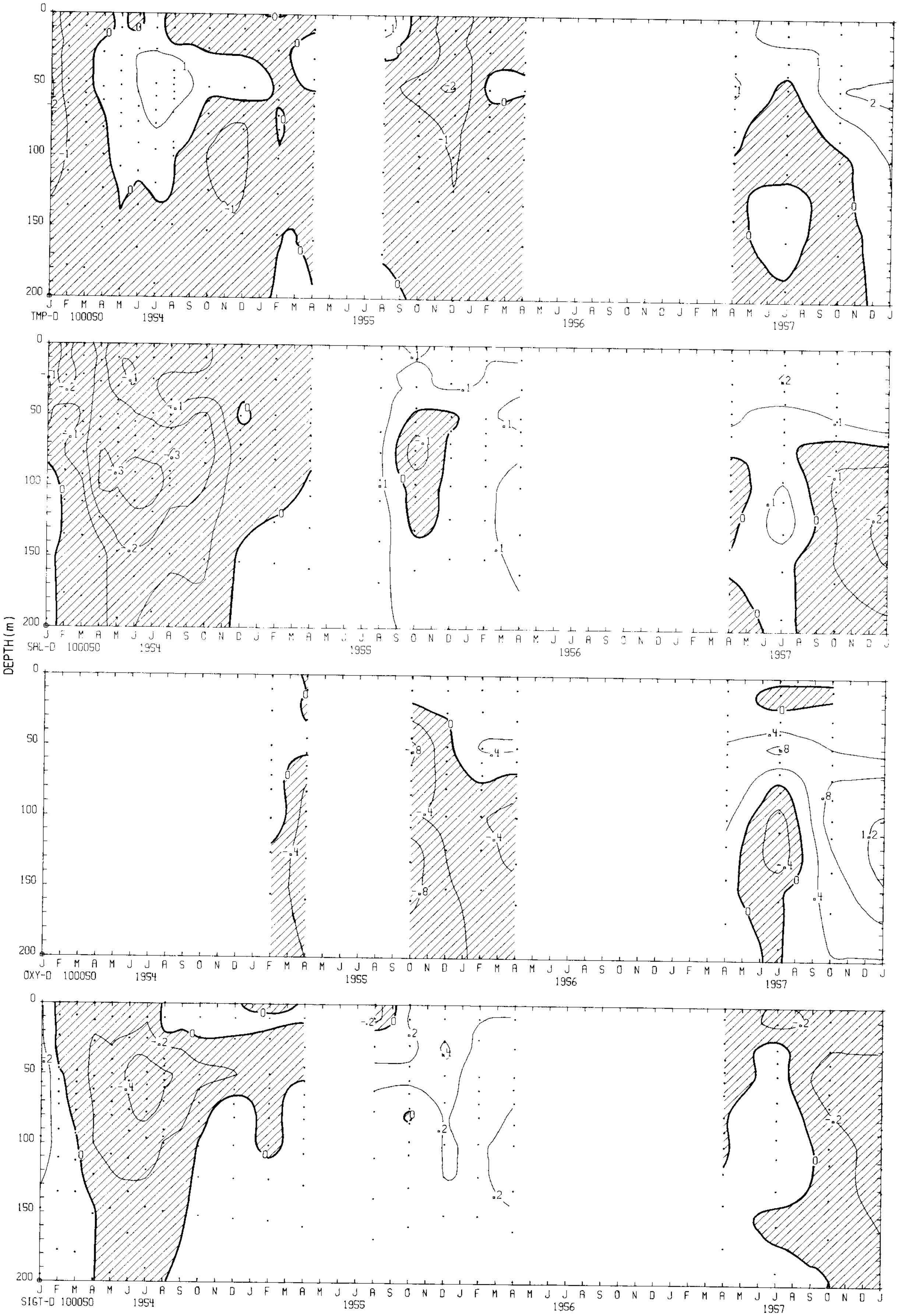
24.8
25.0
25.2
25.4
25.6
25.8
26.0
26.2
26.4

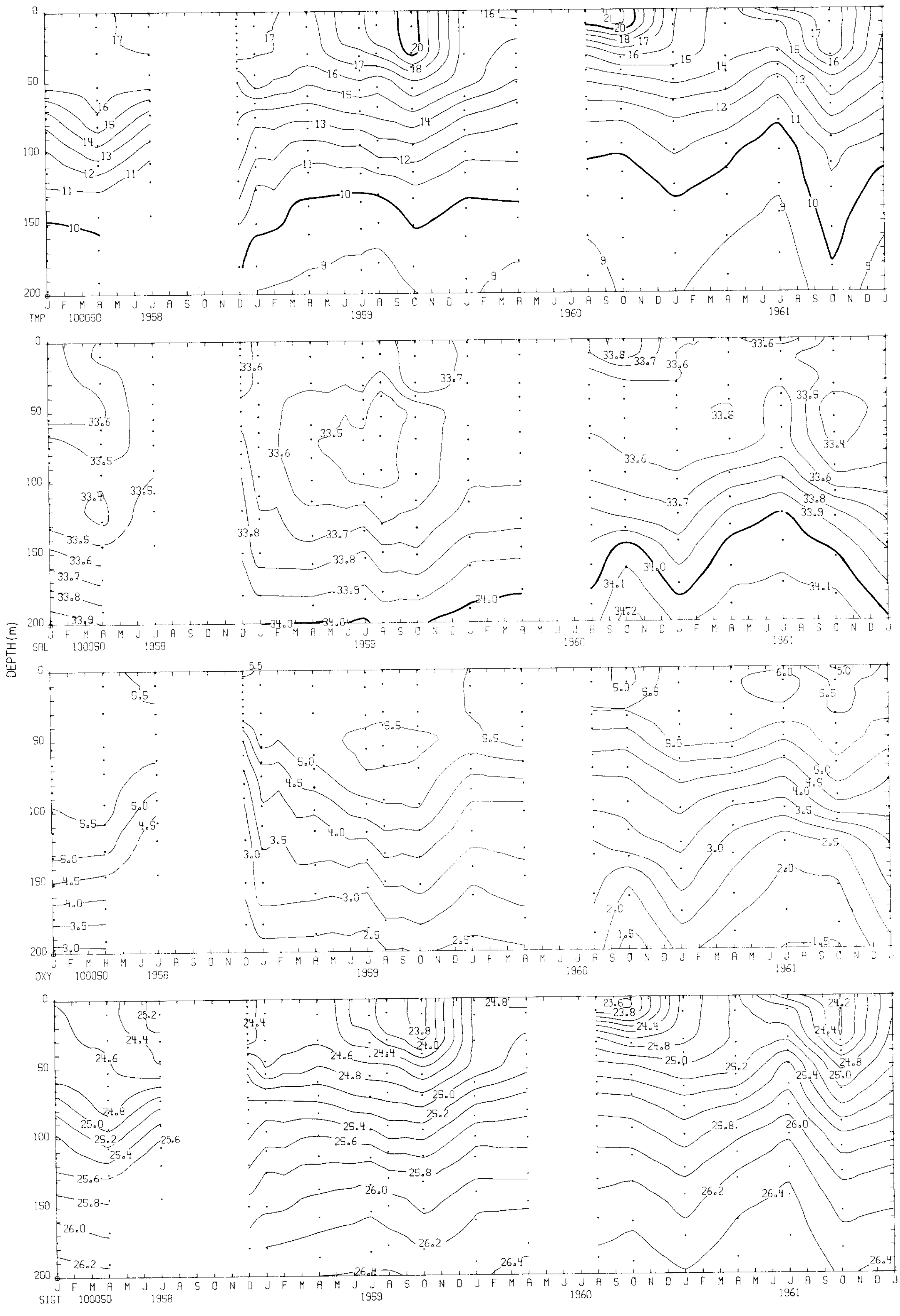

DEPTH (m)
J F M A M J J A S O N D J
SDEV TMP 100030 JAN-DEC
SDEV SAL 100030 JAN-DEC
SDEV OXY 100030 JAN-DEC
SDEV SIGT 100030 JAN-DEC

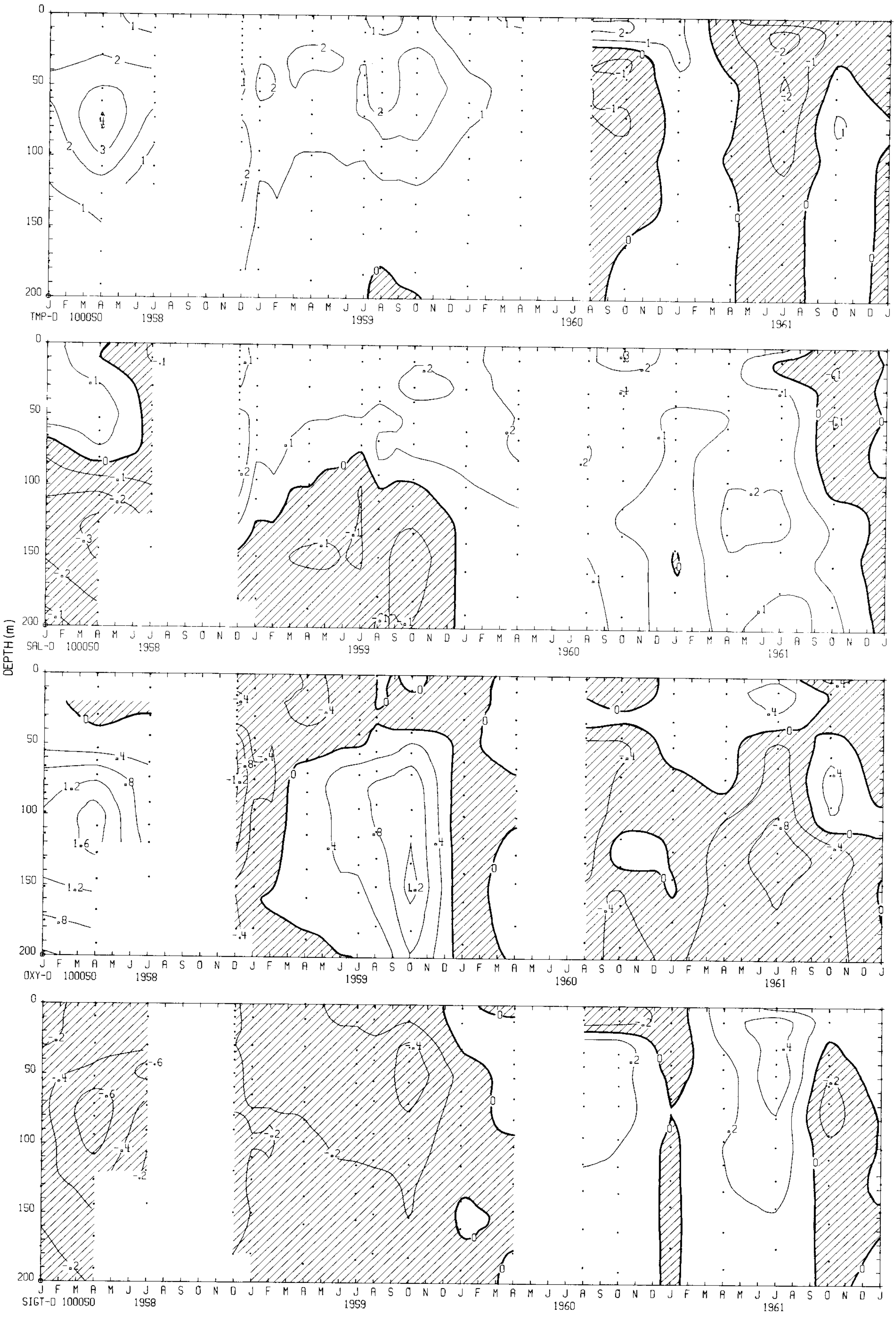

DEPTH (m)
TMP 100050
SAL 100050
OXY 100050
SIGT 100050
1950
1951
1952
1953

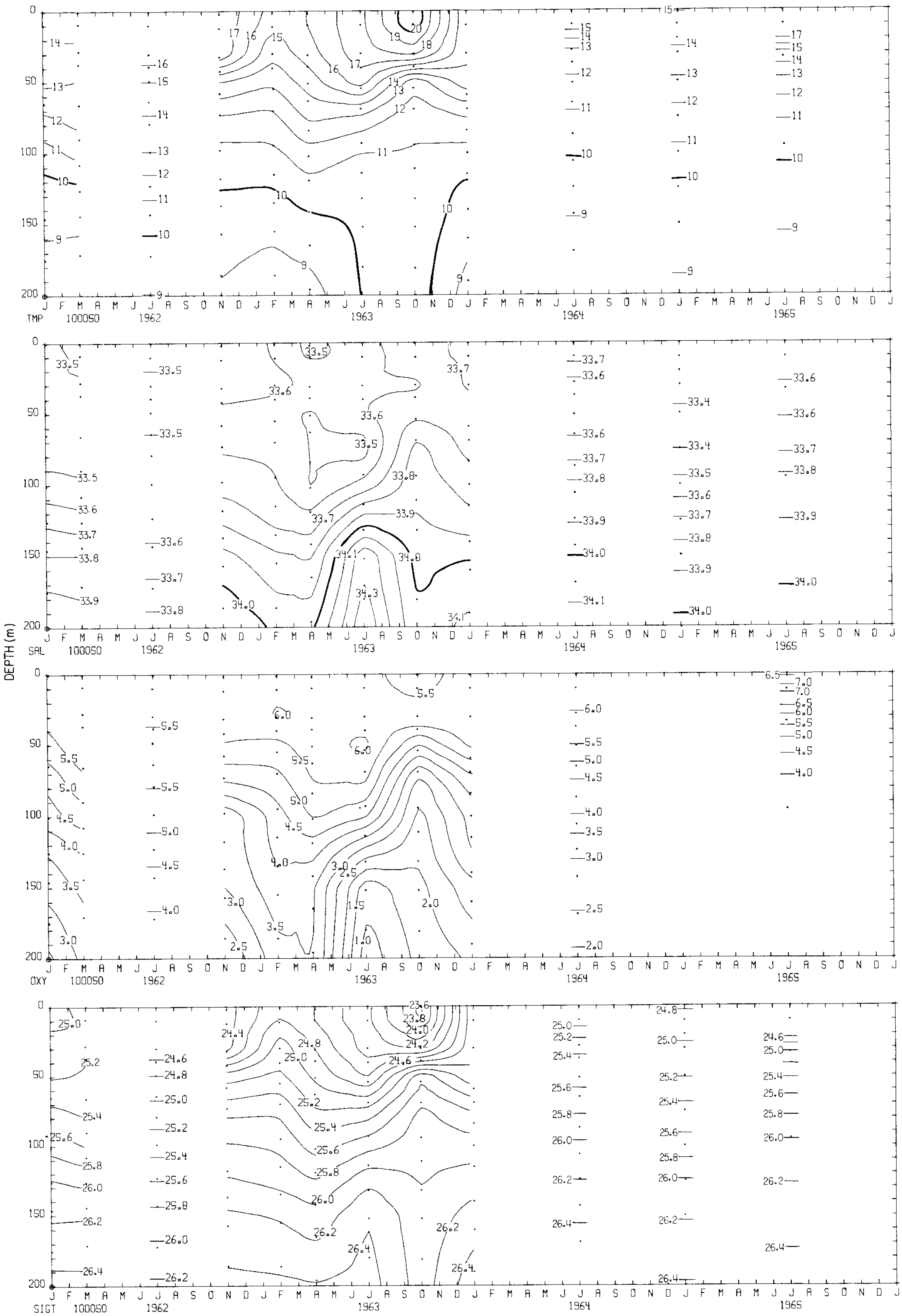

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 100050
SAL-D 100050
OXY-D 100050
SIGT-D 100050
1950
1951
1952
1953

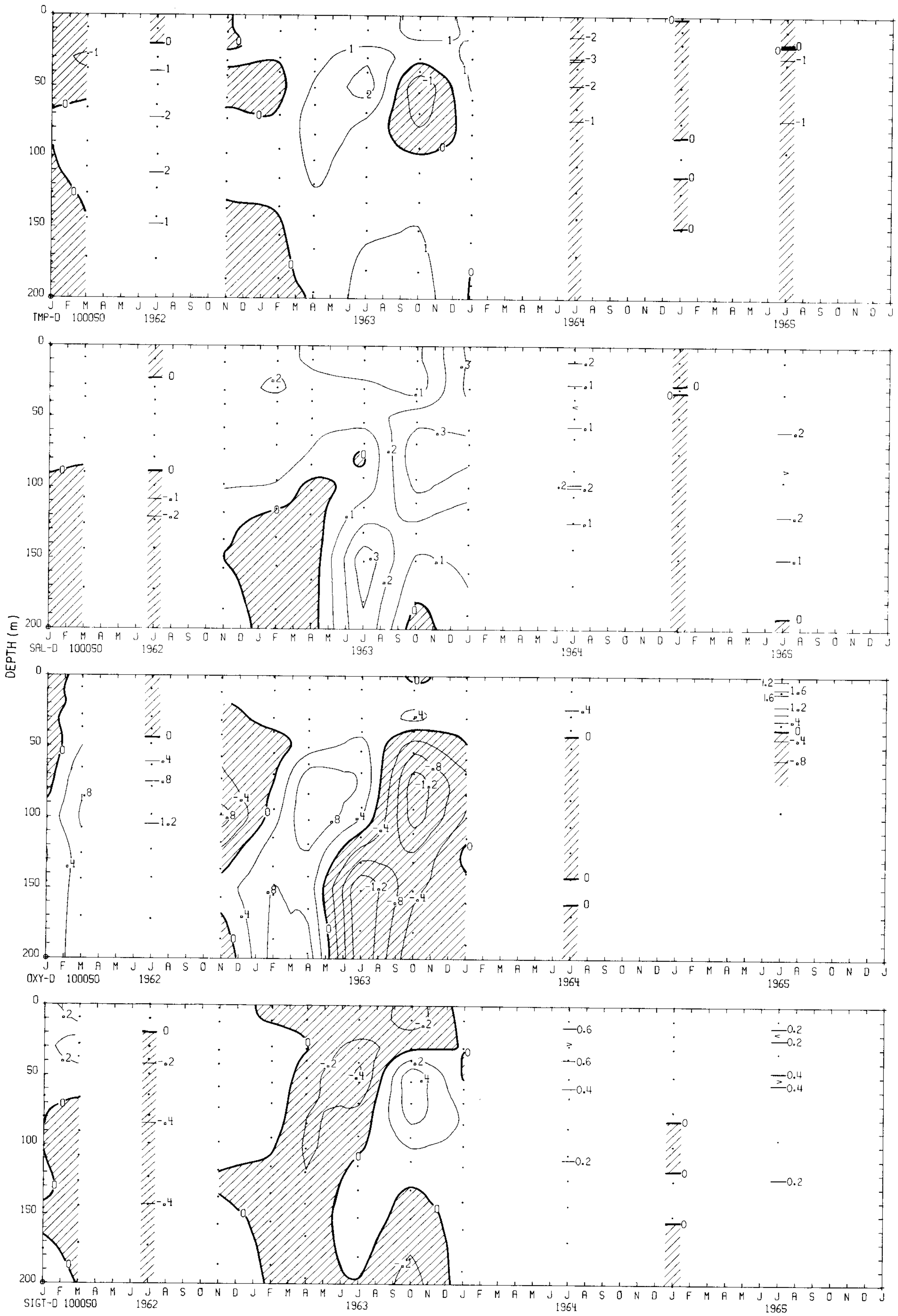

TMP 100050
SAL 100050
OXY 100050
SIGT 100050
DEPTH (m)
1954
1955
1956
1957
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 100050
1954
1955
1956
1957
SAL-D 100050
OXY-D 100050
SIGT-D 100050

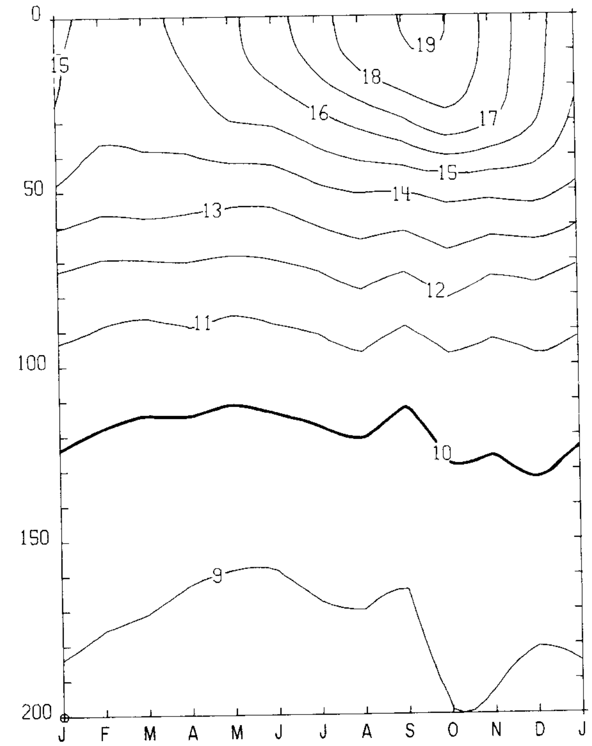

DEPTH (m)
TMP 100050 1958
1959
1960
1961
SAL 100050 1959
OXY 100050 1958
SIGT 100050 1958


DEPTH (m)
TMP-D 100050
SAL-D 100050
OXY-D 100050
SIGT-D 100050
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1958
1959
1960
1961

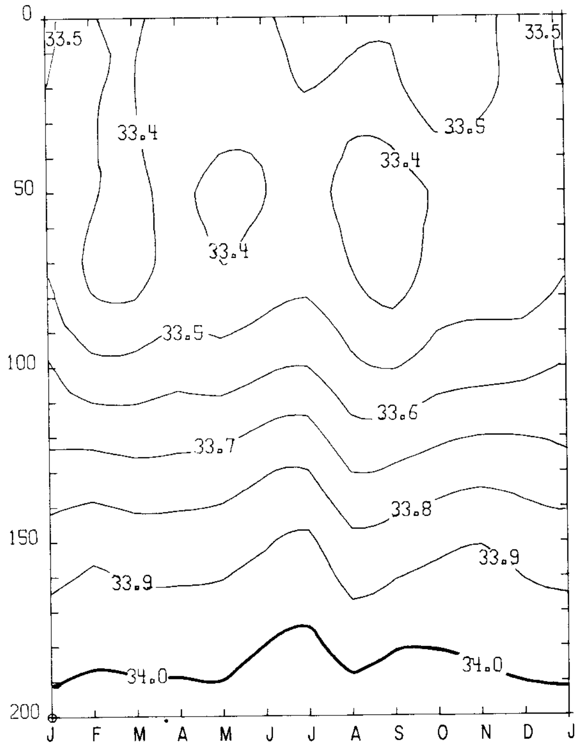

DEPTH (m)
TMP 100050
SAL 100050
OXY 100050
SIGT 100050
1962
1963
1964
1965



DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 100050
1962
1963
1964
1965
SAL-D 100050
1962
1963
1964
1965
OXY-D 100050
1962
1963
1964
1965
SIGT-D 100050
1962
1963
1964
1965

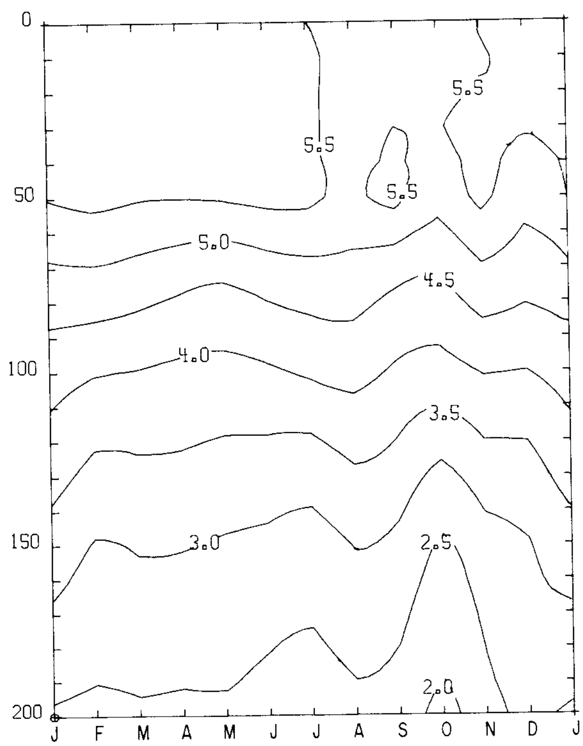


MEAN TMP 100050 JAN-DEC

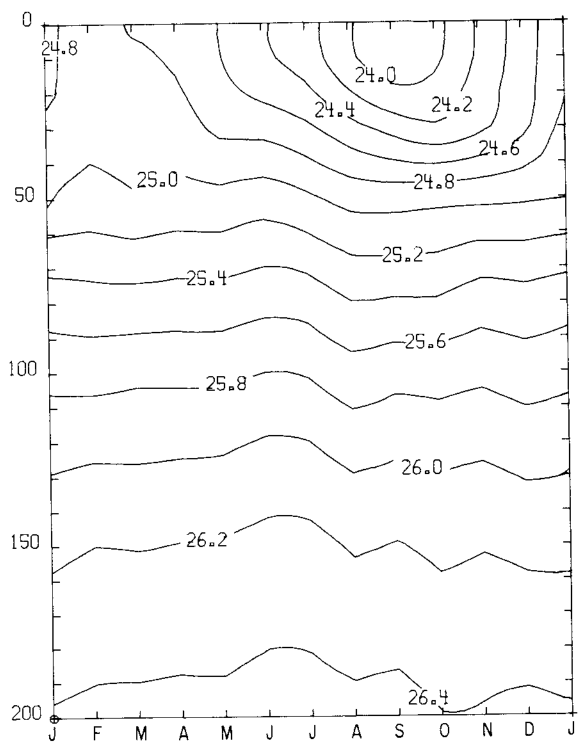


MEAN SAL 100050 JAN-DEC

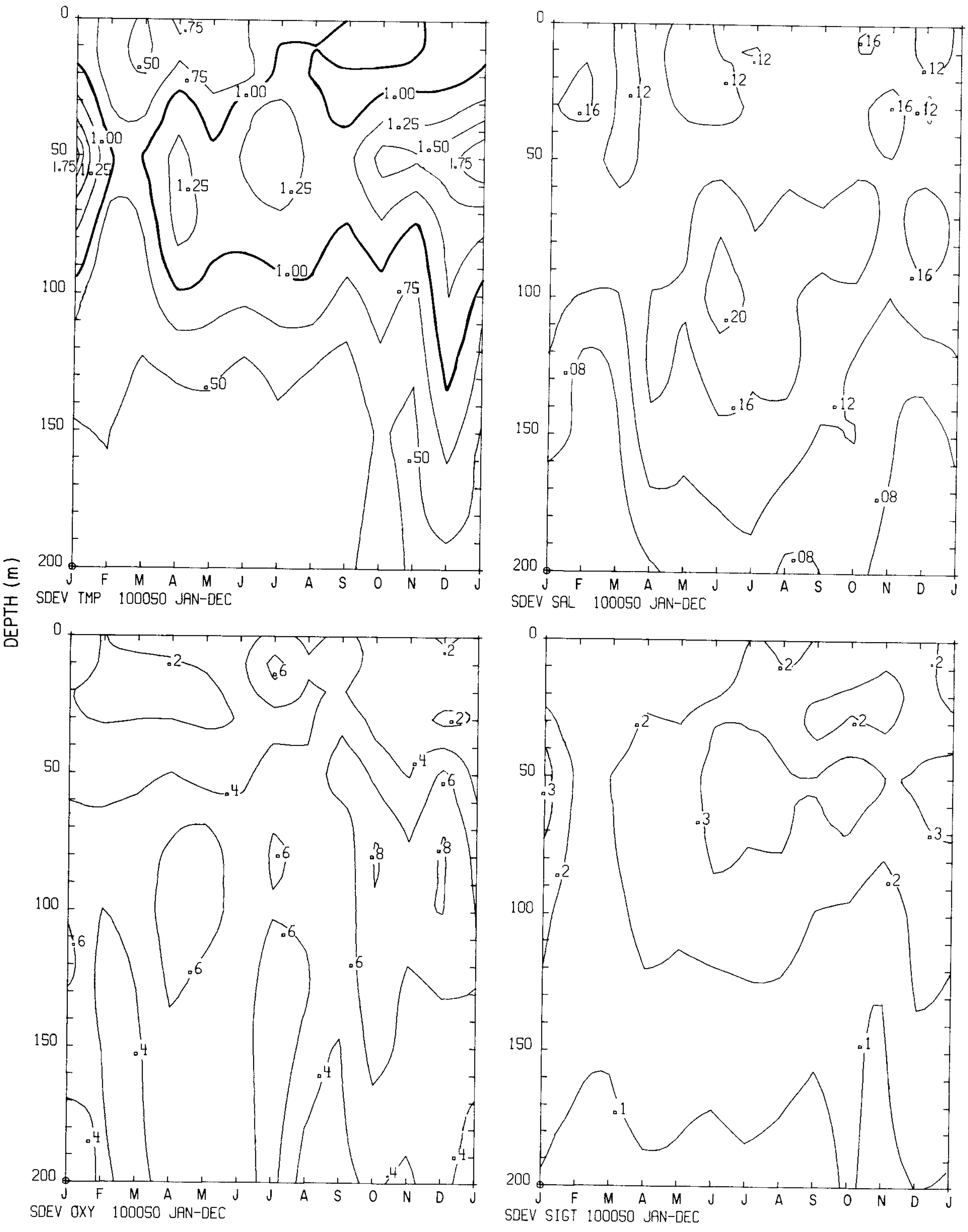
DEPTH (m)

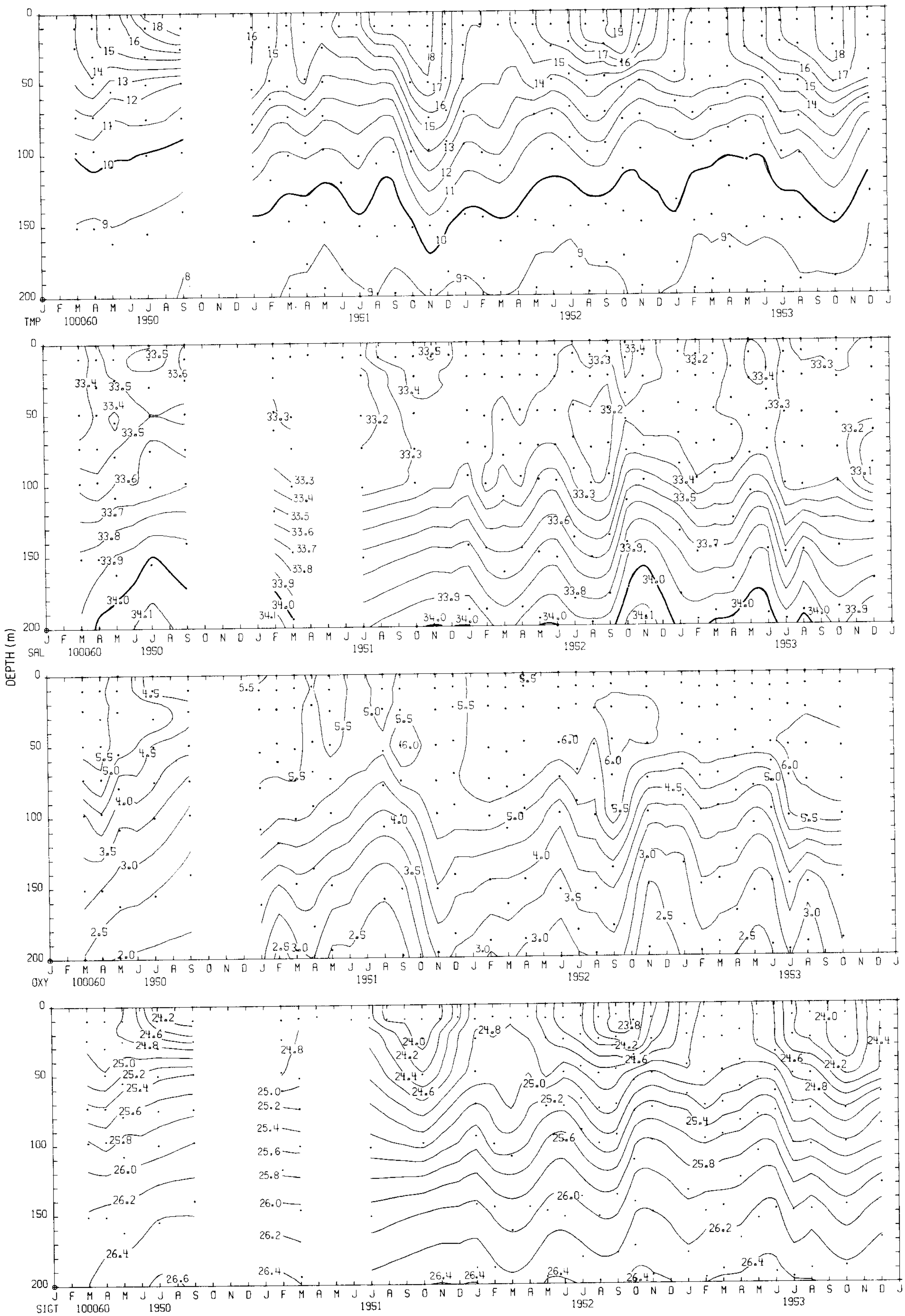


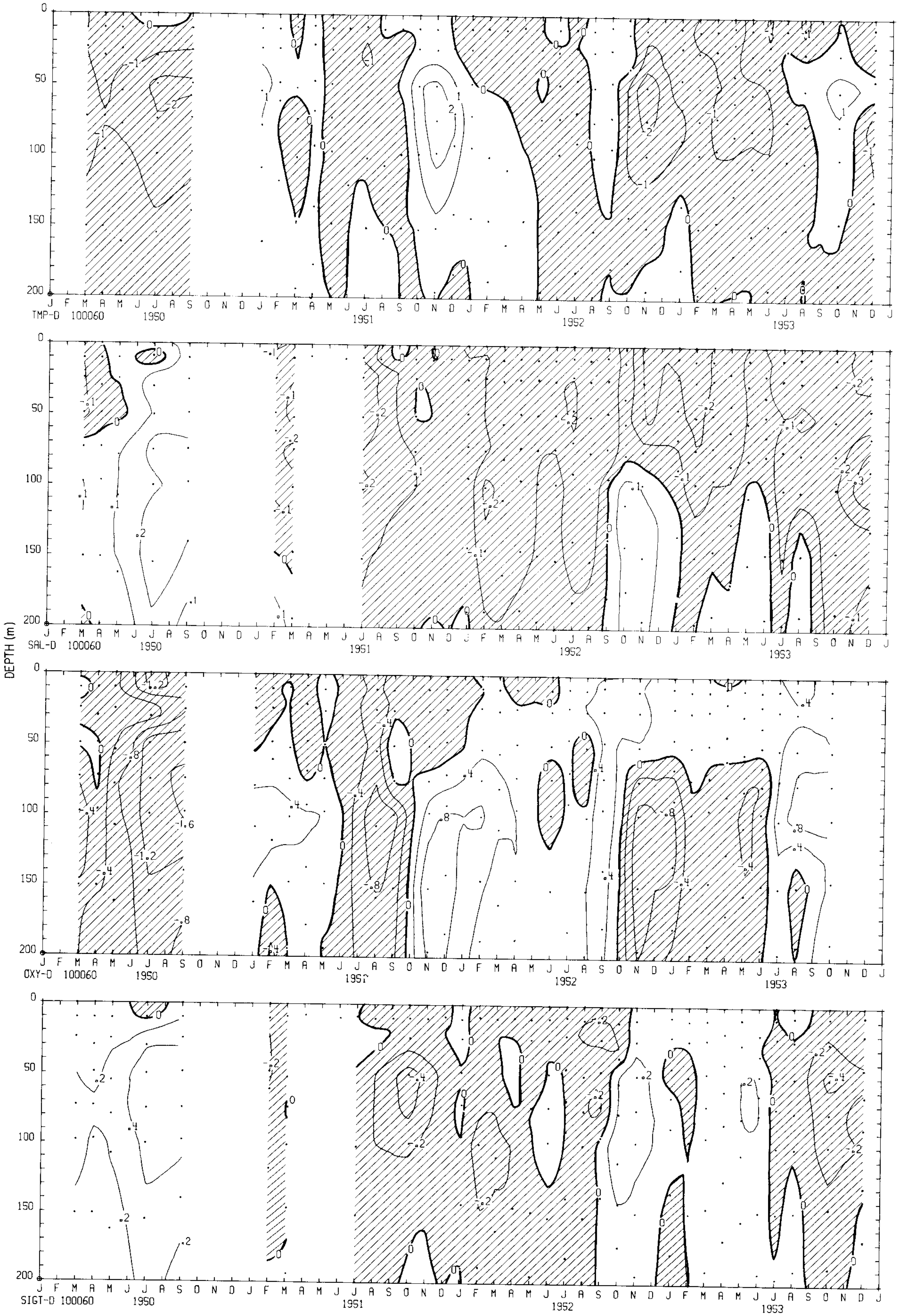
MEAN OXY 100050 JAN-DEC

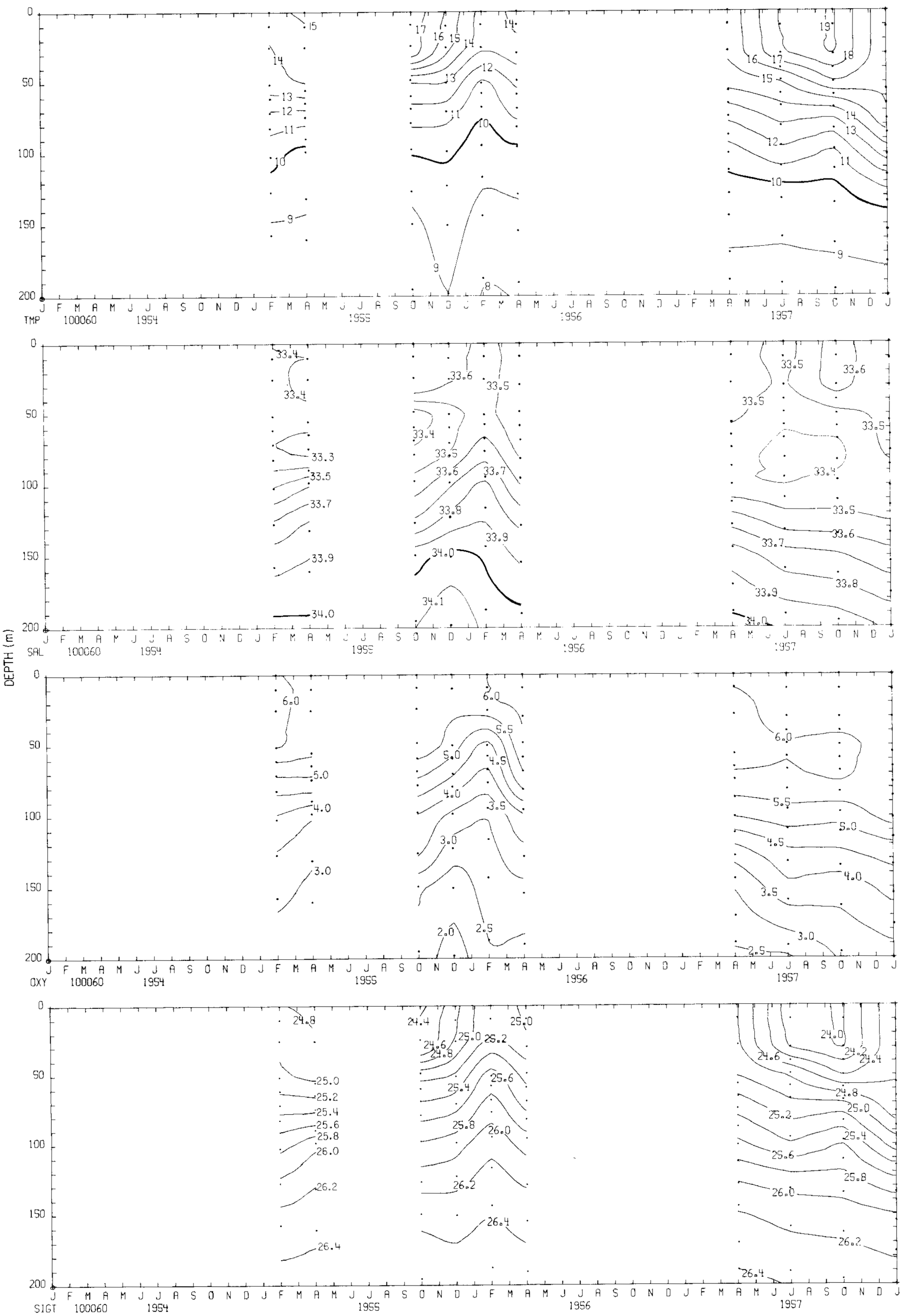


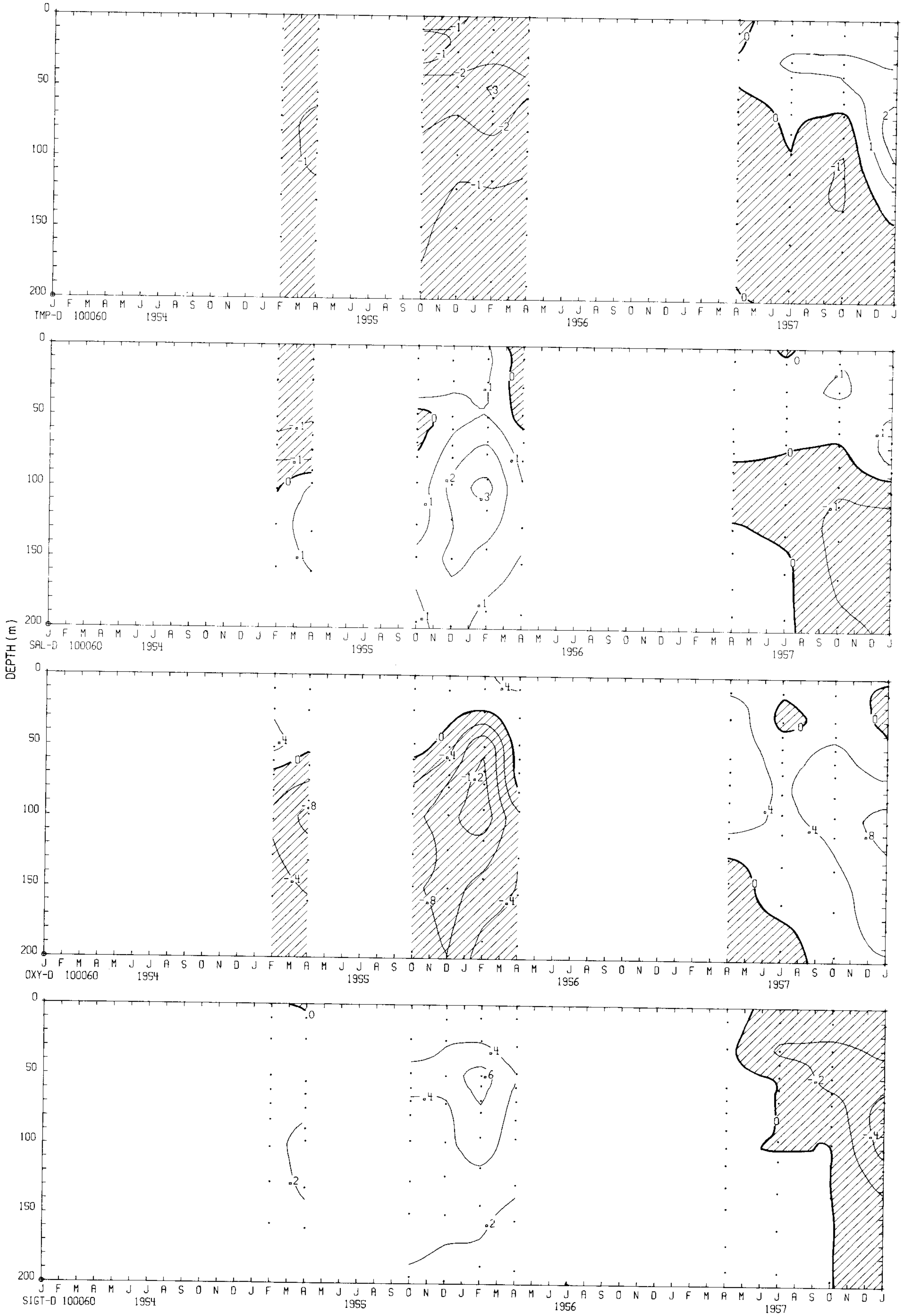
MEAN SIGT 100050 JAN-DEC

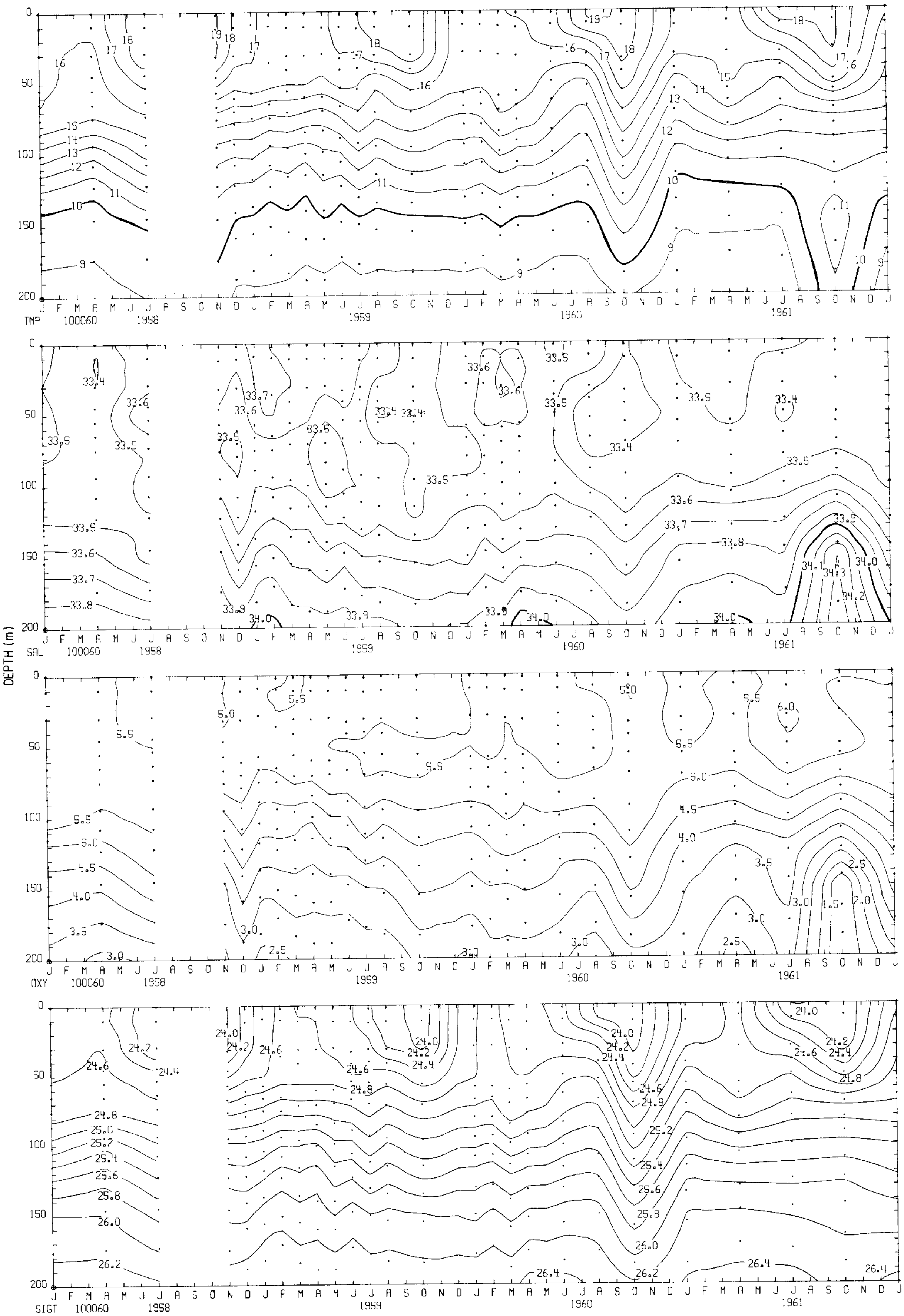

DEPTH (m)
J F M A M J J A S O N D J
SDEV TMP 100050 JAN-DEC
SDEV SAL 100050 JAN-DEC
SDEV OXY 100050 JAN-DEC
SDEV SIGT 100050 JAN-DEC

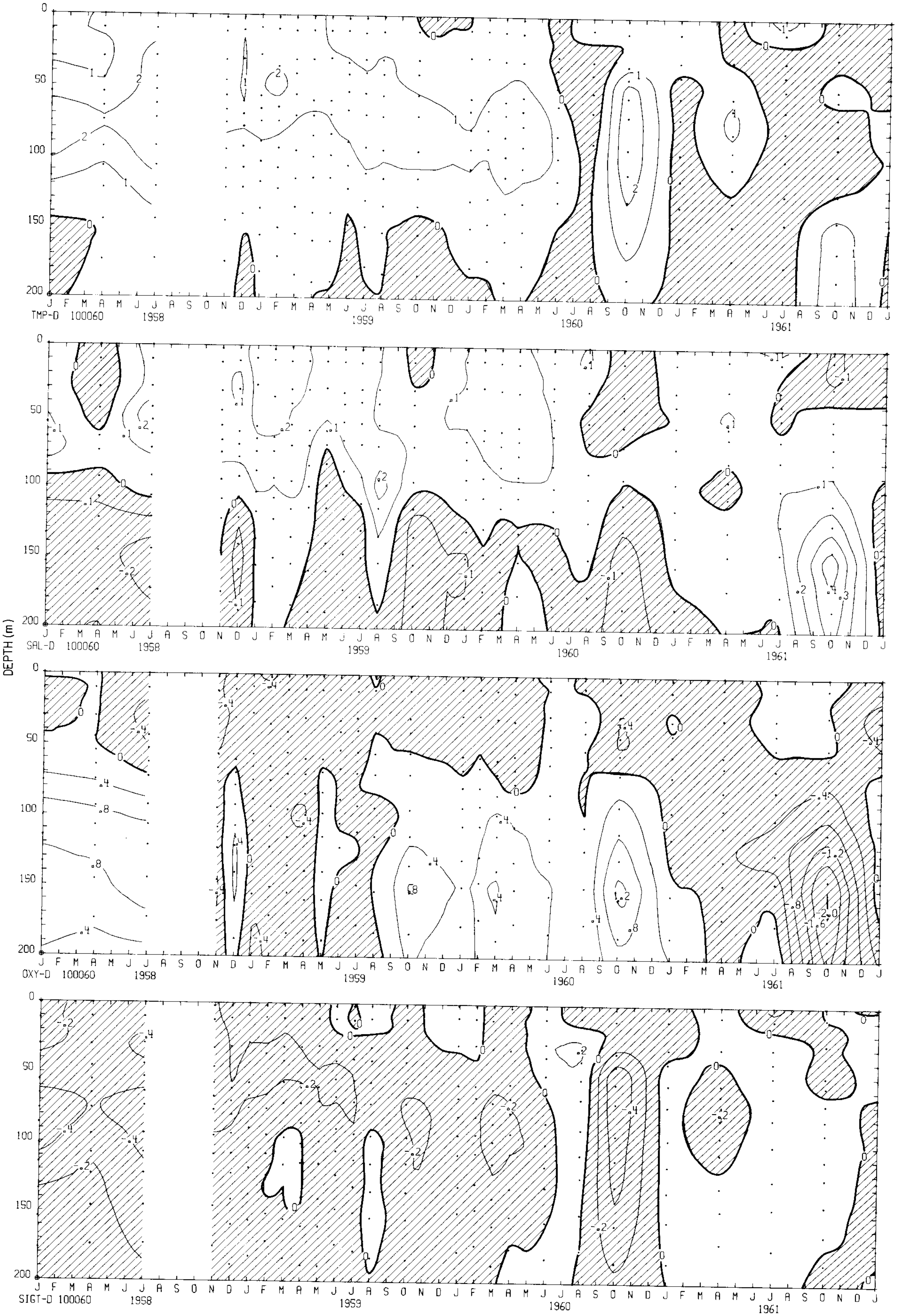

TMP 100060
SAL 100060
OXY 100060
SIGT 100060
DEPTH (m)
1950
1951
1952
1953

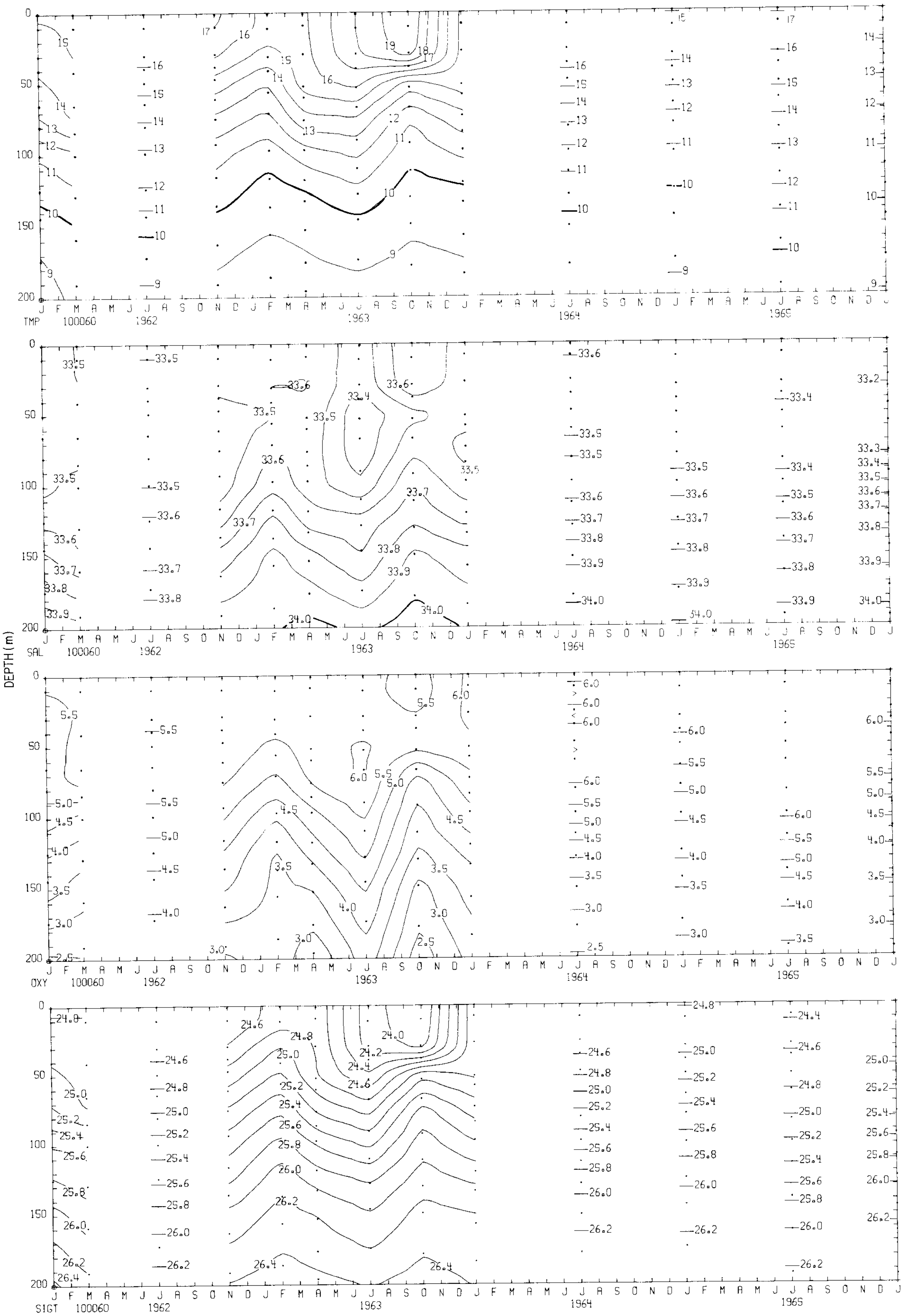

DEPTH (m)
TMP-D 100060
SAL-D 100060
OXY-D 100060
SIGT-D 100060
1950
1951
1952
1953
J F M A M J J A S O N D
0
50
100
150
200


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 100060 1954
1955
1956
1957
SAL 100060 1954
OXY 100060 1954
SIGT 100060 1954

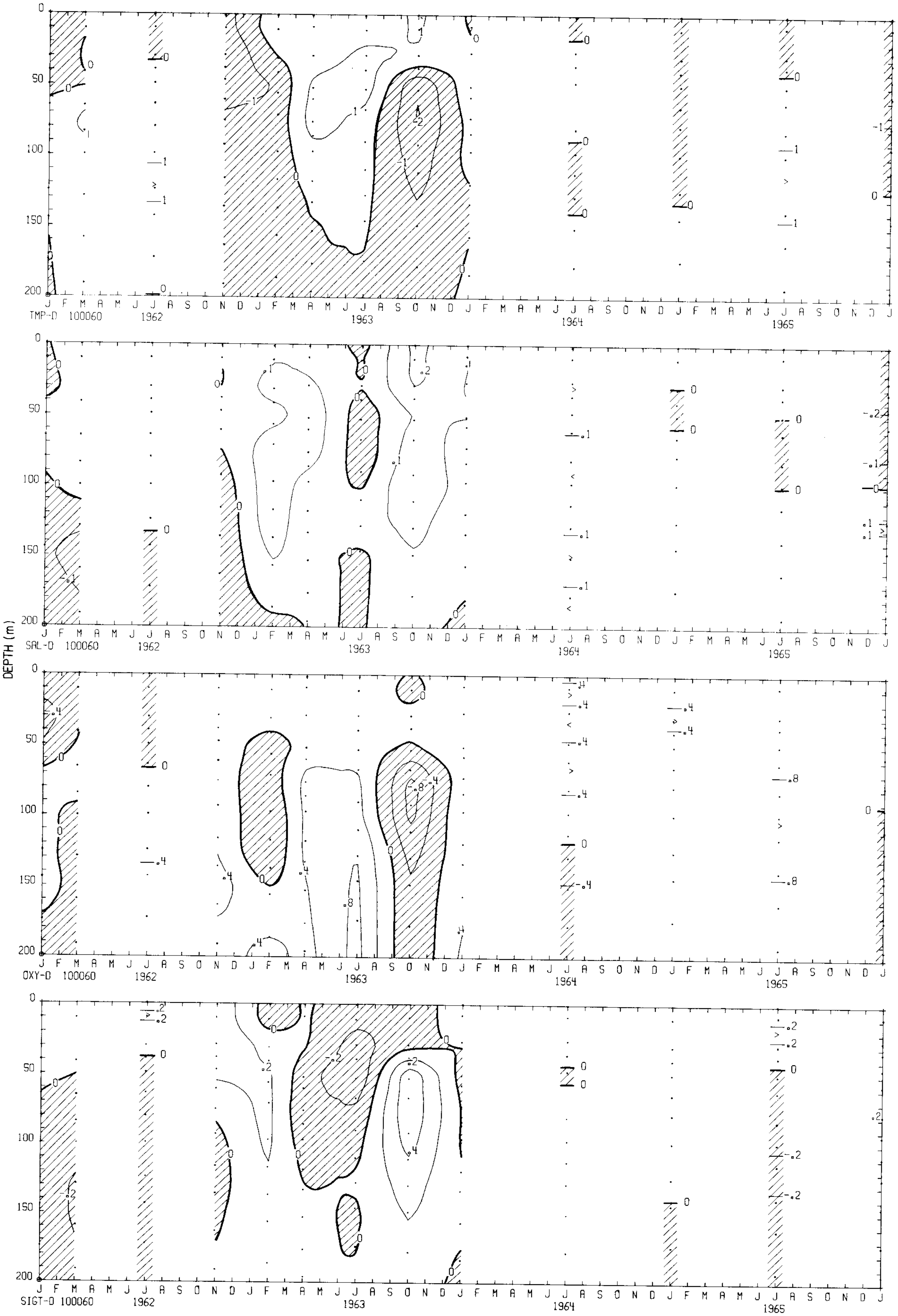

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 100060
SAL-D 100060
OXY-D 100060
SIGT-D 100060
1954
1955
1956
1957

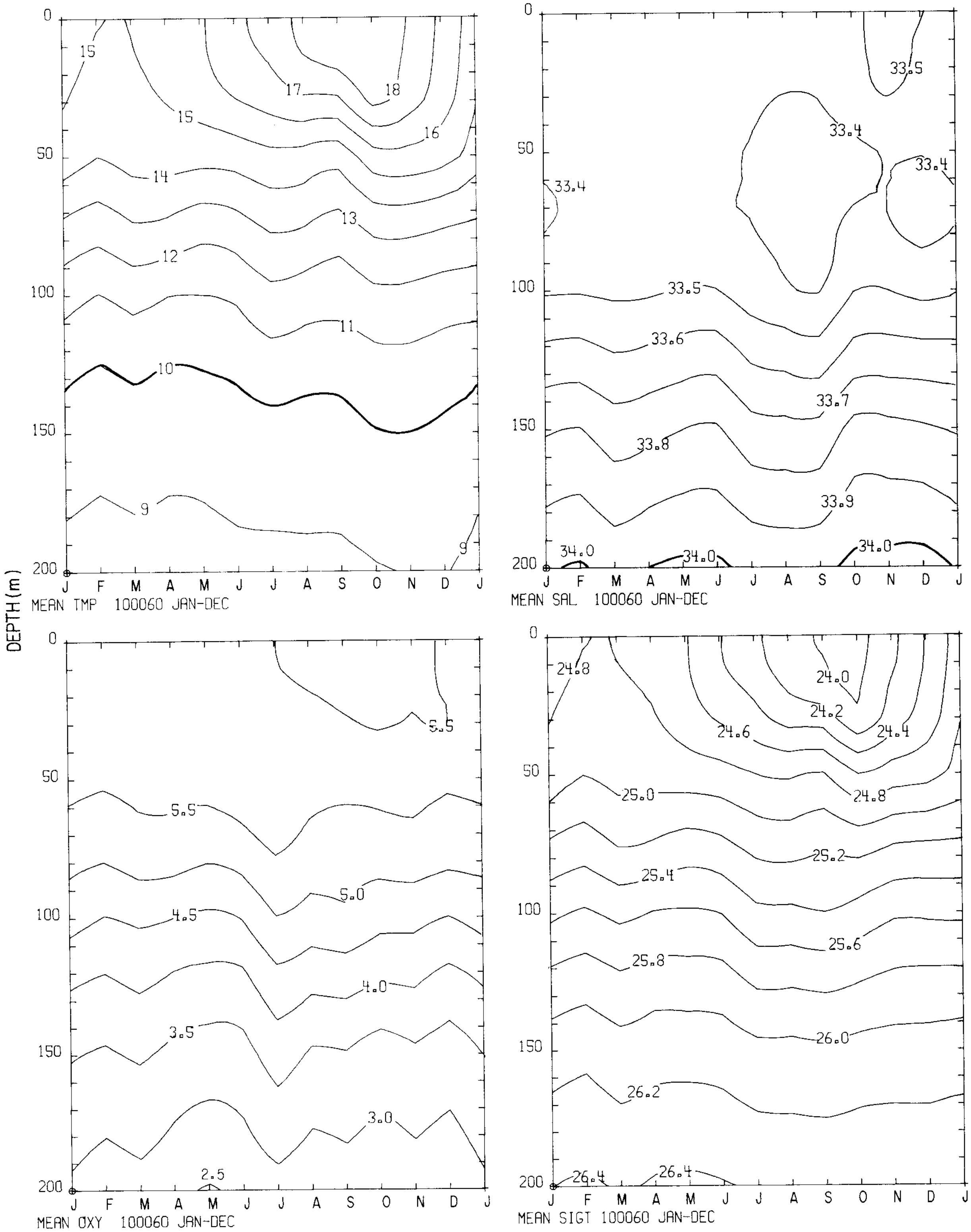

TMP 100060 1958 1959 1960 1961
SAL 100060 1958 1959 1960 1961
OXY 100060 1958 1959 1960 1961
SIGT 100060 1958 1959 1960 1961
DEPTH (m)

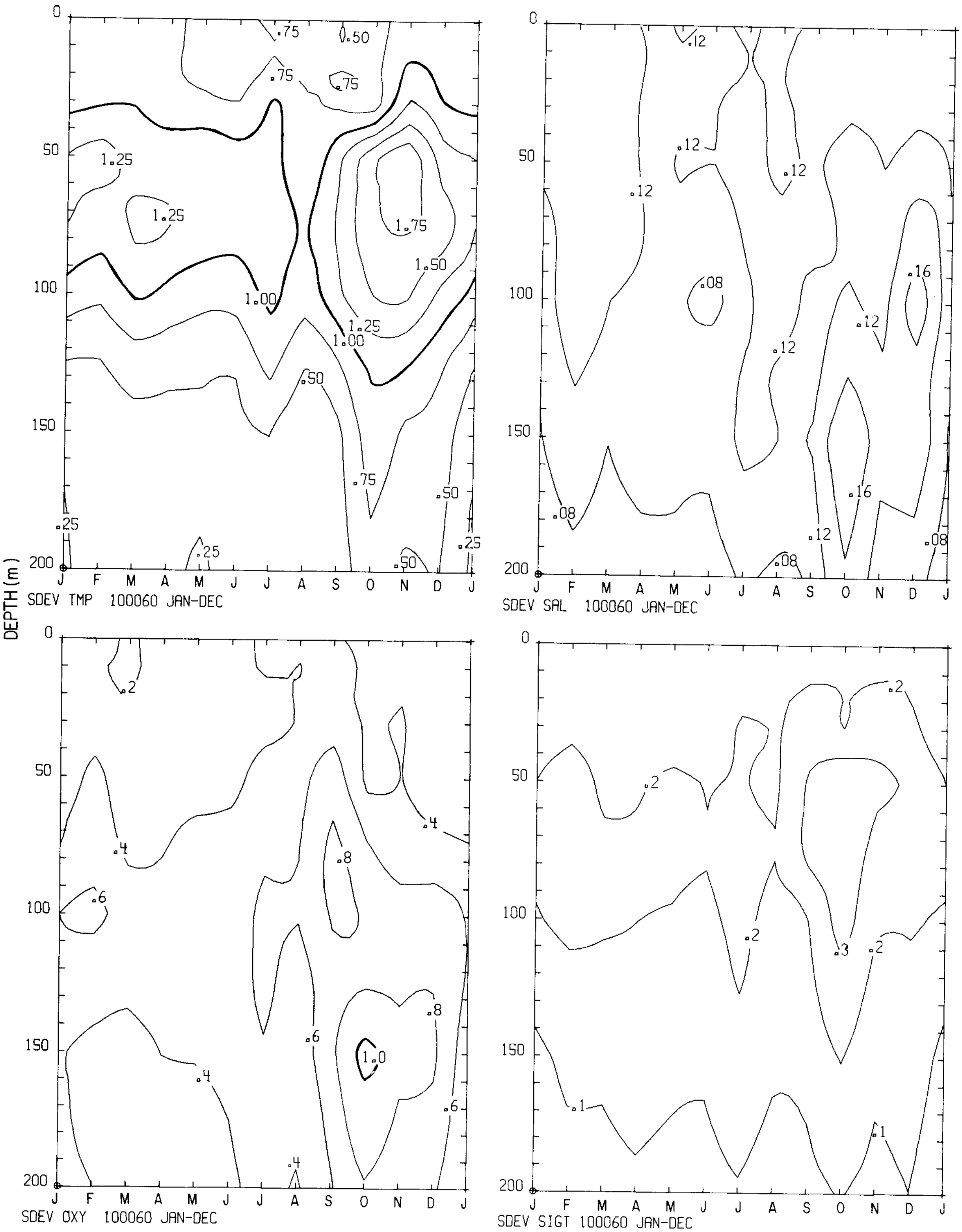

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 100060
1958
1959
1960
1961
SAL-D 100060
OXY-D 100060
SIGT-D 100060



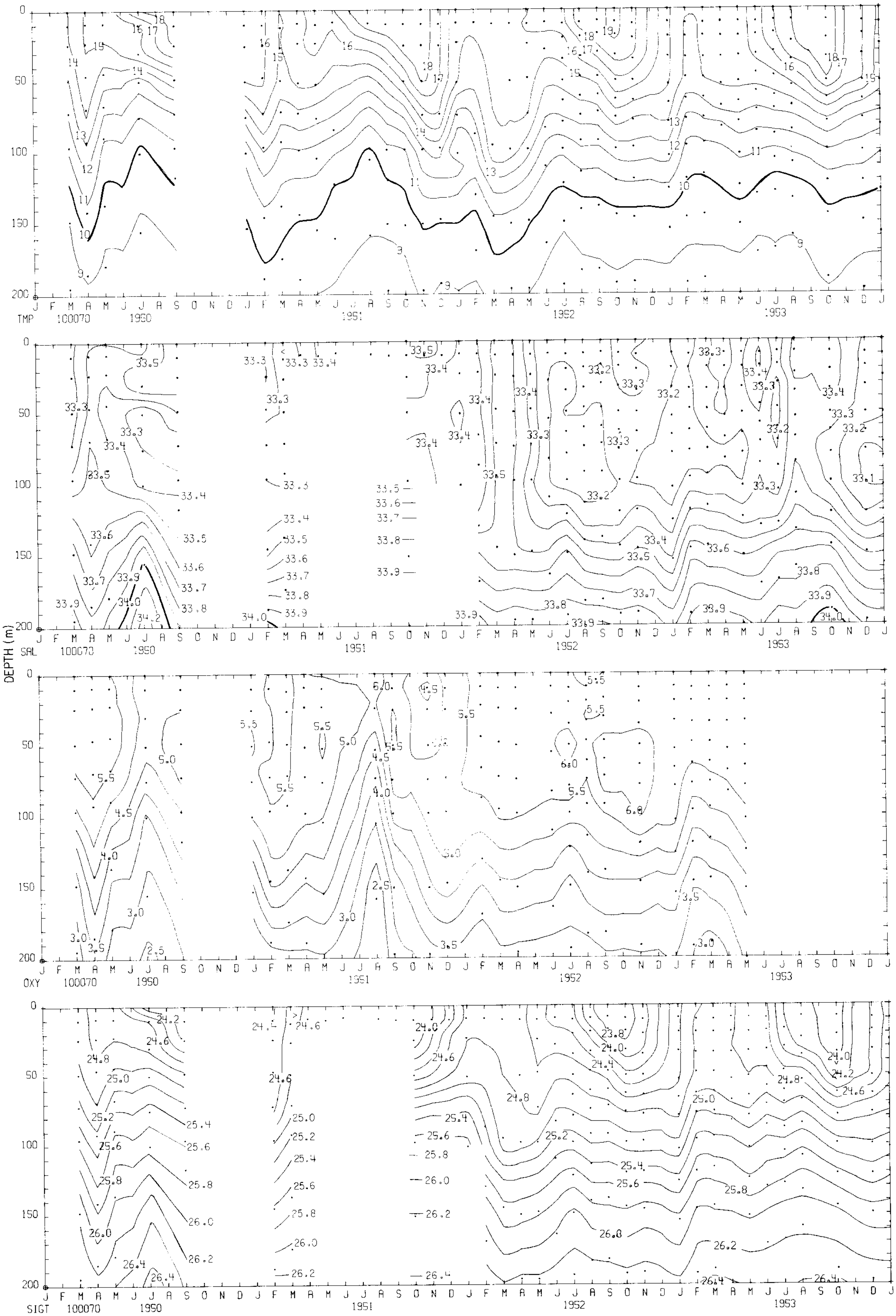
TMP 100060
SAL 100060
OXY 100060
SIGT 100060
DEPTH (m)
1962
1963
1964
1965

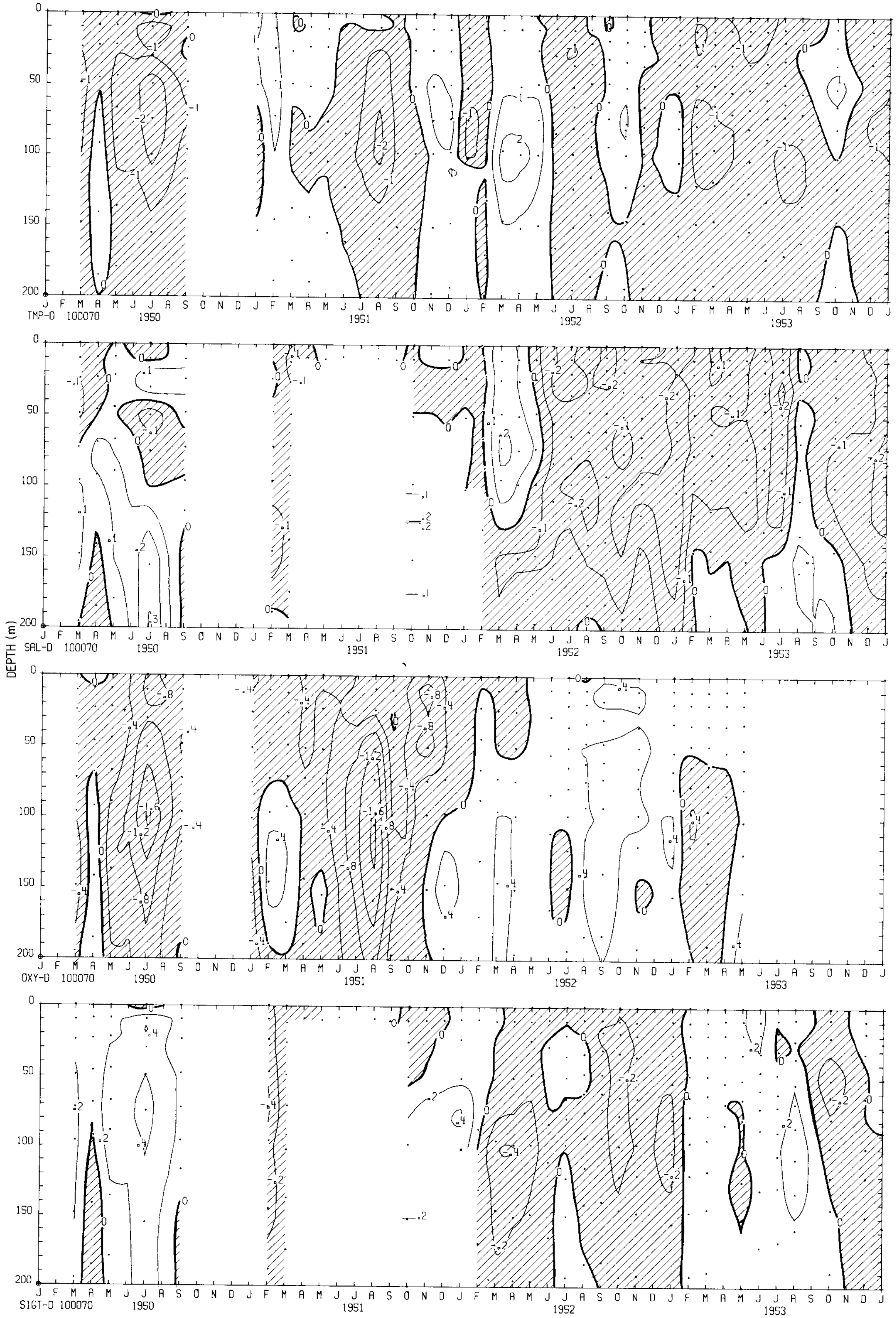

DEPTH (m)
TMP-D 100060
SAL-D 100060
OXY-D 100060
SIGT-D 100060
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1962
1963
1964
1965

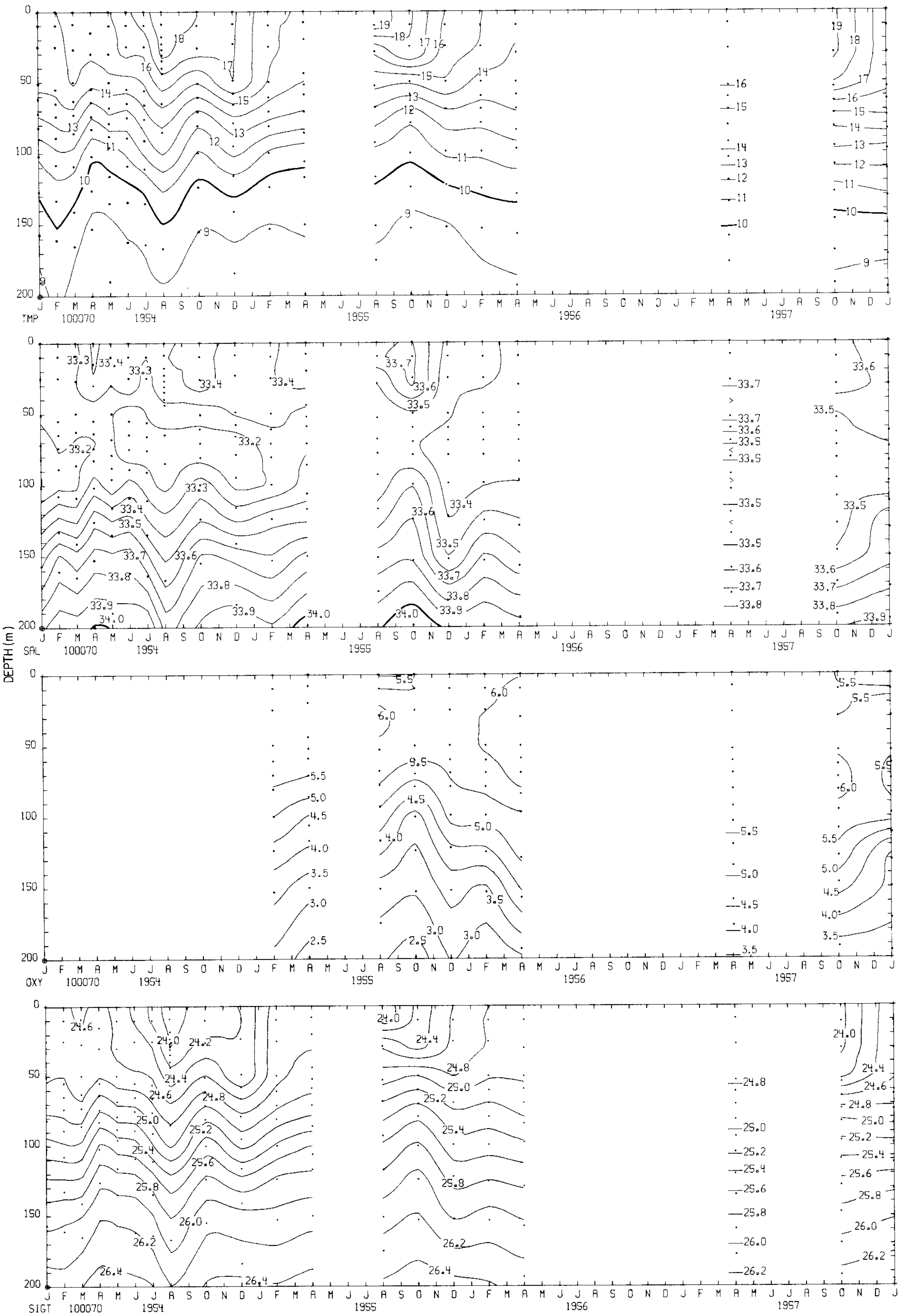

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J
15
17
18
16
14
13
12
11
10
9
MEAN TMP 100060 JAN-DEC
33.5
33.4
33.6
33.7
33.8
33.9
34.0
MEAN SAL 100060 JAN-DEC
5.5
5.0
4.5
4.0
3.5
3.0
2.5
MEAN OXY 100060 JAN-DEC
24.8
24.0
24.2
24.6
24.4
25.0
25.2
25.4
25.6
25.8
26.0
26.2
26.4
MEAN SIGT 100060 JAN-DEC

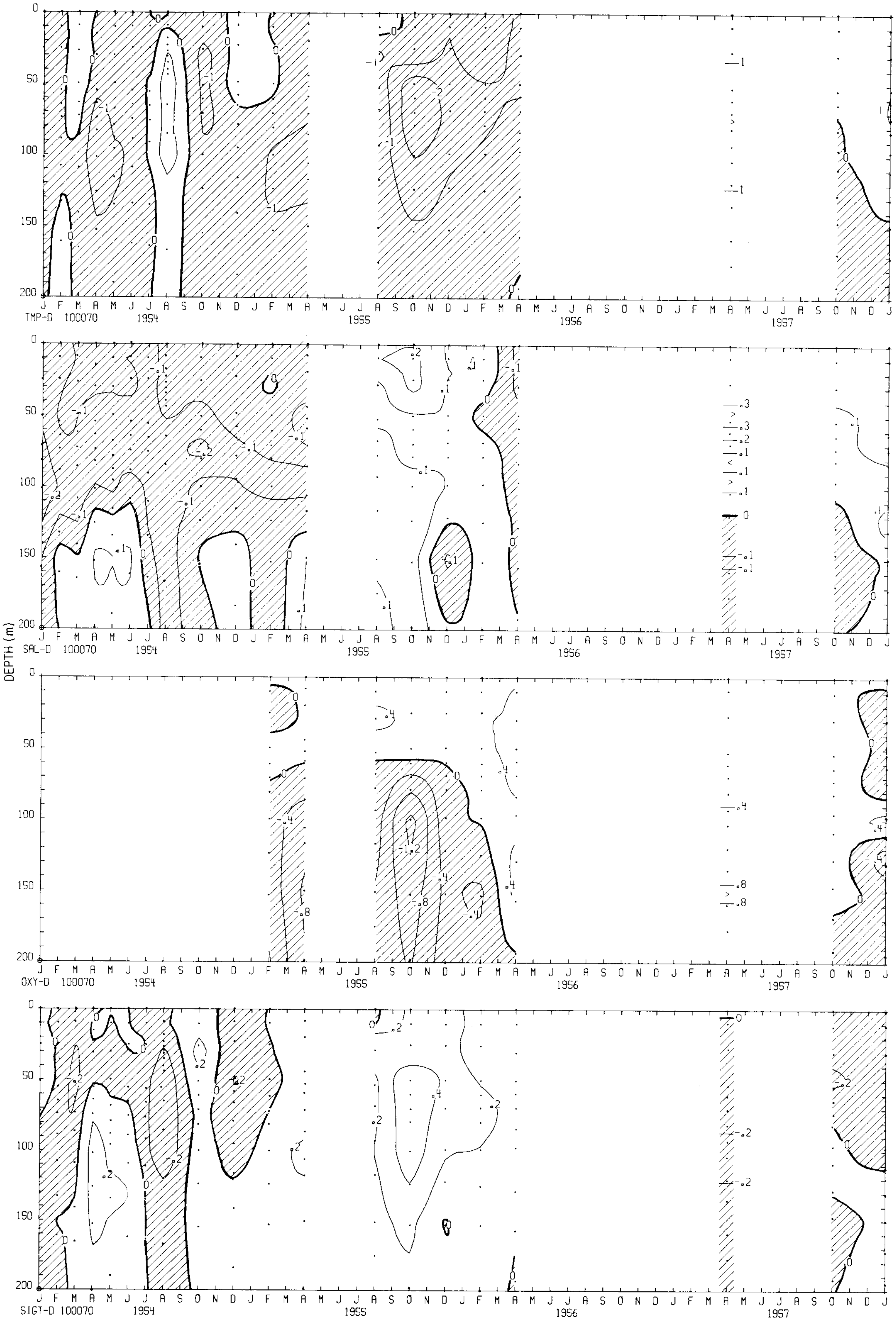


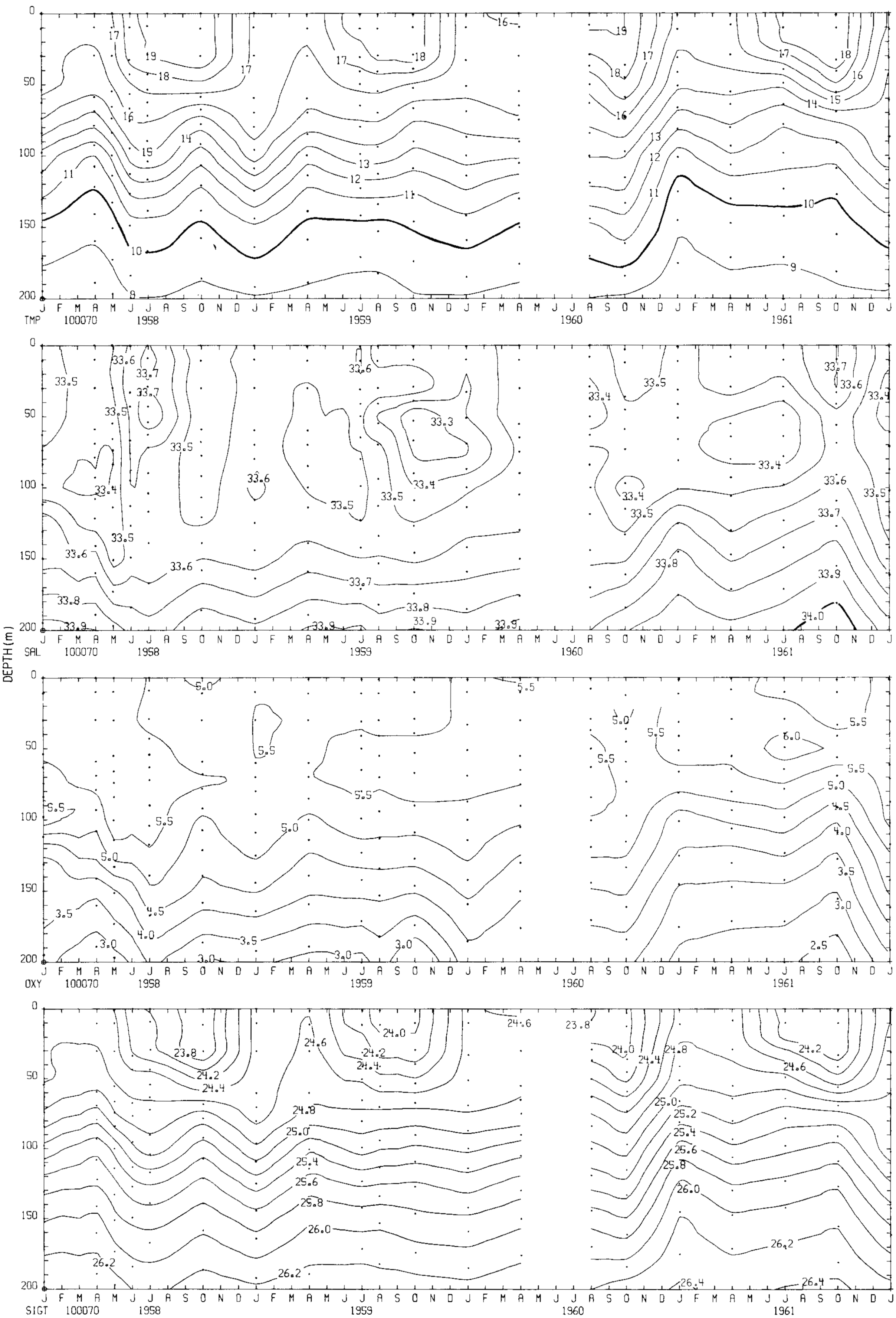
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J
.75
.50
.75
.75
1.25
1.25
1.75
1.50
1.00
1.25
1.00
.50
.75
.50
.25
.25
.25
.50
SDEV TMP 100060 JAN-DEC
.12
.12
.12
.12
.08
.16
.12
.12
.16
.08
.12
.08
.08
SDEV SAL 100060 JAN-DEC
.2
.4
.4
.6
.8
.8
.6
1.0
.4
.6
.4
SDEV OXY 100060 JAN-DEC
.2
.2
.2
.3
.2
.1
.1
SDEV SIGT 100060 JAN-DEC

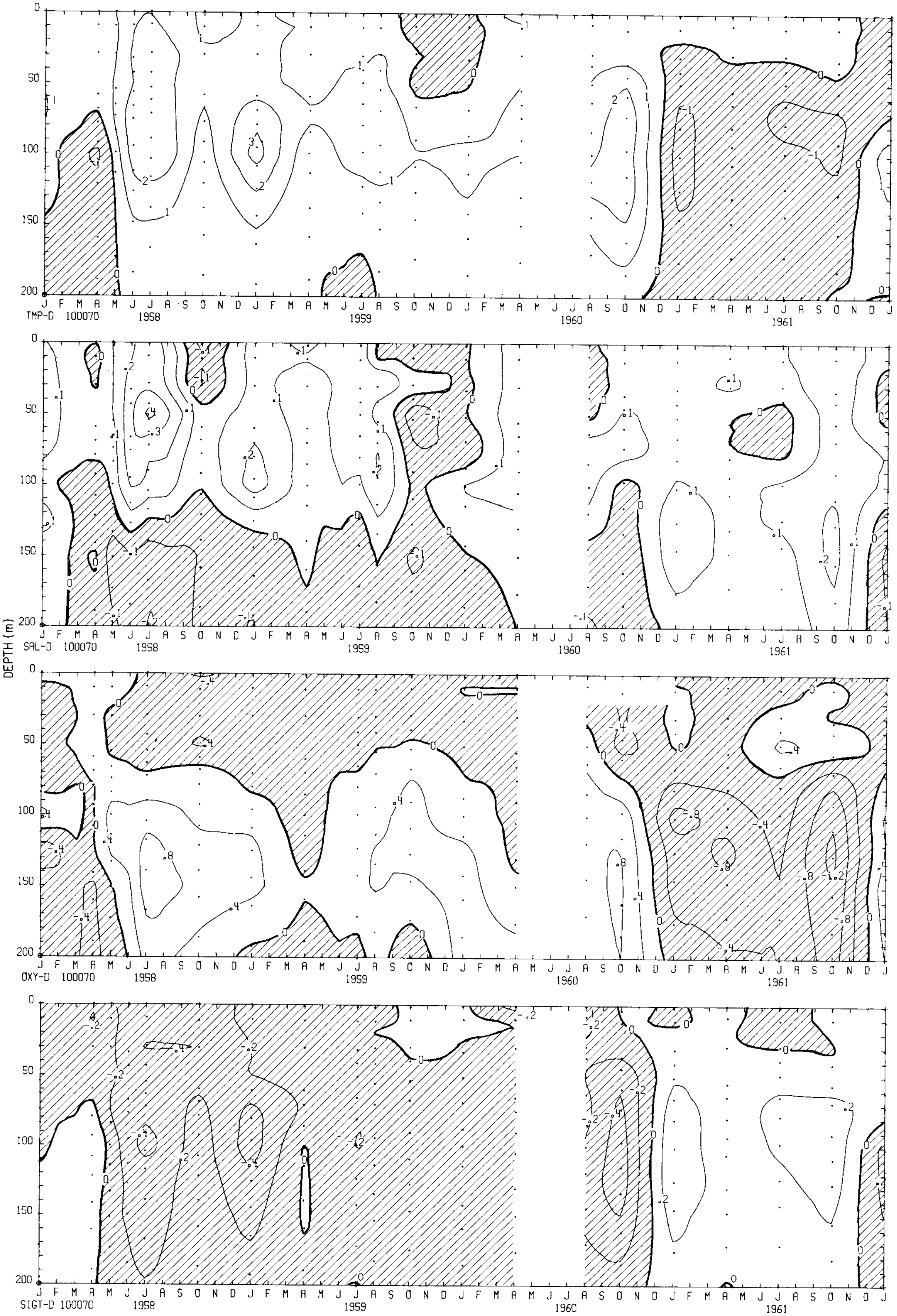

TMP 100070 1950 1951 1952 1953
SAL 100070 1950 1951 1952 1953
DEPTH (m)
OXY 100070 1950 1951 1952 1953
SIGT 100070 1950 1951 1952 1953
J F M A M J J A S O N D

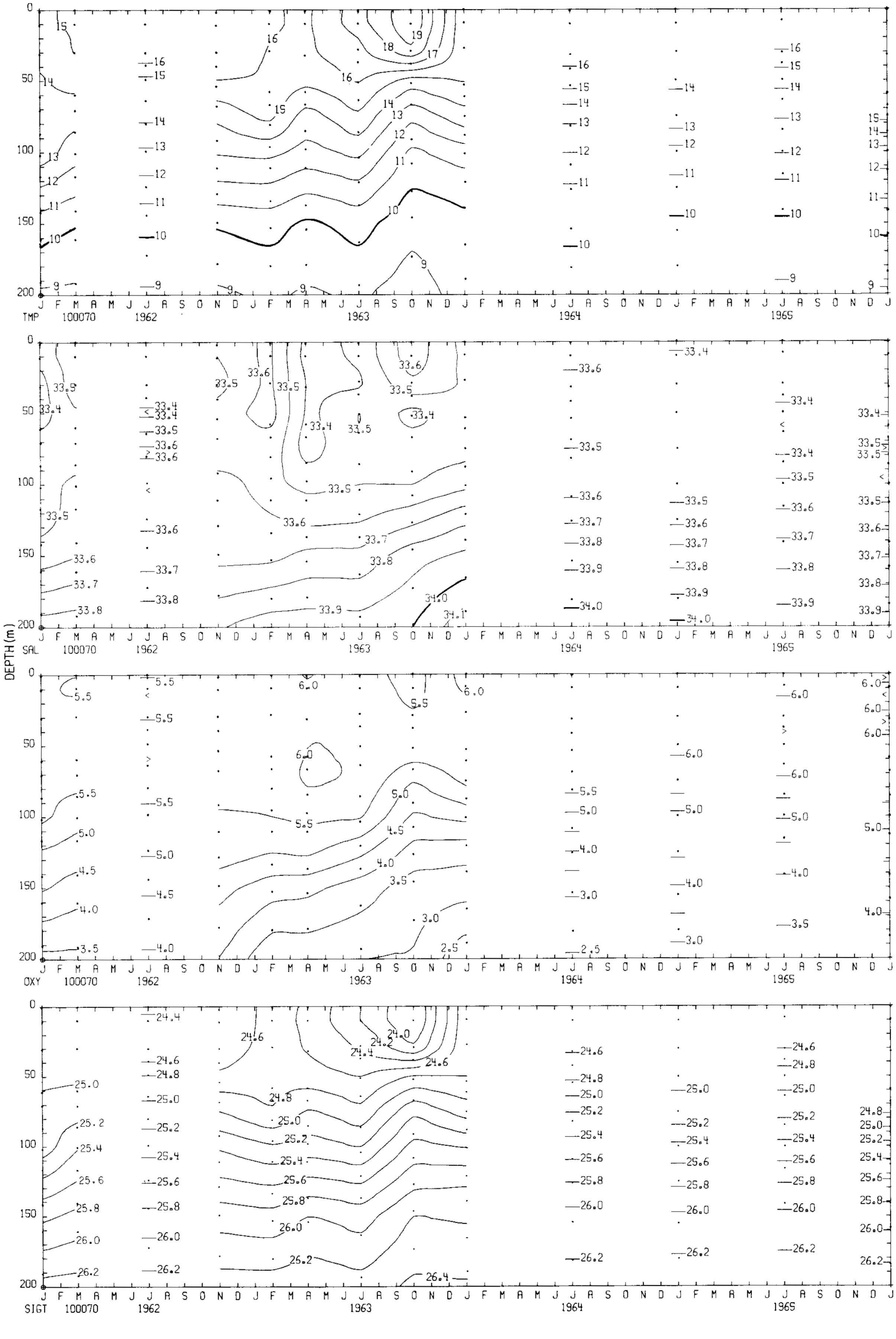

DEPTH (m)
TMP-D 100070
SAL-D 100070
OXY-D 100070
SIGT-D 100070
J F M A M J J A S O N D
1950
1951
1952
1953

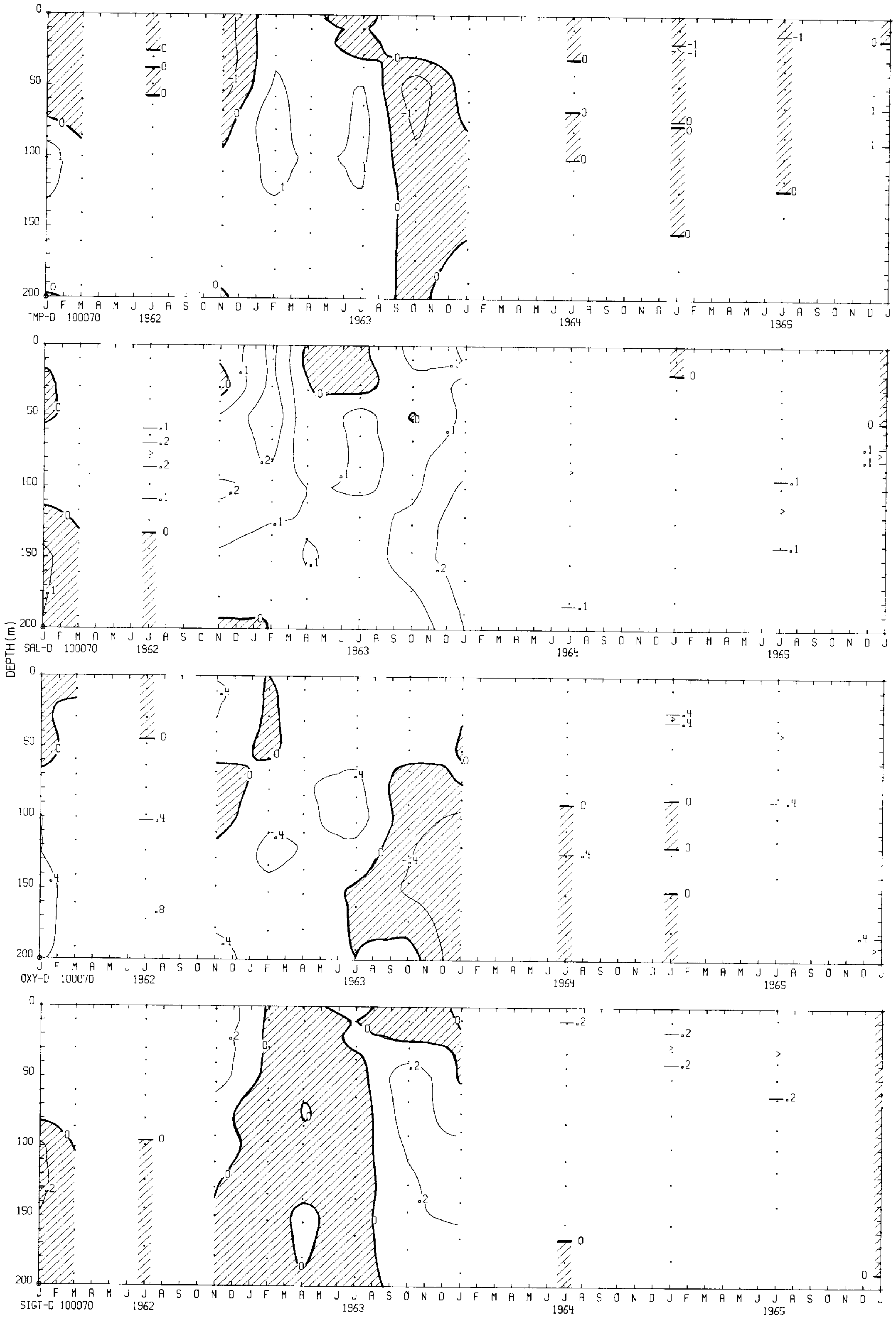

DEPTH (m)
TMP 100070 1954 1955 1956 1957
SAL 100070 1954 1955 1956 1957
OXY 100070 1954 1955 1956 1957
SIGT 100070 1954 1955 1956 1957
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J


DEPTH (m)
TMP-D 100070
SAL-D 100070
OXY-D 100070
SIGT-D 100070
1954
1955
1956
1957
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J


DEPTH (m)
TMP 100070
SAL 100070
OXY 100070
SIGT 100070
1958
1959
1960
1961

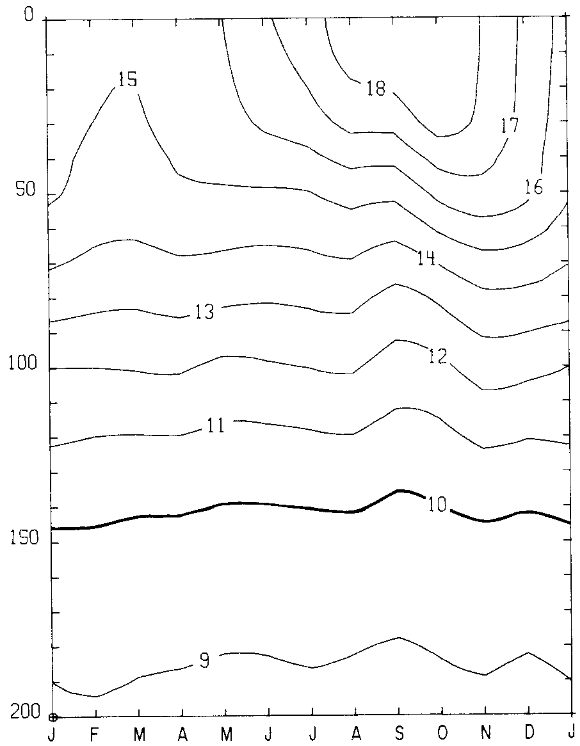

TMP-D 100070
SAL-D 100070
OXY-D 100070
SIGT-D 100070
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1958
1959
1960
1961


TMP 100070
SAL 100070
OXY 100070
SIGT 100070
DEPTH (m)
1962
1963
1964
1965

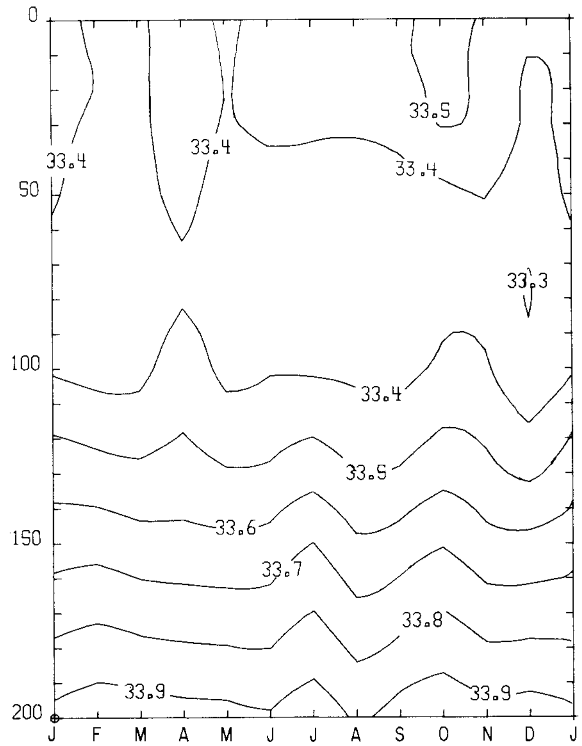


DEPTH (m)
TMP-D 100070
SAL-D 100070
OXY-D 100070
SIGT-D 100070
1962
1963
1964
1965

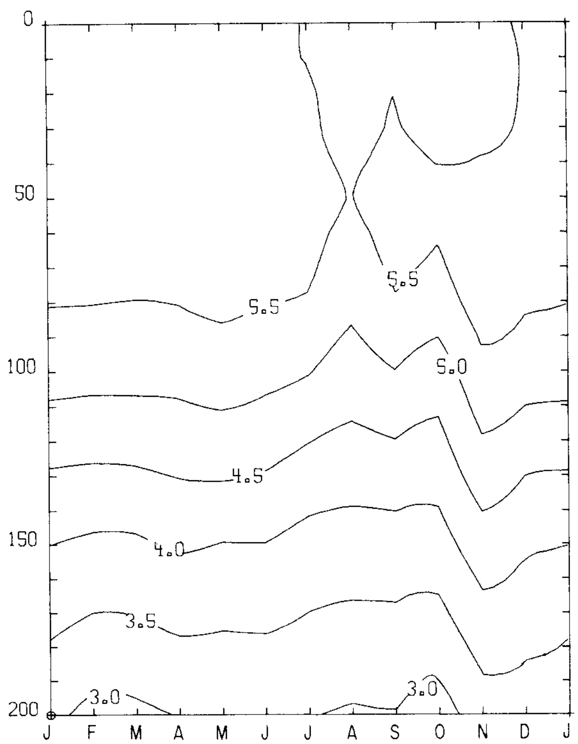
DEPTH(m)



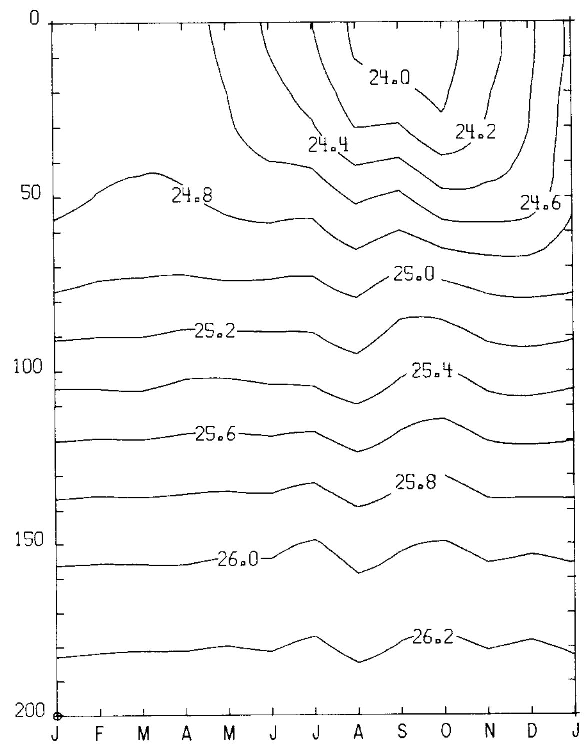
MEAN TMP 100070 JAN-DEC



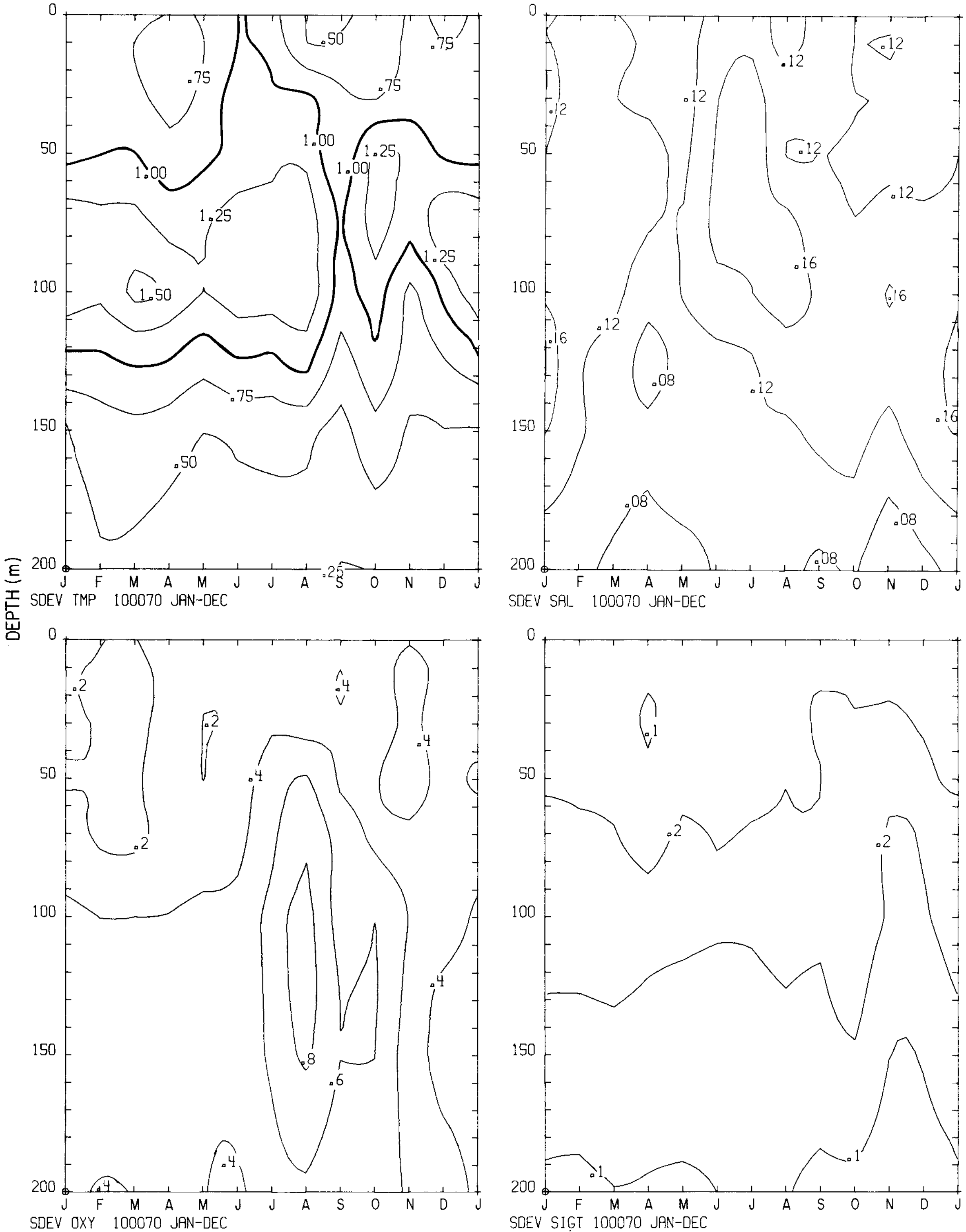
MEAN SAL 100070 JAN-DEC

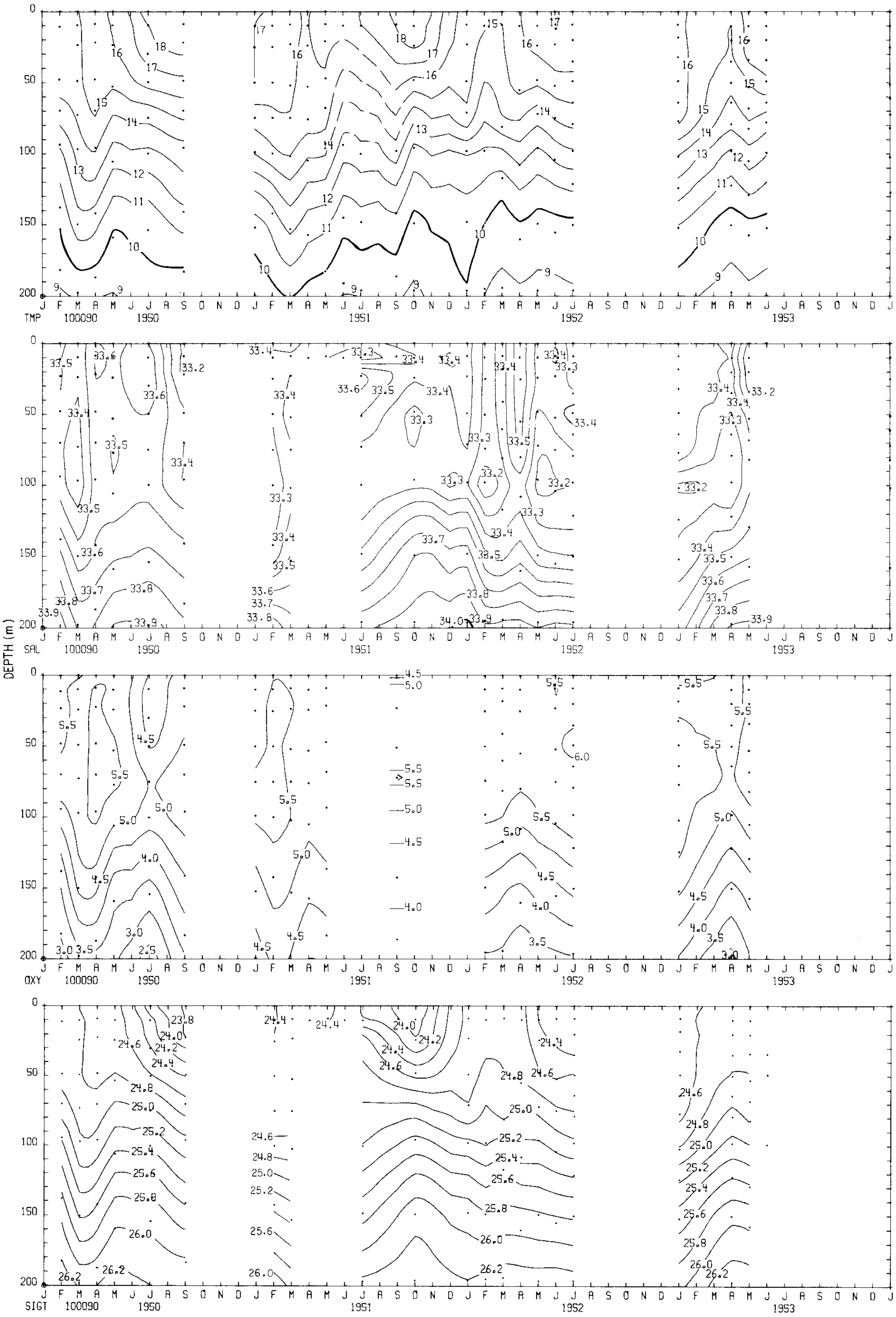


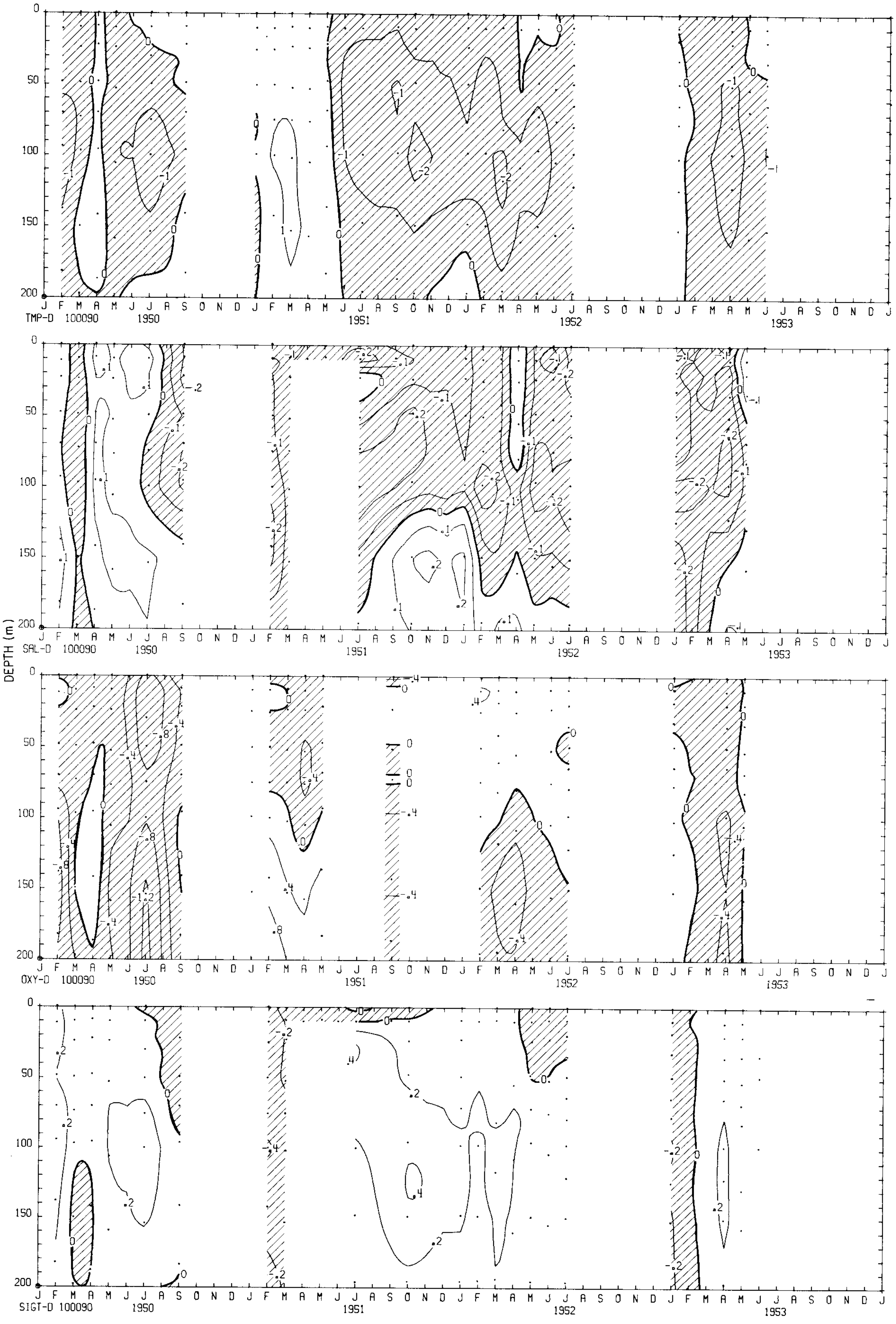
MEAN OXY 100070 JAN-DEC



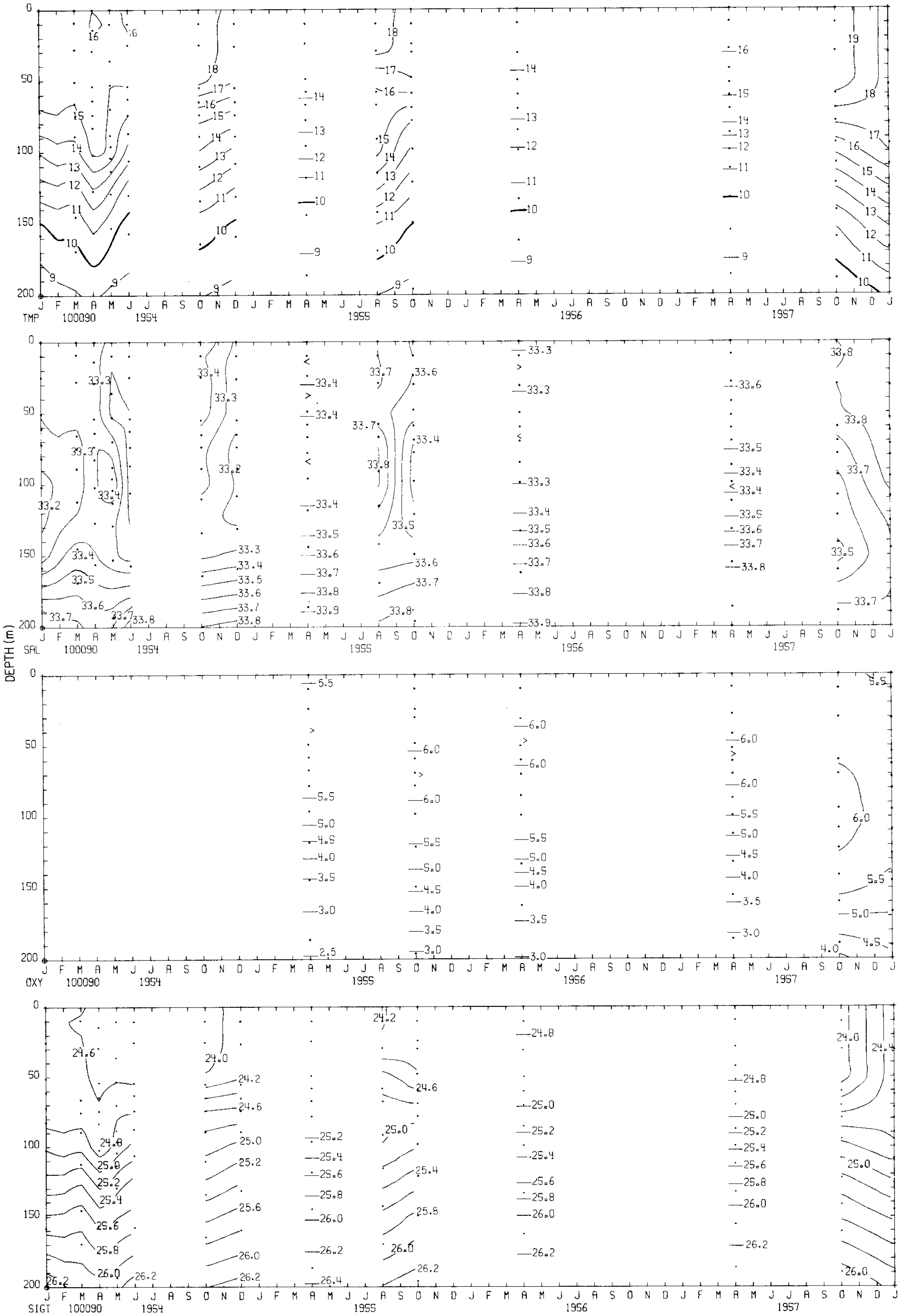
MEAN SIGT 100070 JAN-DEC

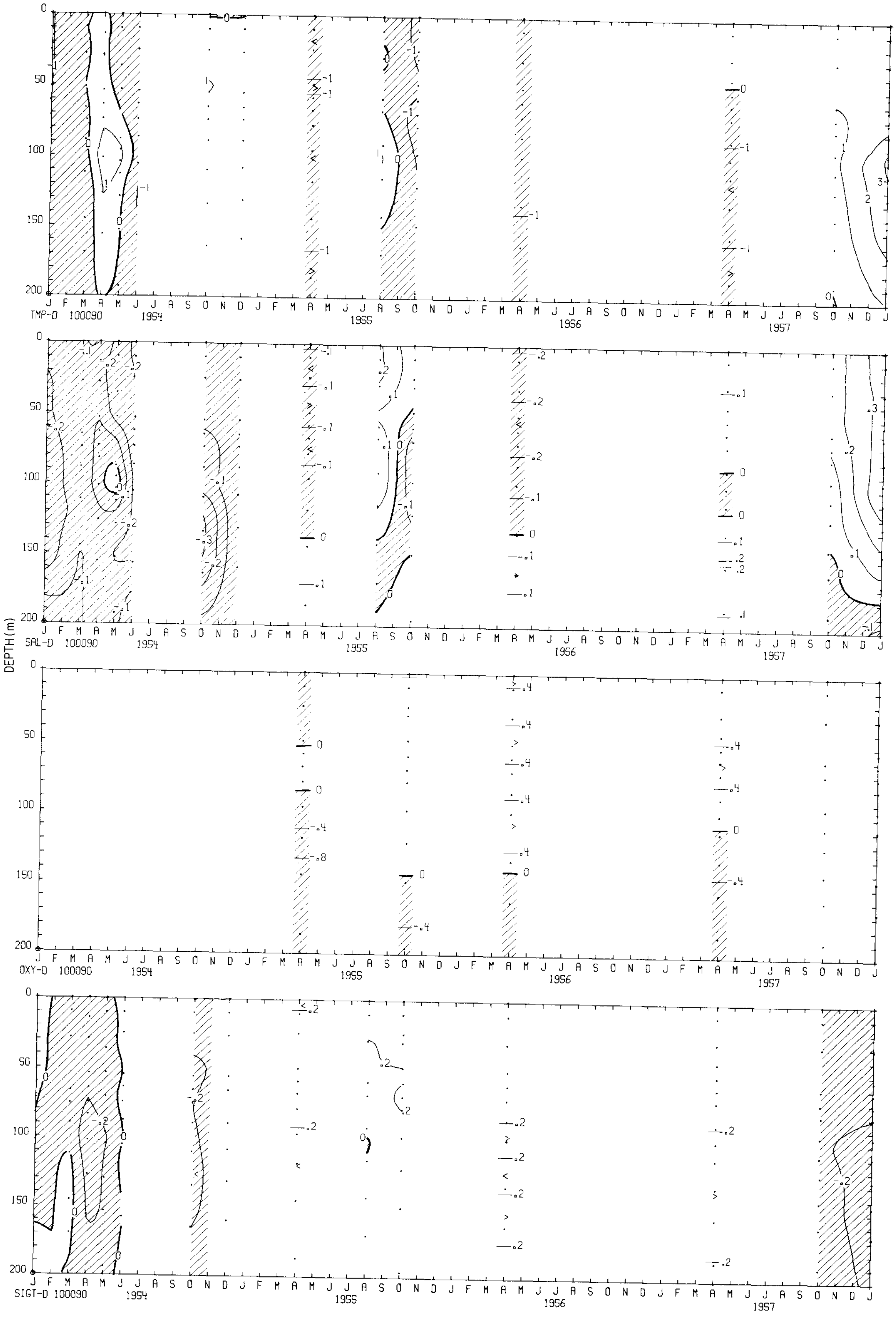

DEPTH (m)
SDEV TMP 100070 JAN-DEC
SDEV SAL 100070 JAN-DEC
SDEV OXY 100070 JAN-DEC
SDEV SIGT 100070 JAN-DEC
J F M A M J J A S O N D J

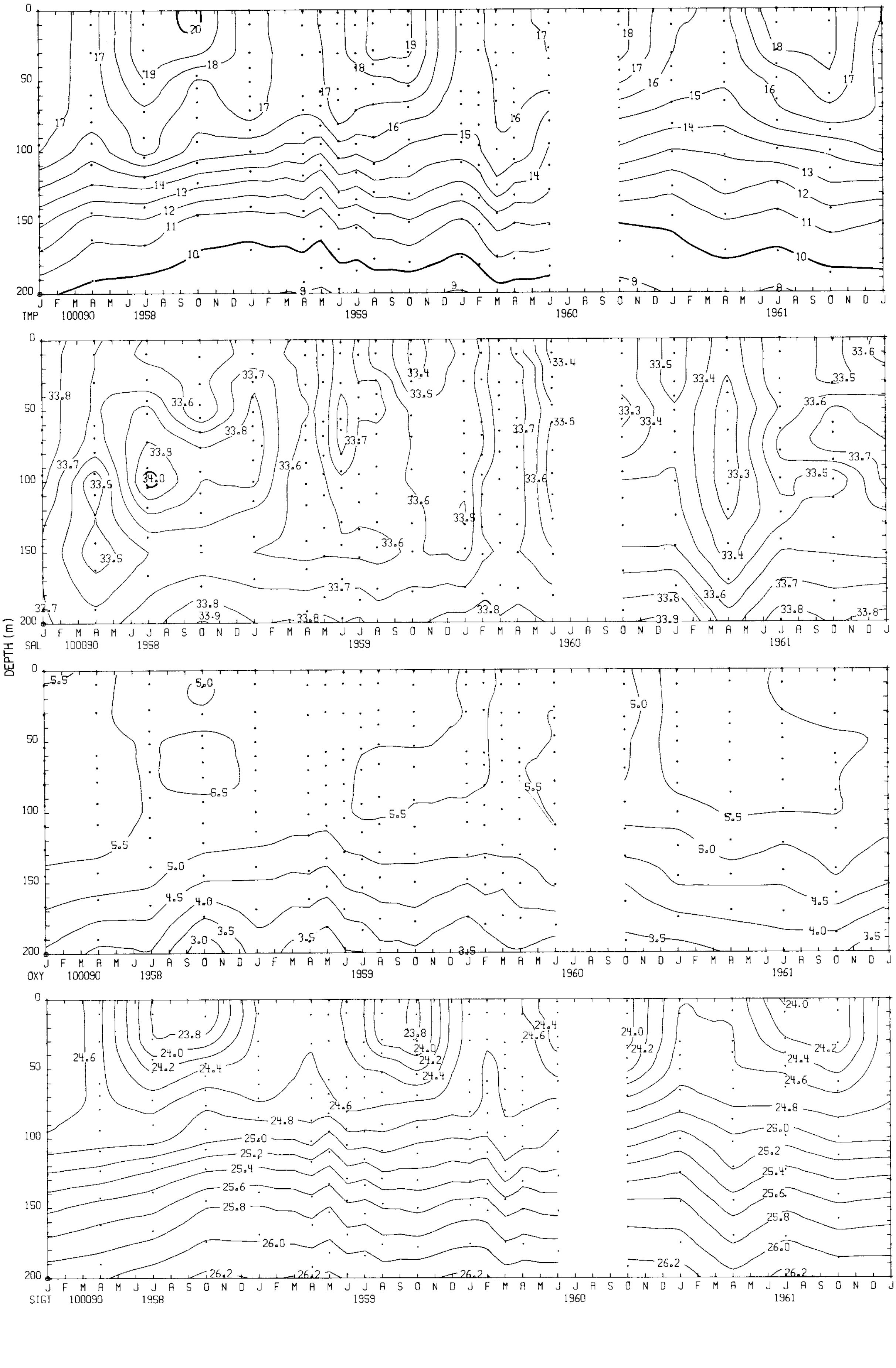

DEPTH (m)
TMP 100090
SAL 100090
OXY 100090
SIGT 100090
1950
1951
1952
1953
J F M A M J J A S O N D

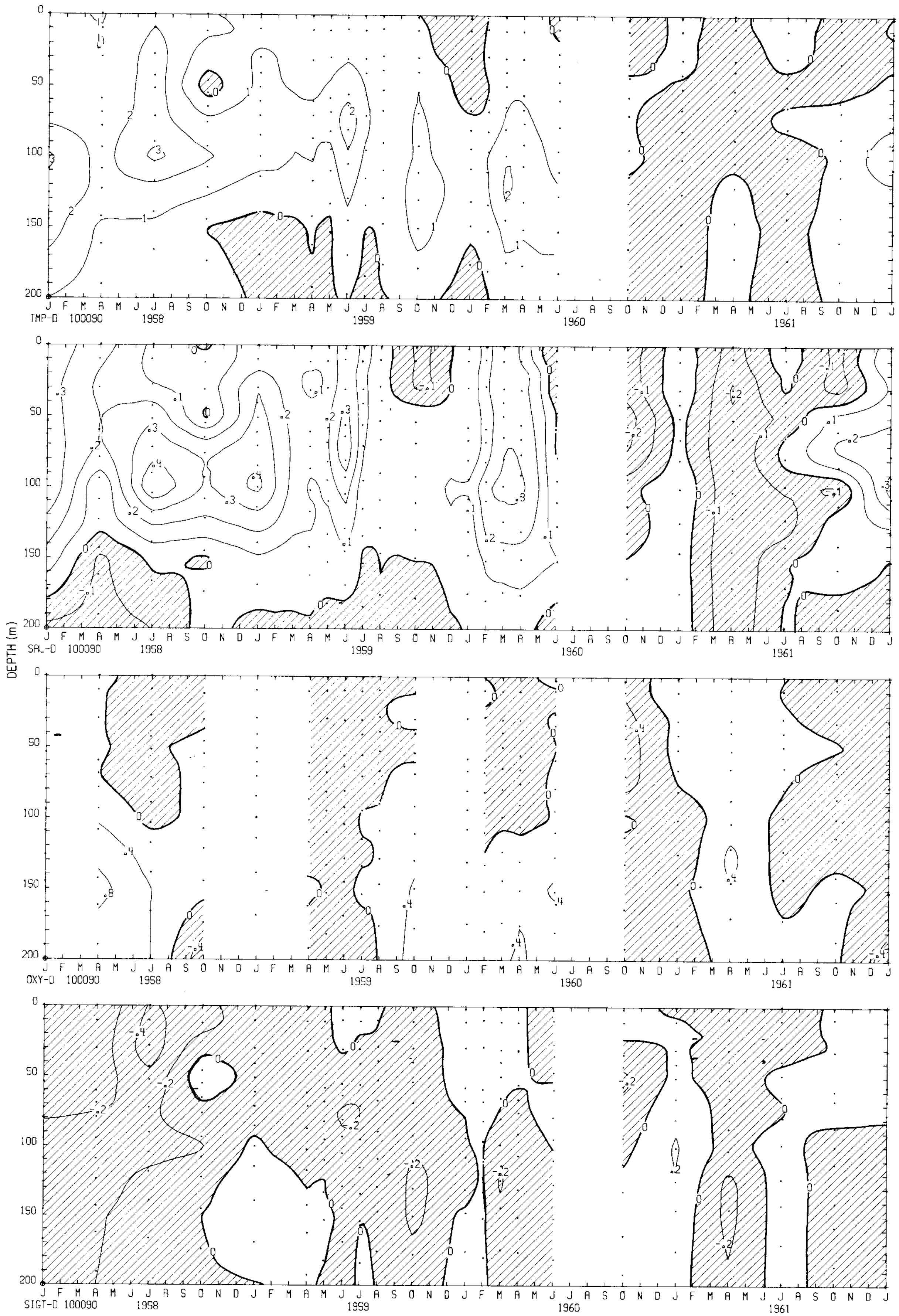


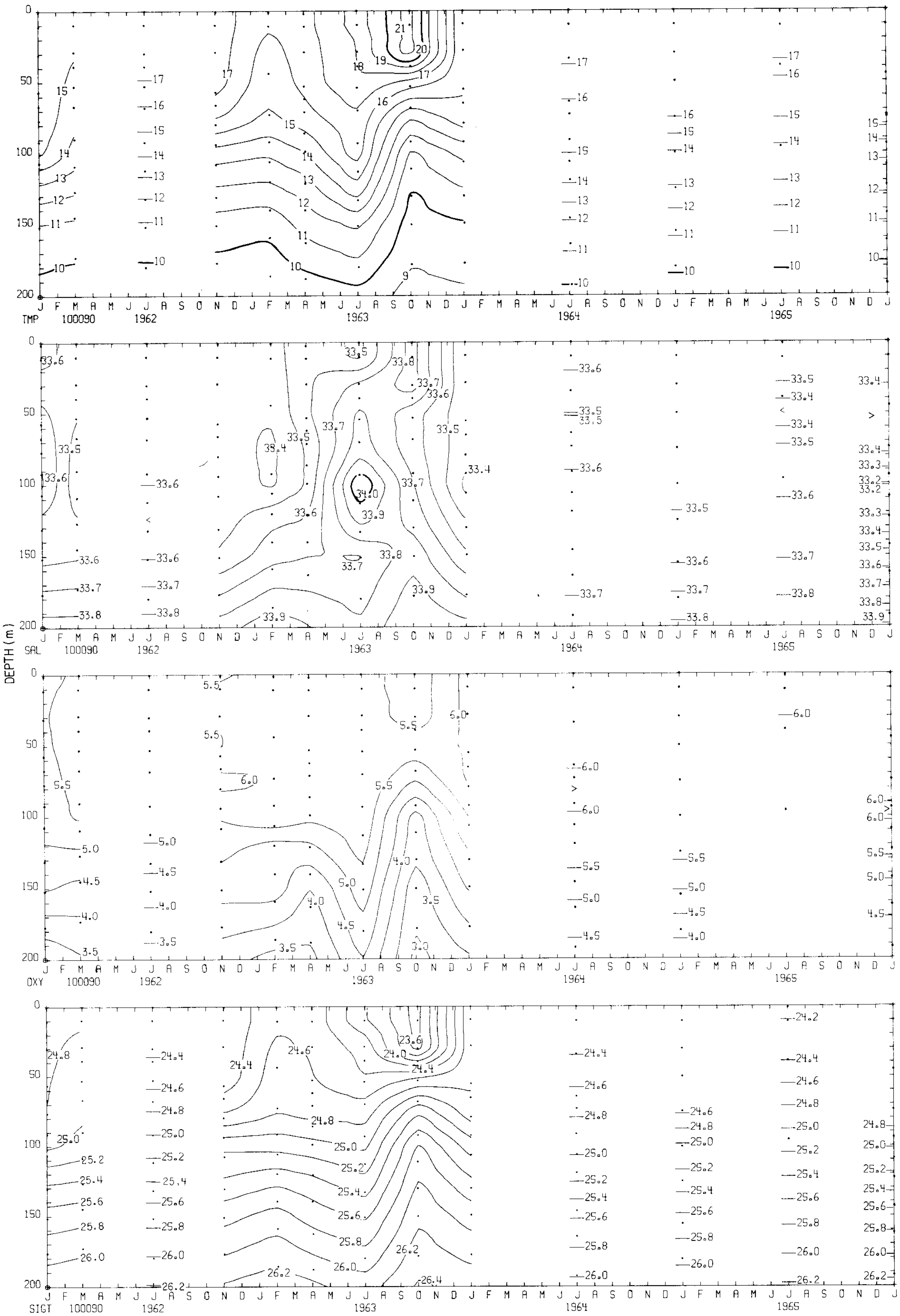
DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 100090
SAL-D 100090
OXY-D 100090
SIGT-D 100090
1950
1951
1952
1953

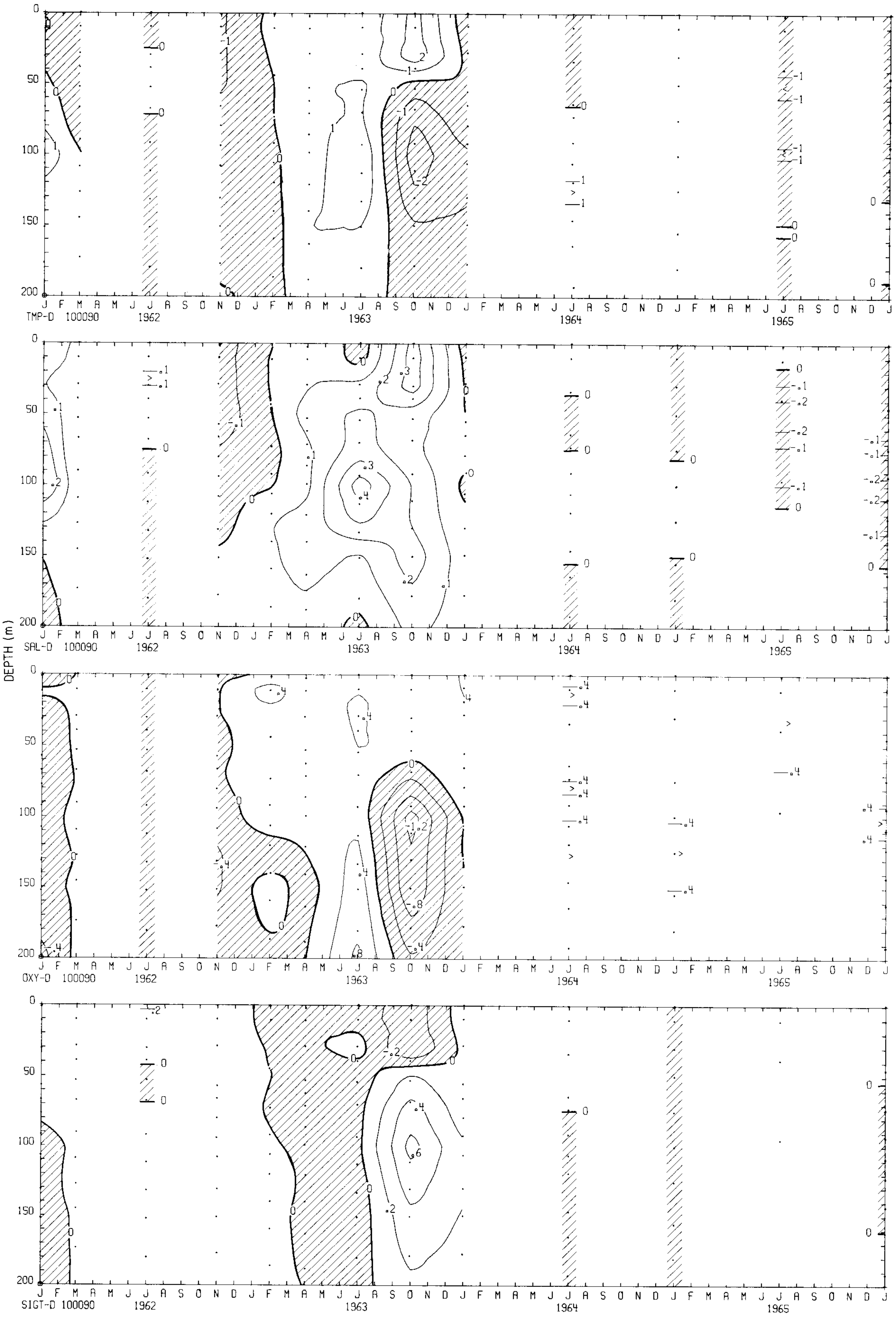

DEPTH (m)
TMP 100090 1954 1955 1956 1957
SAL 100090 1954 1955 1956 1957
OXY 100090 1954 1955 1956 1957
SIGT 100090 1954 1955 1956 1957
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J


DEPTH (m)
TMP-D 100090
SAL-D 100090
OXY-D 100090
SIGT-D 100090
1954
1955
1956
1957

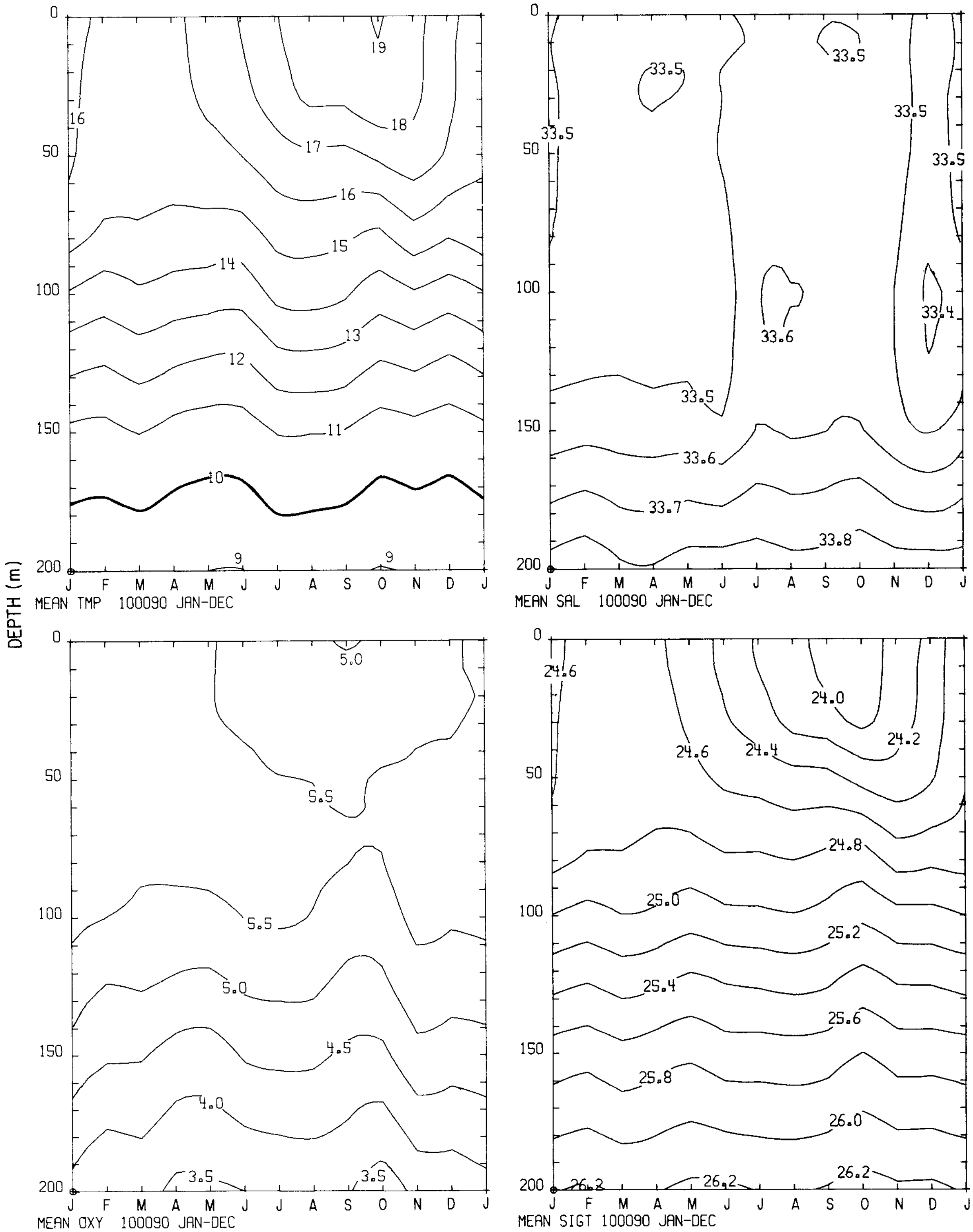

TMP 100090
SAL 100090
OXY 100090
SIGT 100090
DEPTH (m)
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1958
1959
1960
1961

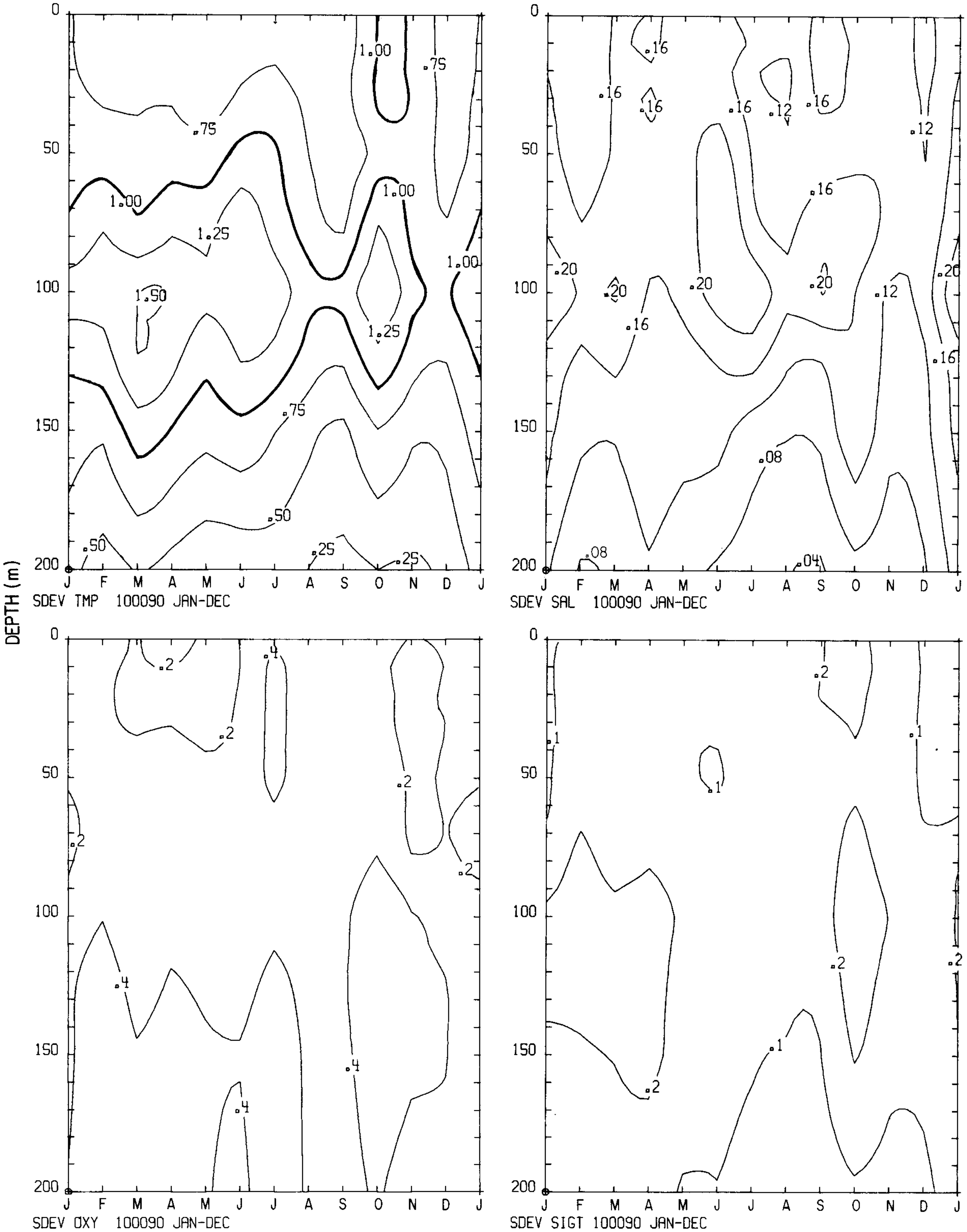

DEPTH (m)
TMP-D 100090
SAL-D 100090
OXY-D 100090
SIGT-D 100090
1958
1959
1960
1961

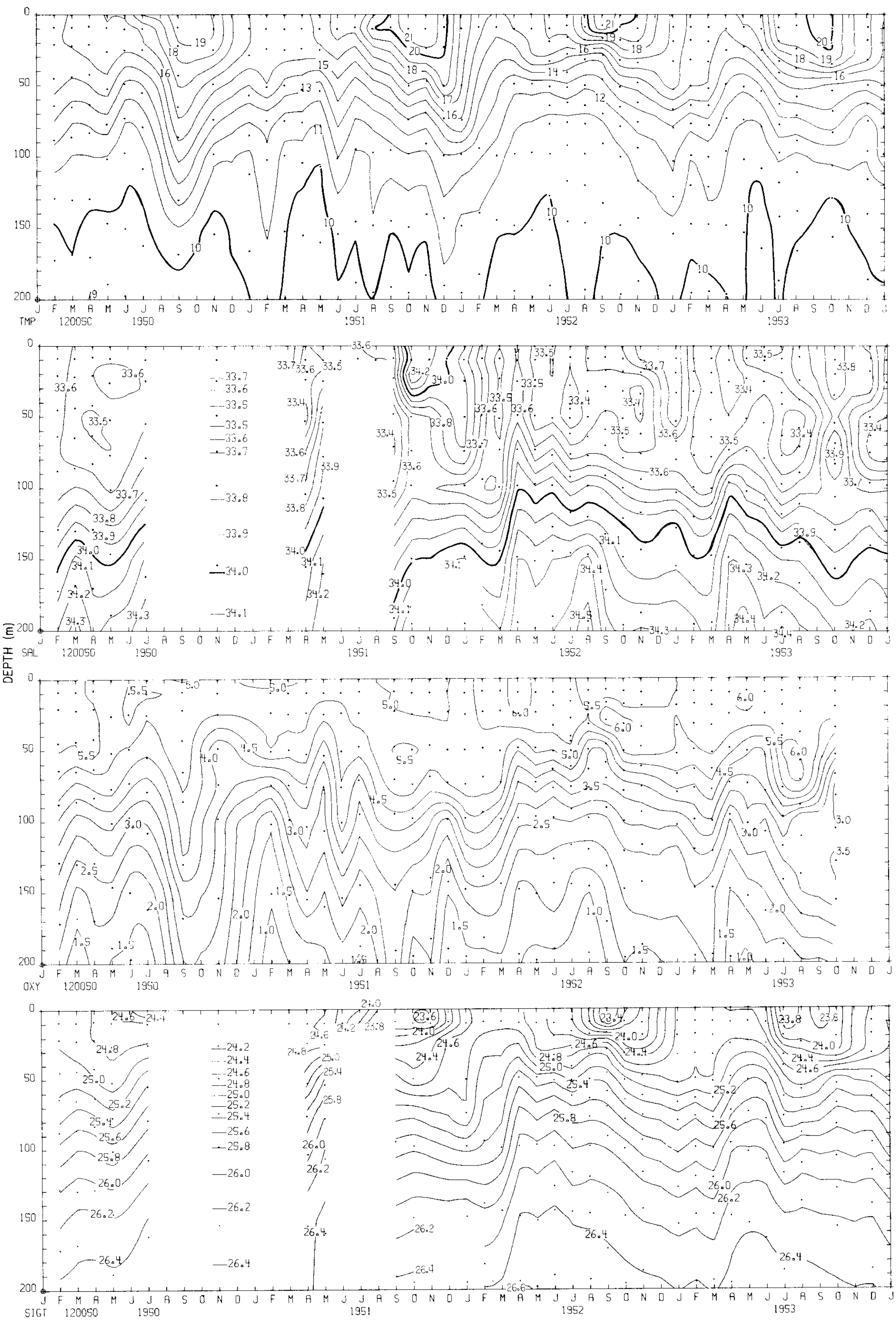

DEPTH (m)
TMP 100090 1962 1963 1964 1965
SAL 100090 1962 1963 1964 1965
OXY 100090 1962 1963 1964 1965
SIGT 100090 1962 1963 1964 1965
J F M A M J J A S O N D



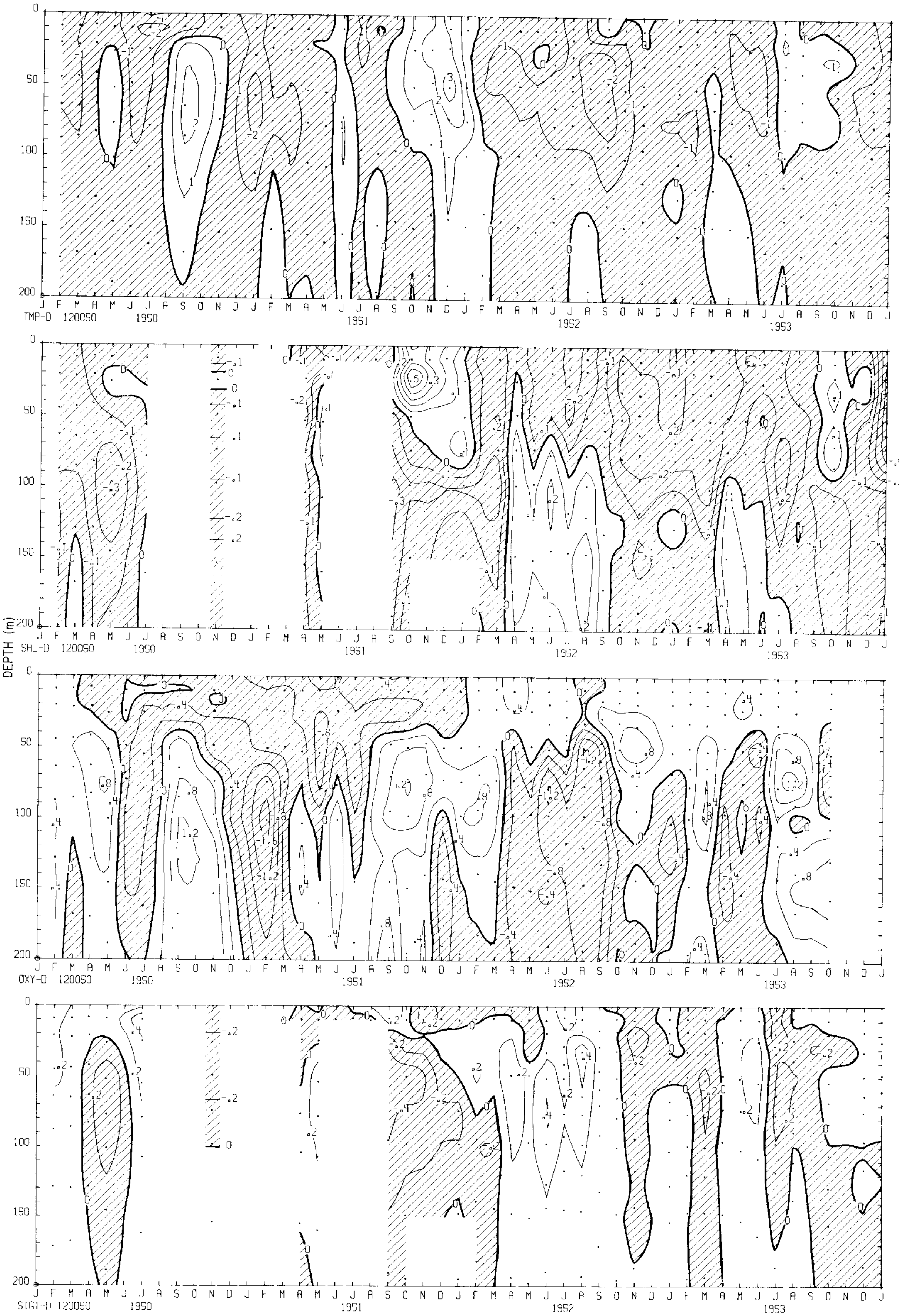
TMP-D 100090
SAL-D 100090
OXY-D 100090
SIGT-D 100090
DEPTH (m)
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1962
1963
1964
1965

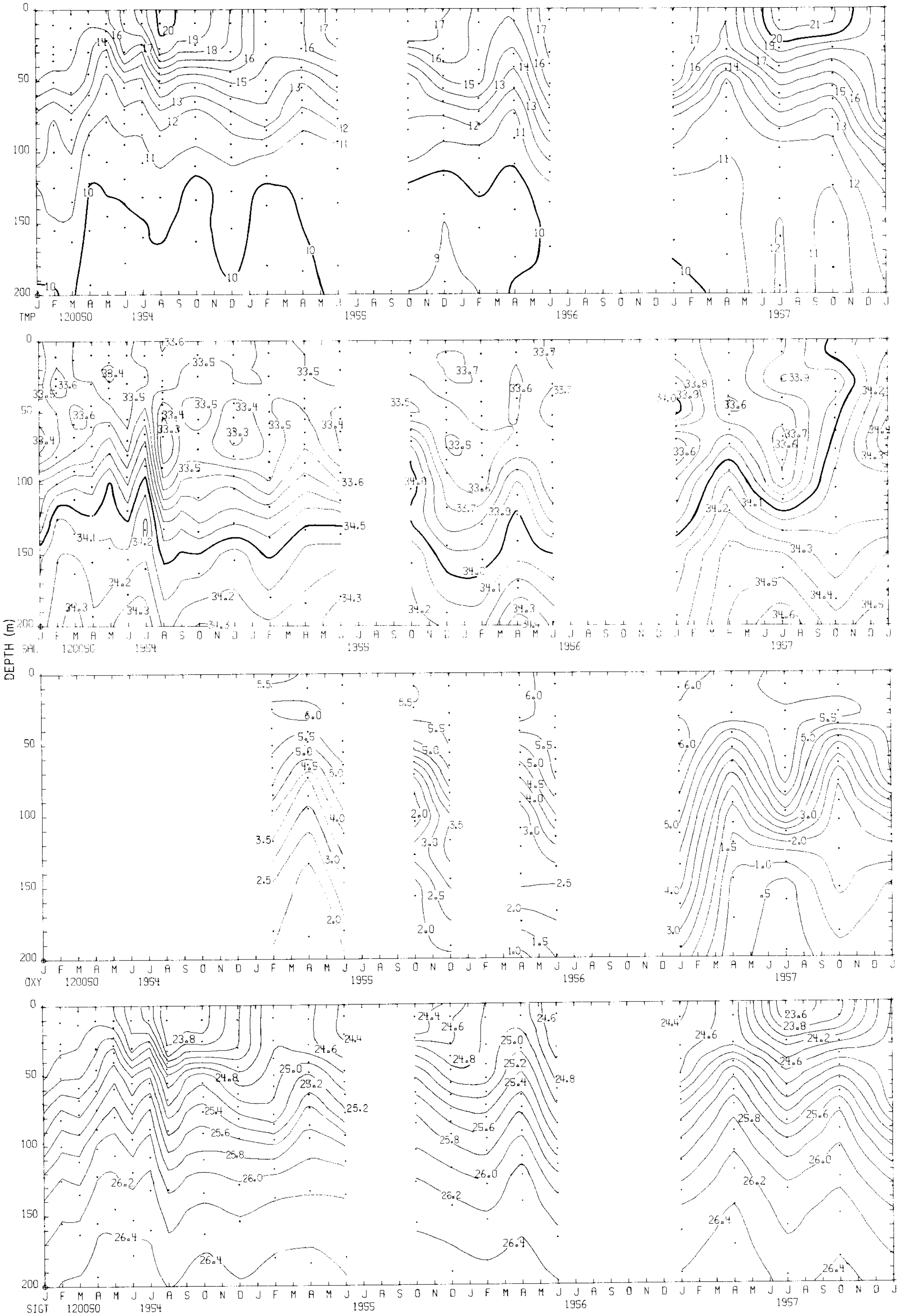

DEPTH (m)
MEAN TMP 100090 JAN-DEC
MEAN SAL 100090 JAN-DEC
MEAN OXY 100090 JAN-DEC
MEAN SIGT 100090 JAN-DEC
J F M A M J J A S O N D J
0 50 100 150 200
19 18 17 16 15 14 13 12 11 10 9
33.5 33.6 33.4 33.7 33.8
5.0 5.5 4.5 4.0 3.5
24.6 24.0 24.2 24.4 24.8 25.0 25.2 25.4 25.6 25.8 26.0 26.2

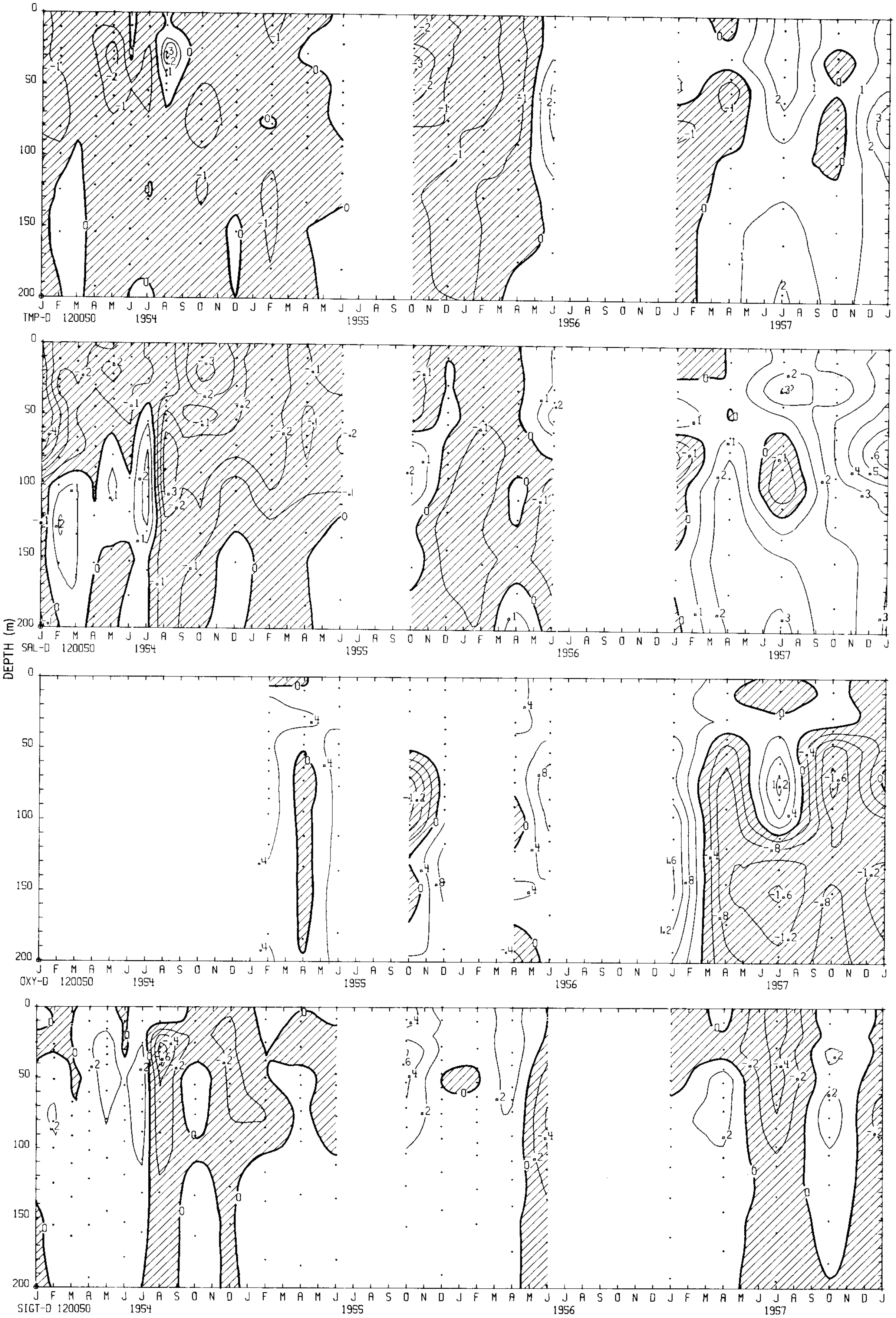

DEPTH (m)
SDEV TMP 100090 JAN-DEC
SDEV SAL 100090 JAN-DEC
SDEV OXY 100090 JAN-DEC
SDEV SIGT 100090 JAN-DEC

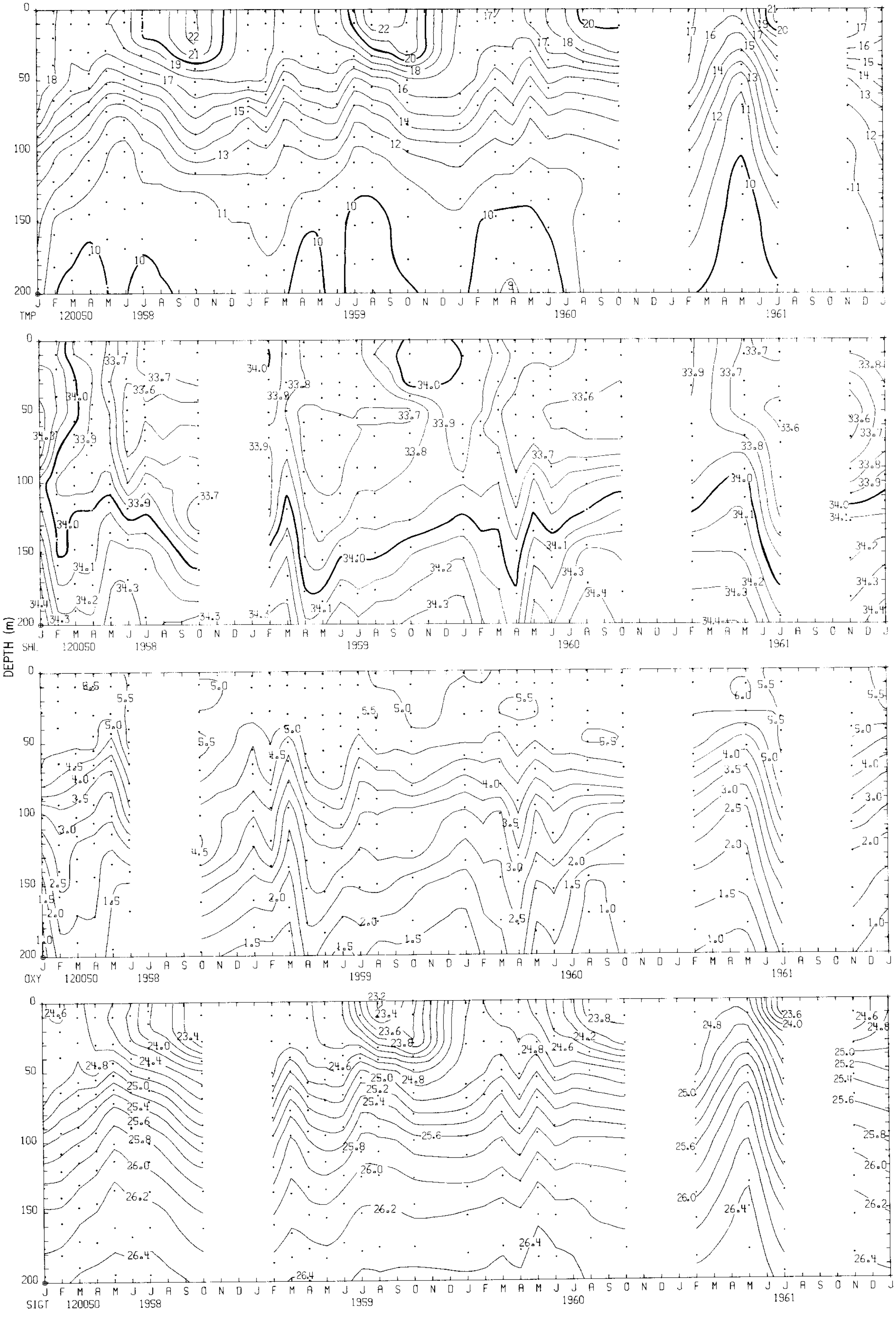


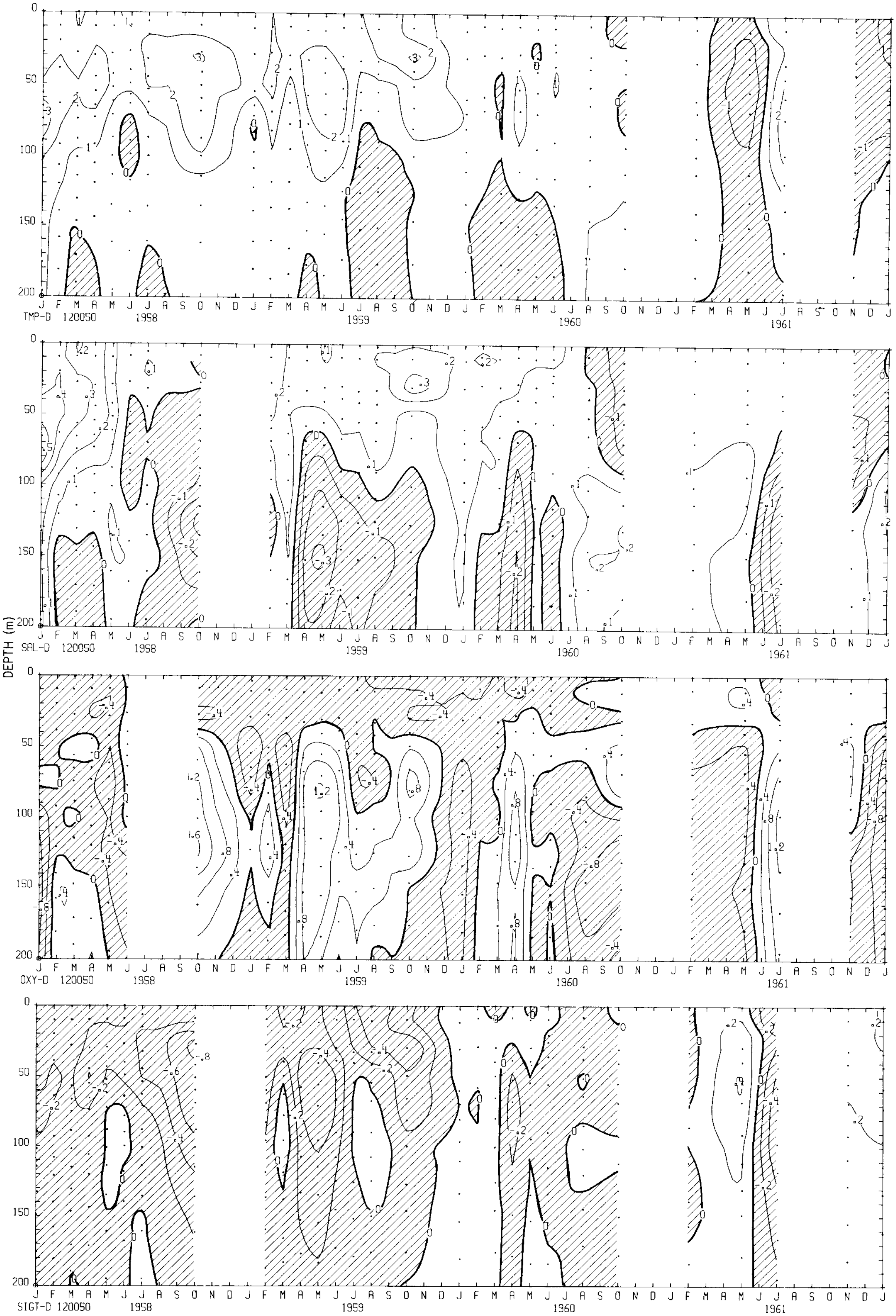
DEPTH (m)
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 120050 1950
1951
1952
1953
SAL 120050 1950
OXY 120050 1950
SIGT 120050 1950

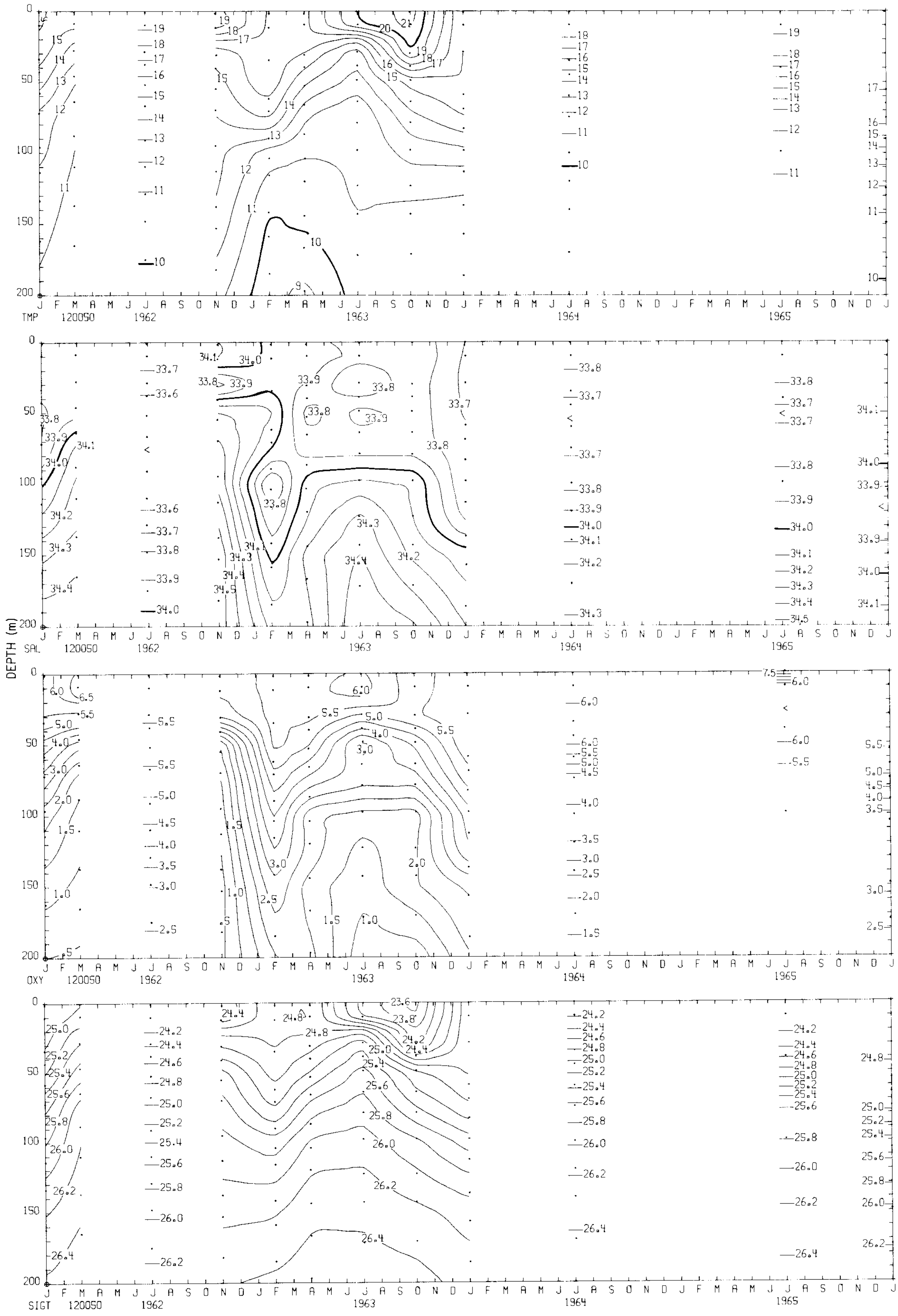

DEPTH (m)
TMP-D 120050
SAL-D 120050
OXY-D 120050
SIGT-D 120050
1950
1951
1952
1953
J F M A M J J A S O N D
0
50
100
150
200

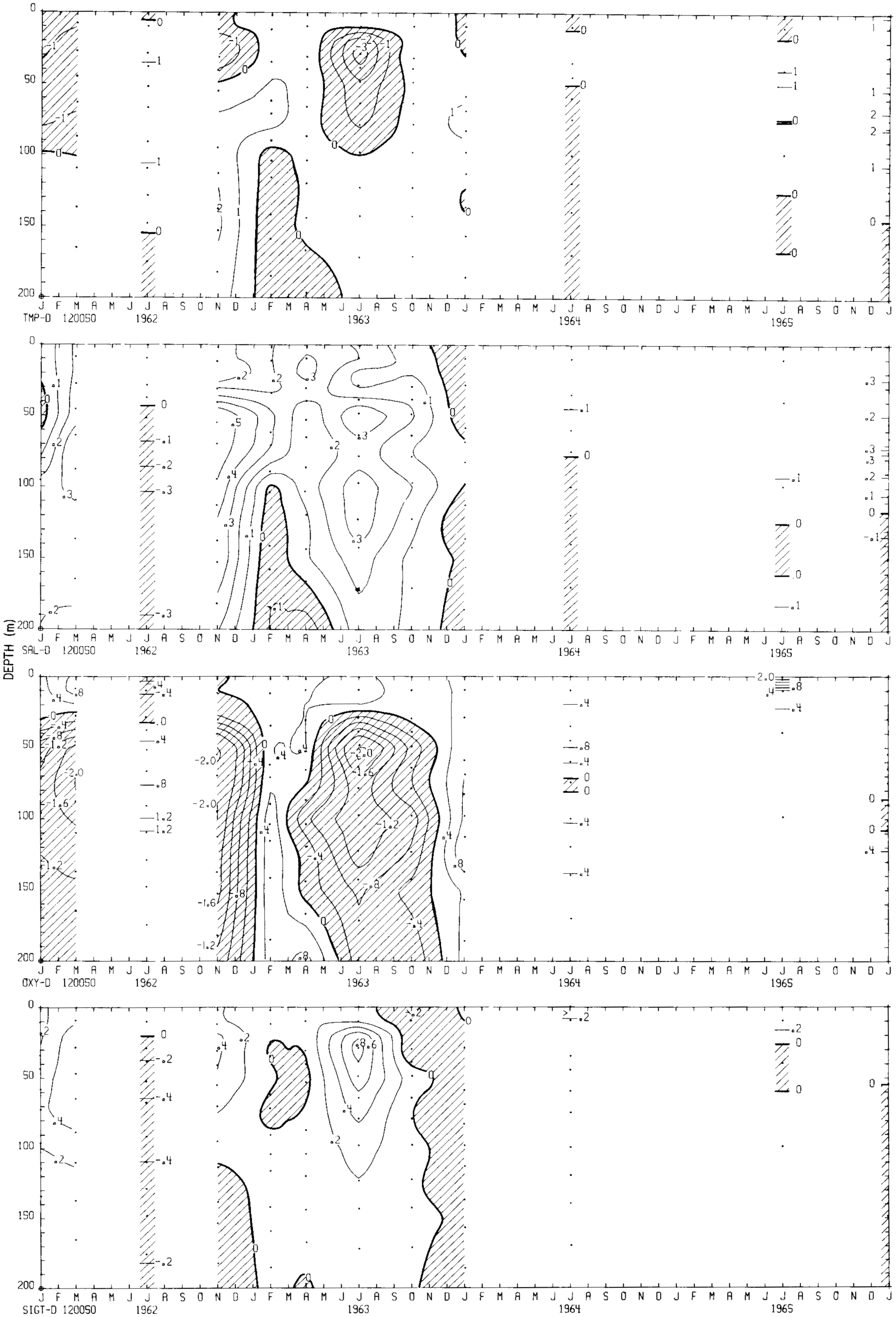

DEPTH (m)
TMP 120050 1954
1955
1956
1957
SAL 120050 1954
1955
1956
1957
OXY 120050 1954
1955
1956
1957
SIGT 120050 1954
1955
1956
1957

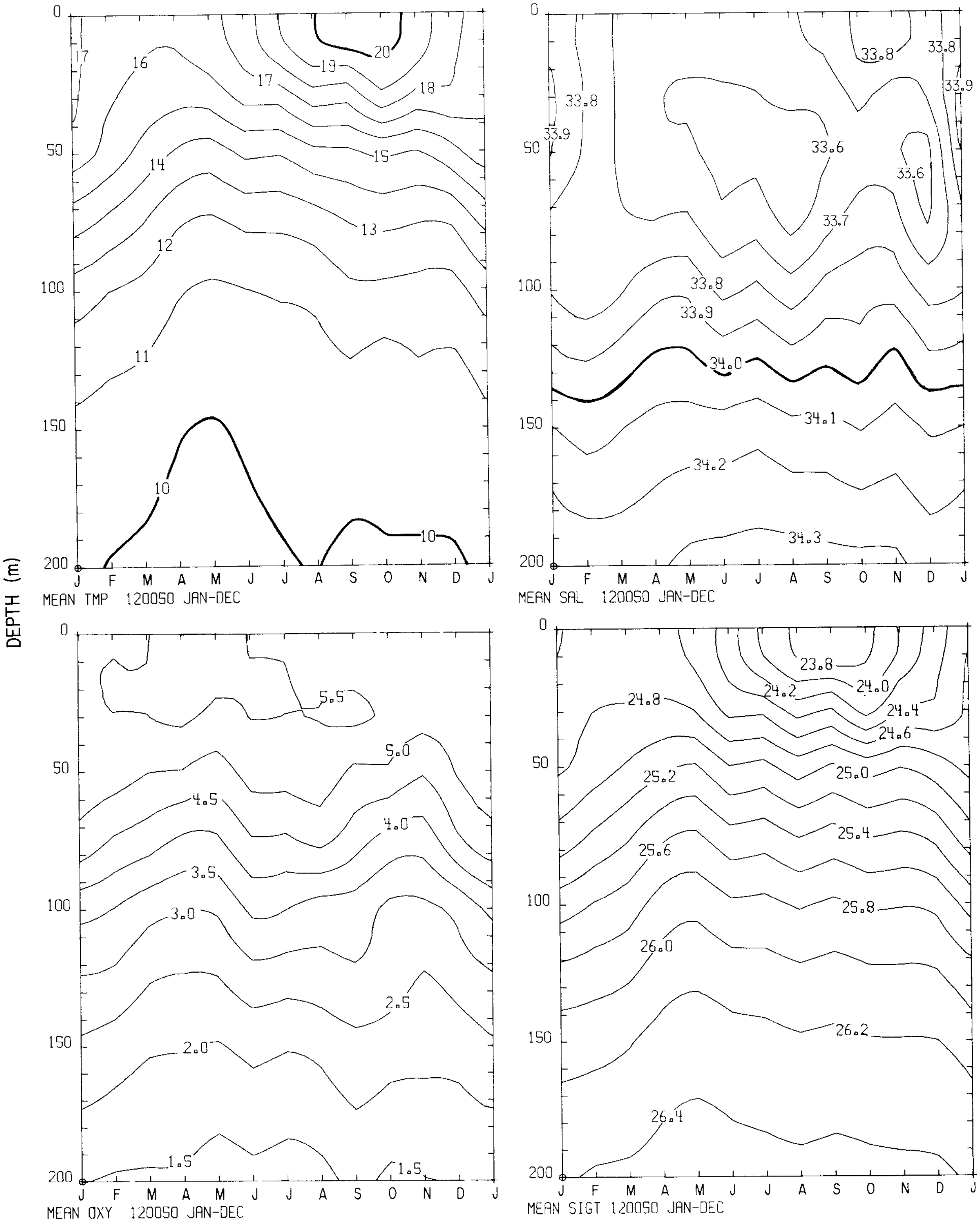

DEPTH (m)
TMP-D 120050
SAL-D 120050
OXY-D 120050
SIGT-D 120050
1954
1955
1956
1957
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
0
50
100
150
200

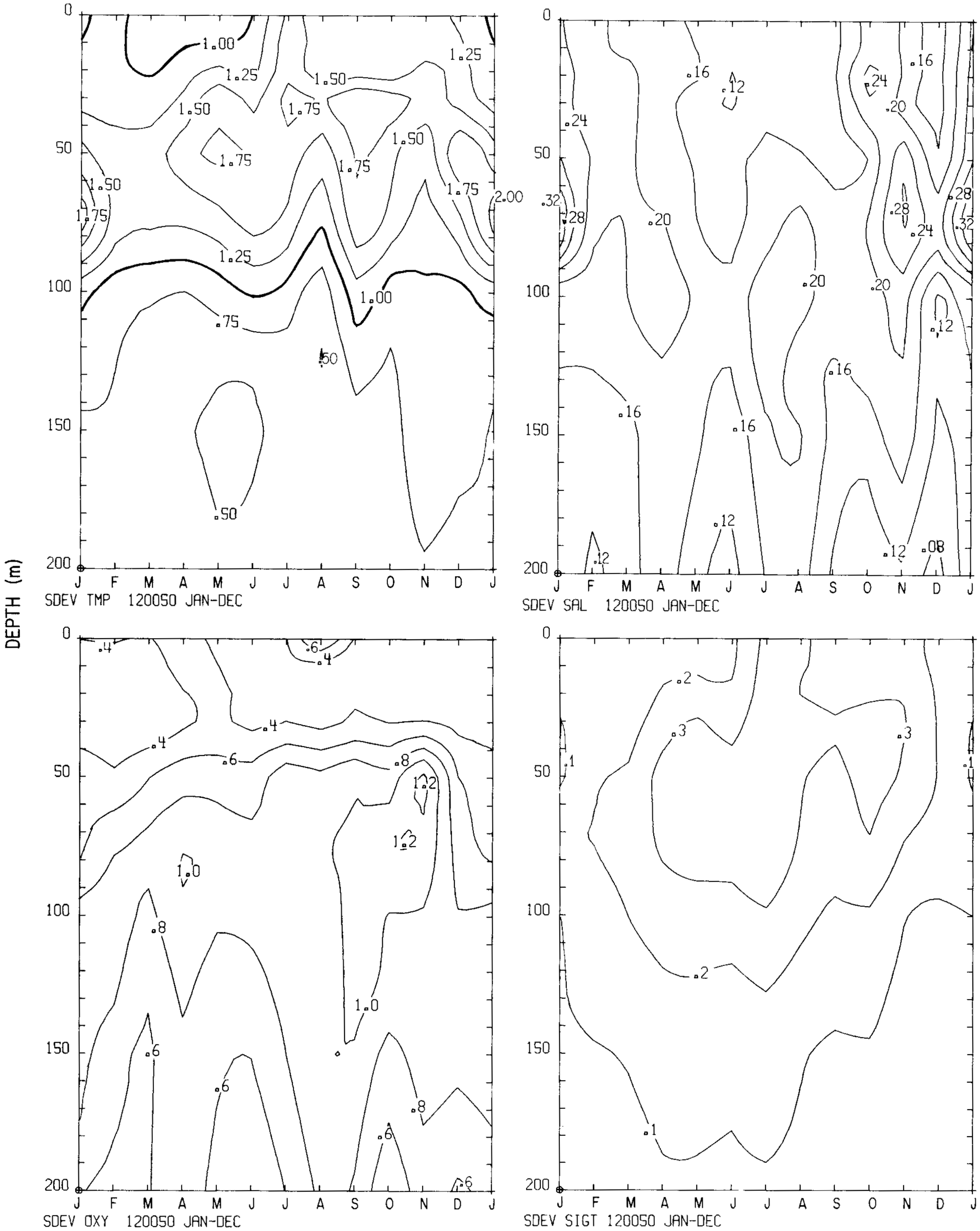

TMP 120050 1958
1959
1960
1961
SHL 120050 1958
OXY 120050 1958
SIGT 120050 1958
DEPTH (m)
J F M A M J J A S O N D

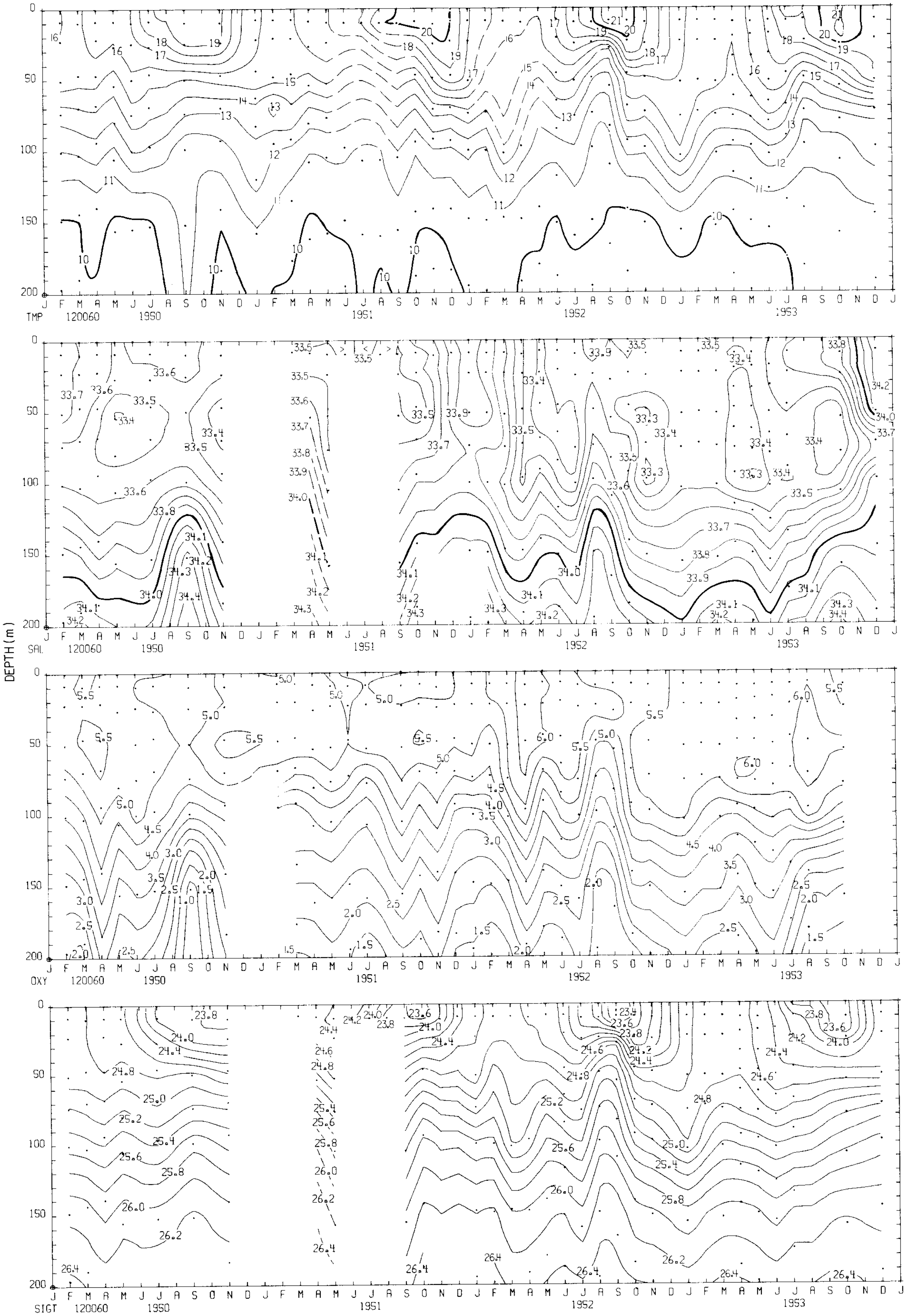

DEPTH (m)
TMP-D 120050
SAL-D 120050
OXY-D 120050
SIGT-D 120050
1958
1959
1960
1961

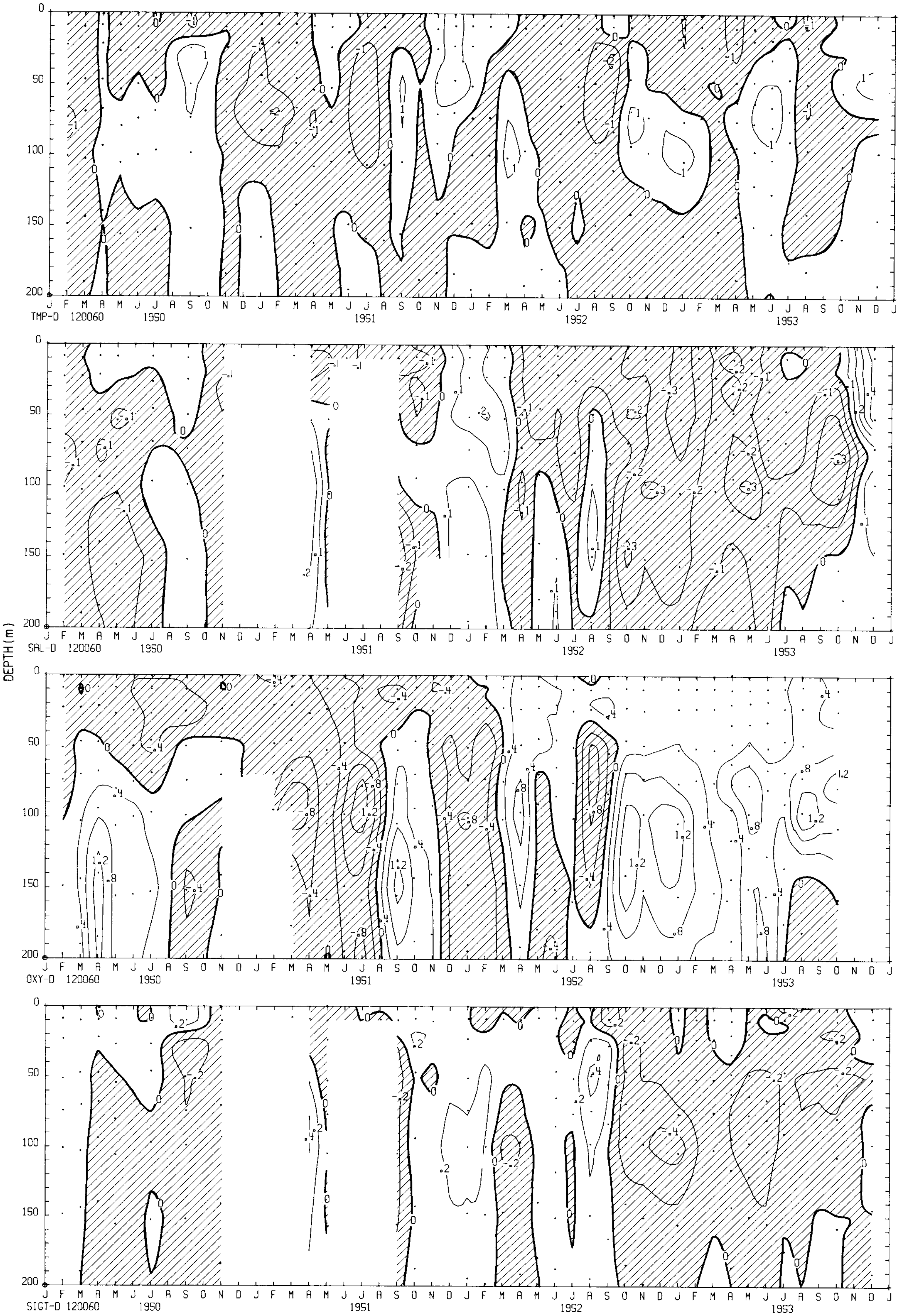

TMP 120050
SAL 120050
OXY 120050
SIGT 120050
DEPTH (m)
1962
1963
1964
1965


DEPTH (m)
TMP-D 120050
SAL-D 120050
OXY-D 120050
SIGT-D 120050
1962
1963
1964
1965
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

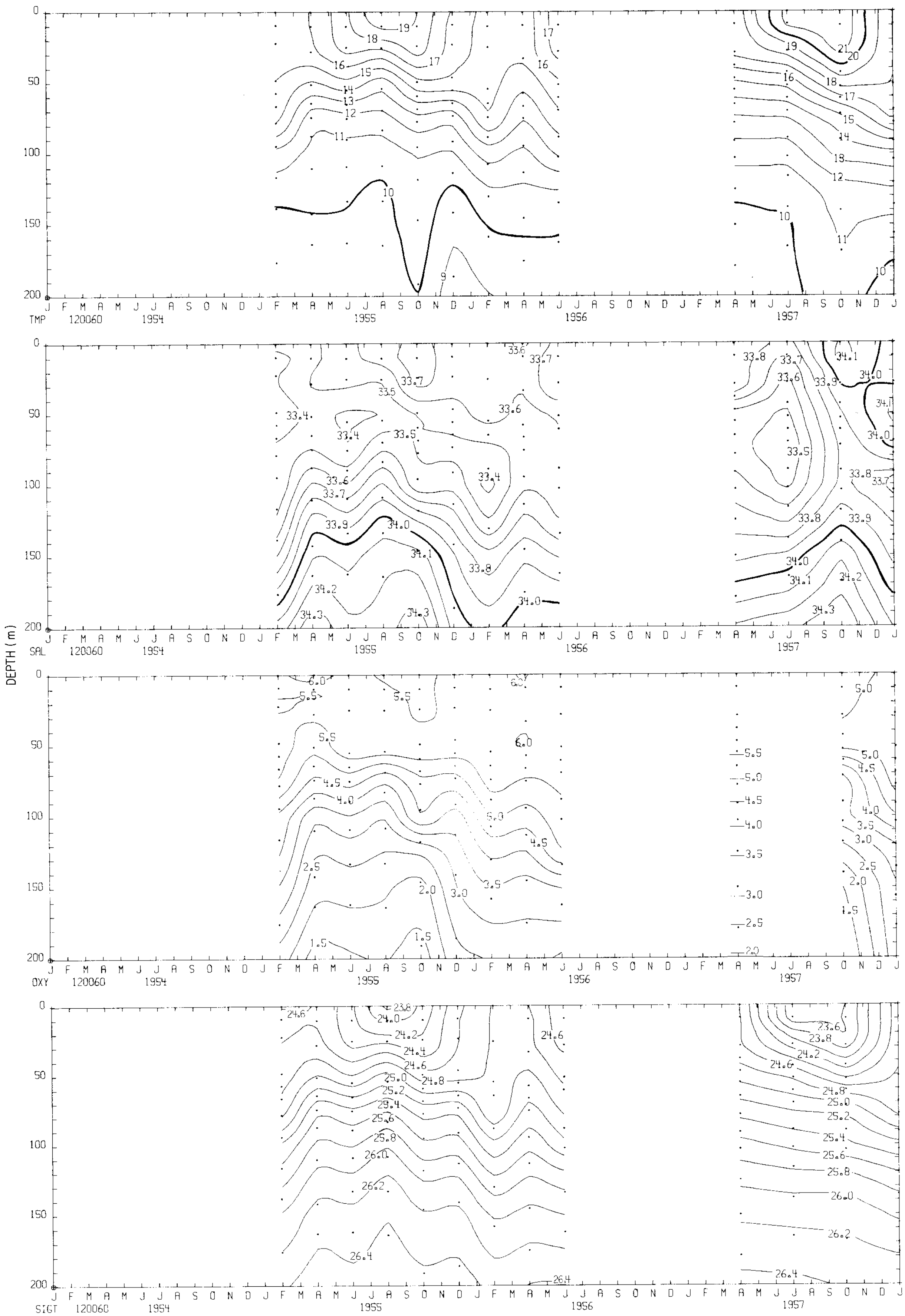

DEPTH (m)
MEAN TMP 120050 JAN-DEC
MEAN SAL 120050 JAN-DEC
MEAN OXY 120050 JAN-DEC
MEAN SIGT 120050 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200

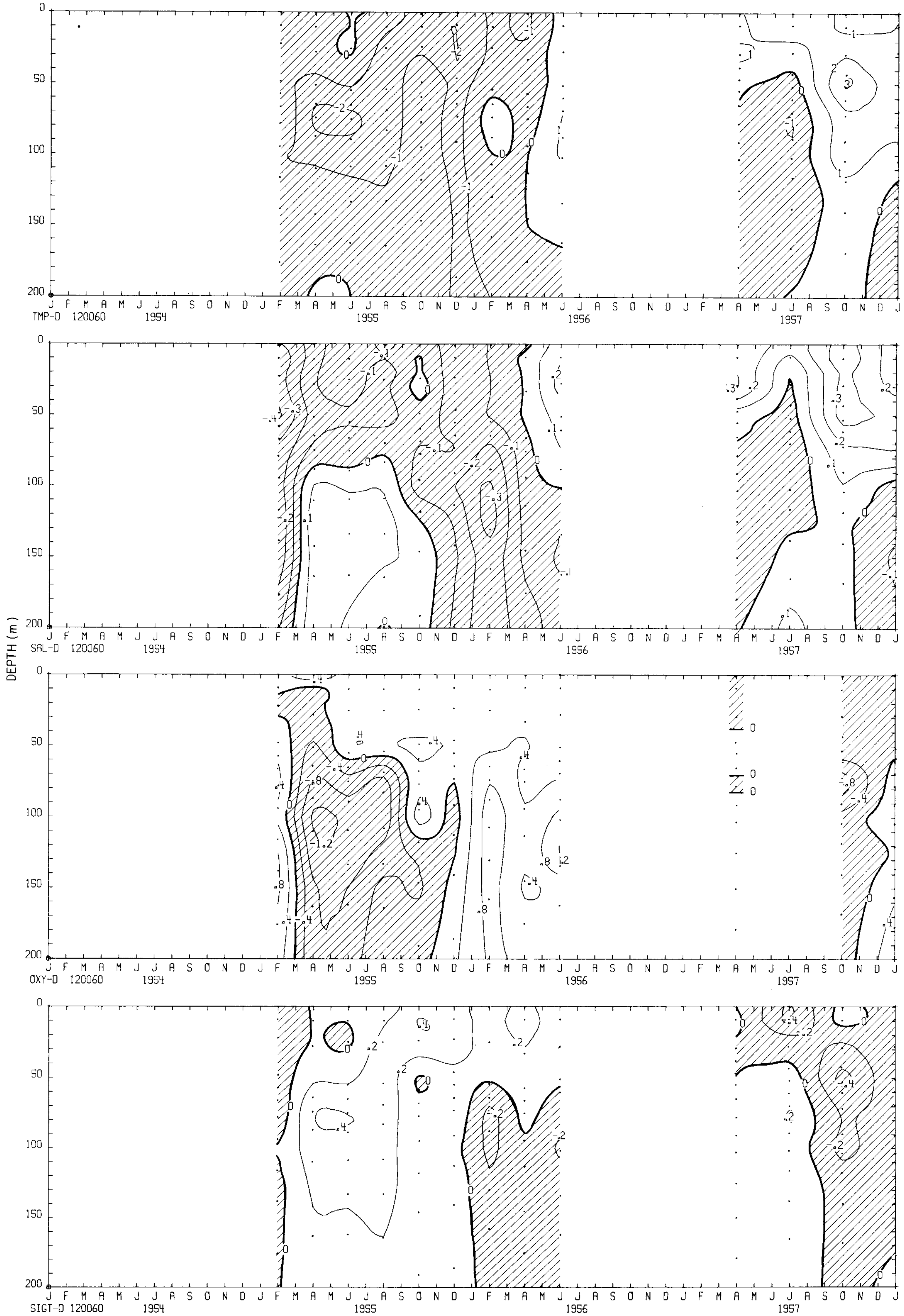

DEPTH (m)
SDEV TMP 120050 JAN-DEC
SDEV SAL 120050 JAN-DEC
SDEV OXY 120050 JAN-DEC
SDEV SIGT 120050 JAN-DEC
J F M A M J J A S O N D J
0
50
100
150
200


DEPTH (m)
TMP 120060 1950 1951 1952 1953
SAL 120060 1950 1951 1952 1953
OXY 120060 1950 1951 1952 1953
SIGT 120060 1950 1951 1952 1953
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

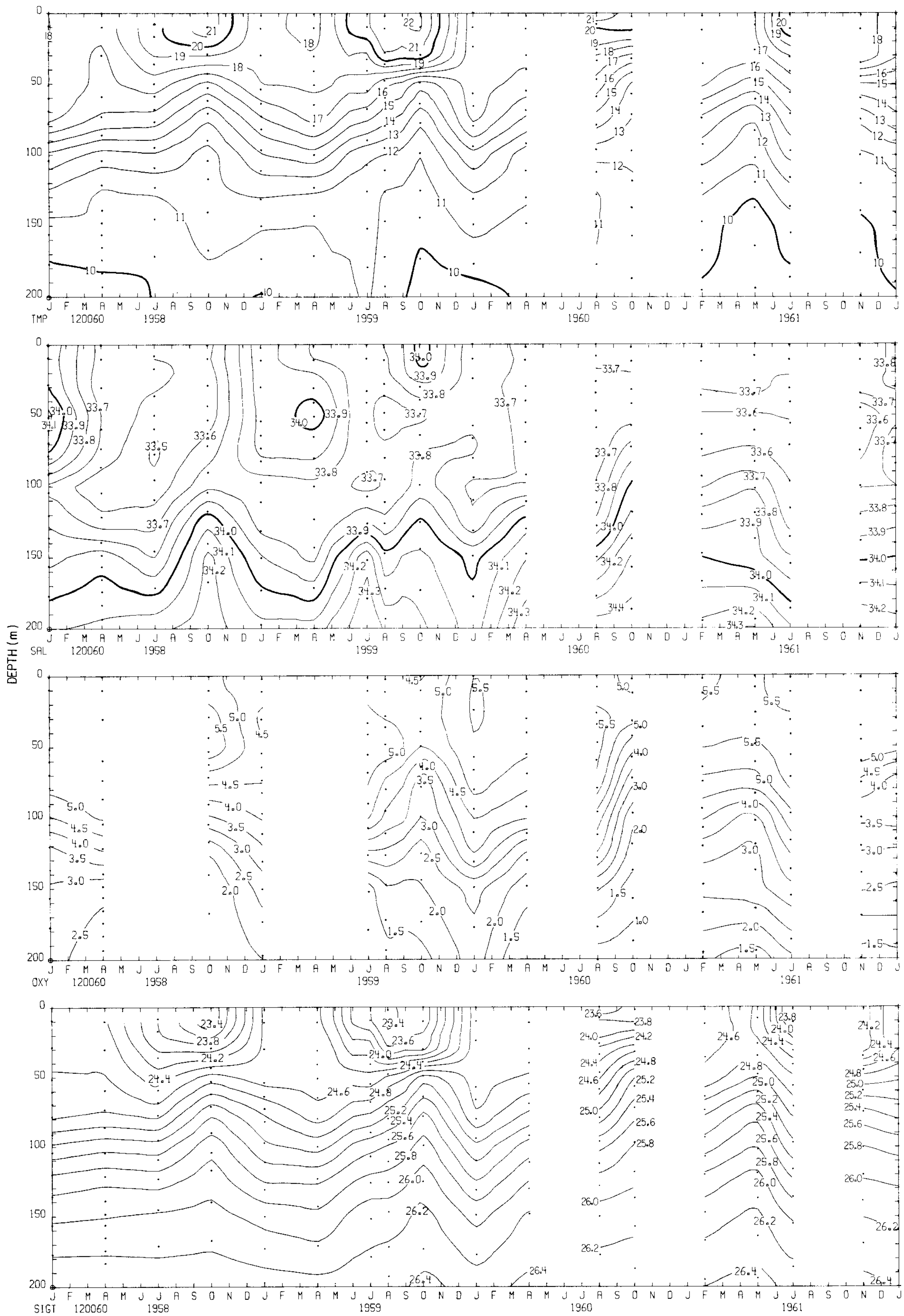


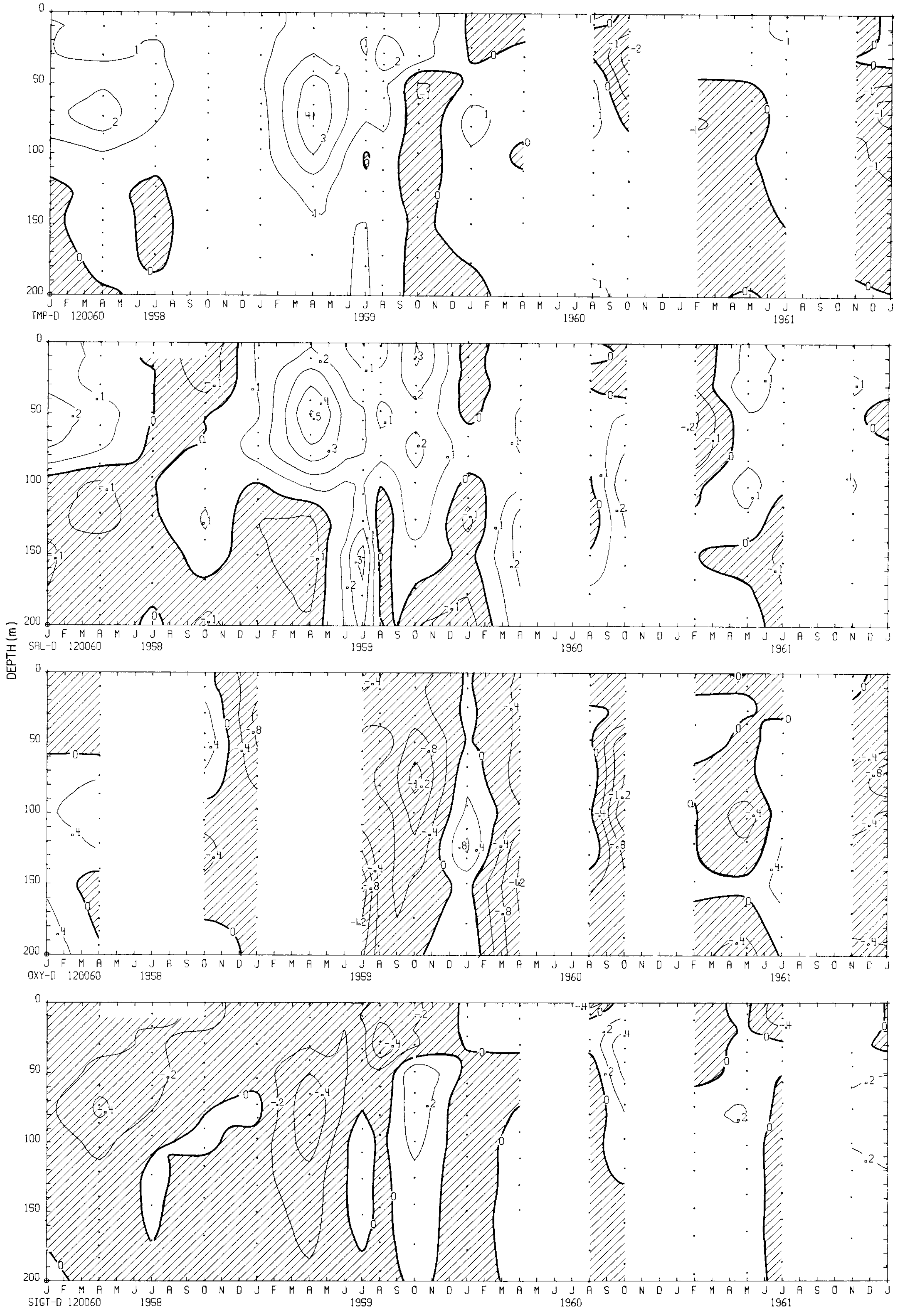
DEPTH (m)
TMP-D 120060
SAL-D 120060
OXY-D 120060
SIGT-D 120060
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1950
1951
1952
1953

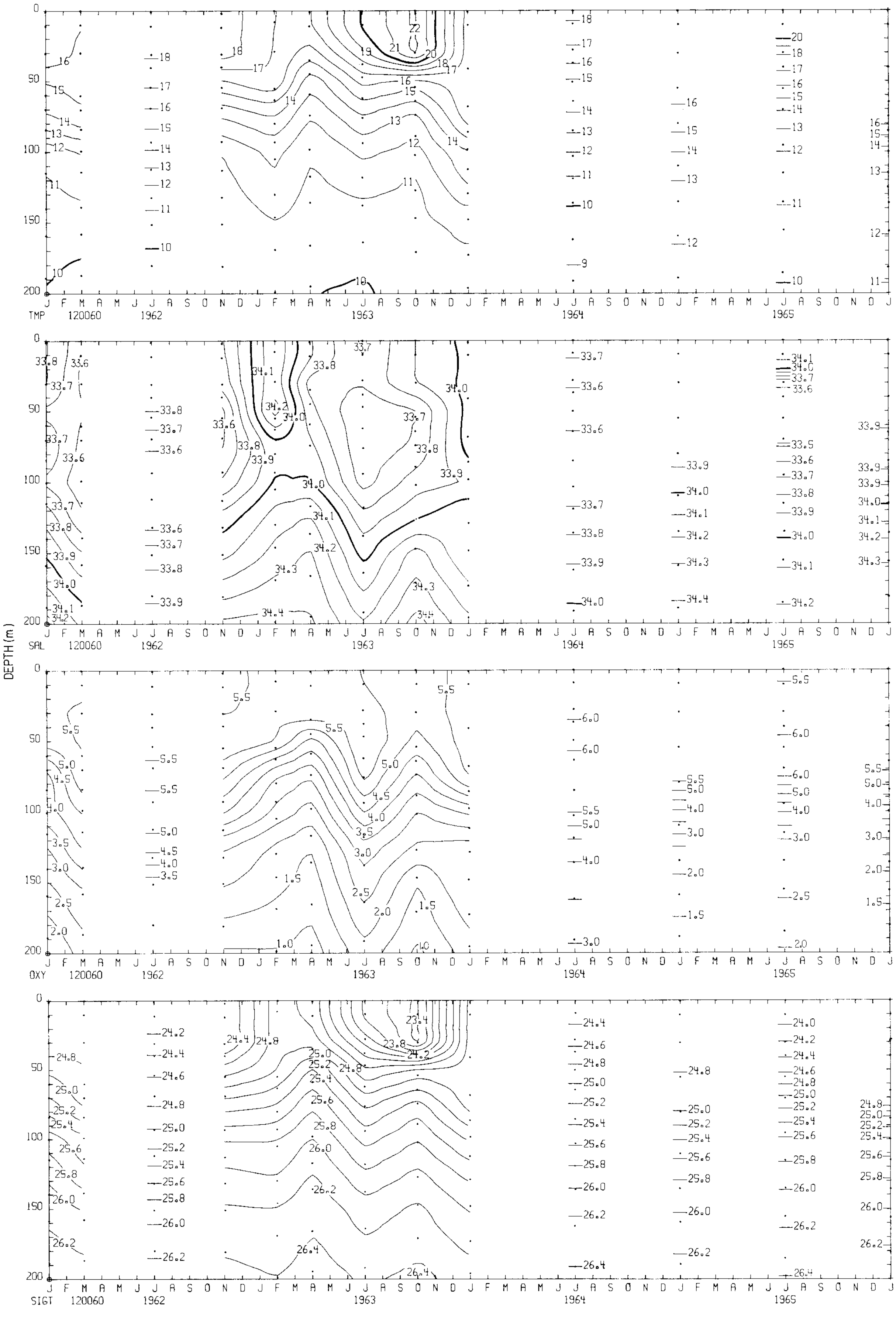

DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 120060 1954
1955
1956
1957
SAL 120060 1954
OXY 120060 1954
SIGT 120060 1954

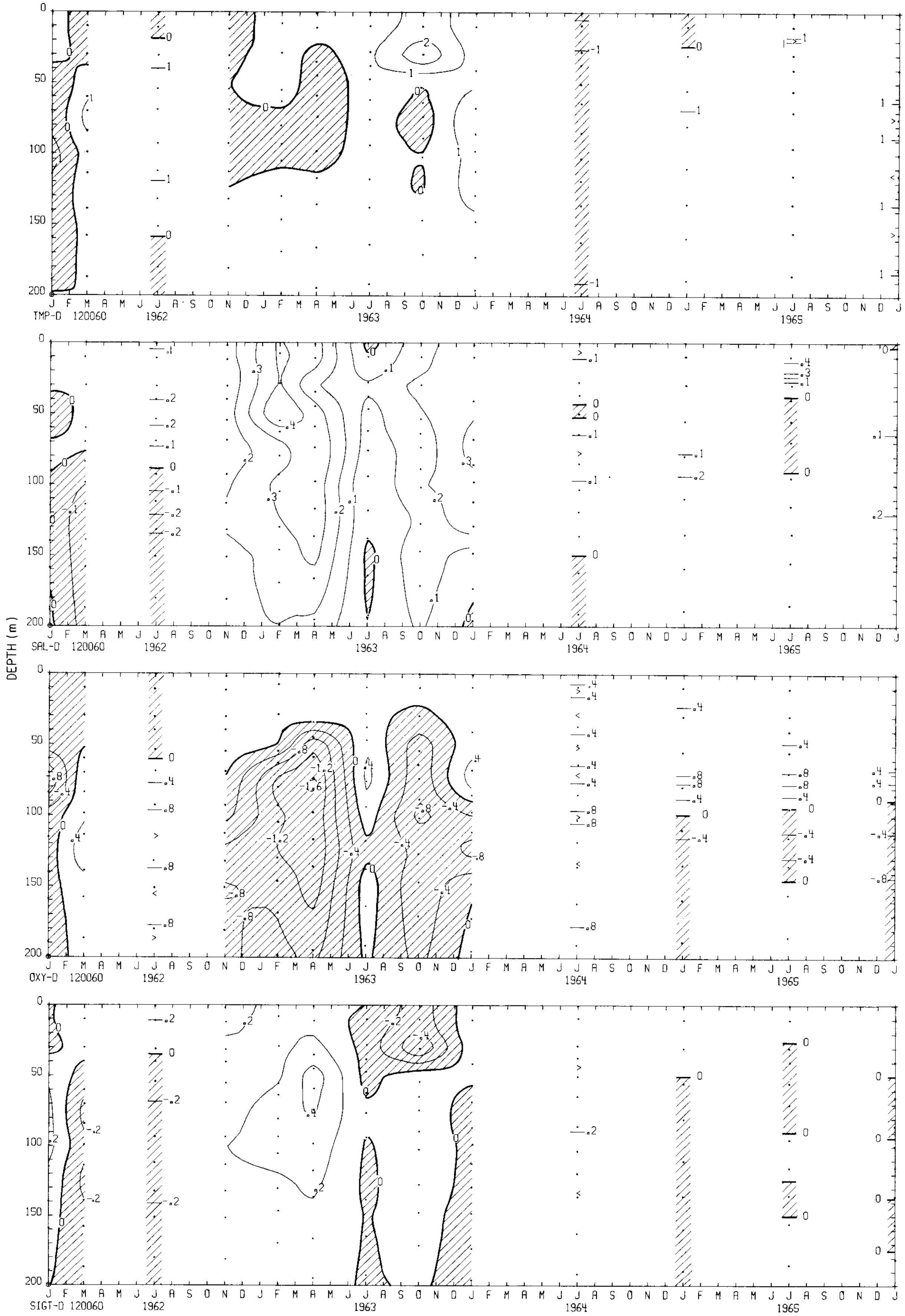


DEPTH (m)
TMP-D 120060
SAL-D 120060
OXY-D 120060
SIGT-D 120060
1954
1955
1956
1957
J F M A M J J A S O N D
0
50
100
150
200


DEPTH (m)
TMP 120060
SAL 120060
OXY 120060
SIGT 120060
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1958
1959
1960
1961


DEPTH (m)
TMP-D 120060
SAL-D 120060
OXY-D 120060
SIGT-D 120060
1958
1959
1960
1961


DEPTH (m)
TMP 120060
SAL 120060
OXY 120060
SIGT 120060
1962
1963
1964
1965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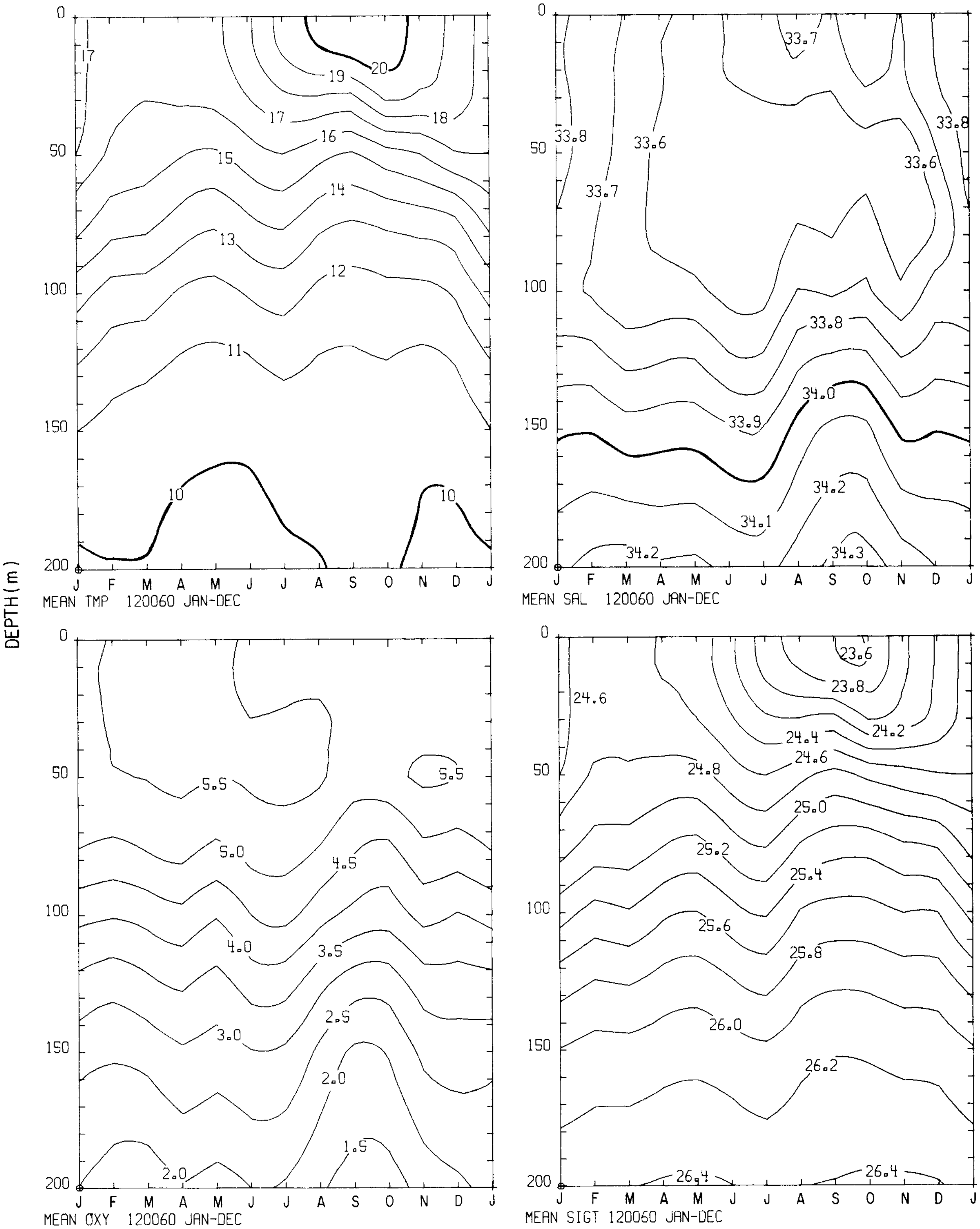
SAL-D 120060
OXY-D 120060
SIGT-D 120060
1962
1963
1964
1965


DEPTH (m)
0
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150
200
J F M A M J J A S O N D J
MEAN TMP 120060 JAN-DEC
17
20
19
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16
15
14
13
12
11
10
10
MEAN SAL 120060 JAN-DEC
33.7
33.8
33.6
33.8
33.6
33.7
33.8
34.0
33.9
34.2
34.1
34.2
34.3
MEAN OXY 120060 JAN-DEC
5.5
5.5
5.0
4.5
4.0
3.5
2.5
3.0
2.0
1.5
2.0
MEAN SIGT 120060 JAN-DEC
23.6
24.6
23.8
24.4
24.2
24.6
24.8
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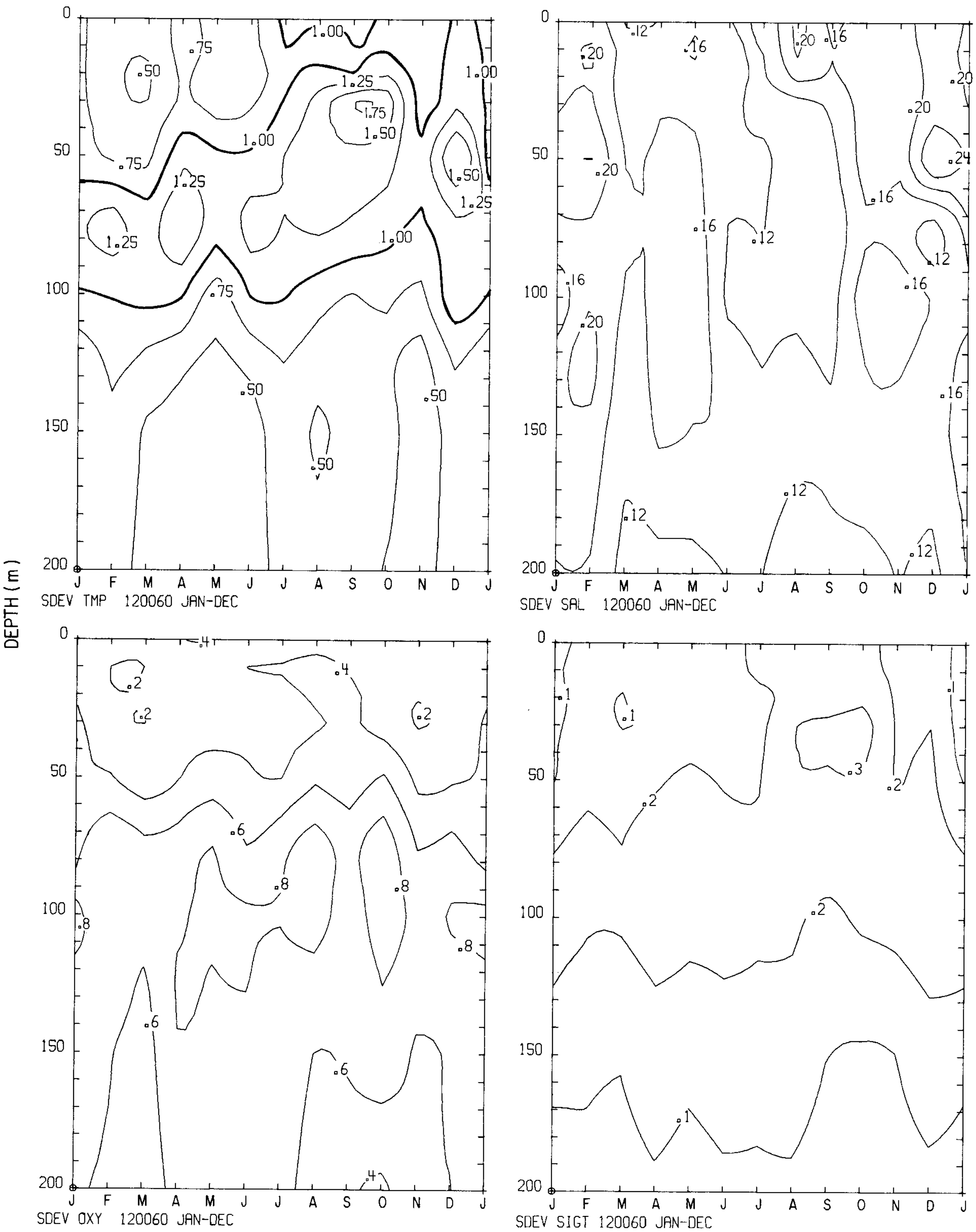
25.2
25.4
25.6
25.8
26.0
26.2
26.4
26.4


DEPTH (m)
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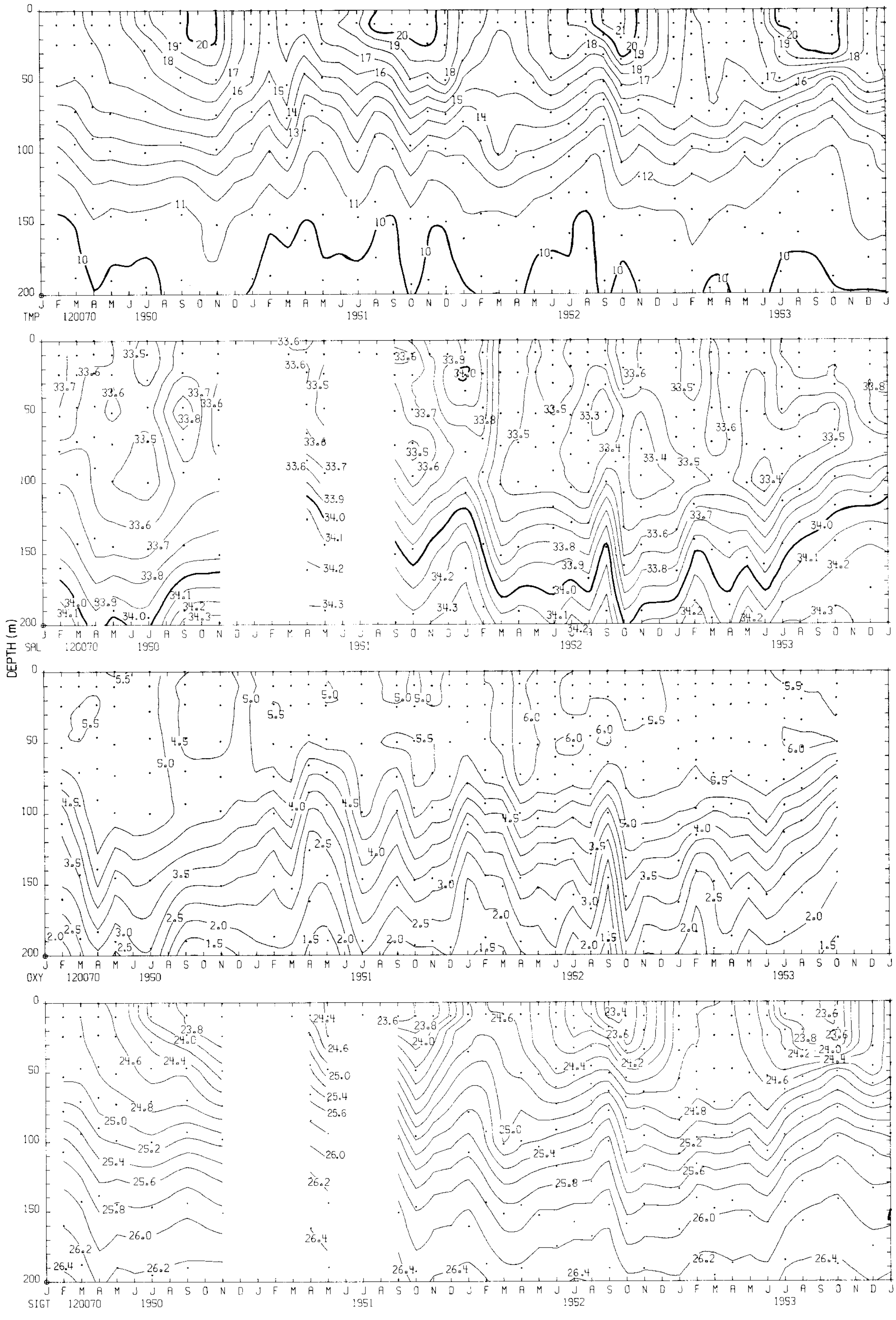
SDEV SAL 120060 JAN-DEC
SDEV OXY 120060 JAN-DEC
SDEV SIGT 120060 JAN-DEC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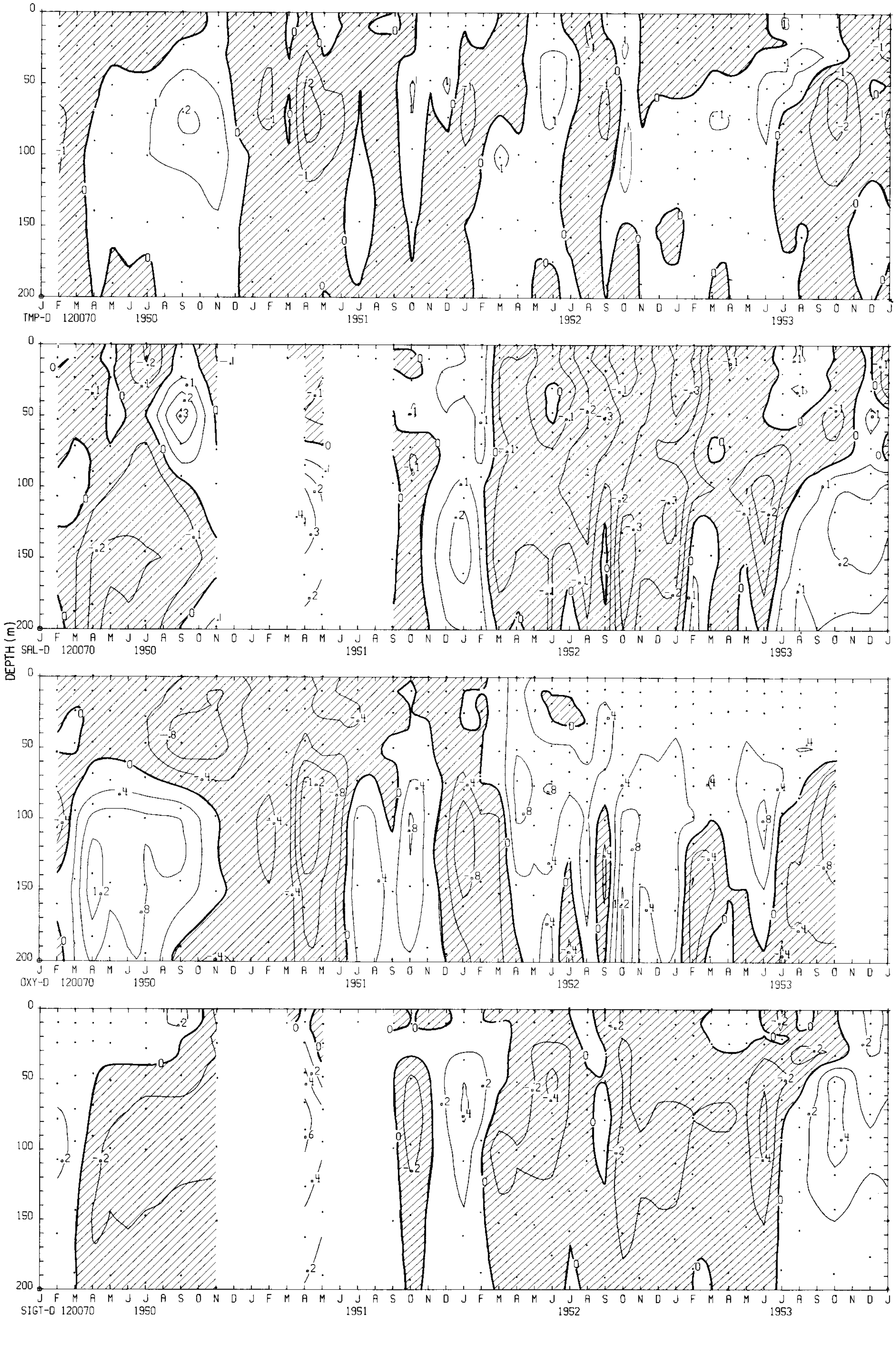
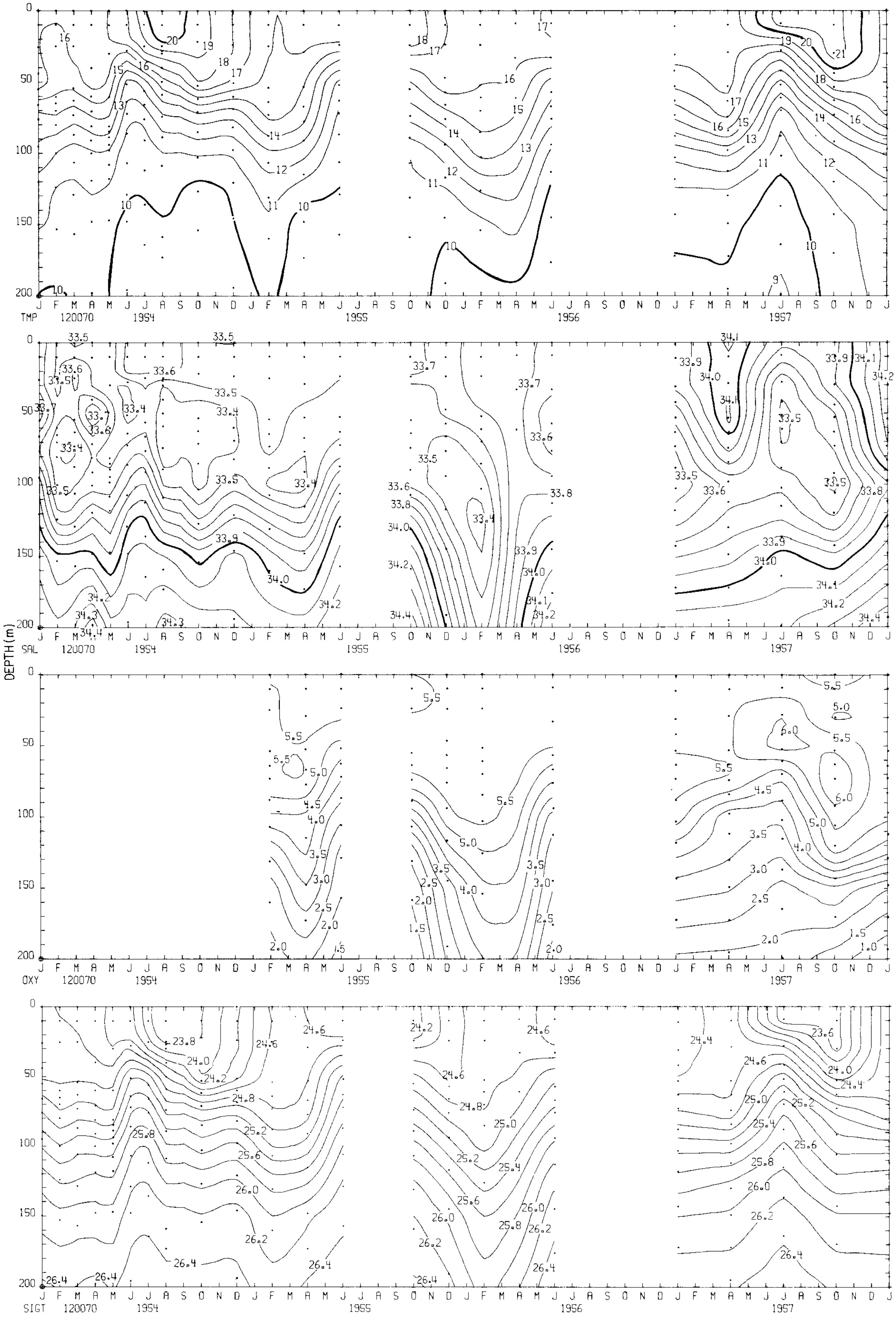
SAL 120070
OXY 120070
SIGT 120070
DEPTH (m)
1950
1951
1952
1953


DEPTH (m)
TMP-D 120070
SAL-D 120070
OXY-D 120070
SIGT-D 120070
1950
1951
1952
1953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1955
1956
1957
SAL 120070 1954
OXY 120070 1954
SIGT 120070 1954
DEPTH (m)
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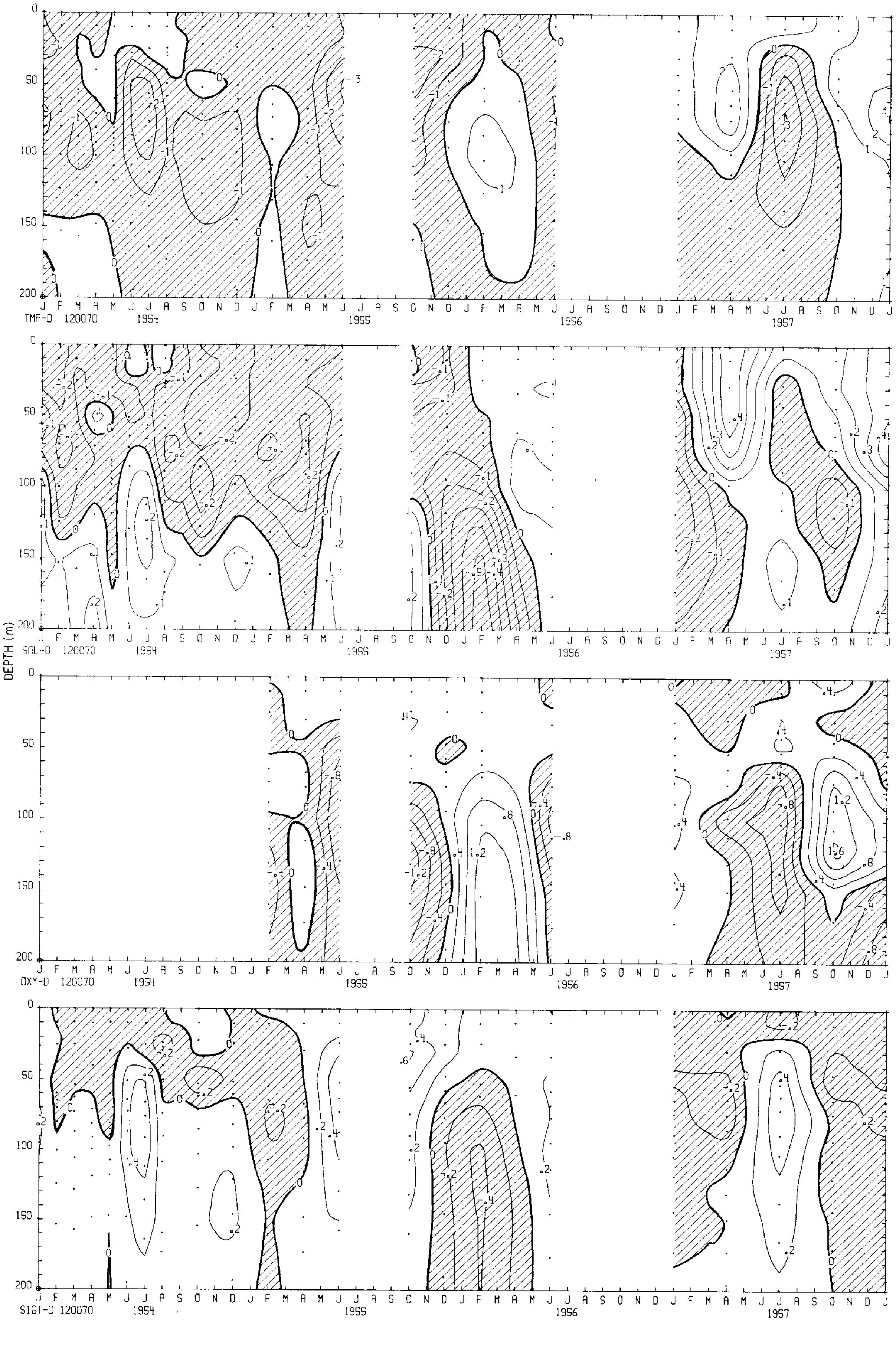
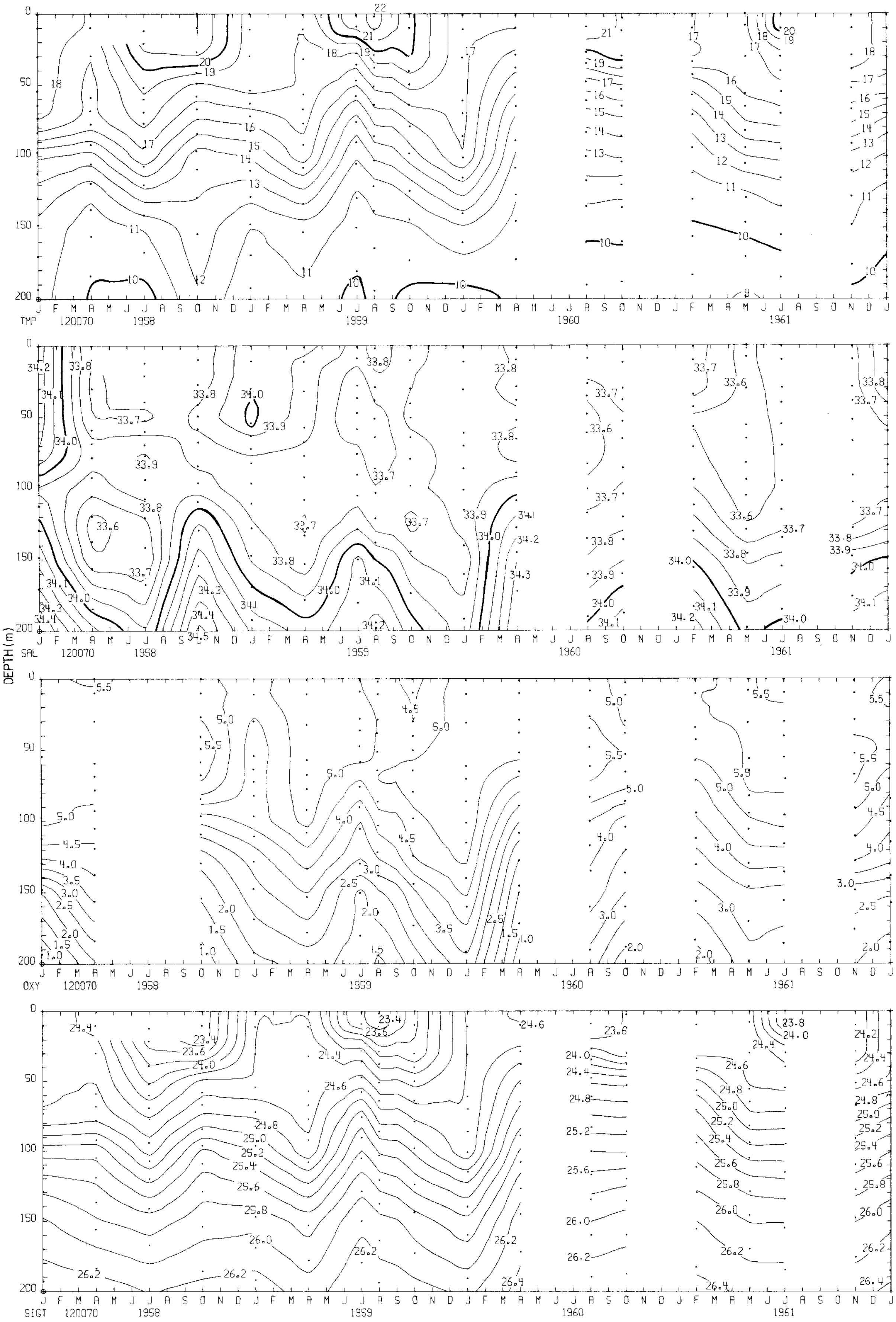


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 120070
1954
1955
1956
1957
SAL-D 120070
OXY-D 120070
SIGT-D 120070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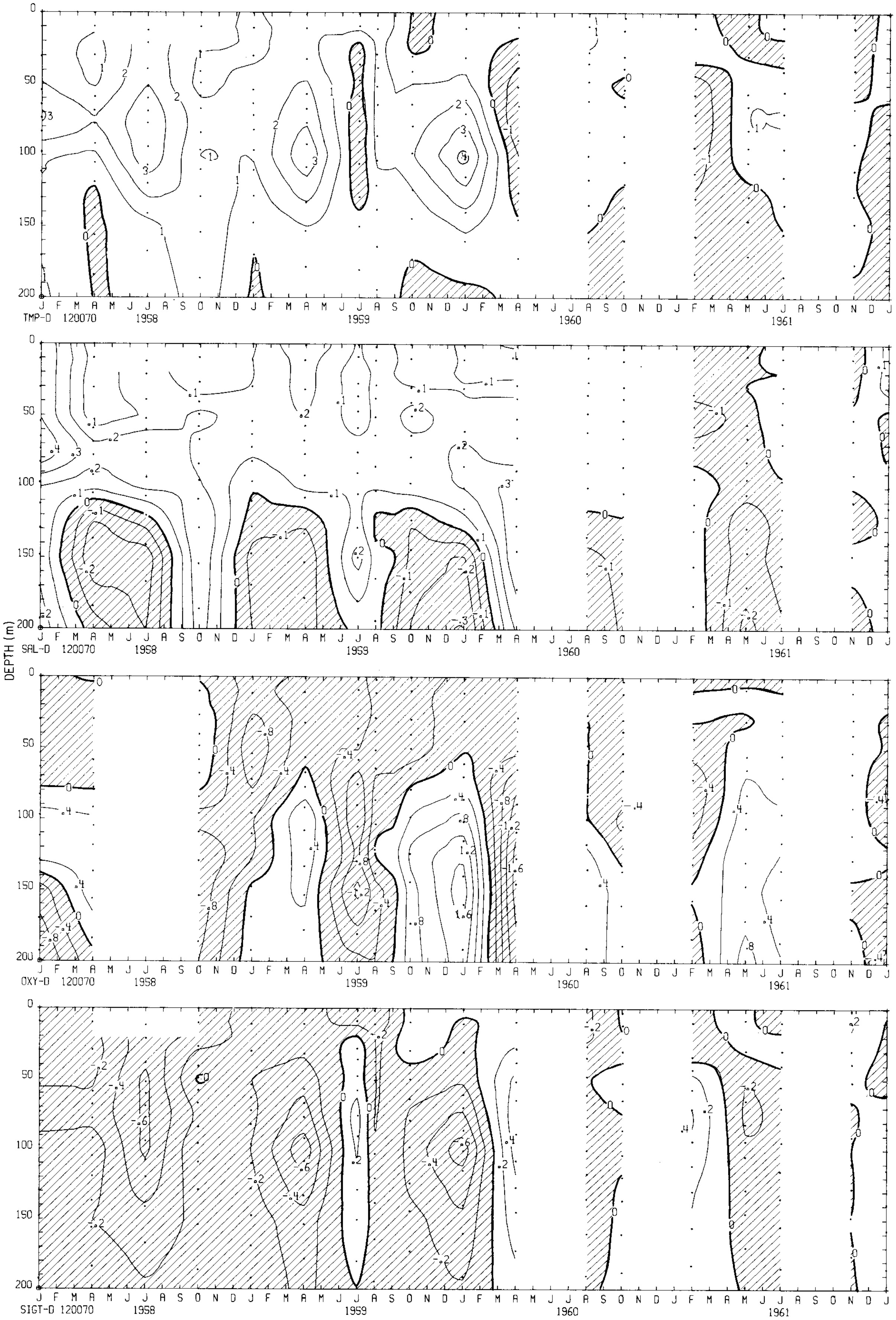
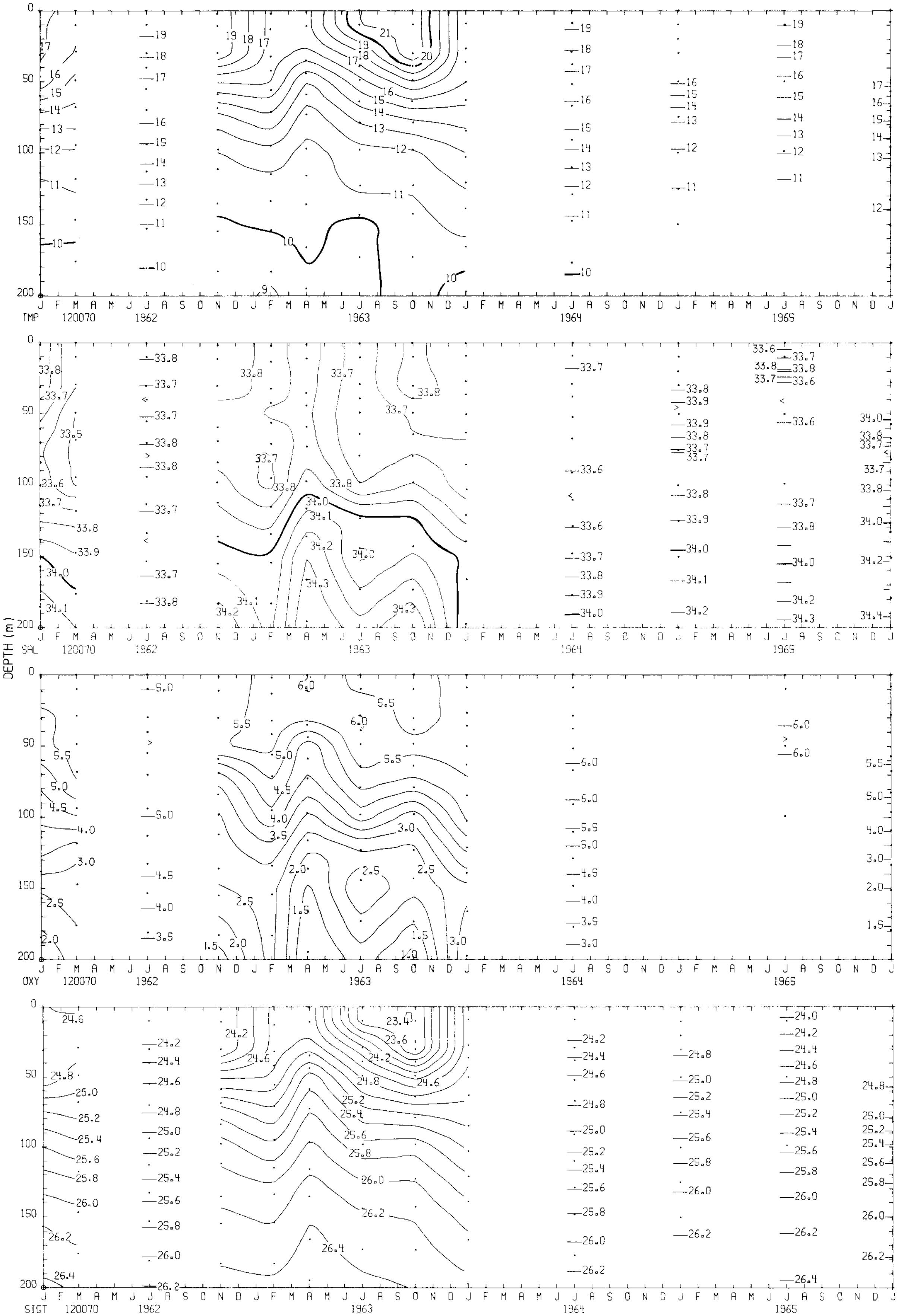
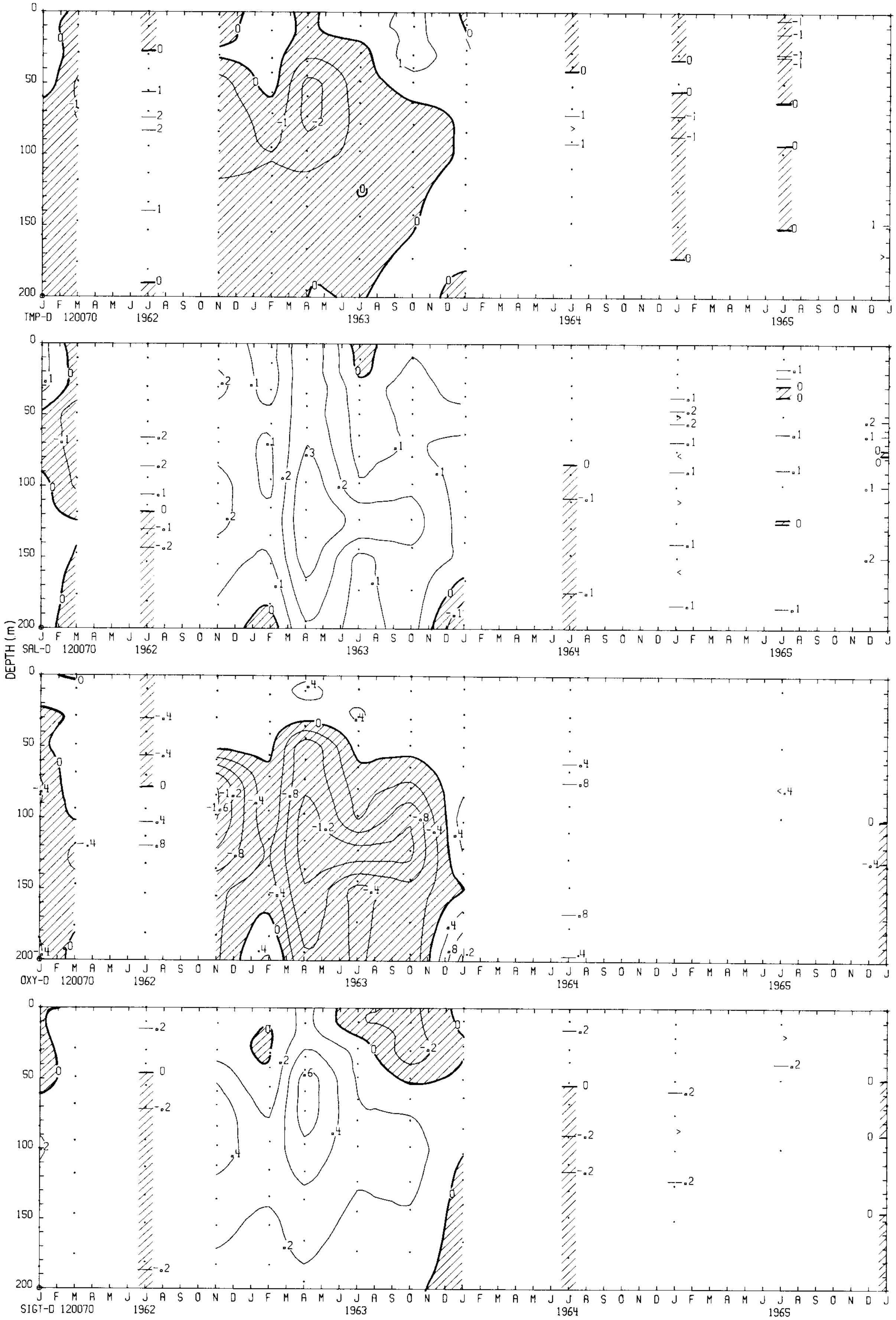
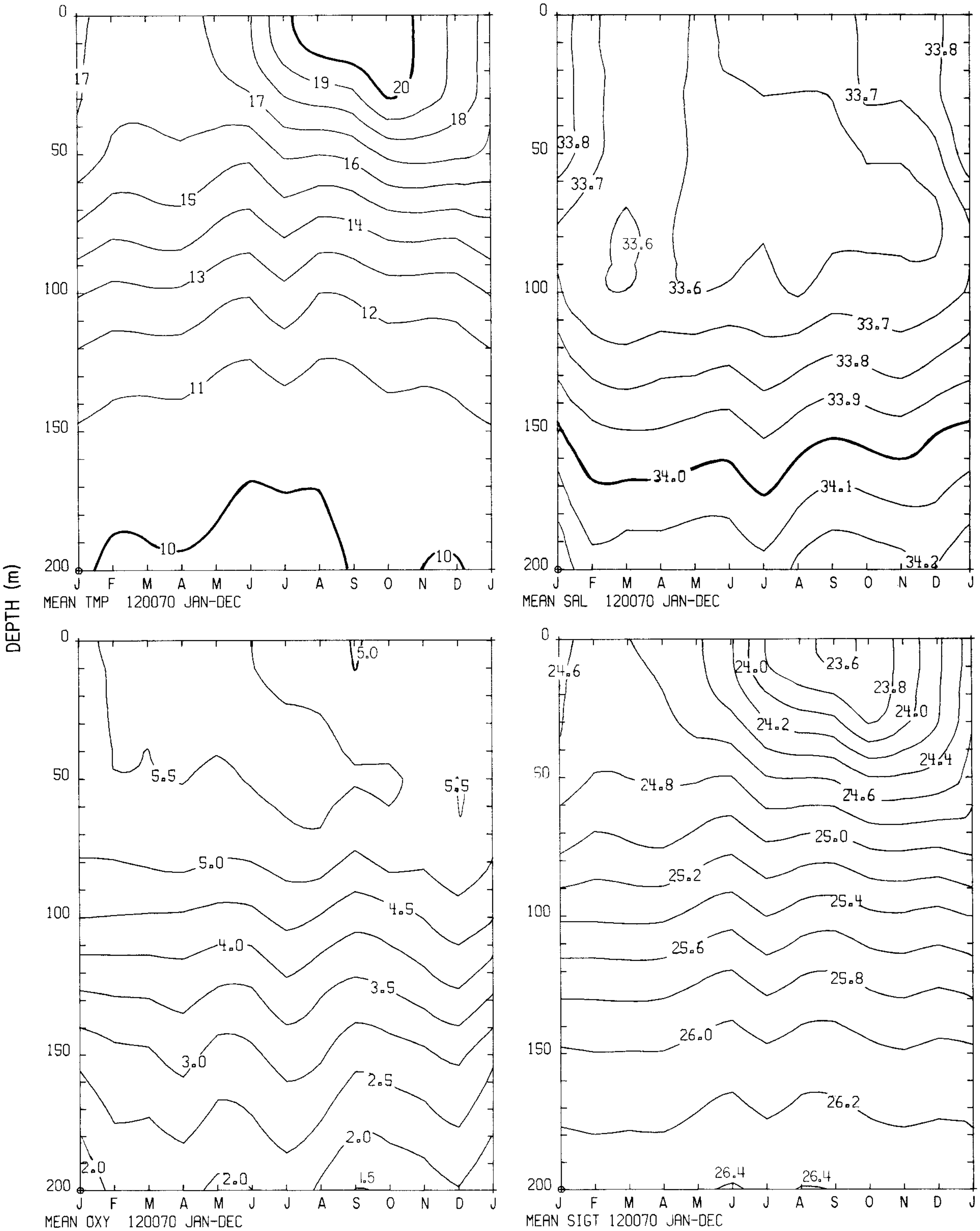
SAL 120070 1958 1959 1960 1961
OXY 120070 1958 1959 1960 1961
SIGT 120070 1958 1959 1960 1961
DEPTH (m)
J F M A M J J A S O N D


DEPTH (m)
TMP-D 120070
SAL-D 120070
OXY-D 120070
SIGT-D 120070
1958
1959
1960
1961
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J


DEPTH (m)
TMP 120070
SAL 120070
OXY 120070
SIGT 120070
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1962
1963
1964
1965


DEPTH (m)
TMP-D 120070
SAL-D 120070
OXY-D 120070
SIGT-D 120070
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
1962
1963
1964
1965



DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J
MEAN TMP 120070 JAN-DEC
17
19
20
17
18
16
15
14
13
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11
10
10
MEAN SAL 120070 JAN-DEC
33.8
33.7
33.8
33.7
33.6
33.6
33.7
33.8
33.9
34.0
34.1
34.2
MEAN OXY 120070 JAN-DEC
5.0
5.5
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
2.0
2.0
1.5
MEAN SIGT 120070 JAN-DEC
24.6
24.0
23.6
23.8
24.0
24.2
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25.2
25.4
25.6
25.8
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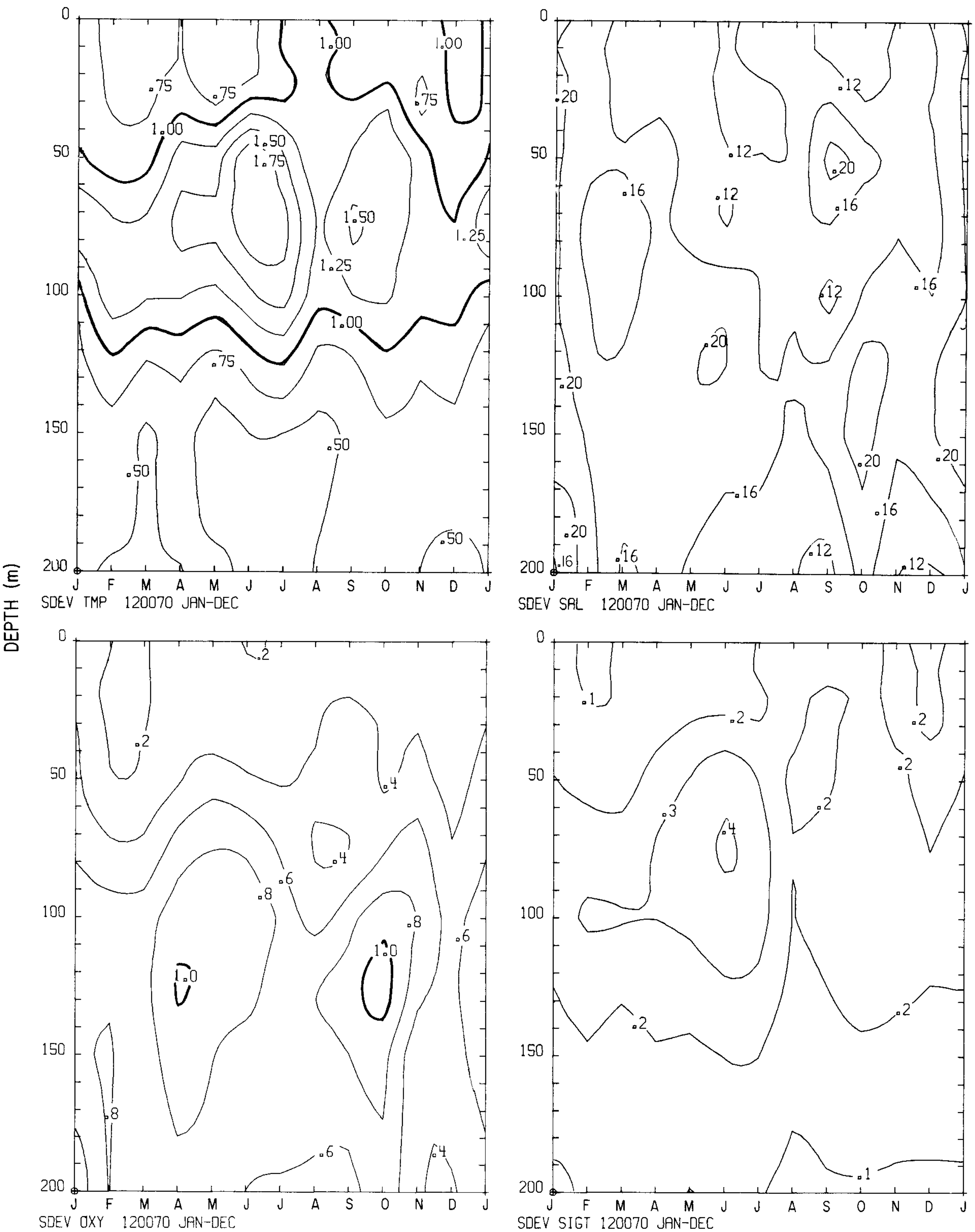
26.2
26.4
26.4


DEPTH (m)
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SDEV SAL 120070 JAN-DEC
SDEV OXY 120070 JAN-DEC
SDEV SIGT 120070 JAN-DEC
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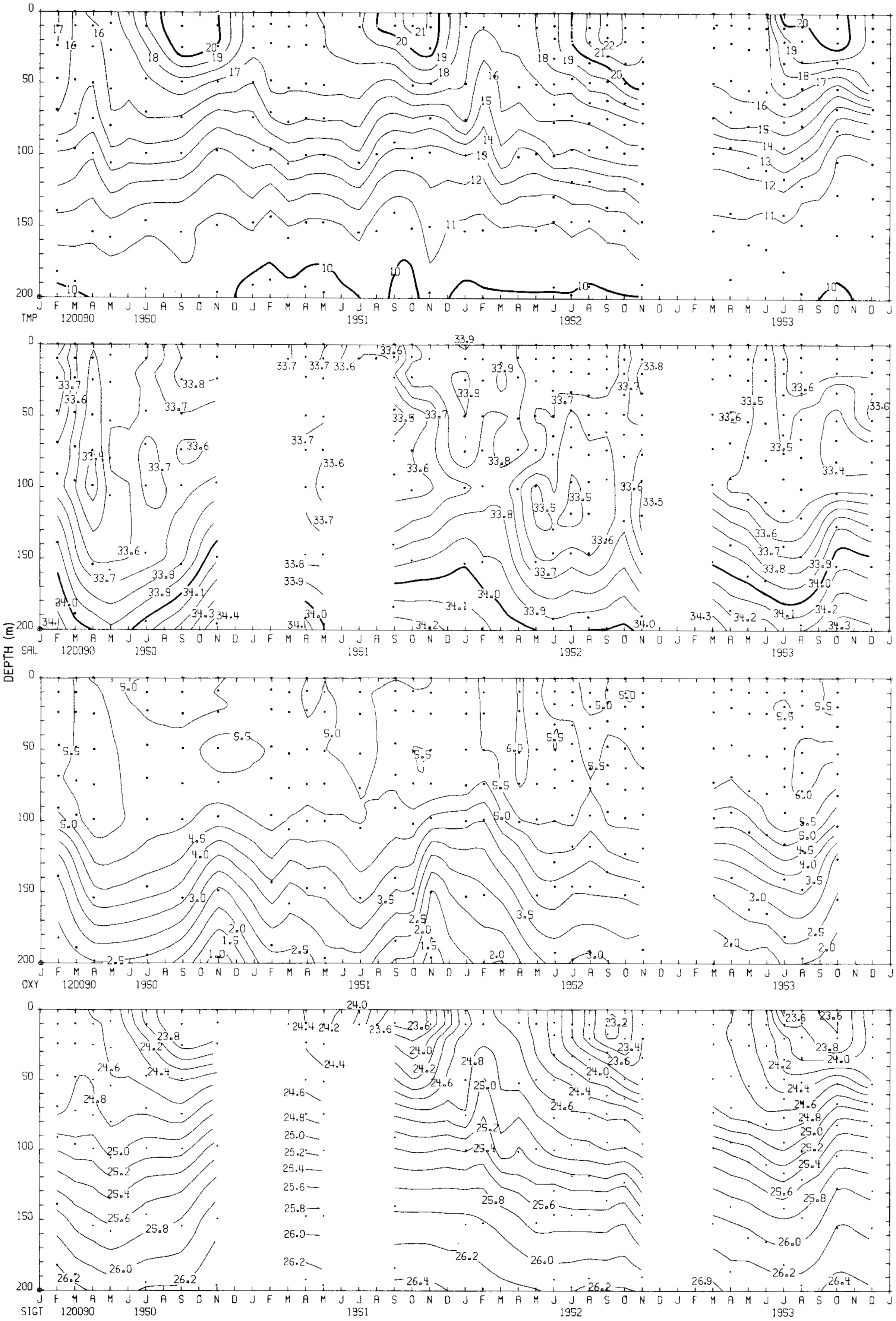
DEPTH (m)
0
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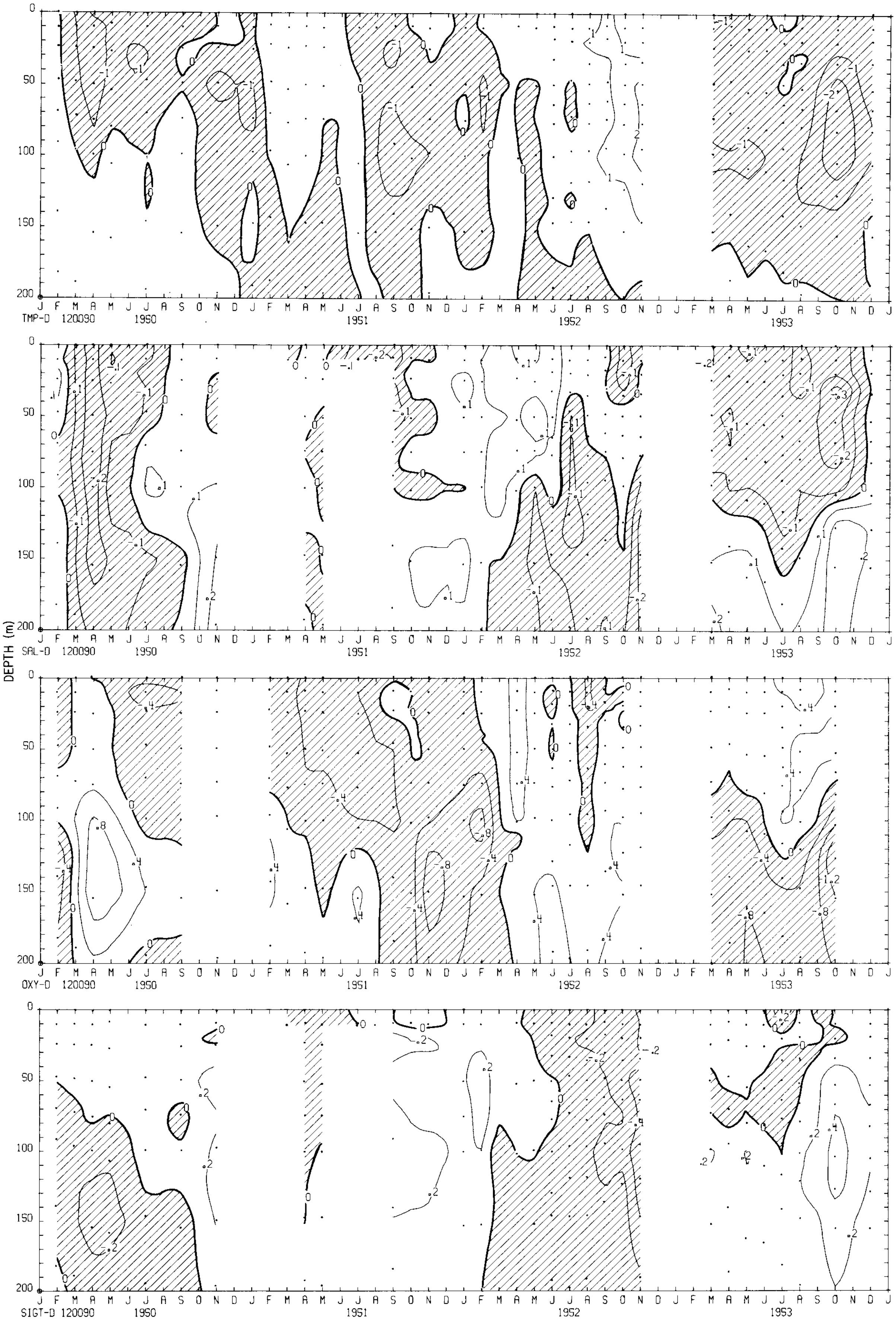
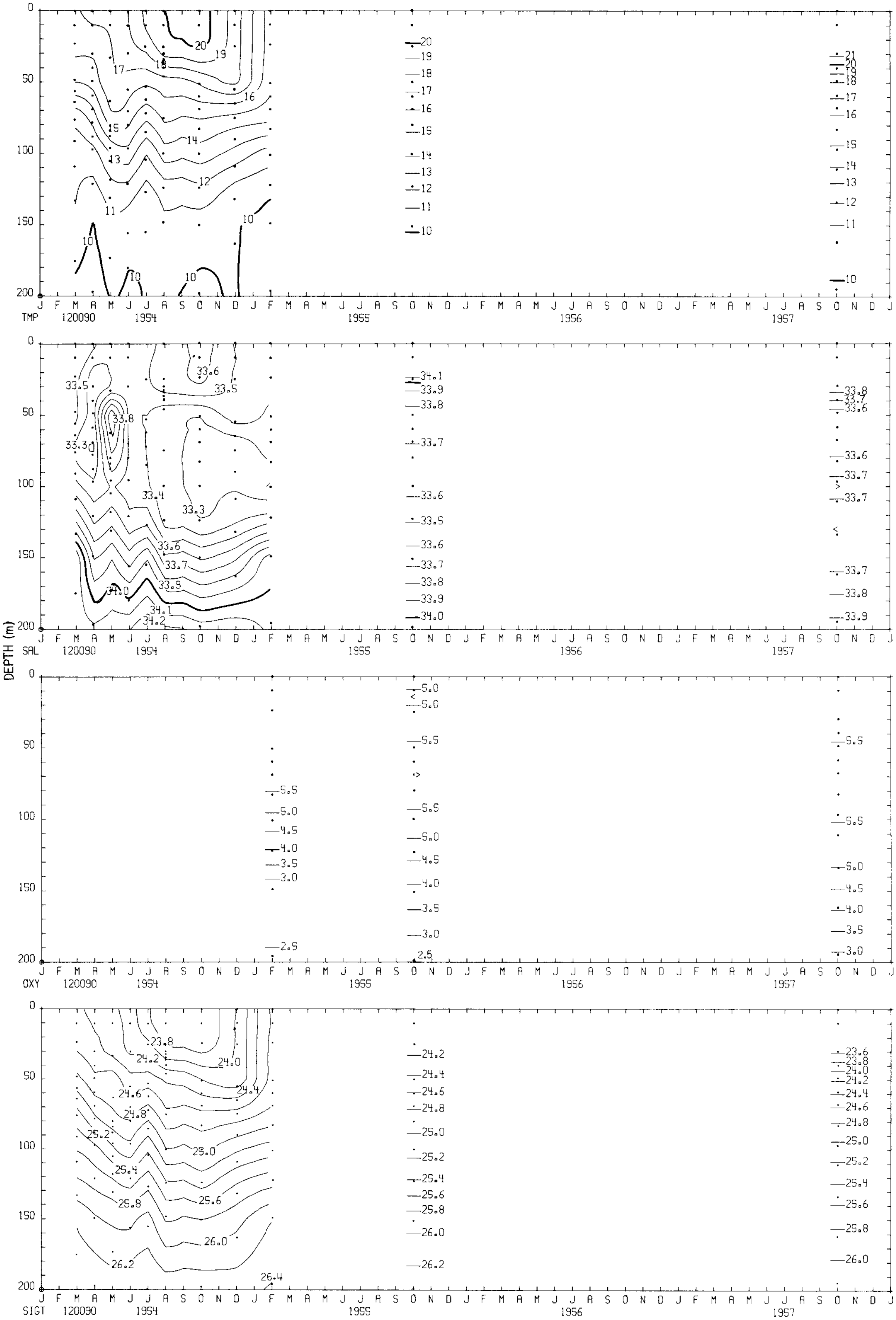
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP 120090 1950
1951
1952
1953
SAL 120090 1950
OXY 120090 1950
SIGT 120090 1950


DEPTH (m)
TMP-D 120090
SAL-D 120090
OXY-D 120090
SIGT-D 120090
1950
1951
1952
1953
J F M A M J J A S O N D


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
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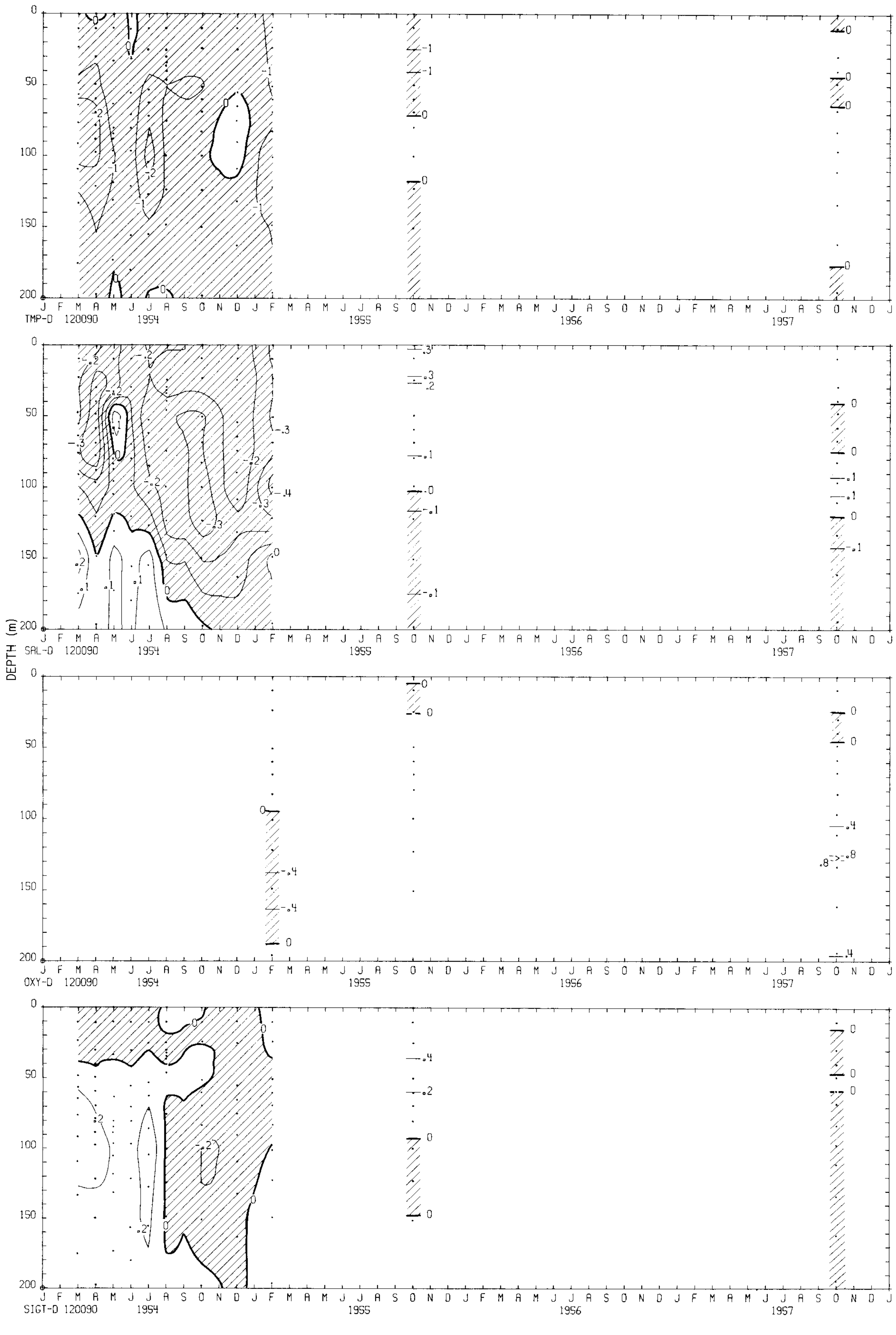
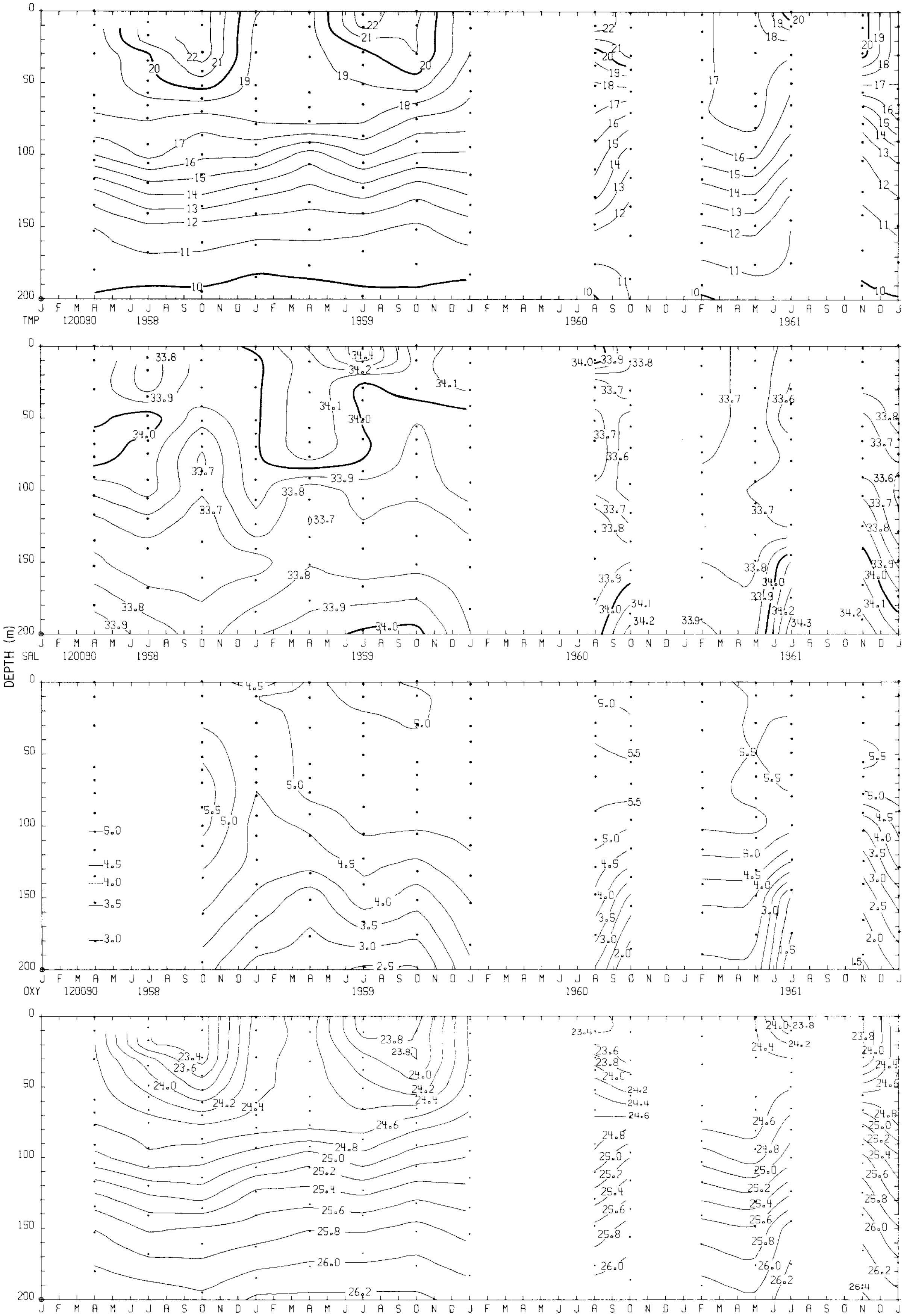
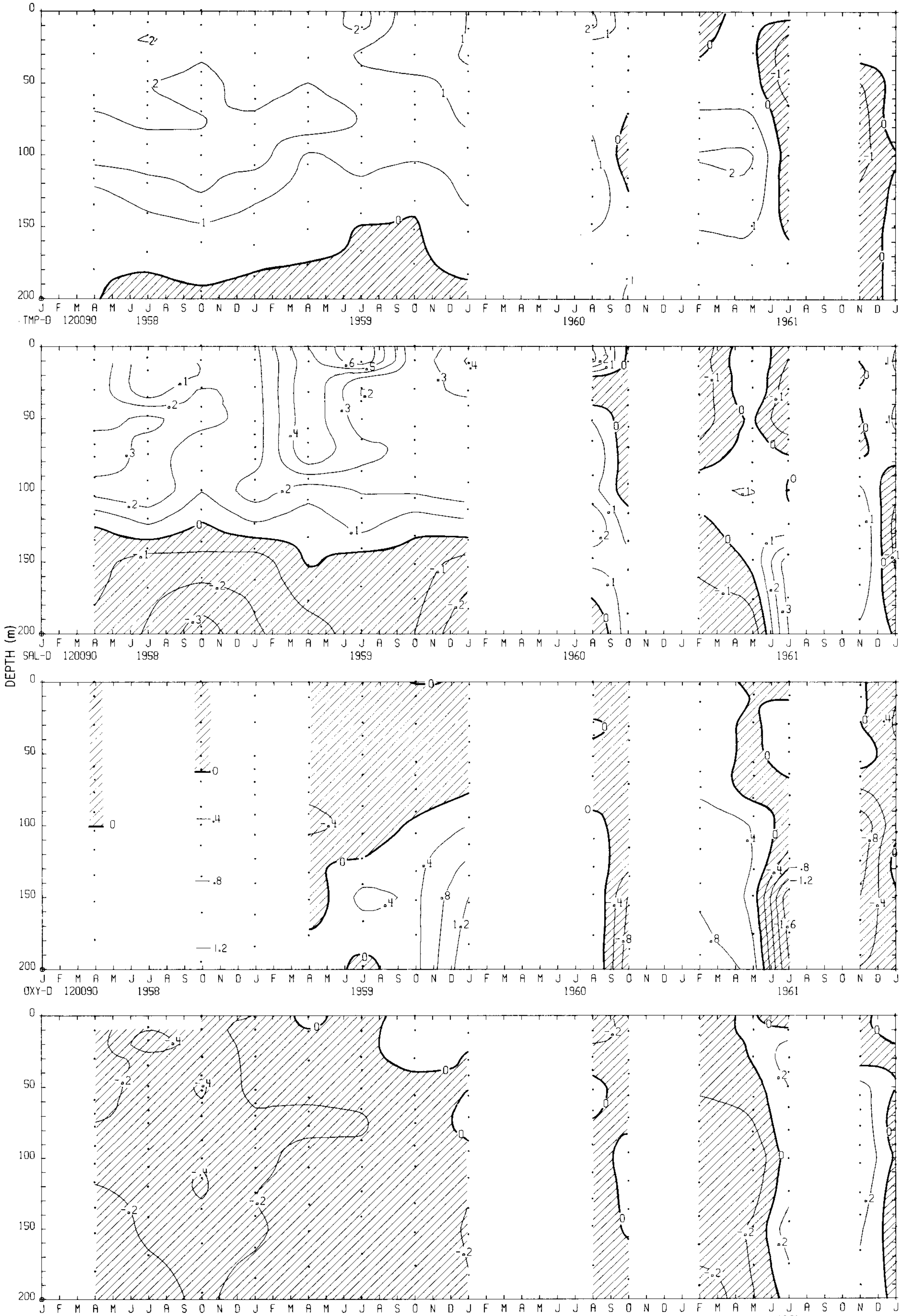
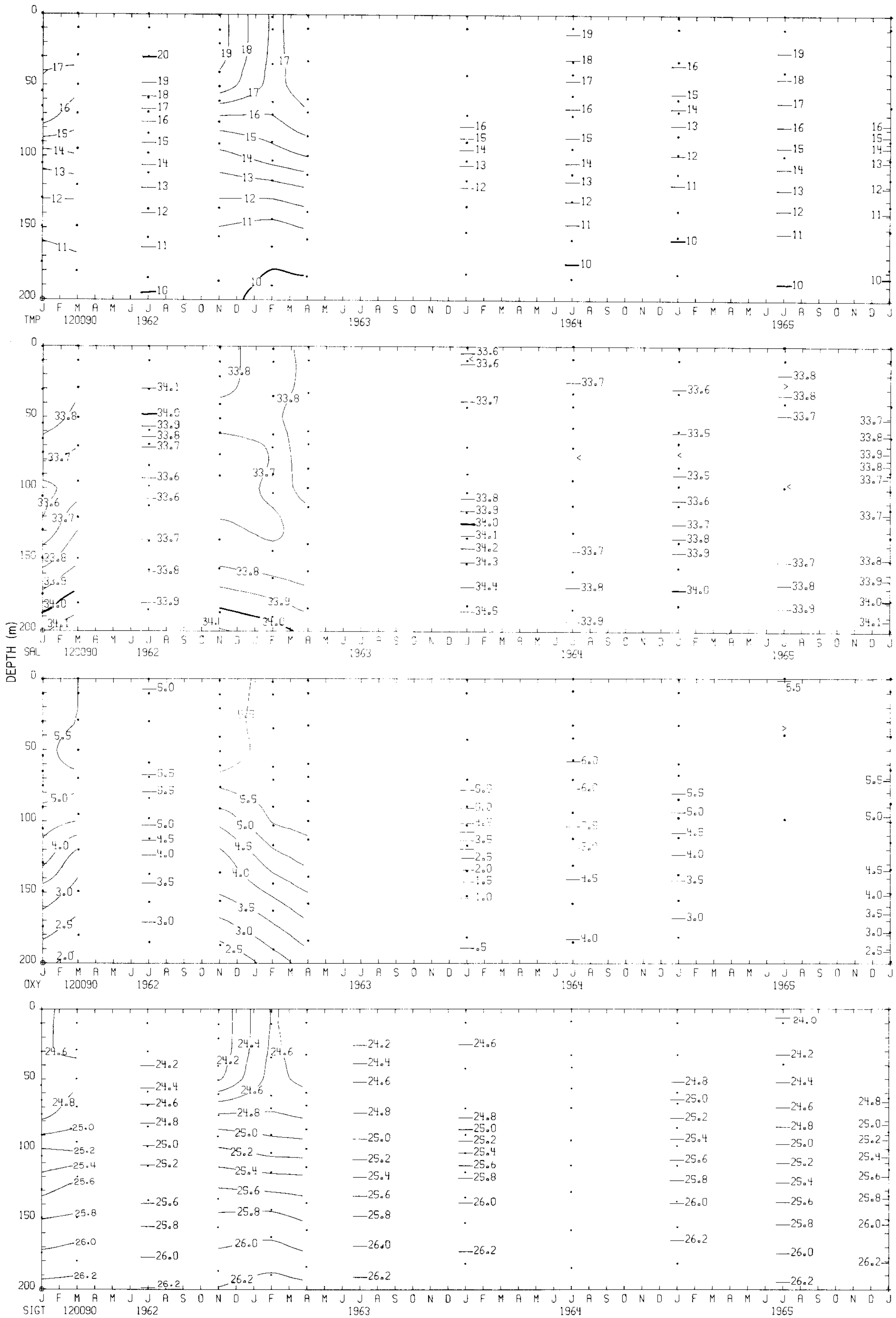
1956
1957
SAL 120090 1954
OXY 120090 1954
SIGT 120090 1954


DEPTH (m)
TMP-D 120090 1954 1955 1956 1957
SAL-D 120090 1954 1955 1956 1957
OXY-D 120090 1954 1955 1956 1957
SIGT-D 120090 1954 1955 1956 1957

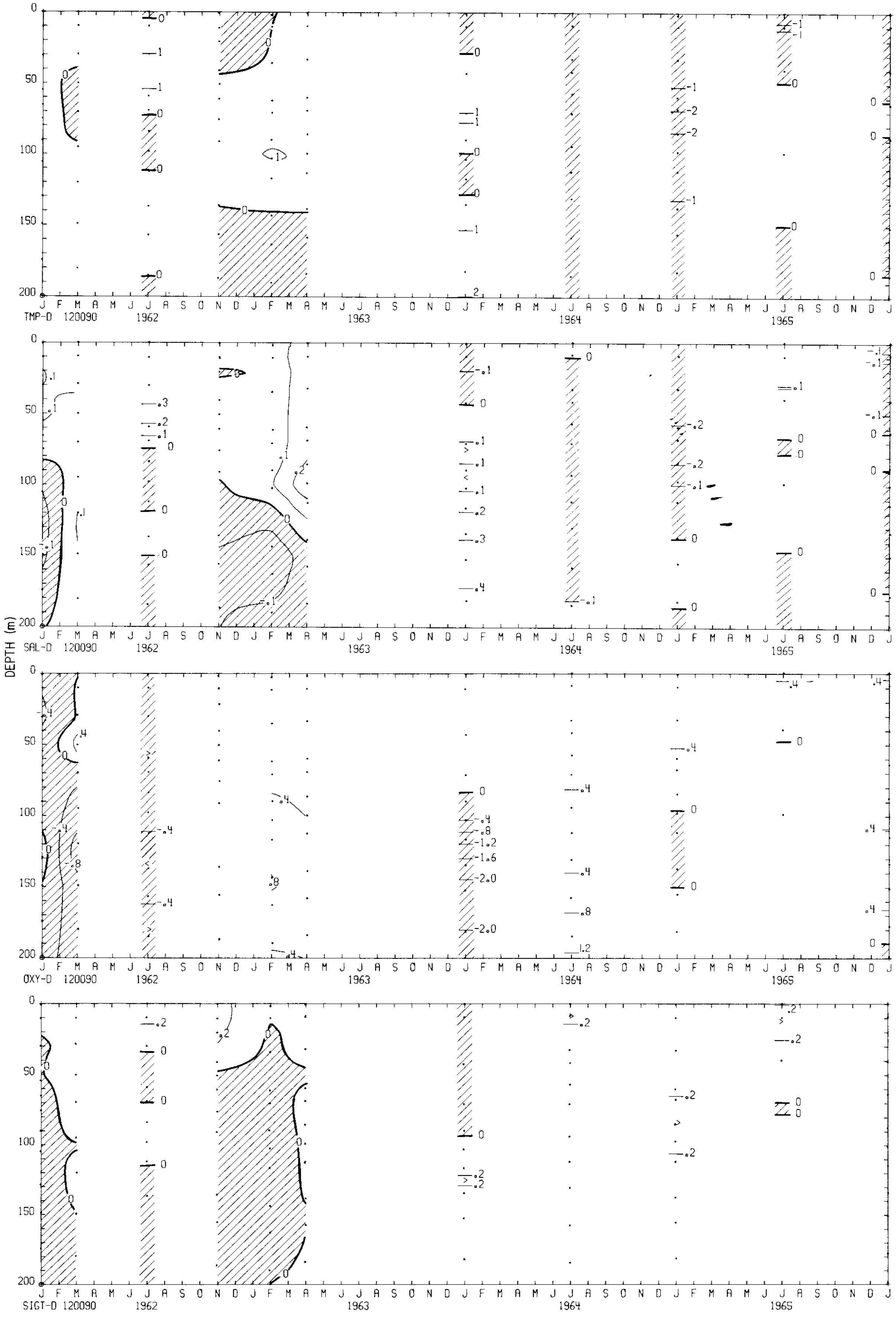

DEPTH (m)
TMP 120090
SAL 120090
OXY 120090
SIGT 120090
1958
1959
1960
1961
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J

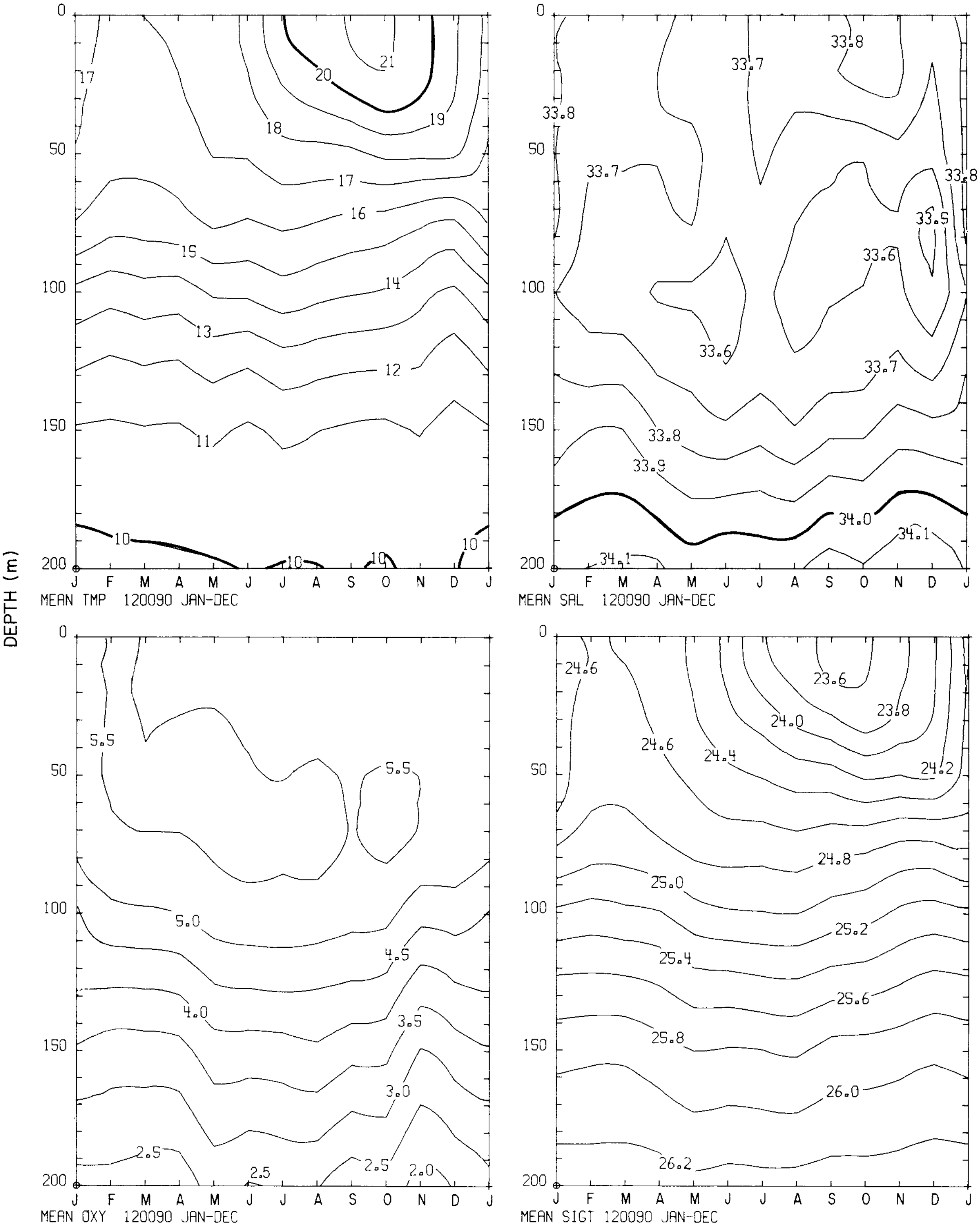


DEPTH (m)
0
50
100
150
200
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
TMP-D 120090
SAL-D 120090
OXY-D 120090
SIGT-D 120090
1958
1959
1960
1961



TMP 120090
SAL 120090
OXY 120090
SIGT 120090
DEPTH (m)
1962
1963
1964
1965


DEPTH (m)
TMP-D 120090
SAL-D 120090
OXY-D 120090
SIGT-D 120090
1962
1963
1964
1965


DEPTH (m)
0
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100
150
200
J F M A M J J A S O N D J
MEAN TMP 120090 JAN-DEC
21
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19
18
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16
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12
11
10
MEAN SAL 120090 JAN-DEC
33.8
33.7
33.6
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33.9
34.0
34.1
MEAN OXY 120090 JAN-DEC
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4.5
4.0
3.5
3.0
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2.0
MEAN SIGT 120090 JAN-DEC
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23.6
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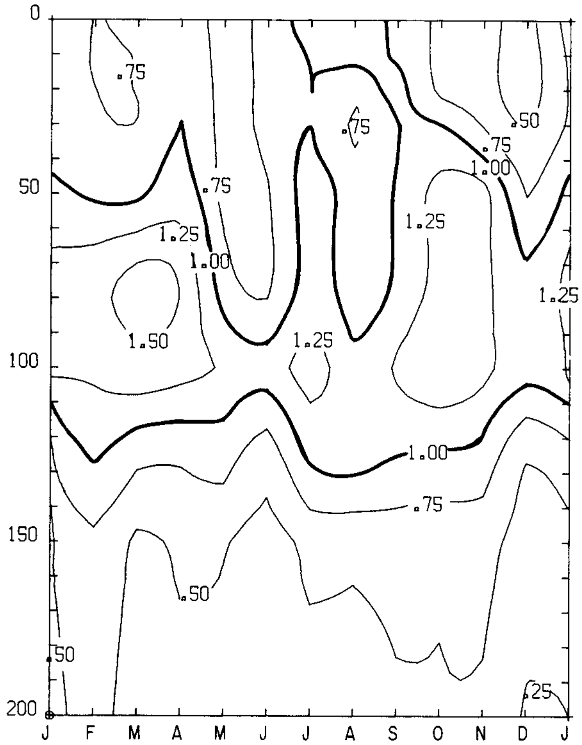
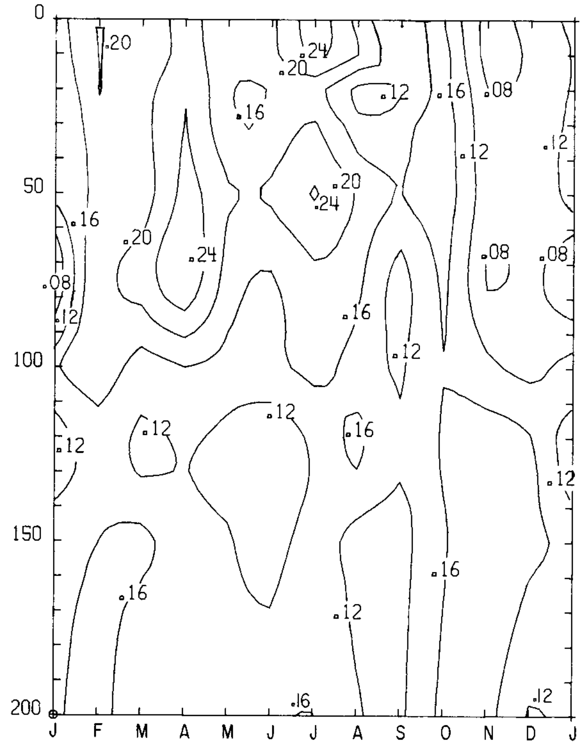


SDEV TMP 120090 JAN-DEC



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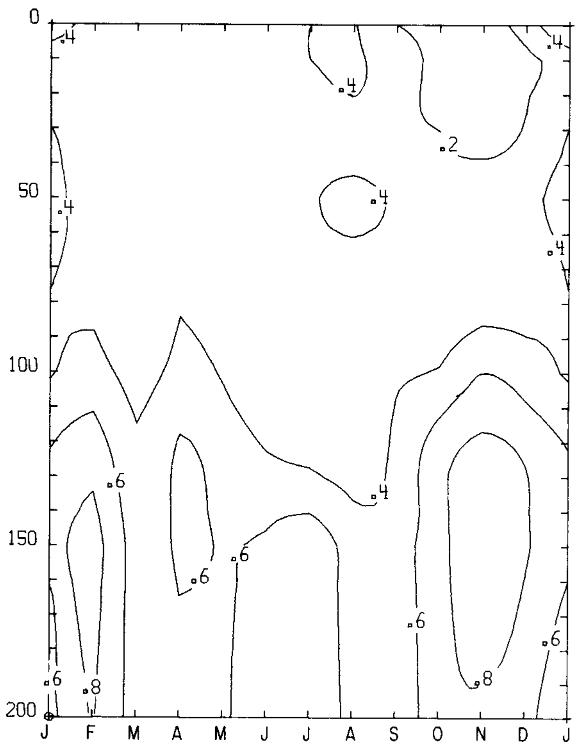
DEPTH (m)



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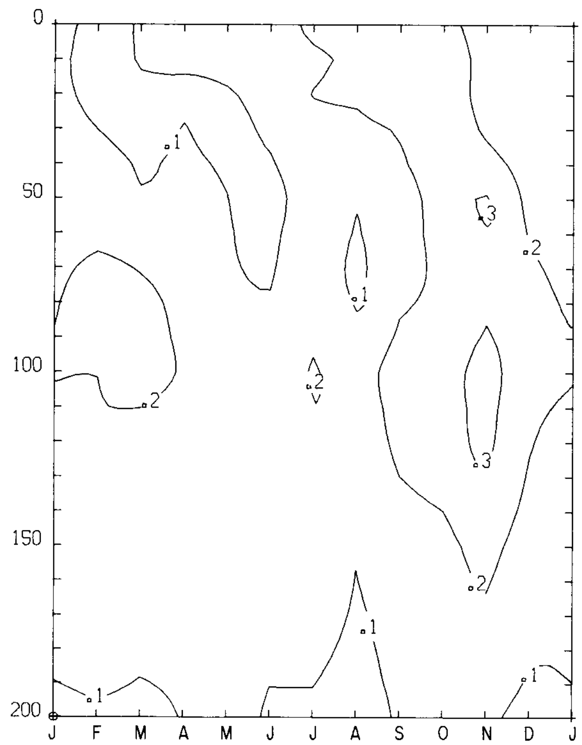

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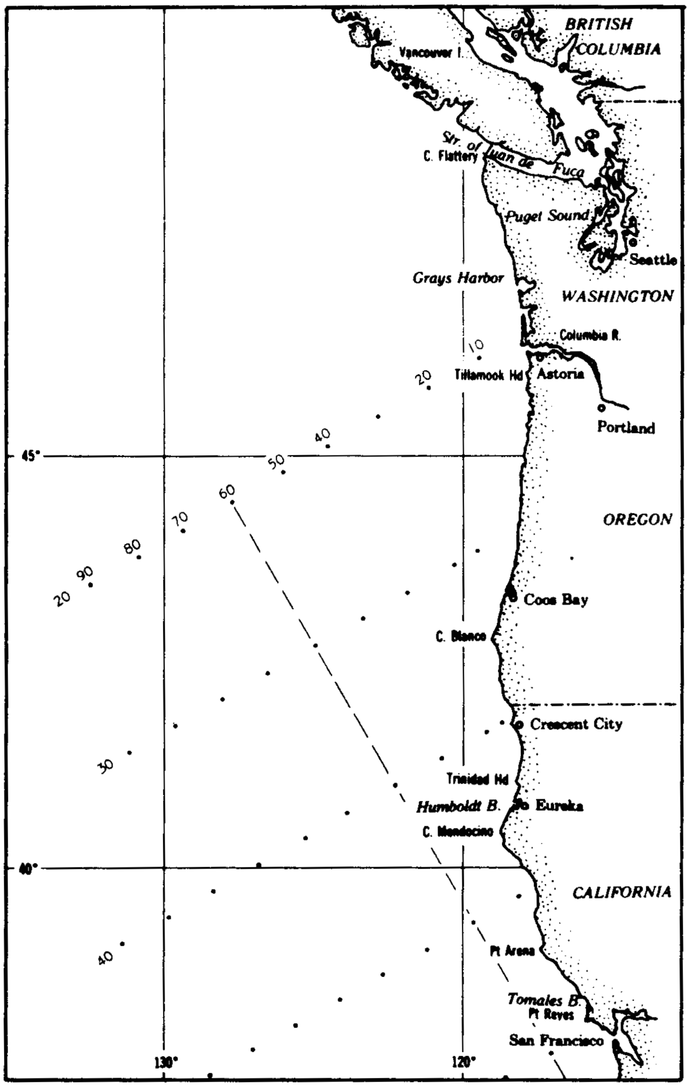

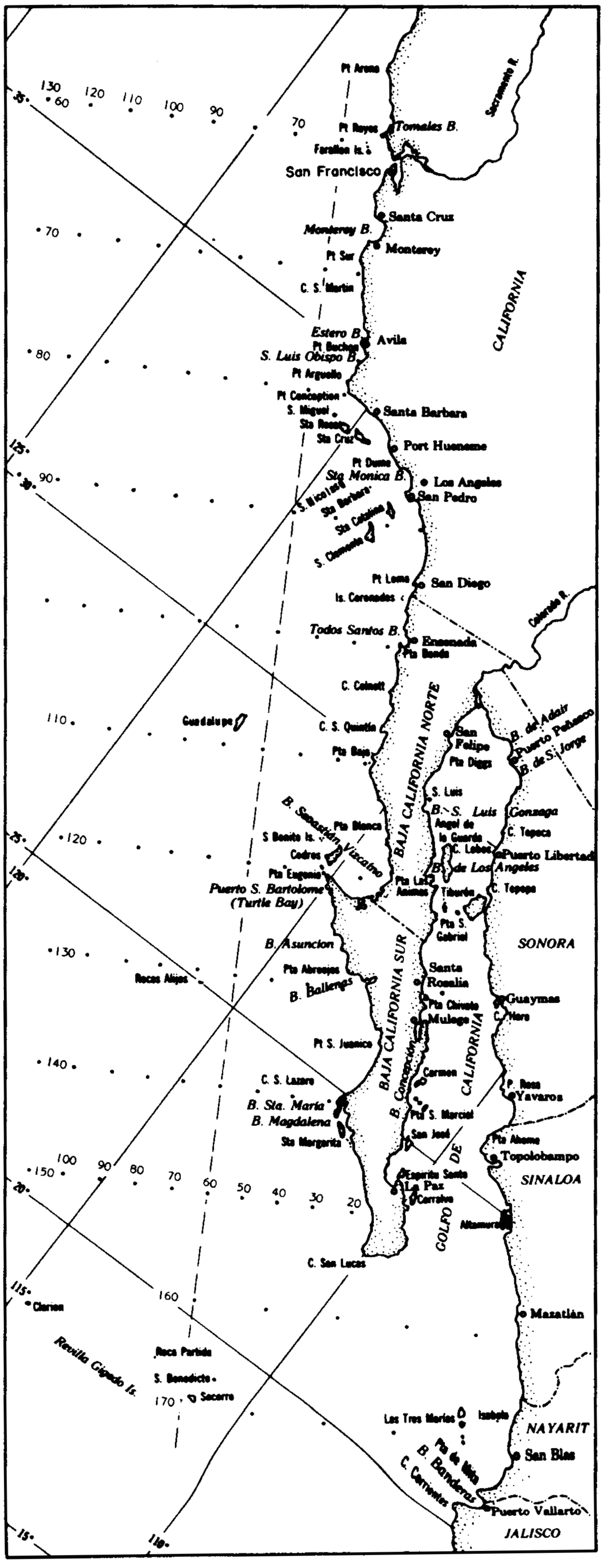

These maps are designed to show essential details of the area most intensively studied by the California Cooperative Oceanic Fisheries Investigations. This is approximately the same area as is shown in color on the front cover. Geographical place names are those most commonly used in the various publications emerging from the research. The cardinal station lines extending southwestward from the coast are shown. They are 120 miles apart. Additional lines are utilized as needed and can be as closely spaced as 12 miles apart and still have individual numbers. The stations along the lines are numbered with respect to the station 60 line, the numbers increasing to the west and decreasing to the east. Most of them are 40 miles apart, and are numbered in groups of 10. This permits adding stations as close as 4 miles apart as needed. An example of the usual identification is 120.65. This station is on line 120, 20 nautical miles southwest of station 60.

The projection of the front cover is Lambert's Azimuthal Equal Area Projection. The detail maps are a Mercator projection.

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