I have not tried to interpret the curves other than to correlate some features to reported geology and topography. For example, there appears to be a contact between Stations 1 and 2. Station 2, which lies west of Station 1, seems to be on the more resistive side of the contact. I don't know how these stations are situated with respect to known structures, but Station 2 could be close to the Opal Mound fault and possibly astride the aeromagnetic and gravity high. The large tipper also indicates proximity to a discontinuity. Station 3 may be biased by topography.

Station 4 appears to be on the resistive side of a NW-trending fault (?) passing north of the station.

The curves are being properly annotated by a draftsman and we will send you better copies when they become available.

Best regards,

Sincerely,

Norman E. Goldstein

NEG/clw

Enclosures

cc: R.A. Gray, DOE/HQ w/o enclosures
J.W. Salisbury DOE/HQ w/o enclosures

Enclosed is one set of magnetotelluric results from the eight stations occupied by LBL in the Roosevelt H.S. area last autumn. Results appear to be complete; no lost data and small error bars. For each station Tom Gamble and Bob Miracky, who performed the analyses, provide the following curves:

1. Rotated apparent resistivities - The resistivity scale ranges between 10^{-2} and 10^{4} ohm·m on each plot. ρ_{yx} is associated with E perpendicular to apparent strike.

2. Rotation angle/Skewness - Rotation angle is the angle (positive clockwise) from magnetic north to the x - axis or apparent strike direction. Skewness is defined as usual.

3. Phase spectra of the Z_{yx} and Z_{xy} impedances.

4. Power spectra of the two electric field components. Ordinate extends from 10^{-6} to 10^{4} $(mv/km)^2/Hz$.

5. Power spectra of the horizontal magnetic field components at the local station. Ordinate extends from 10^{-10} to 10^{5} γ^2/Hz.

6. Power spectra of the horizontal magnetic field components at the reference station. Ordinate values range as in 5.

7. Power spectra of the vertical magnetic field at the local station. Ordinate values range from 10^{-11} to 10^{3} γ^2/Hz.

8. Tipper strike - The direction of the horizontal magnetic field that has the smallest linear relationship with H_z, measured from magnetic north.

9 Tipper phase angle, Tipper magnitude squared, $|T_y|^2$, normal to the tipper strike direction, and Tipper mangitude squared, $|T_x|^2$, parallel to the tipper strike direction.

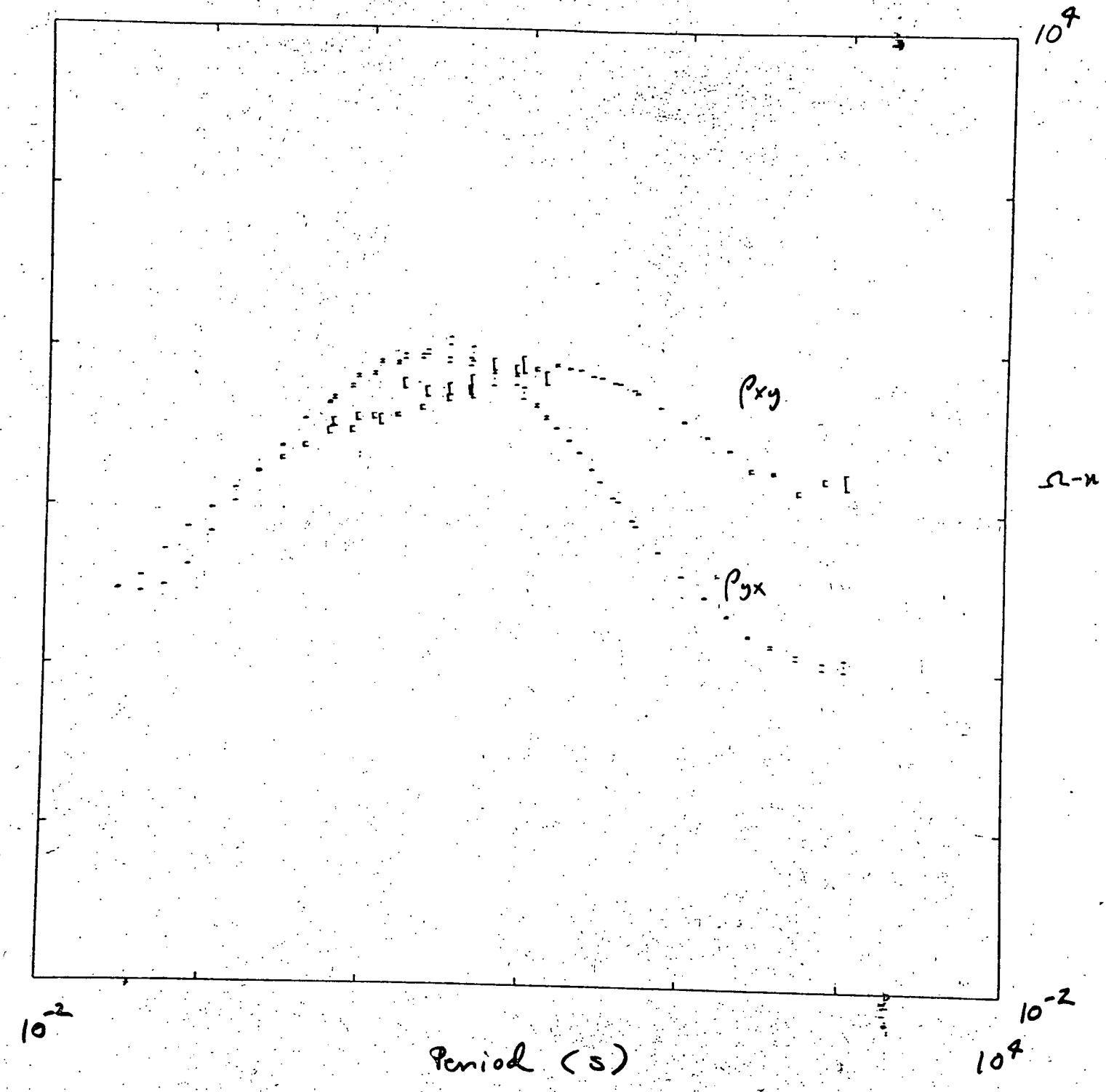
The abscissa on all graphs covers the period range of 10^{-2} to 10^4 seconds; however, actual results extend to only 10^3 seconds.

Station locations were as follows:

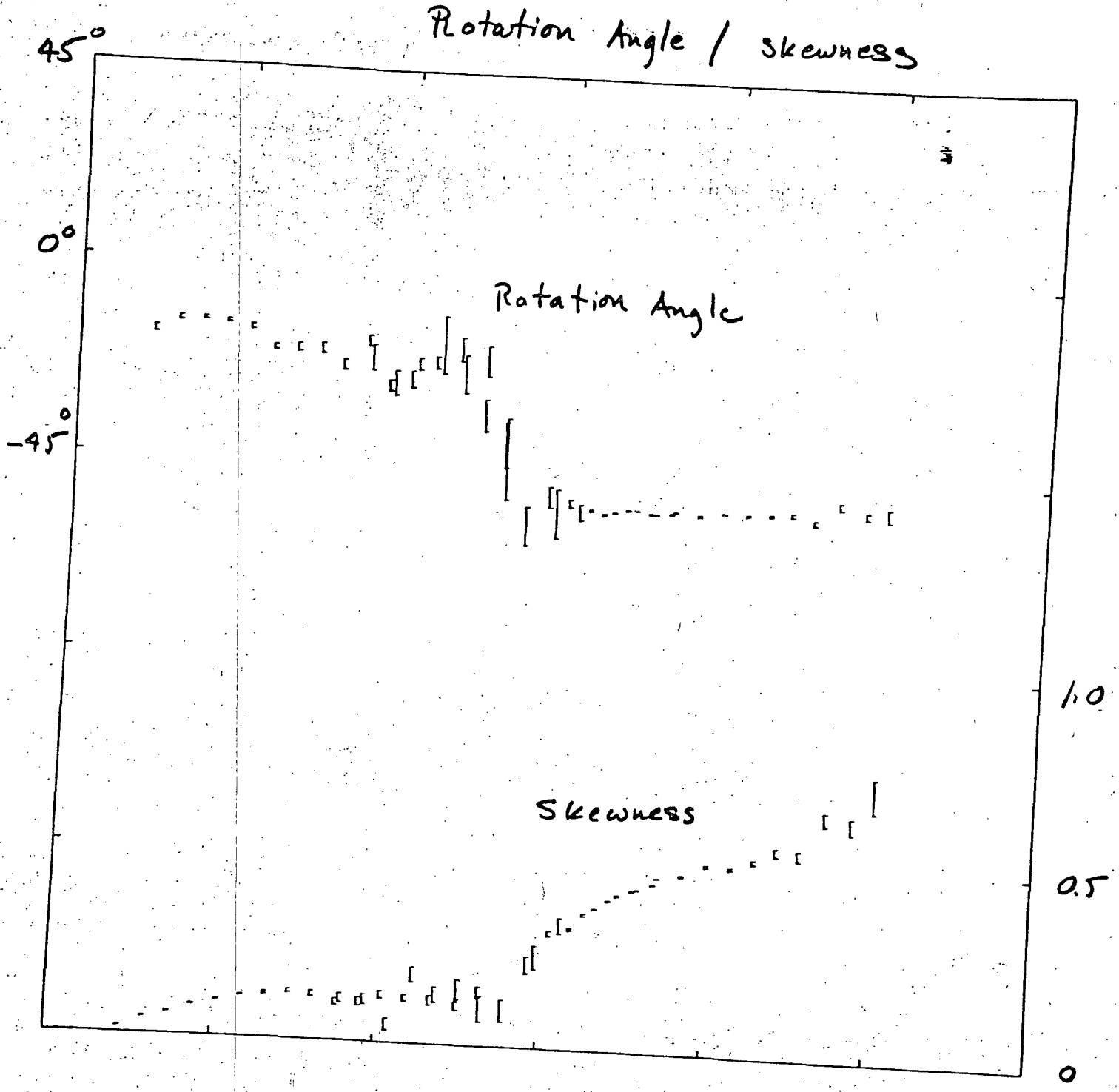
Local Station	Location	Reference Mag Station	Location
1	SE¼, NW¼ sec. 3 South of Hot Spring, Wash, T.27S., R.9W.	1	SW¼, SW¼ sec. 30 T.26S., R.82. 1 km west of Bailey BM elevation 7918 ft.
2	SW¼, NE¼ sec.4 about 1 mile WNW of local station 1.	1	as above
3	NE¼, SE¼ sec.6 T.27S., R.8W., 3½ miles east of local station 1.	1	as above
4	NW¼, NE¼, sec. 4 T.25S., R.9W. one mile north of Antelope Spring.	2	N½ sec 17 T.26S., R.9W.
5	SE¼, SE¼ sec. 14 T.26S., R.9W.	2	as above
6	NW¼, SW¼ sec. 11 T.26S., R.9W.	2	as above
7	NE¼, NW¼ sec. 23 T.27S., R.10W	2	as above
8	33 | 34 R.10W.	Local 7	see above

Station 1

Apparent resistivities

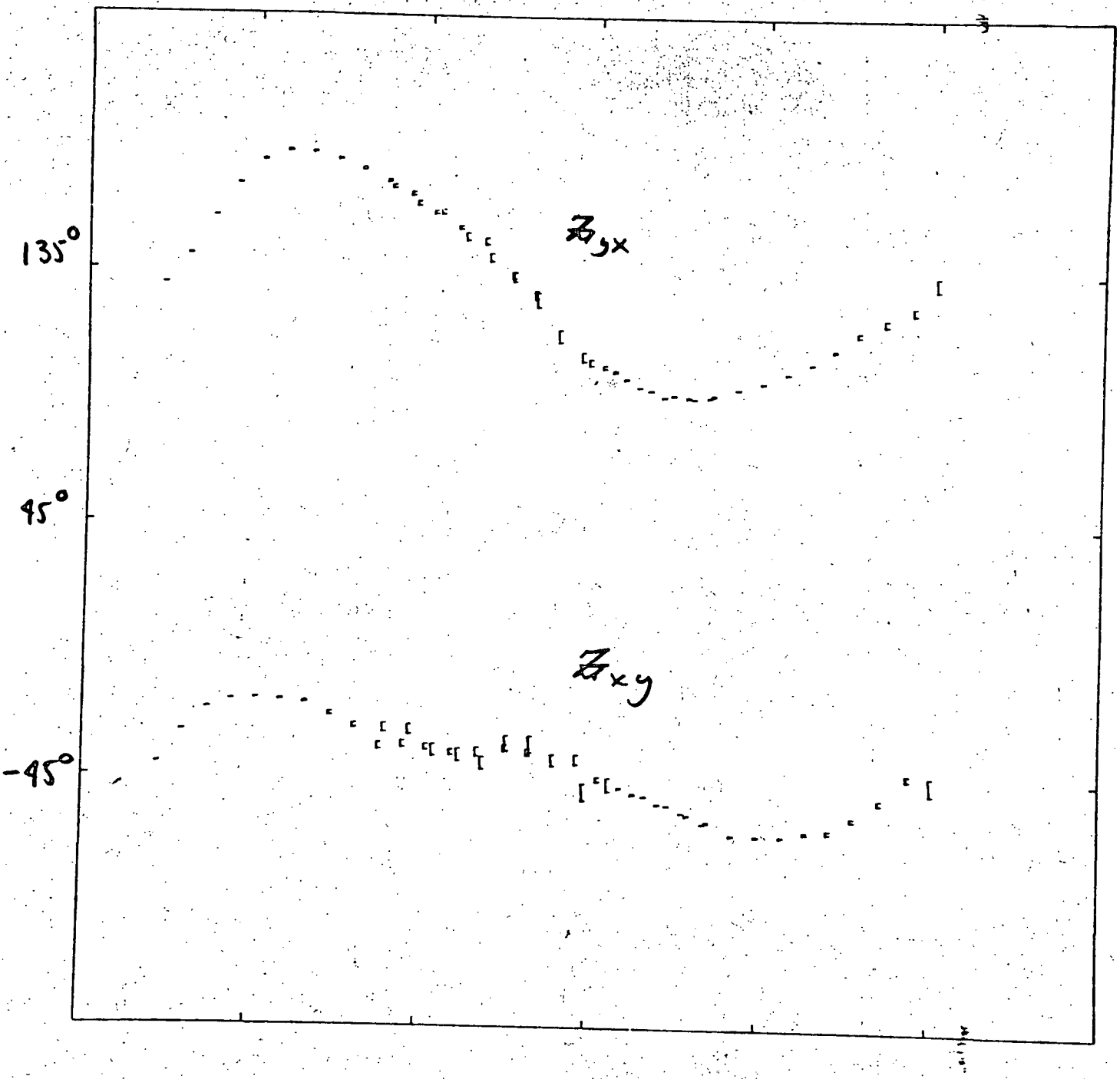


Station 1

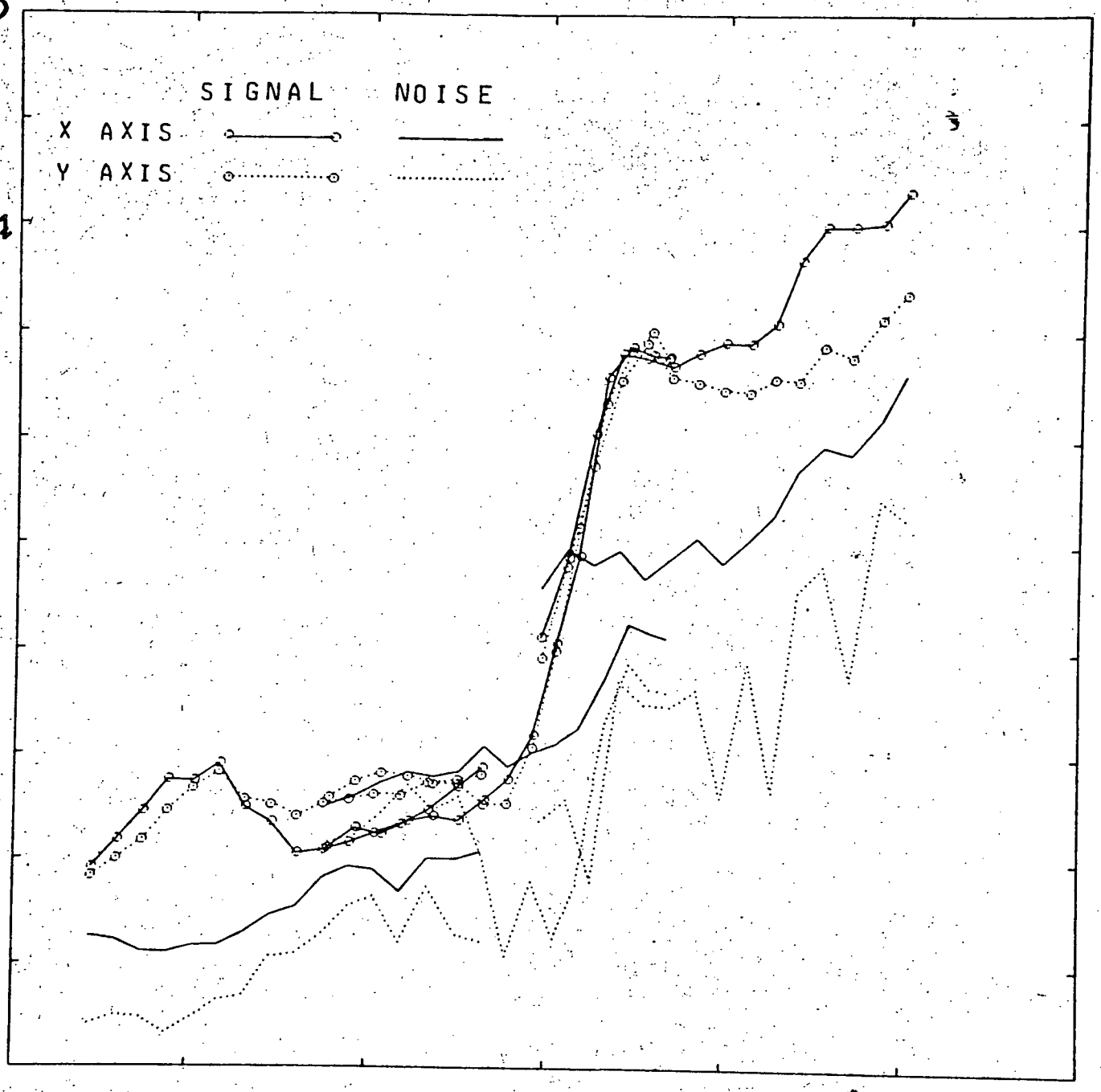

Rotation Angle / Skewness
45°
0°
-45°
Rotation Angle
1.0
Skewness
0.5
0

Station 1

Phase Angles



Station 1
Power Spectra
E



10^{4}

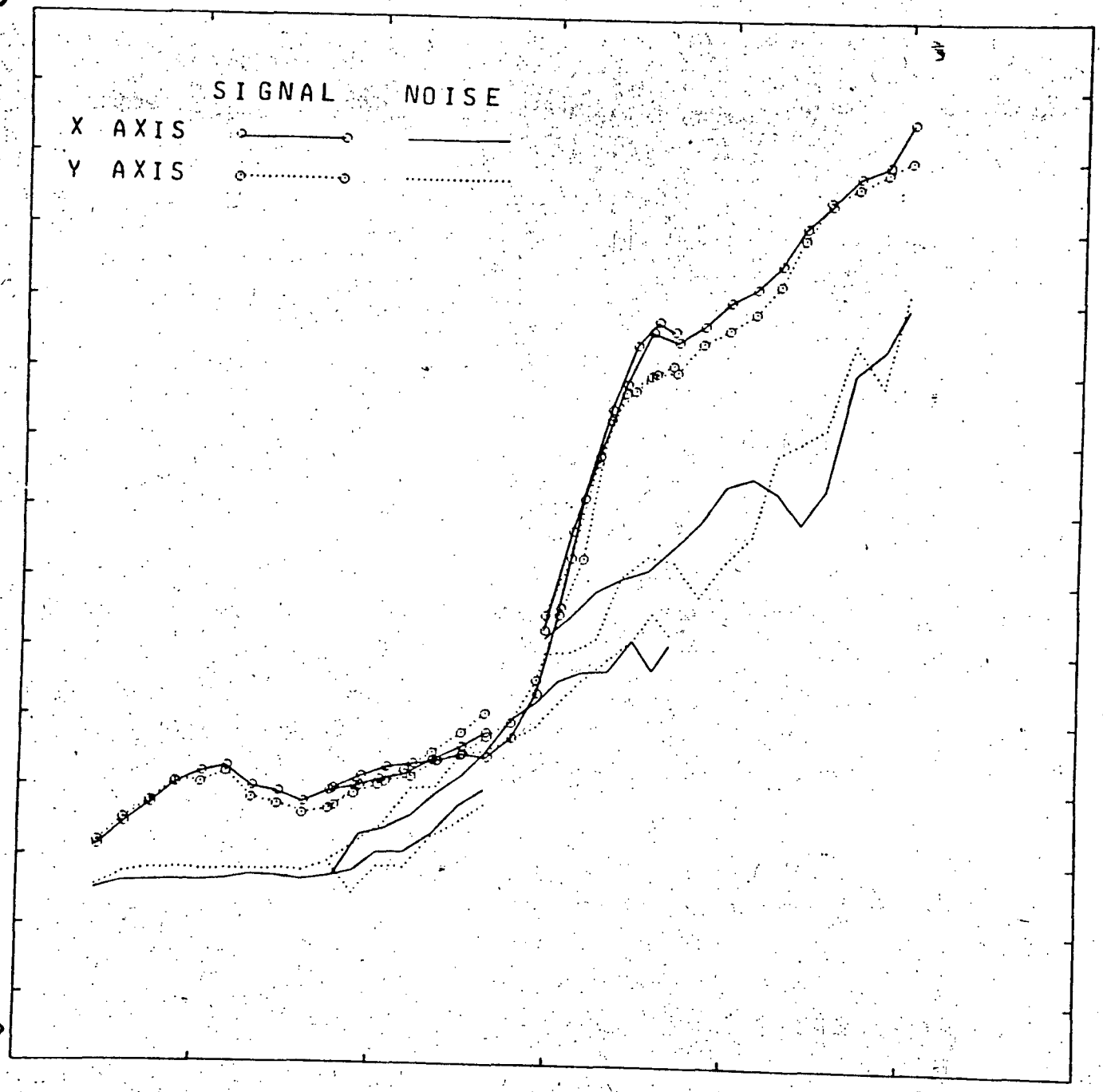
$(\text{nT})^2/\text{Hz}$

10^{-6}

Station 1

Power Spectra

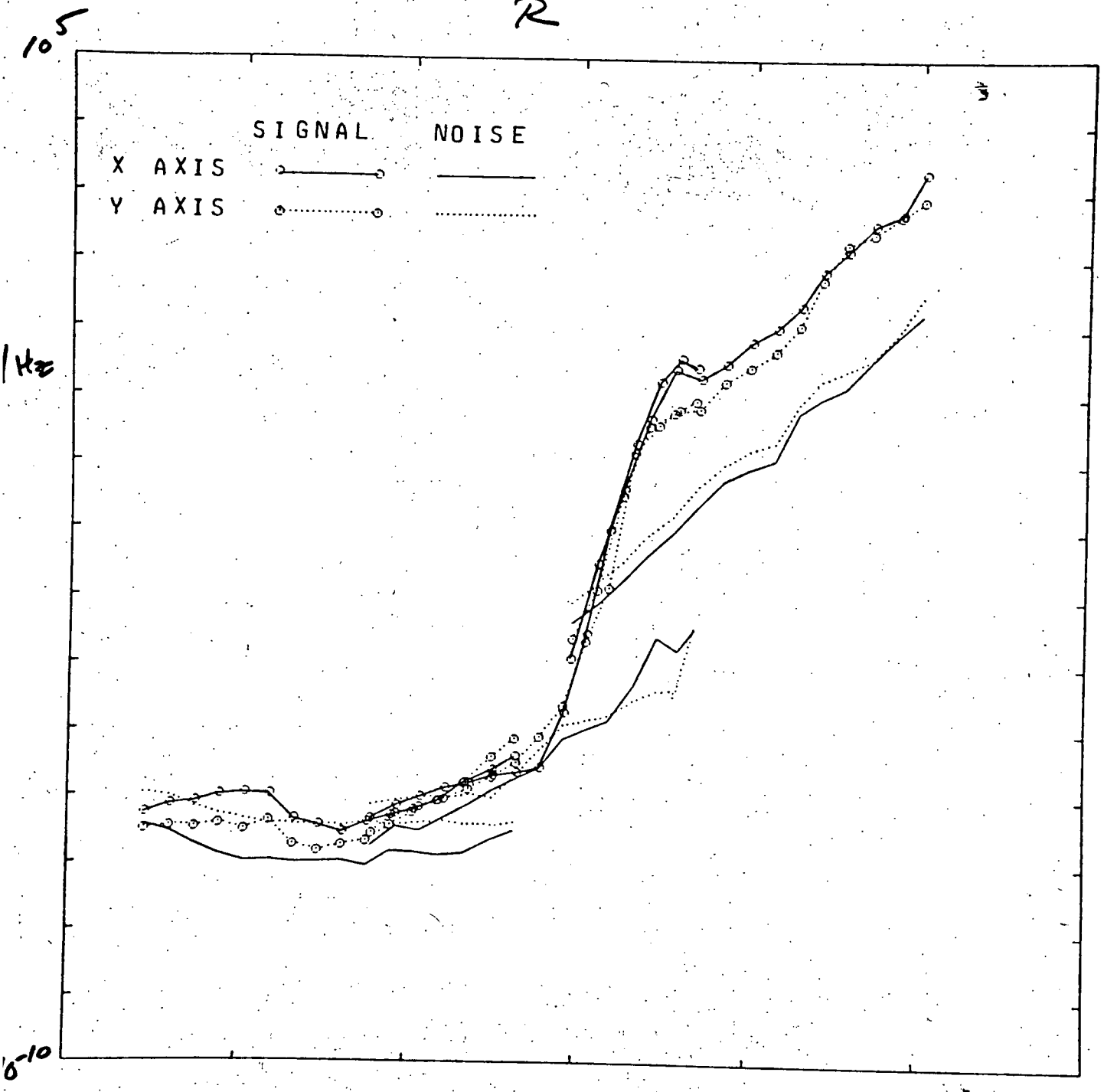
H



Station 1

Power spectra

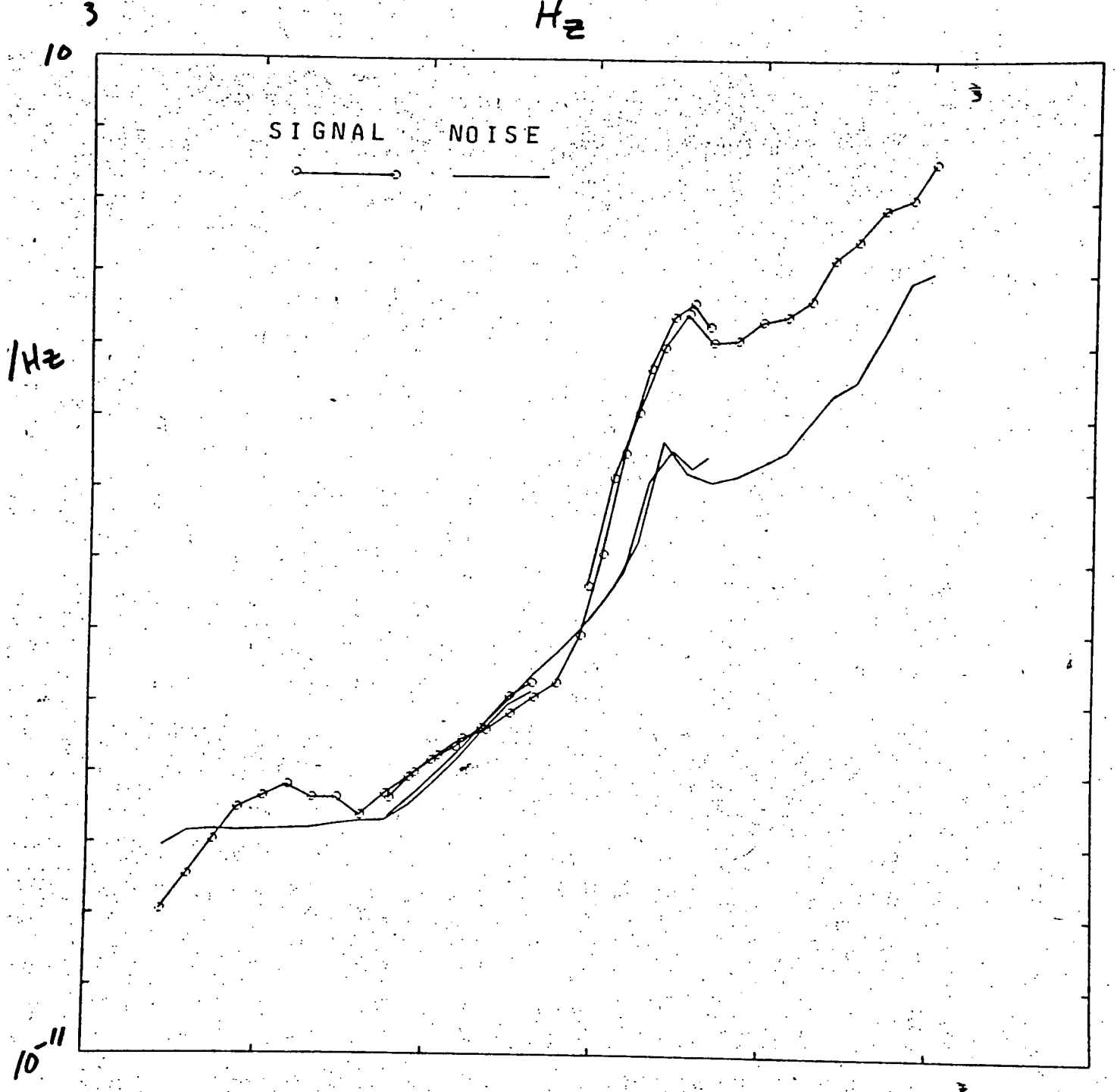
R



Station 1

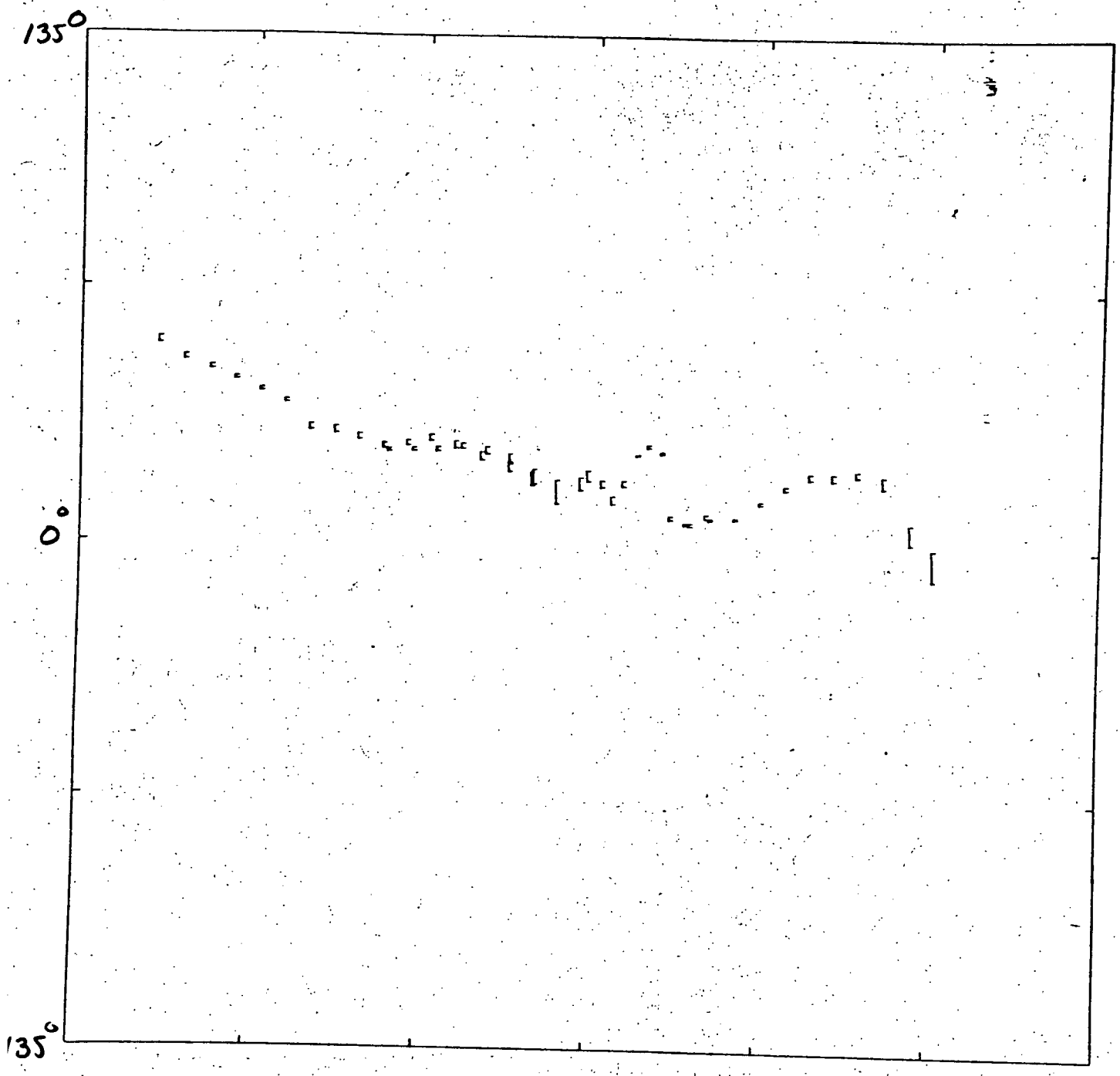
Power Spectra

H_z

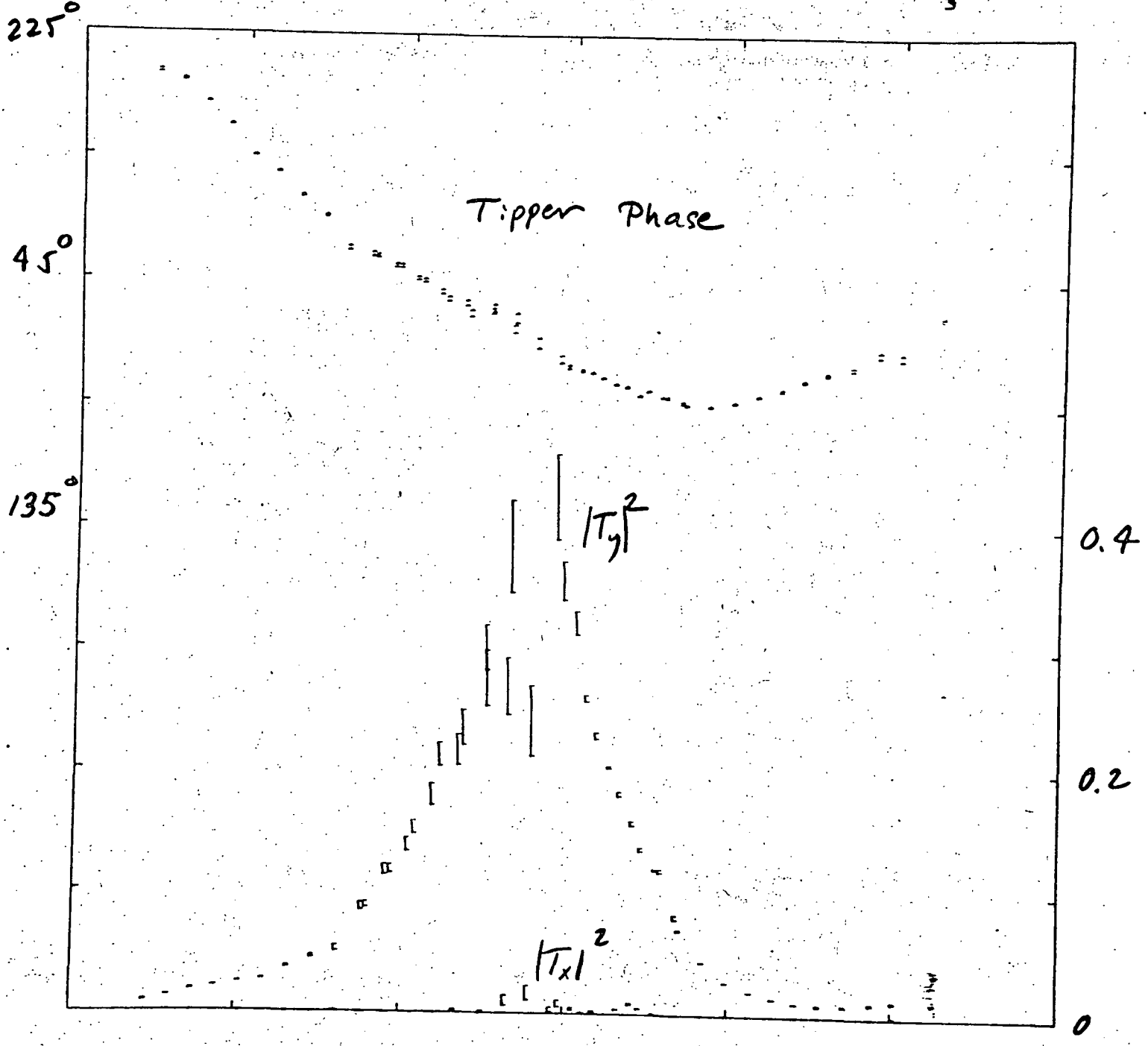


Station 1

Tipper Strike

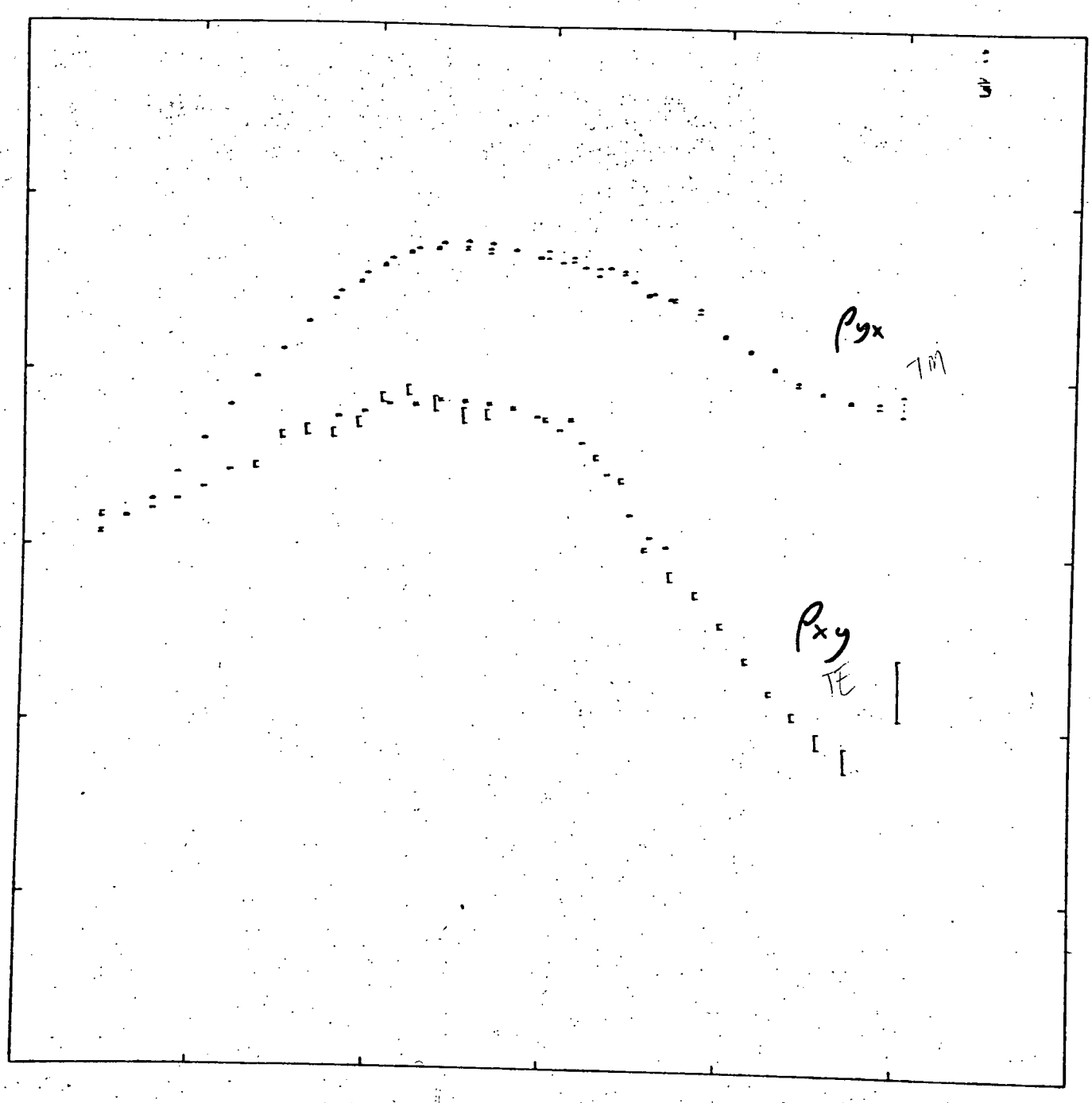


Station 1

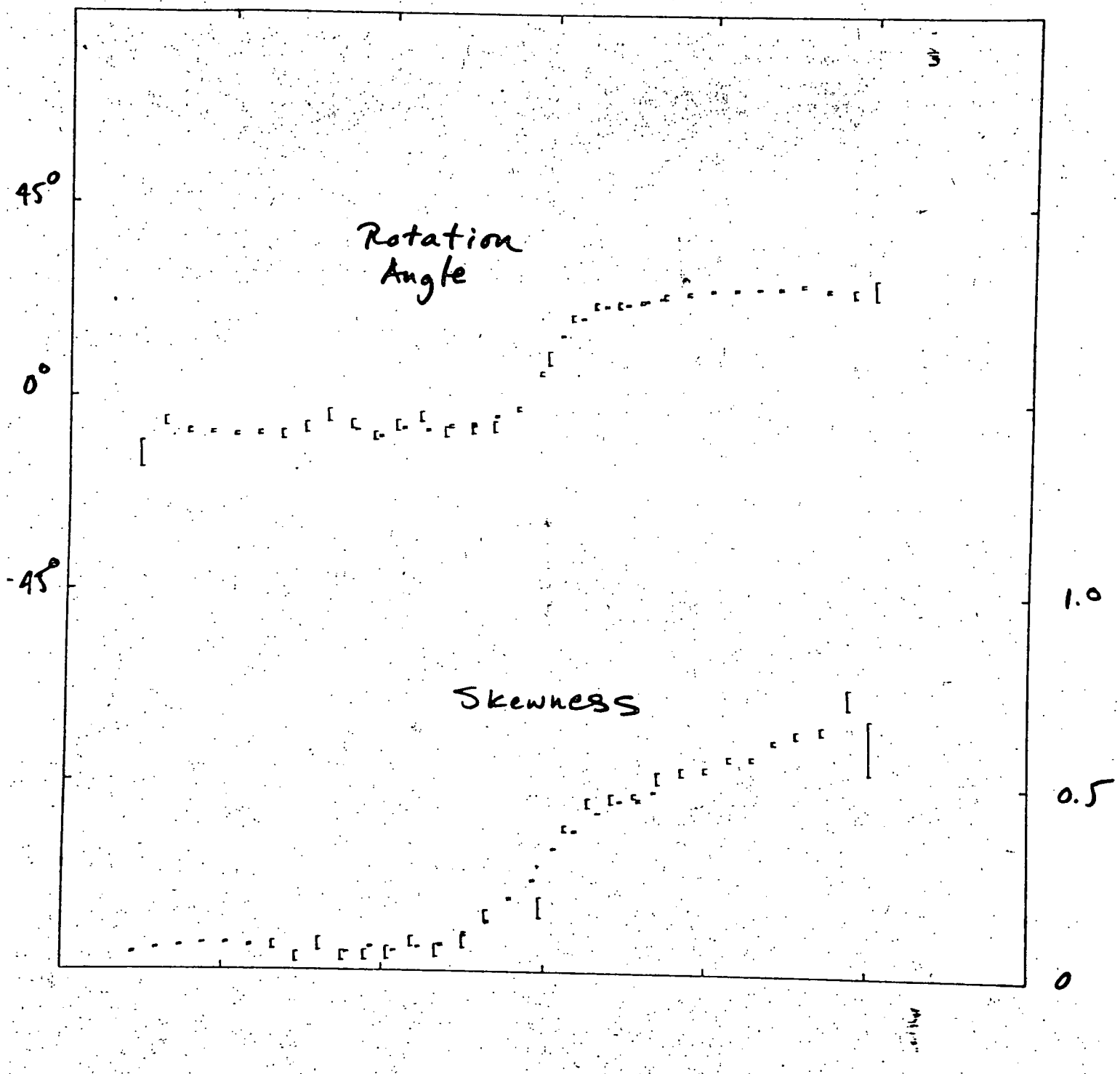


Station 2

Apparent Resistivities

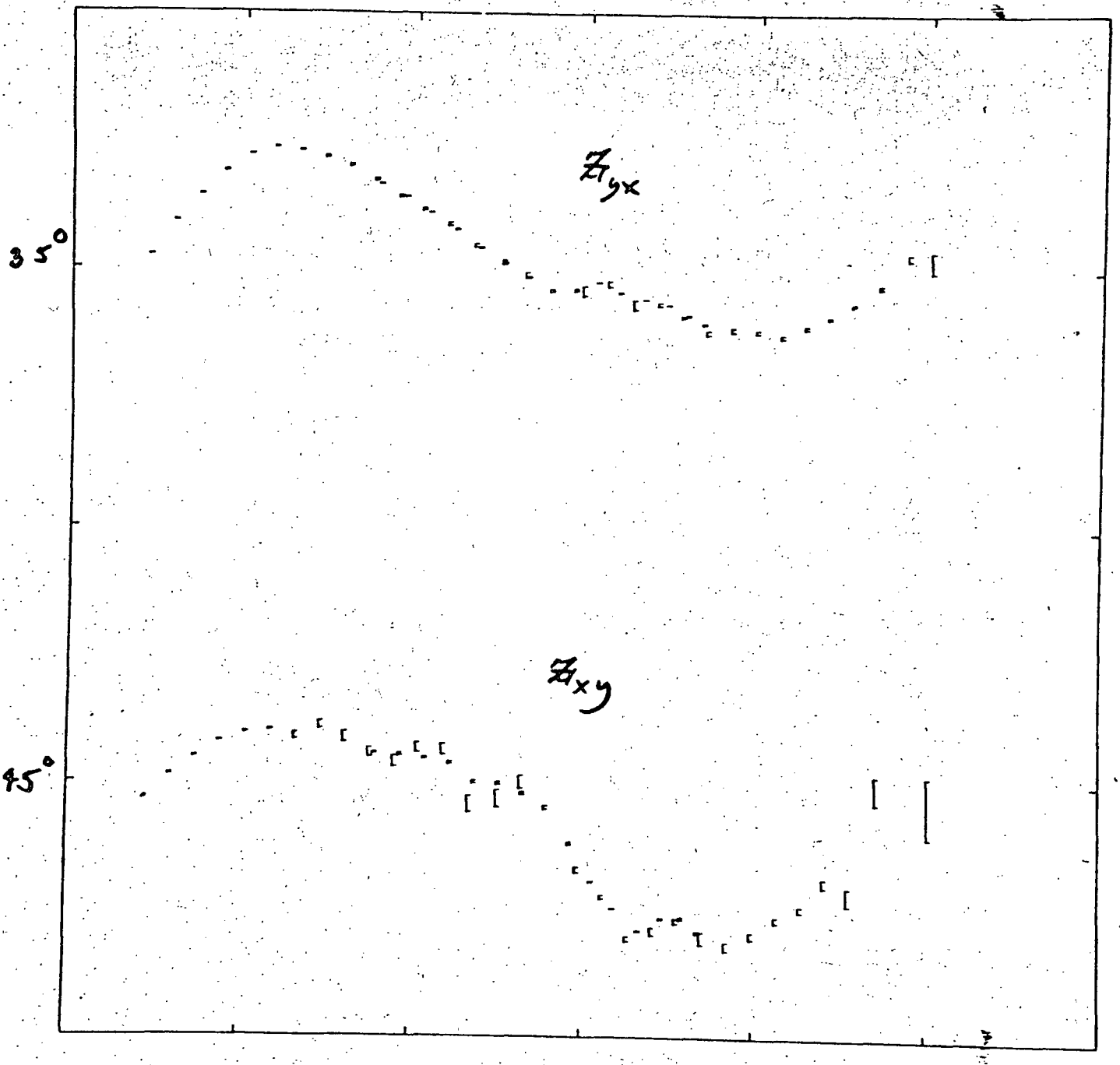


Station 2



Station 2

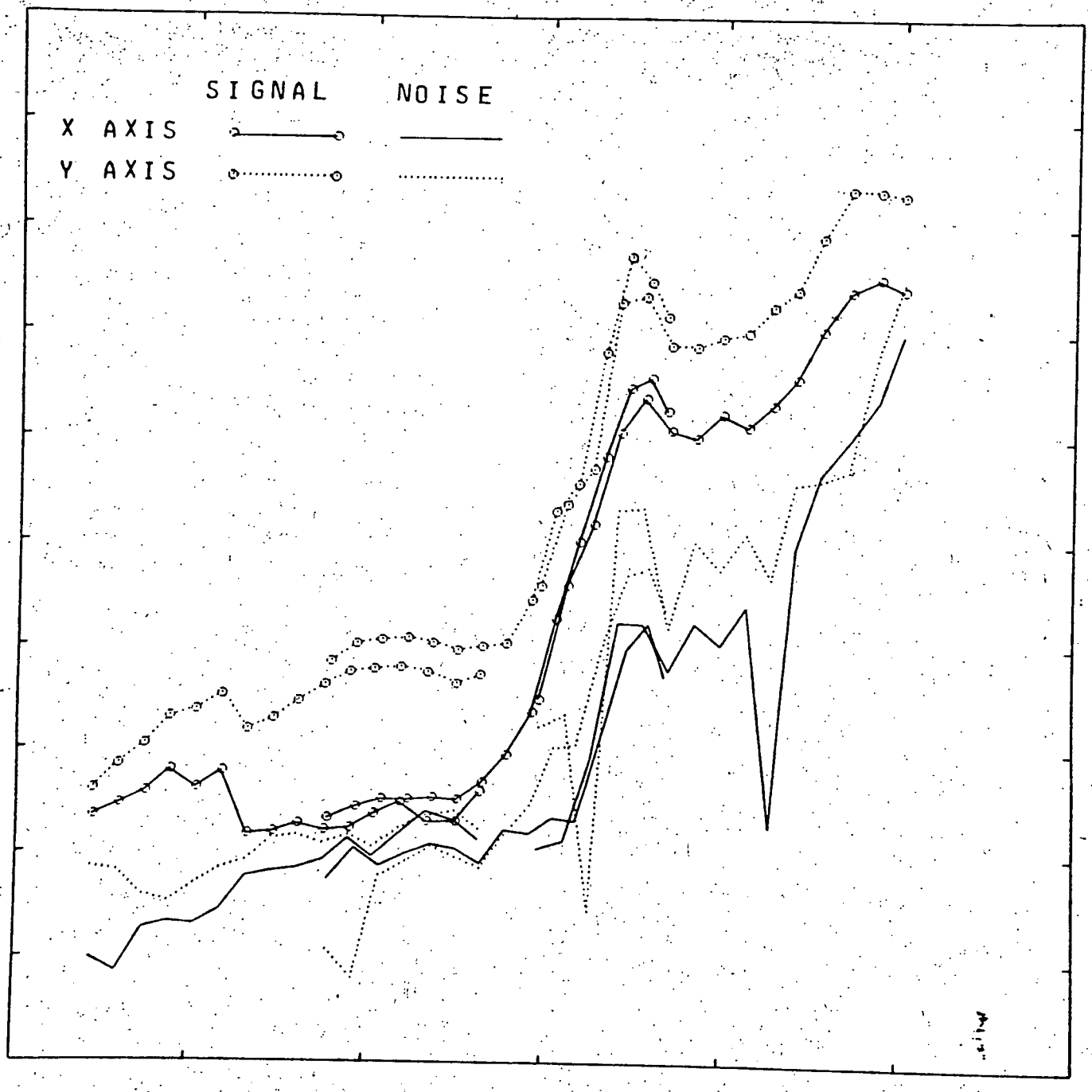
Phase Angles



station 2

Power Spectra

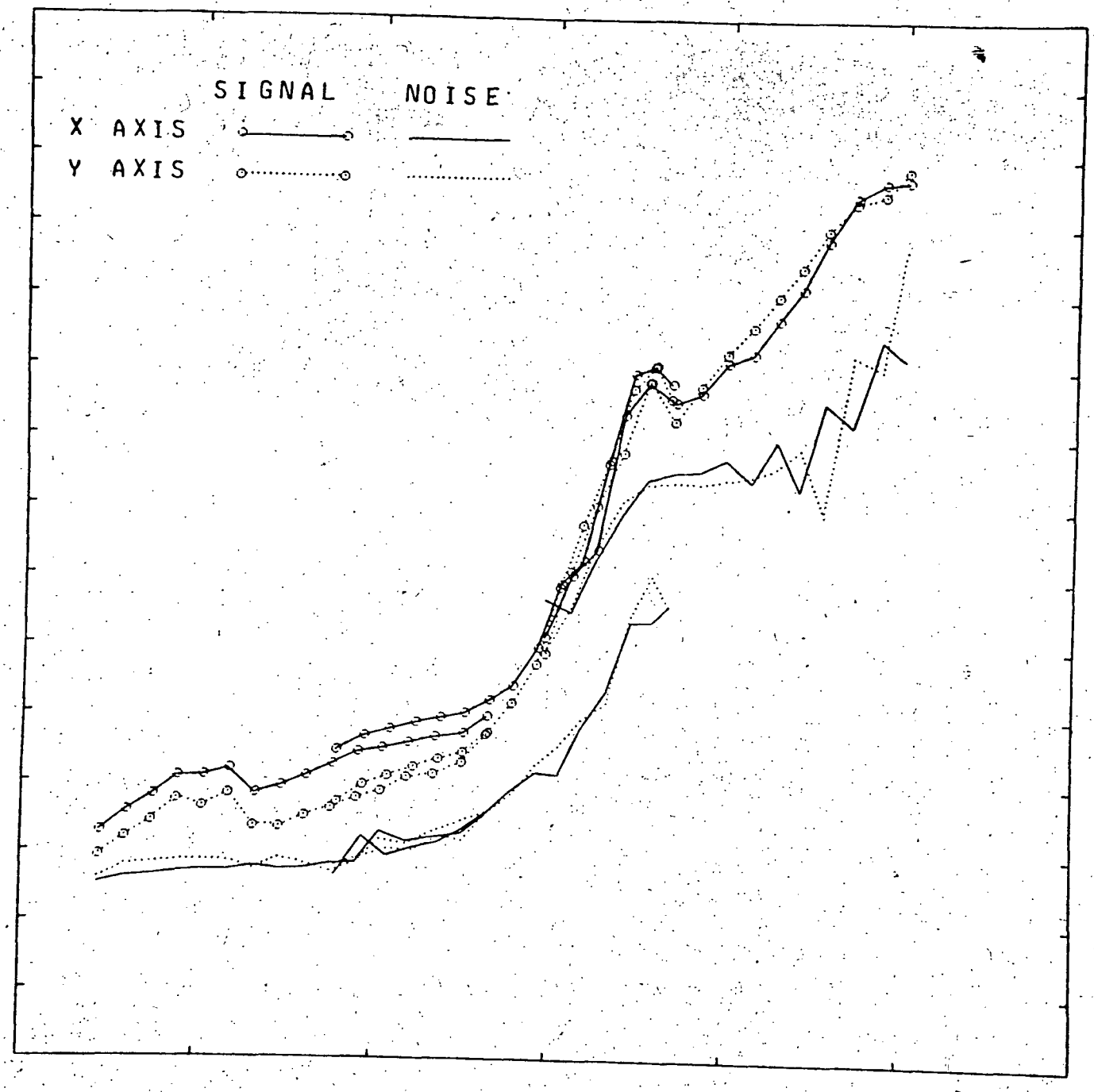
E



Station 2

Power Spectra

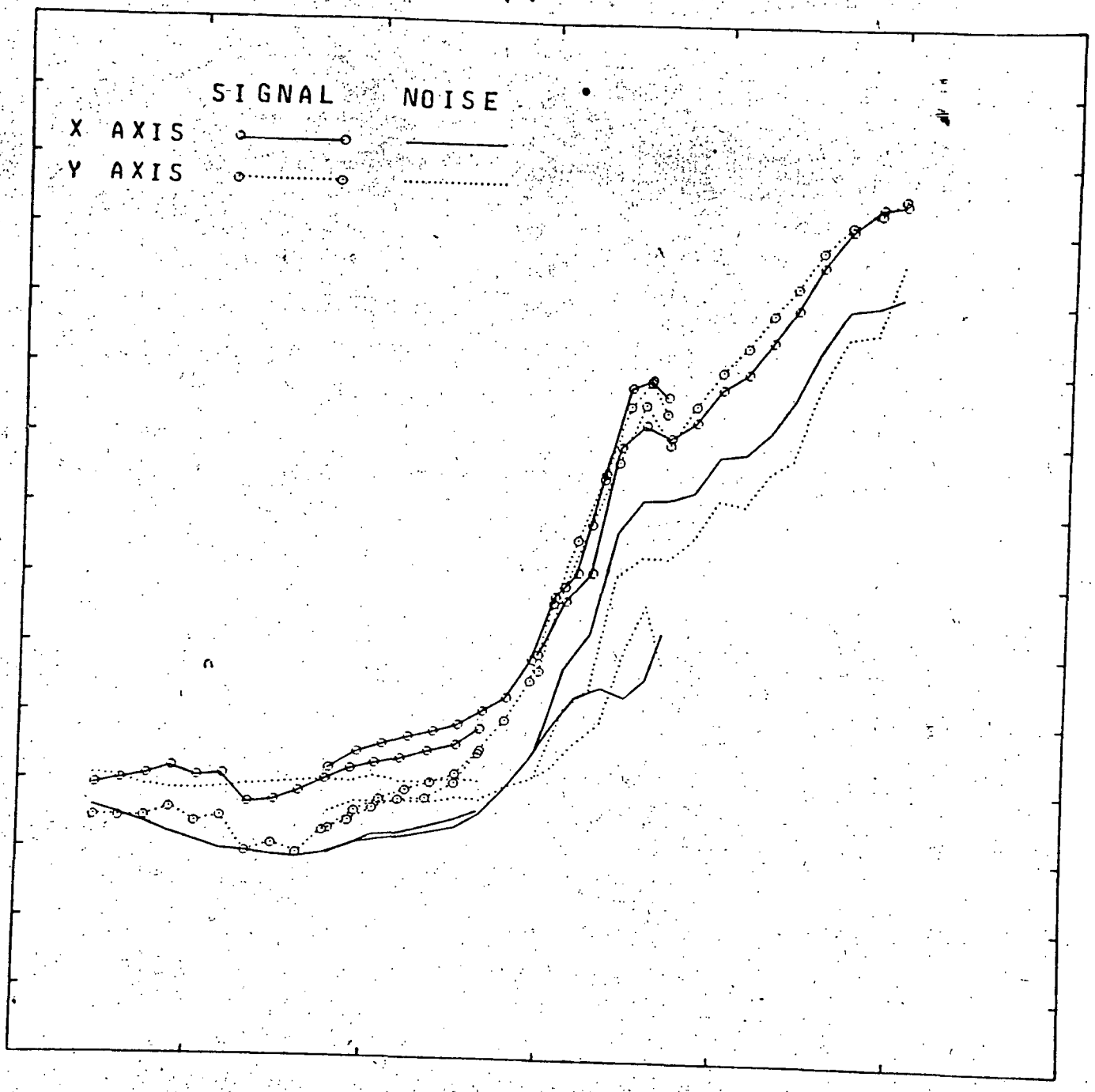
H



Station 2

Power Spectra

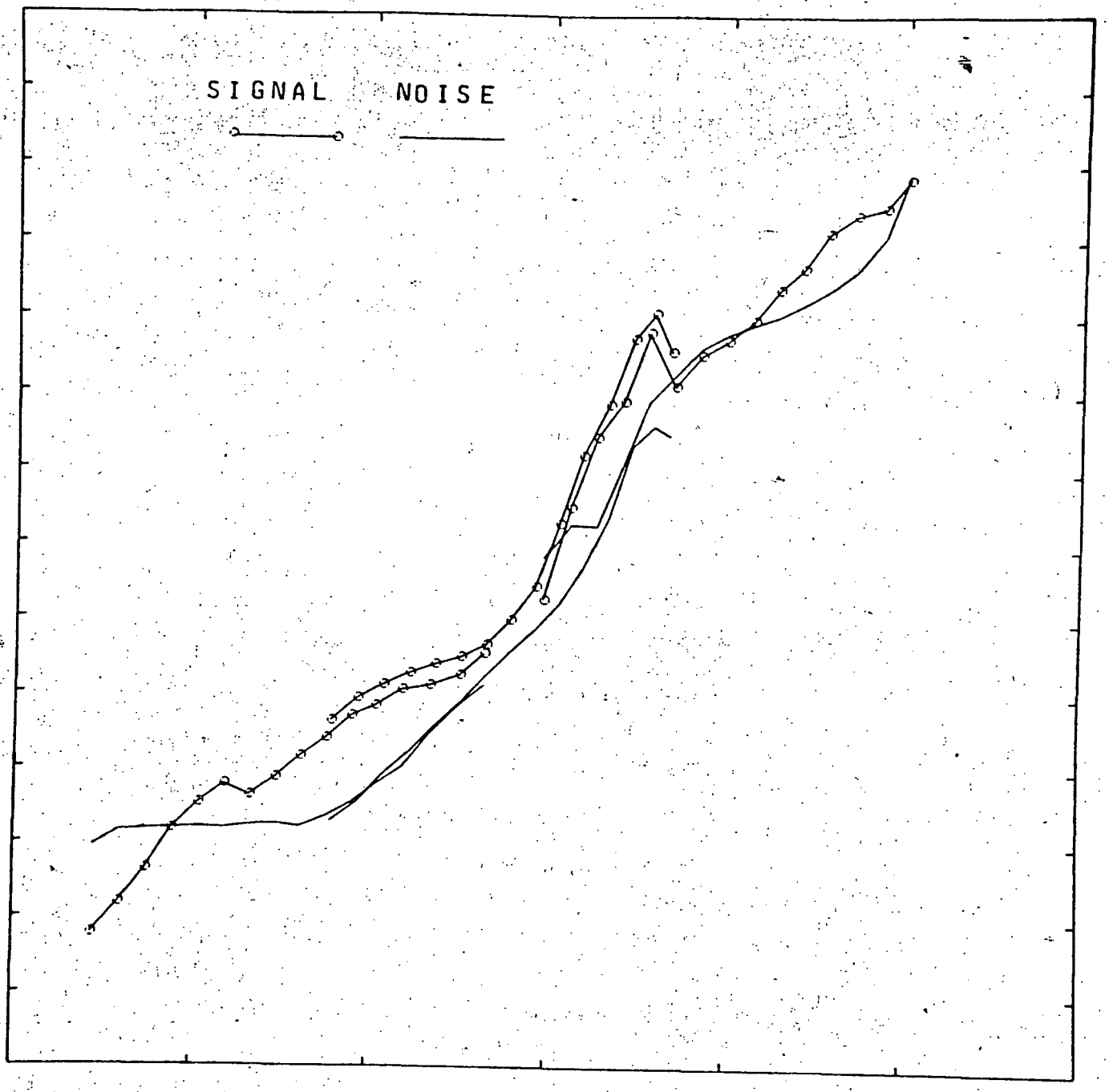
R



Station 2

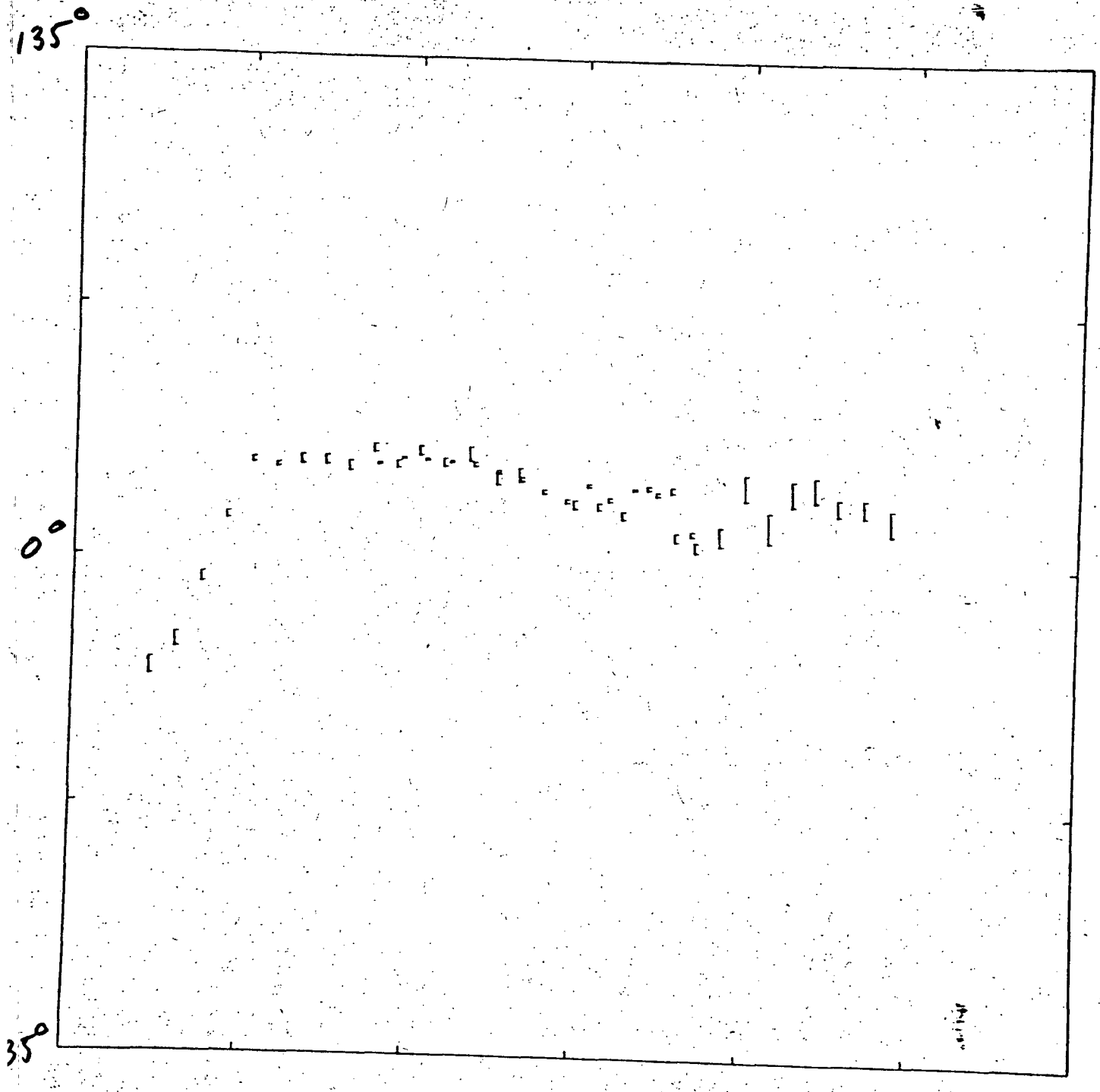
Power Spectra

H_z

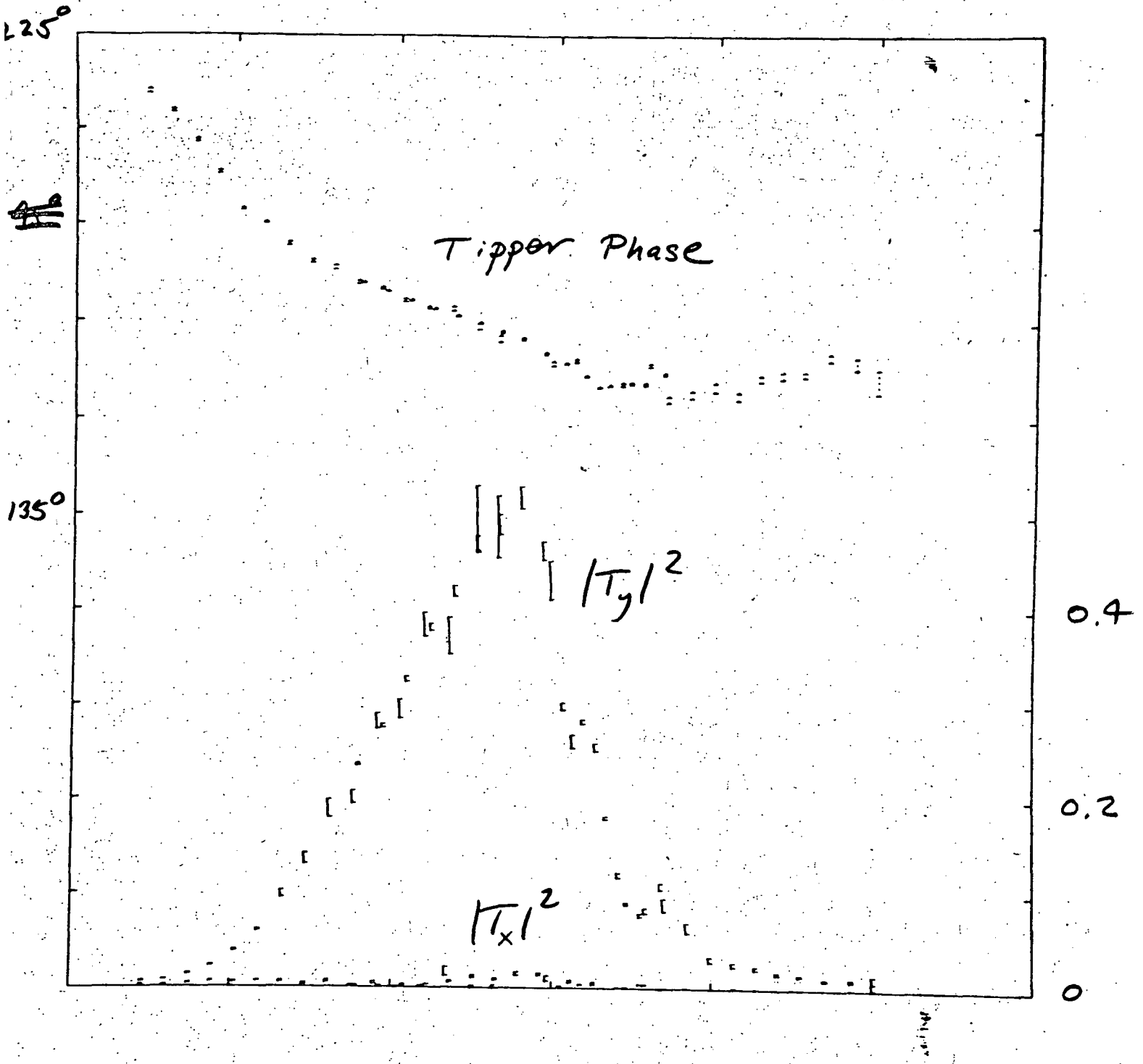


station 2

Tipper Strike

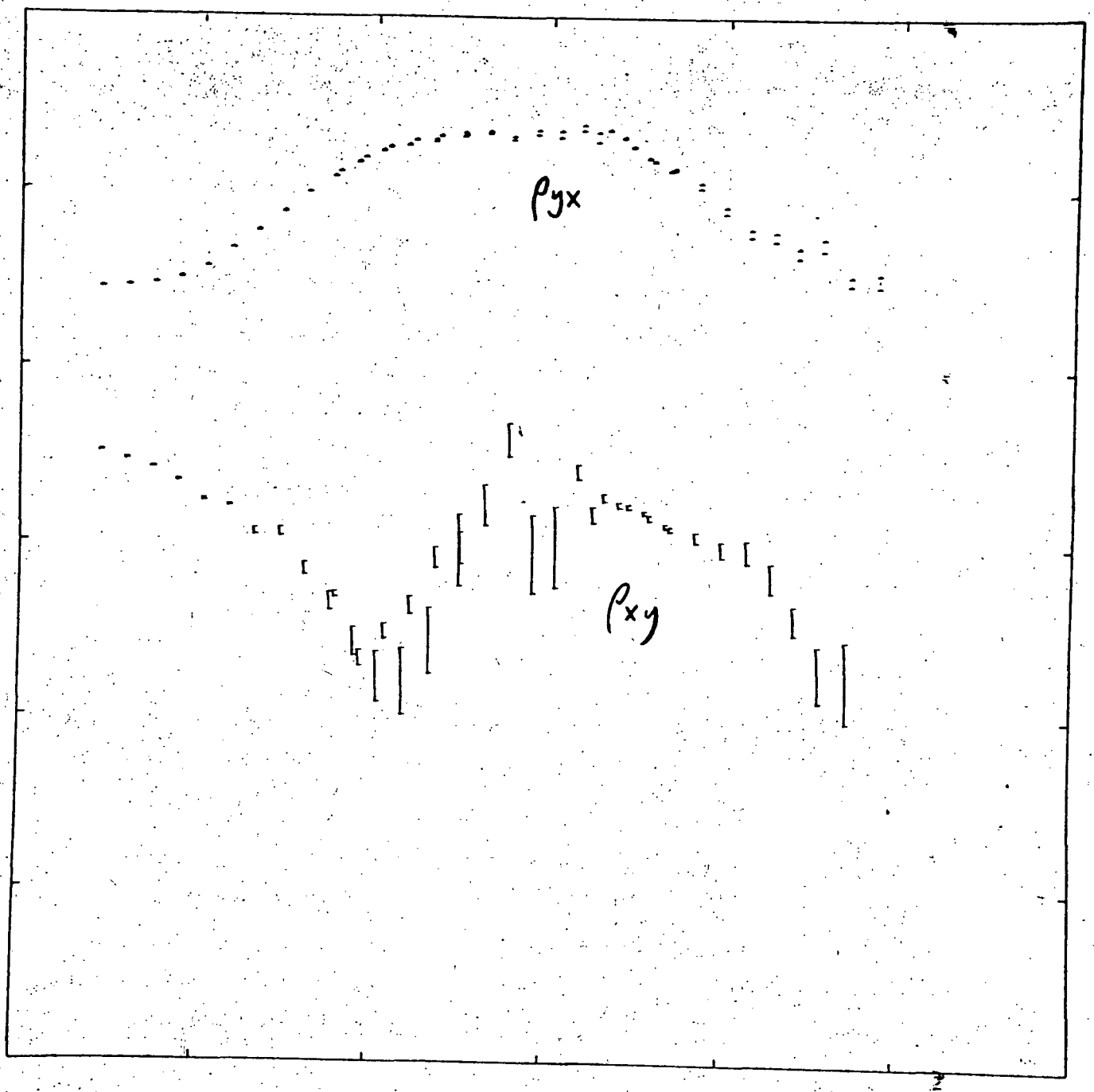


Station 2

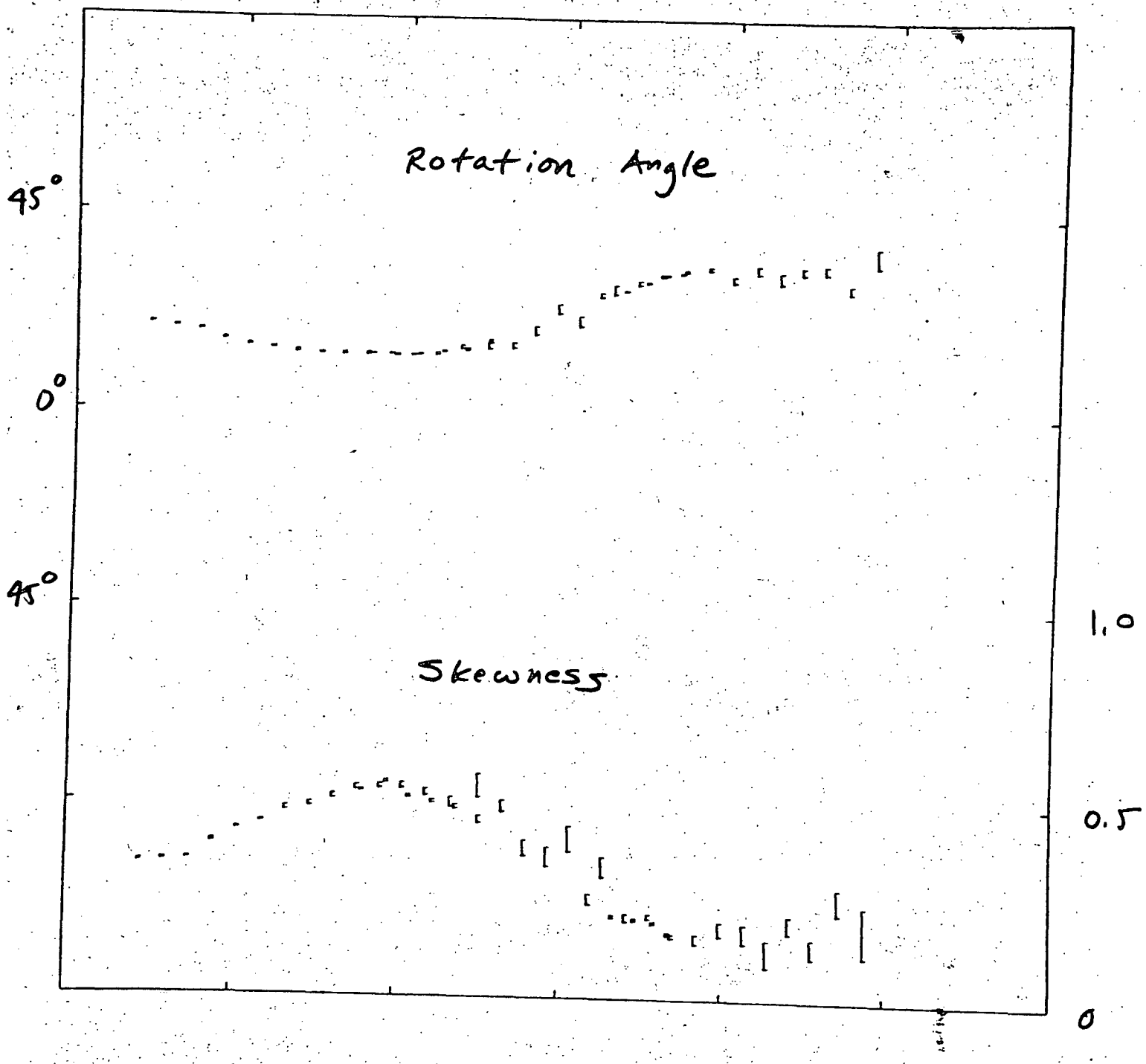


Station 3

Apparent Resistivities

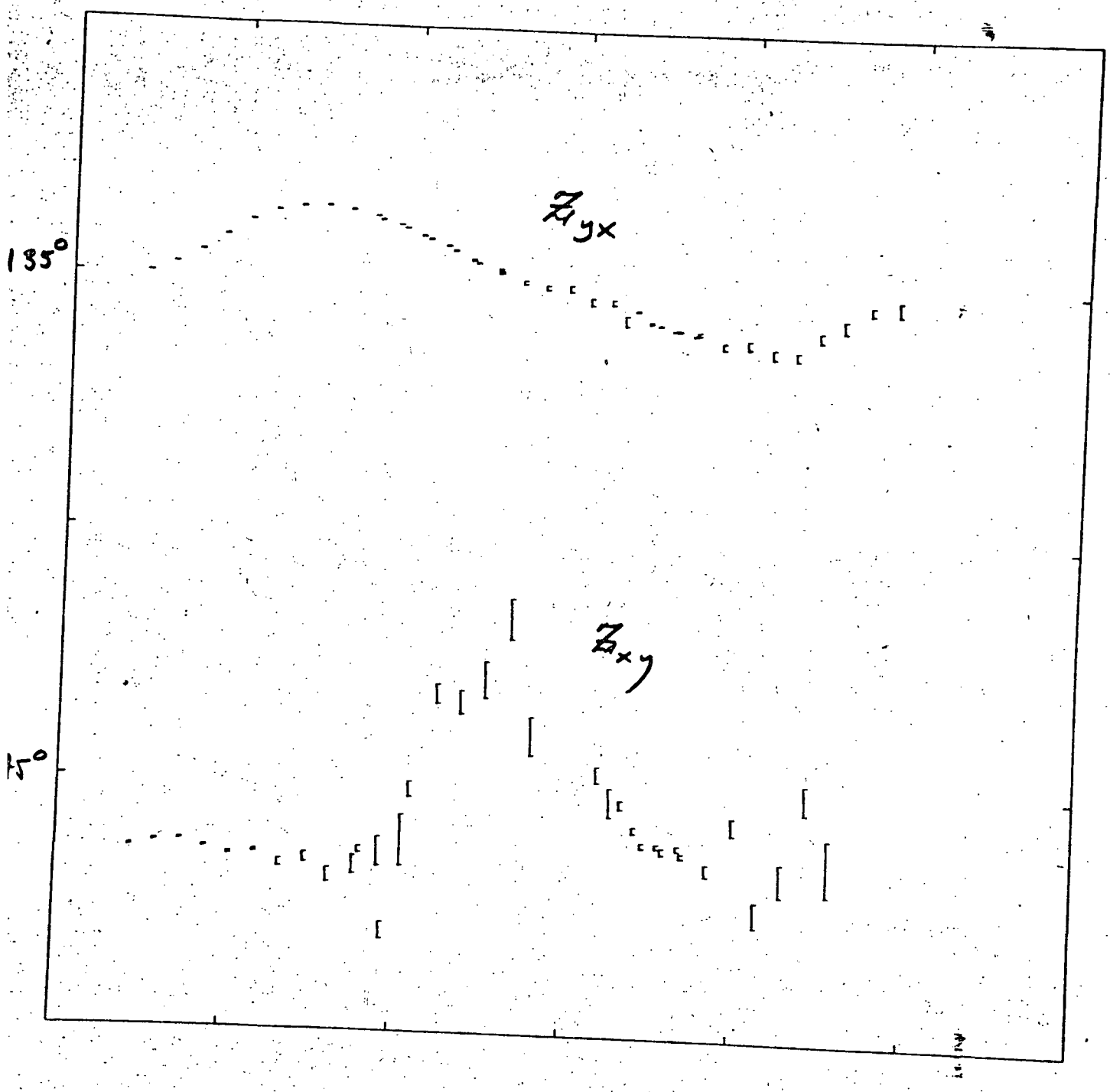


Station 3



Station 3

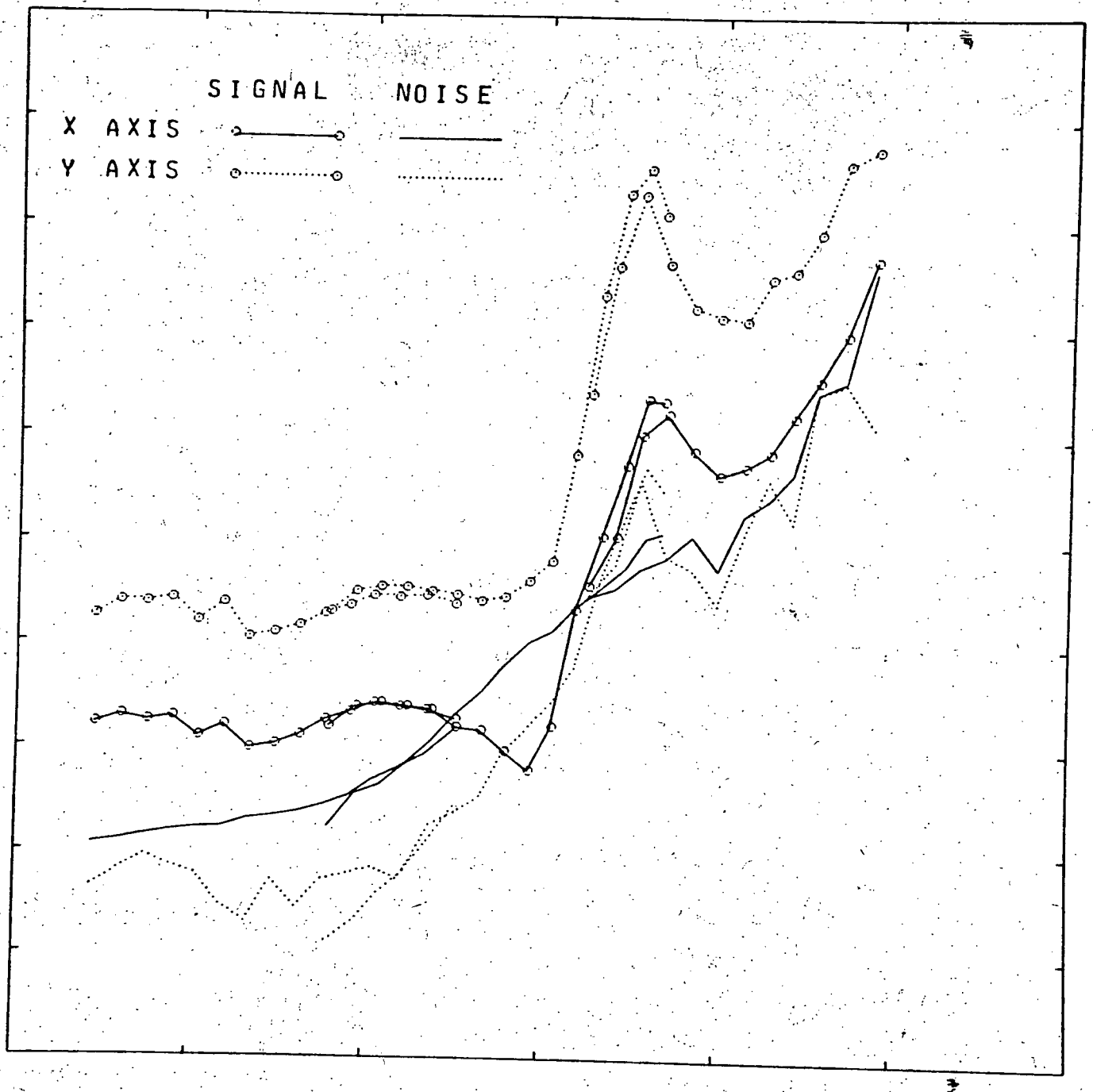
Phase Angles



Station 3

Power Spectra

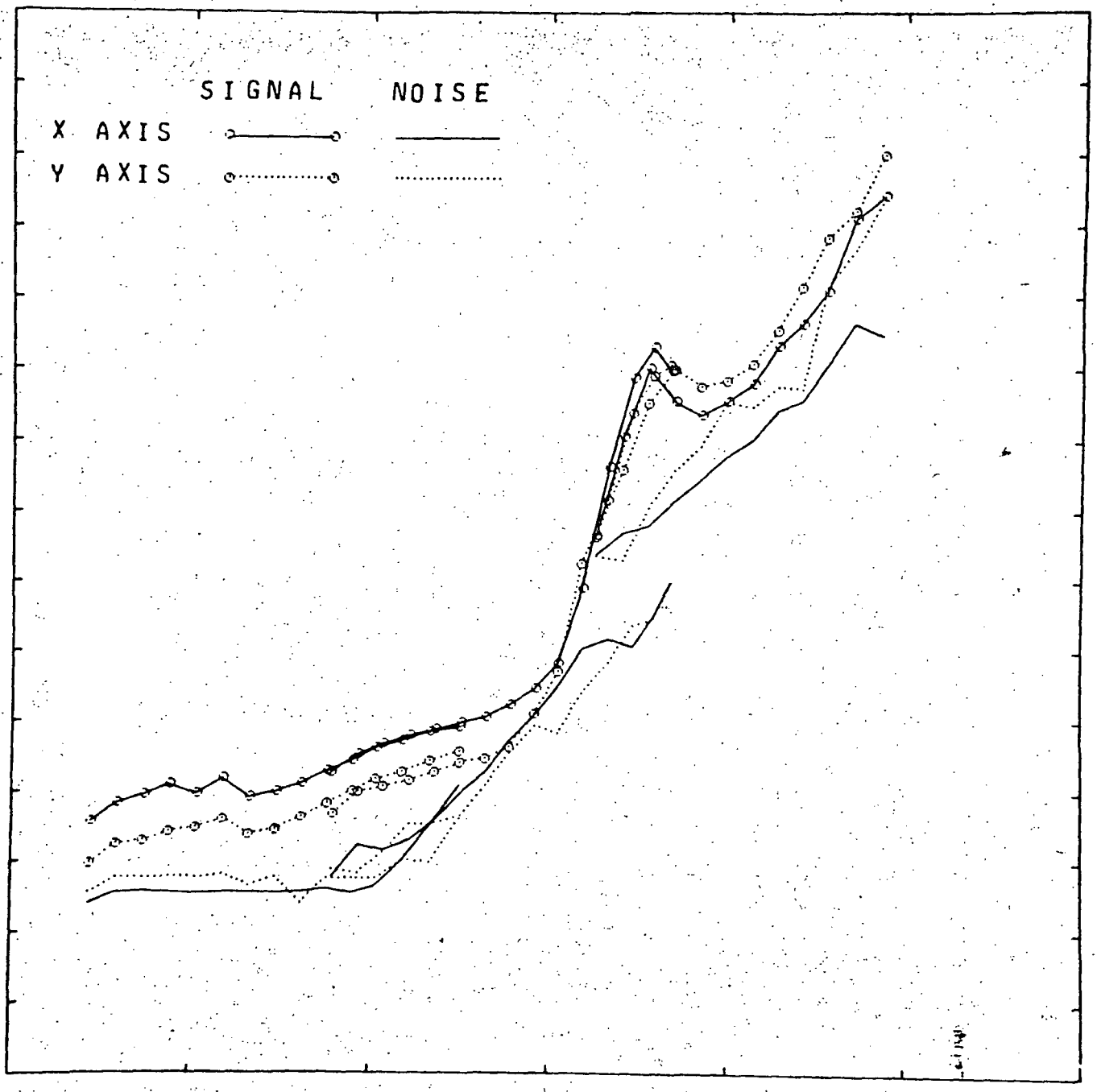
E



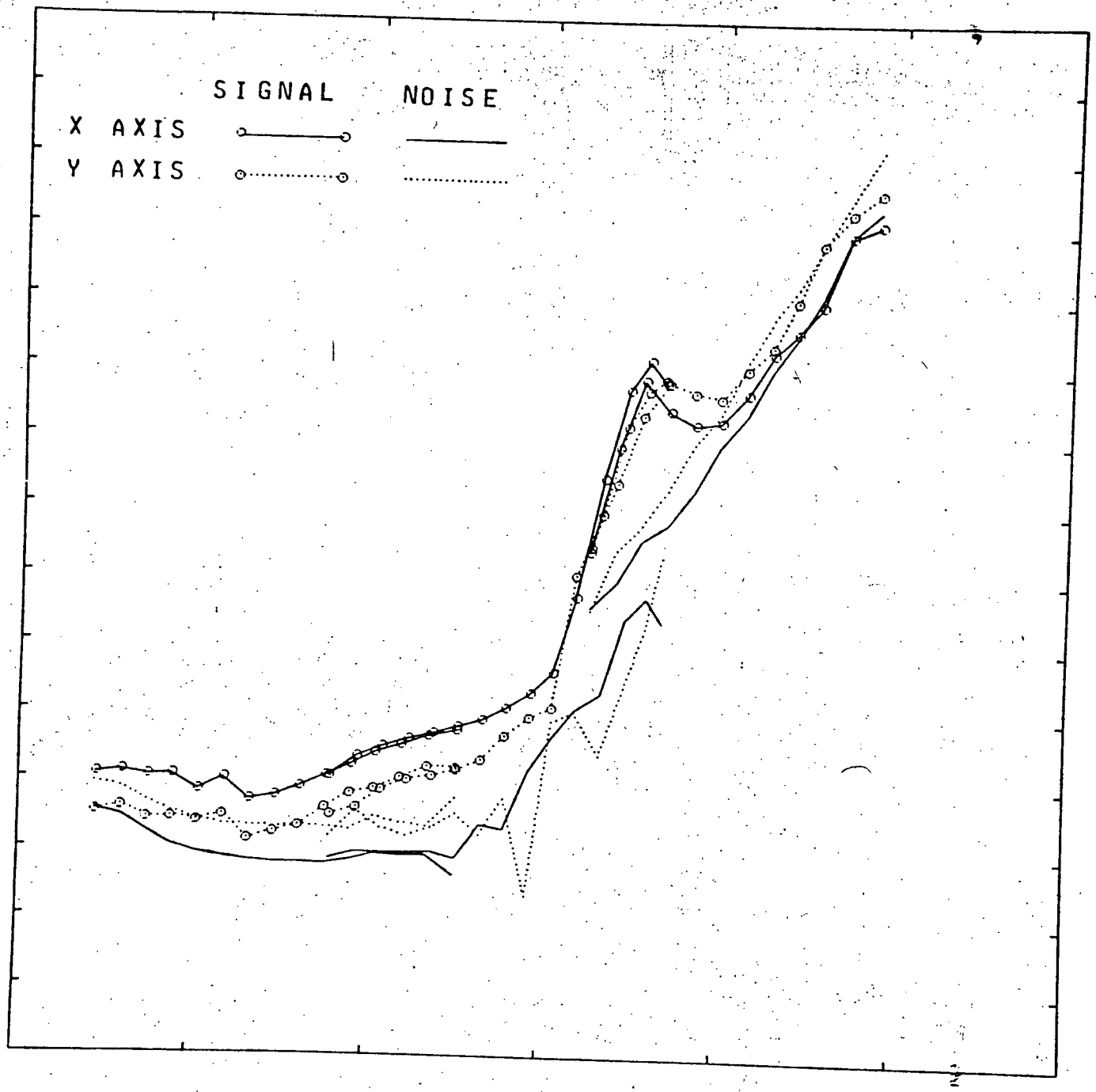
Station 3

Power Spectra

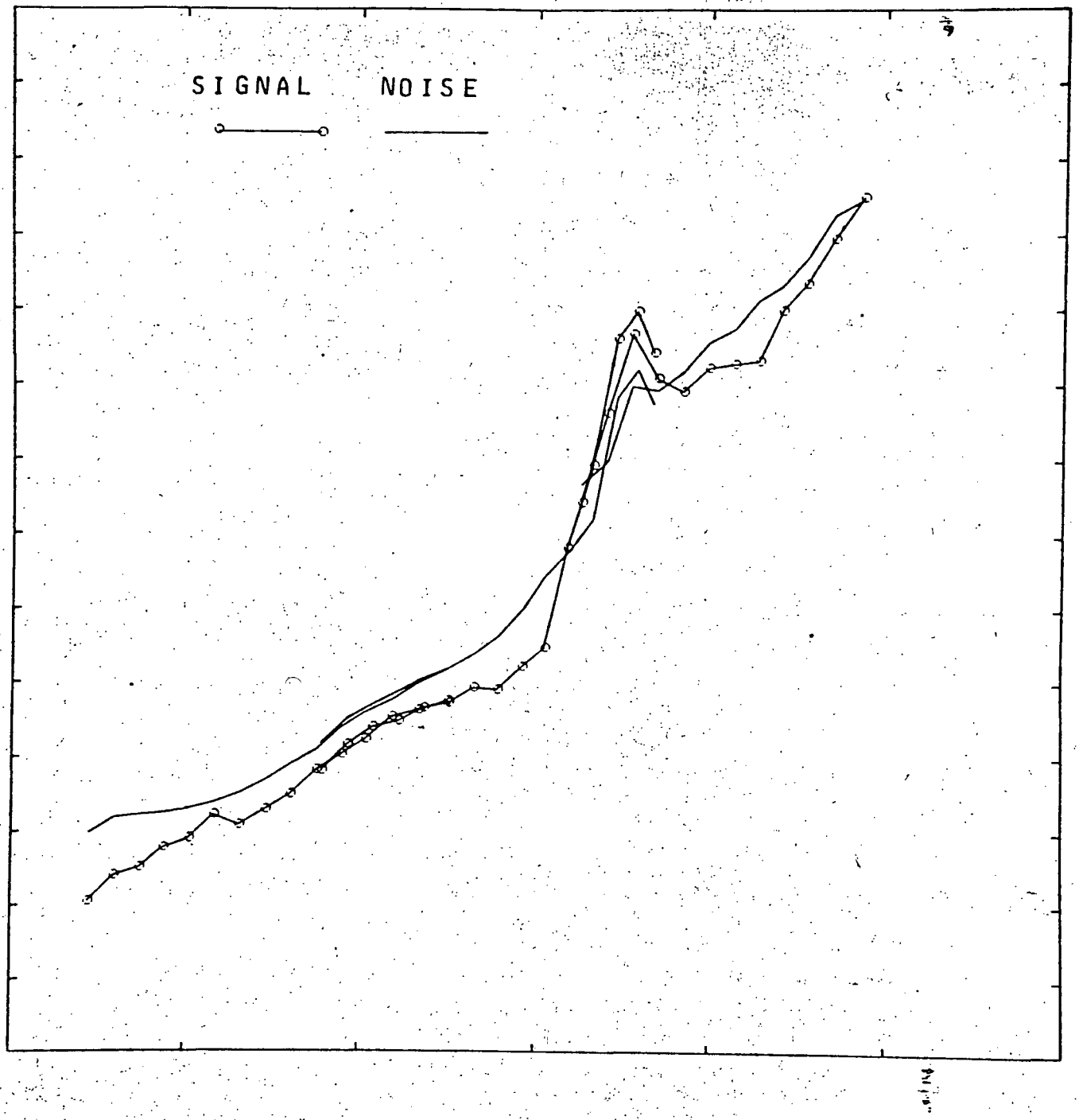
H



Station 3
Power Spectra
R

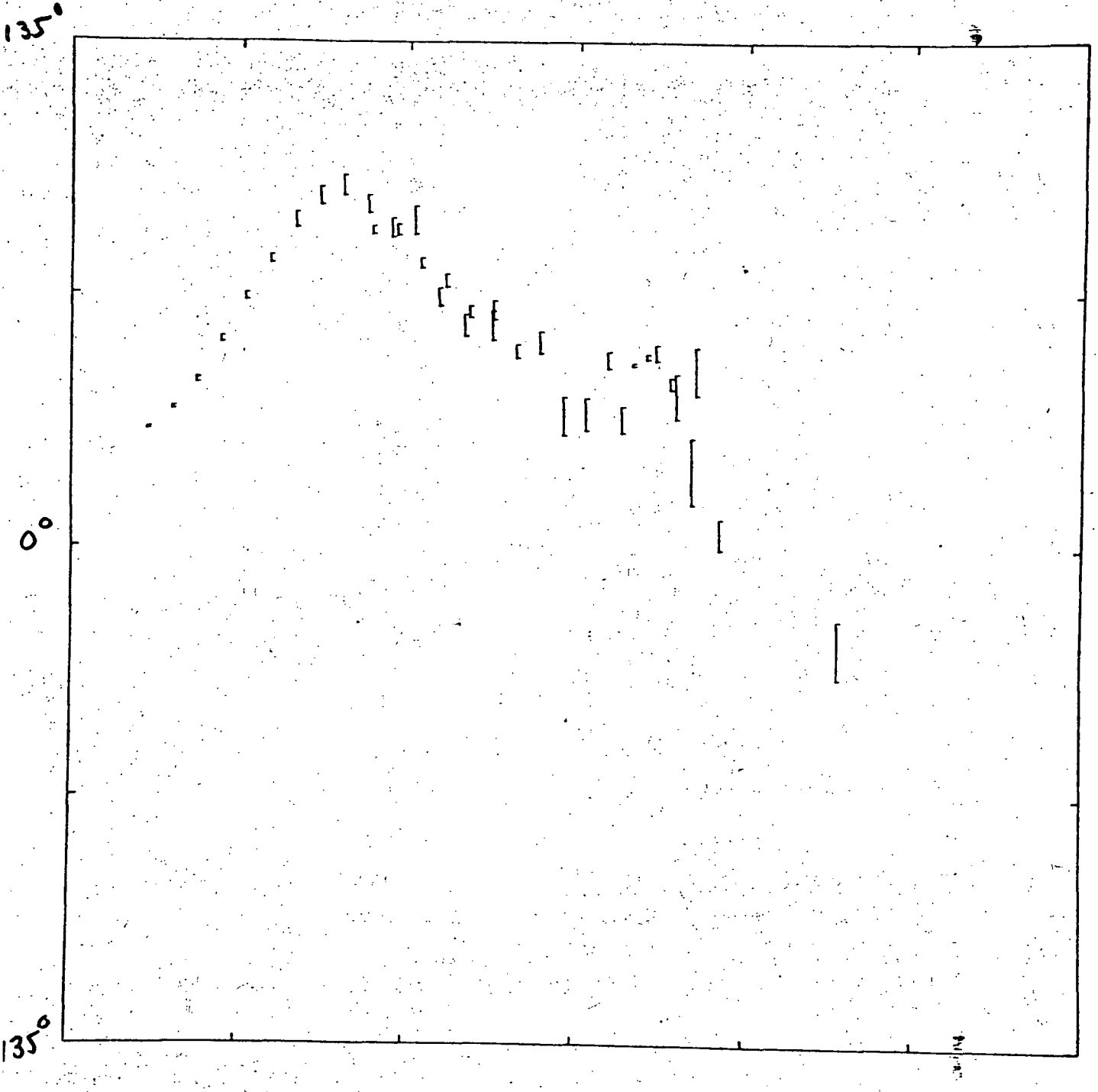


Station 3
Power Spectra
H_z

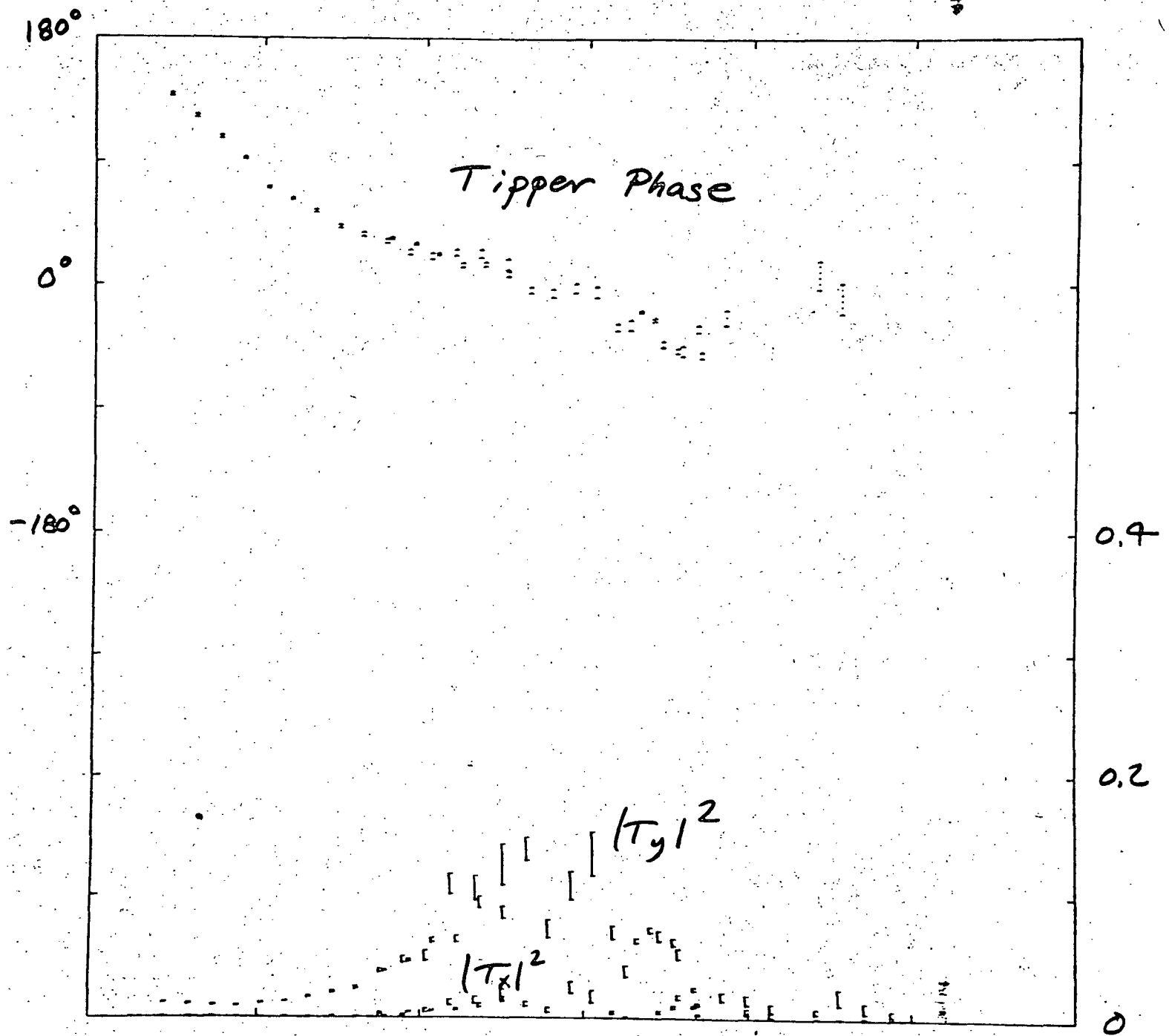


Station 3

Tipper Strike

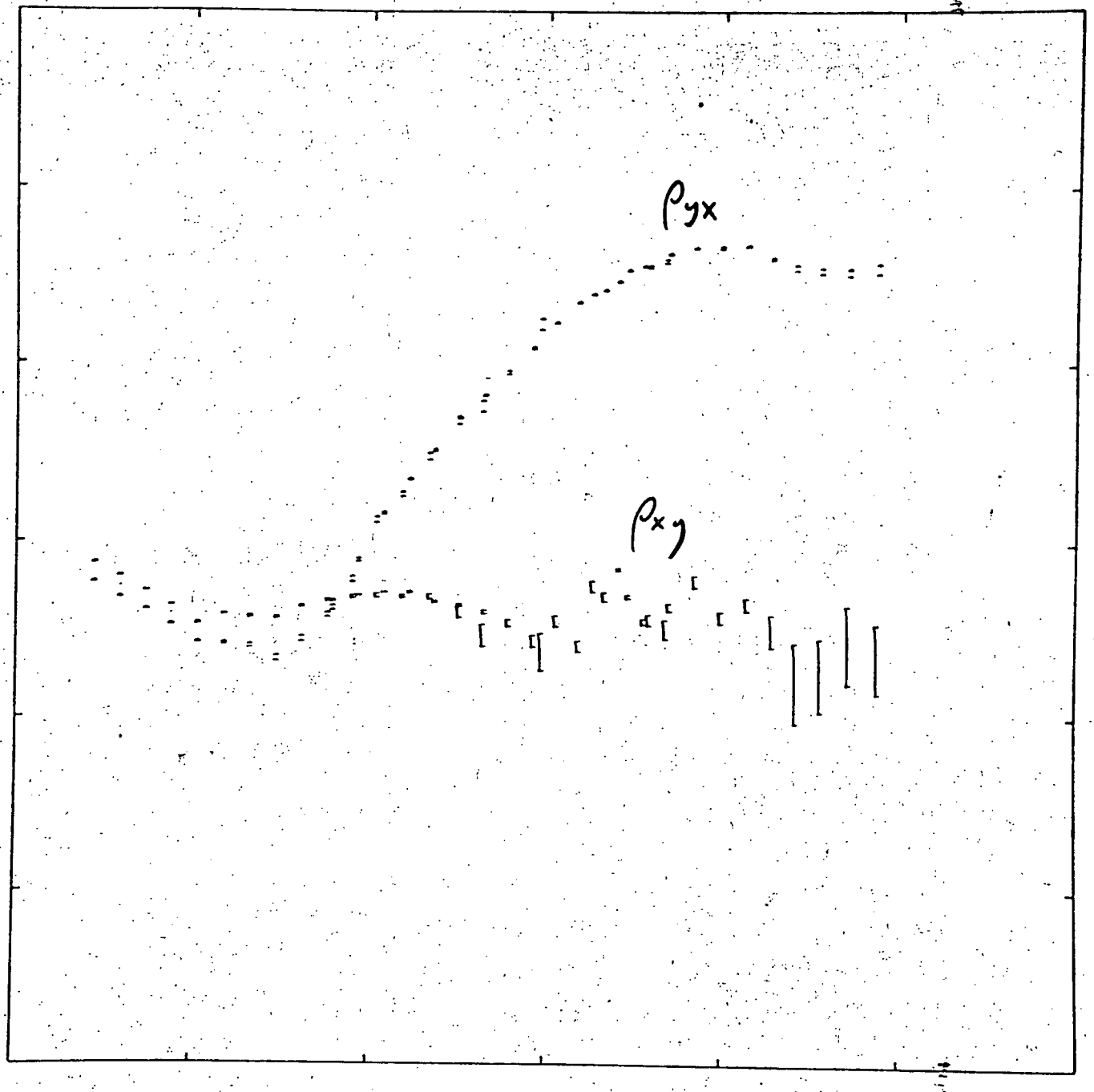


Station 3

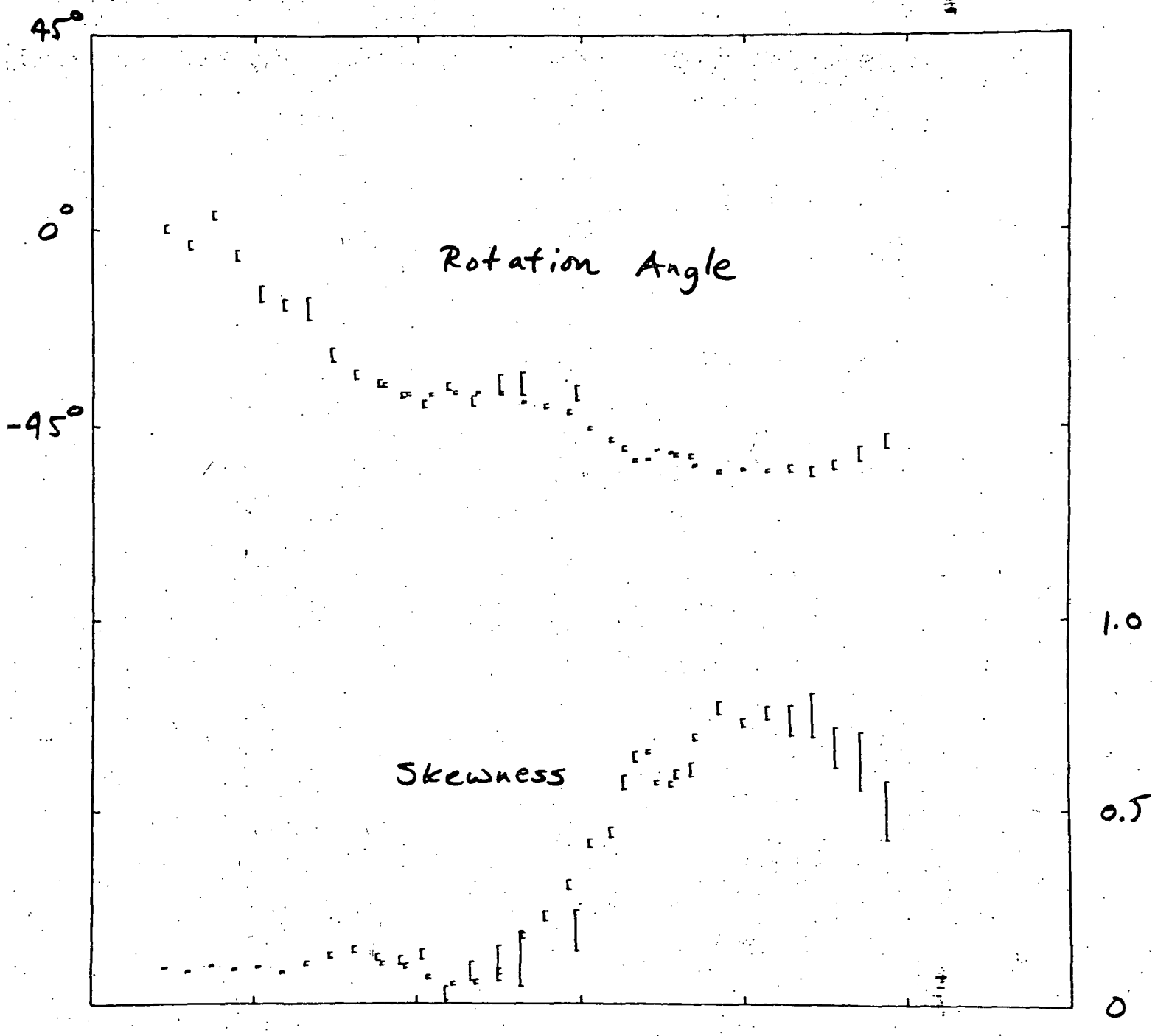


Station 4

Apparent Resistivities

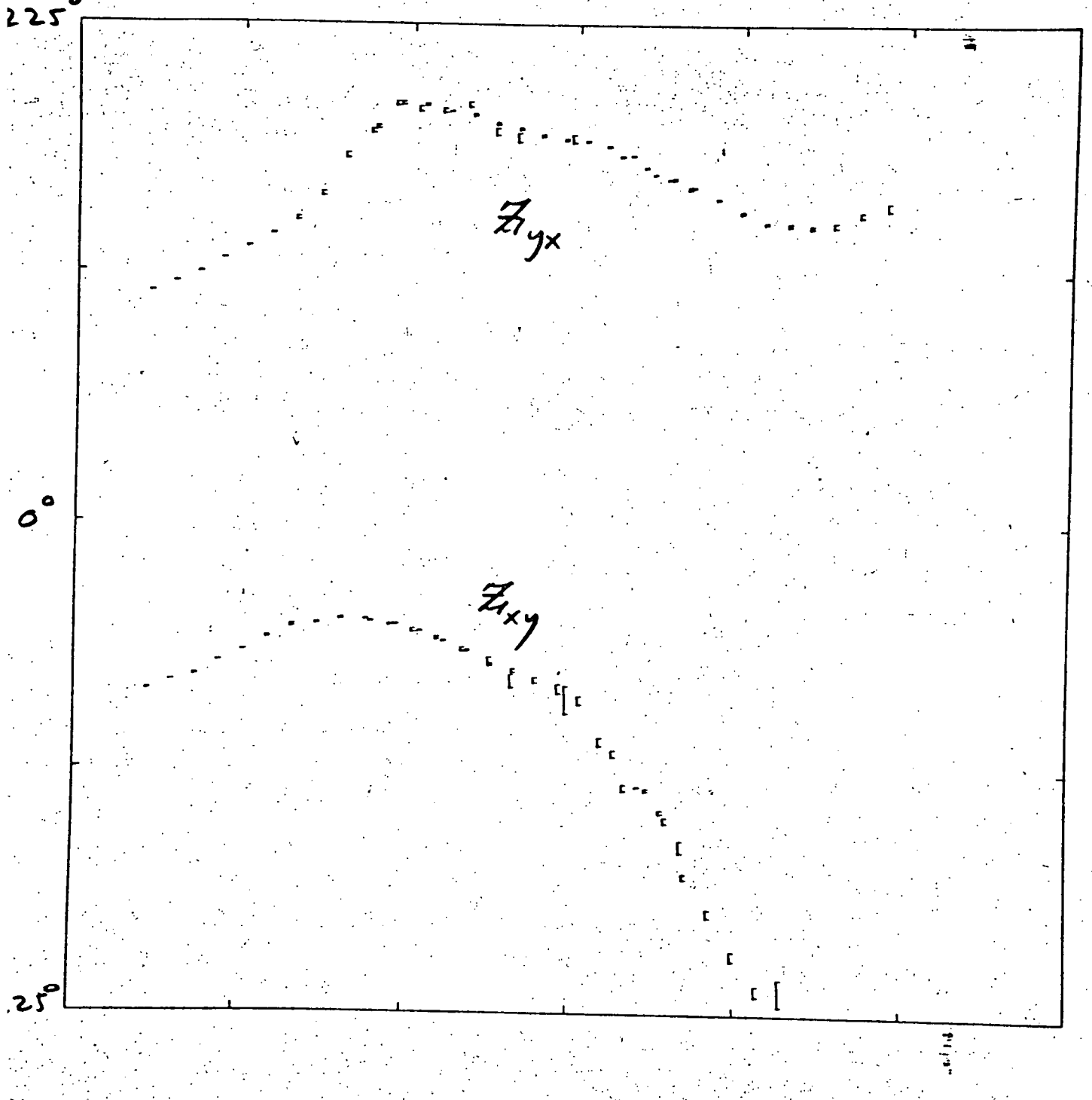


Station 4



Station 4

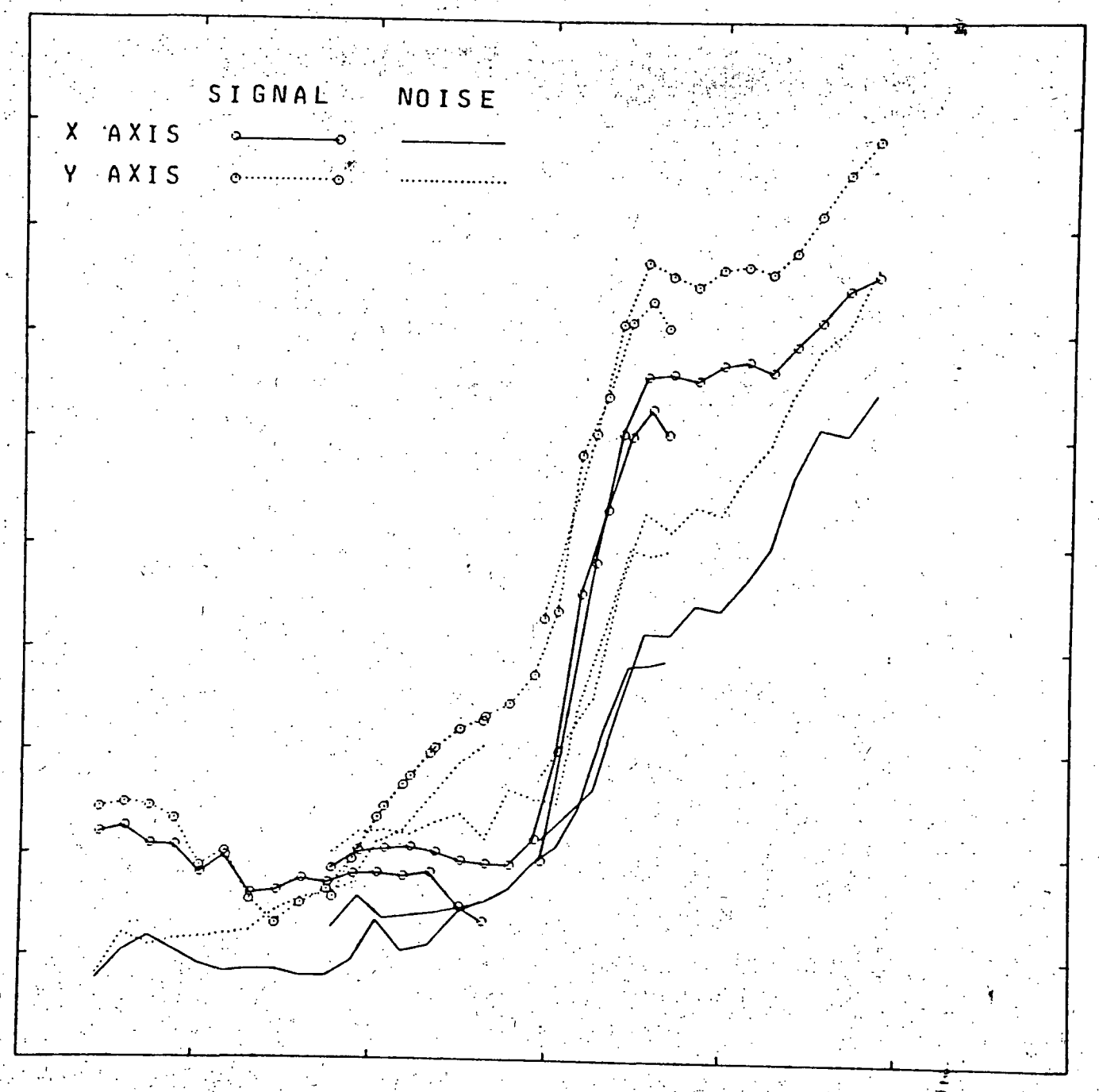
Phase Angles



Station 4

Power Spectra

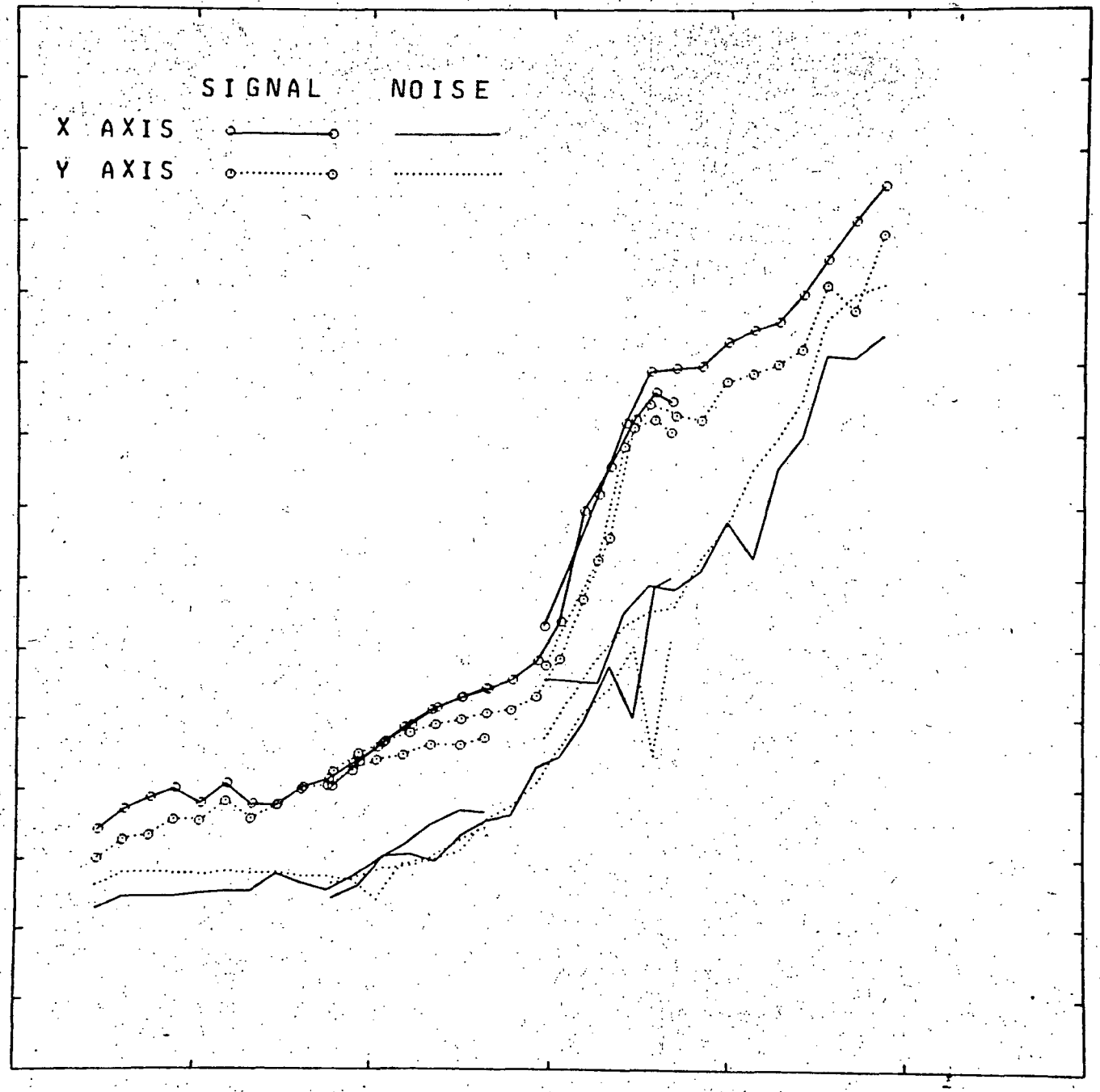
E



Station 4

Power Spectra

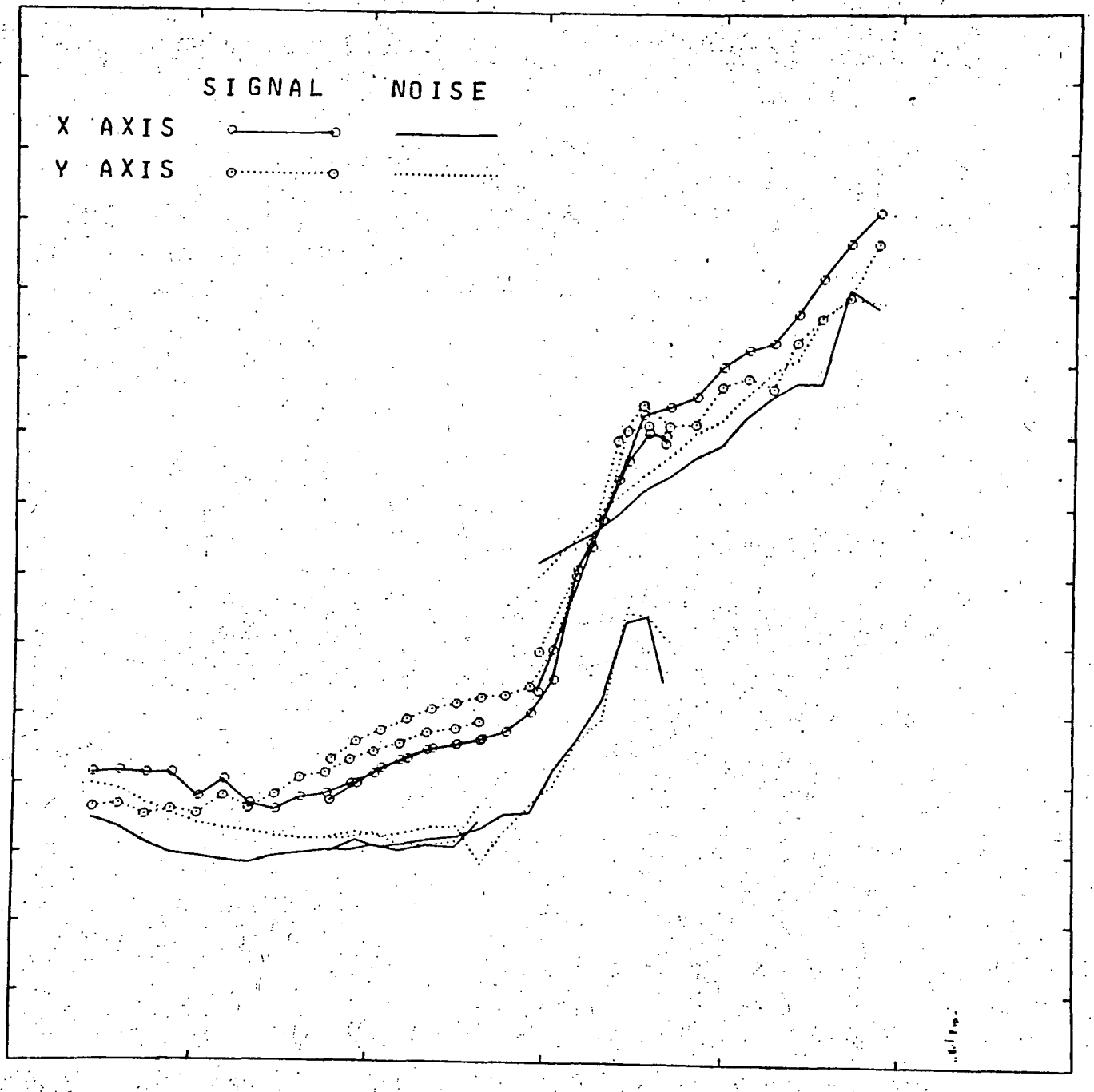
H



Station 4

Power Spectra

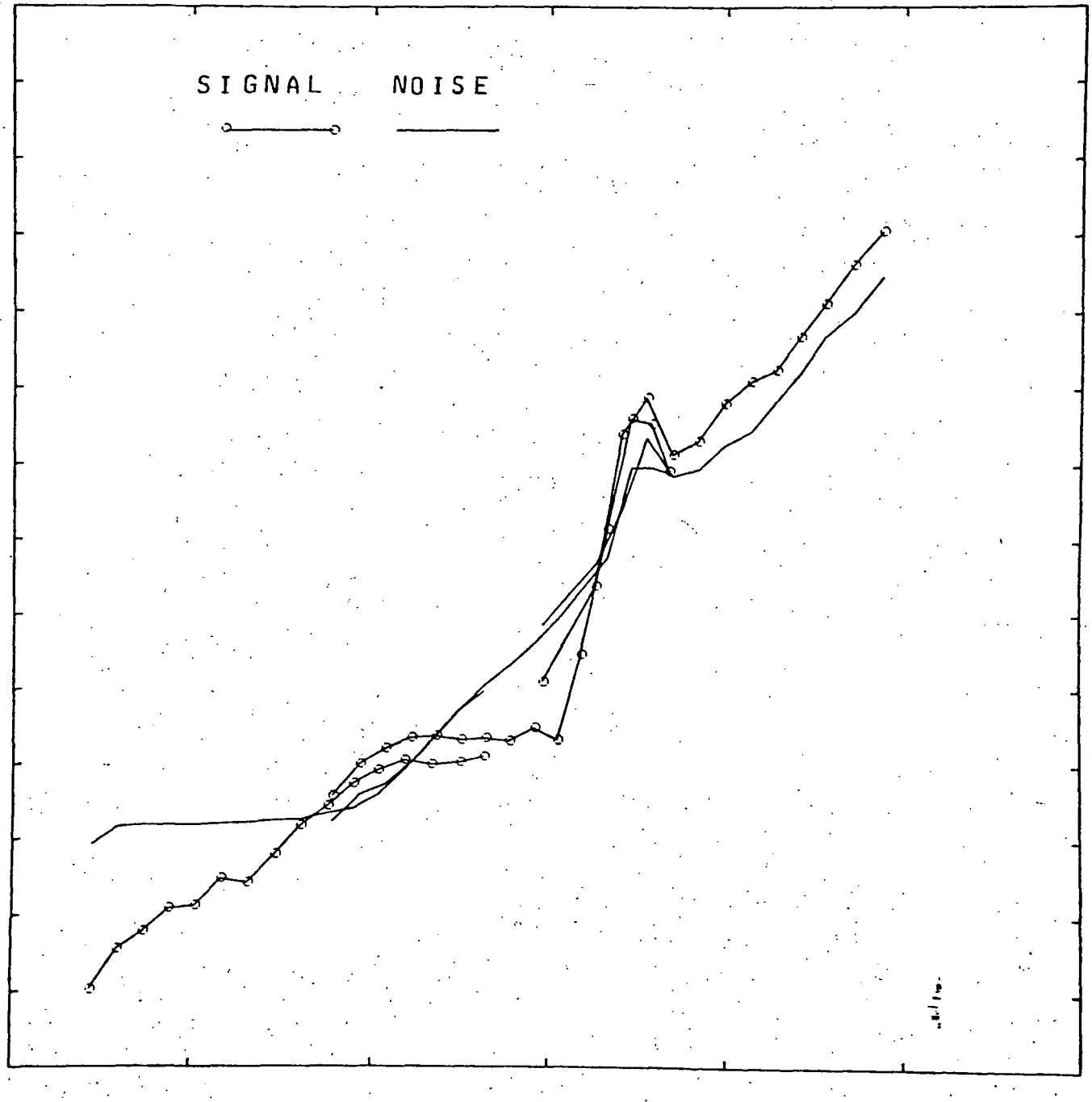
R



Station 4

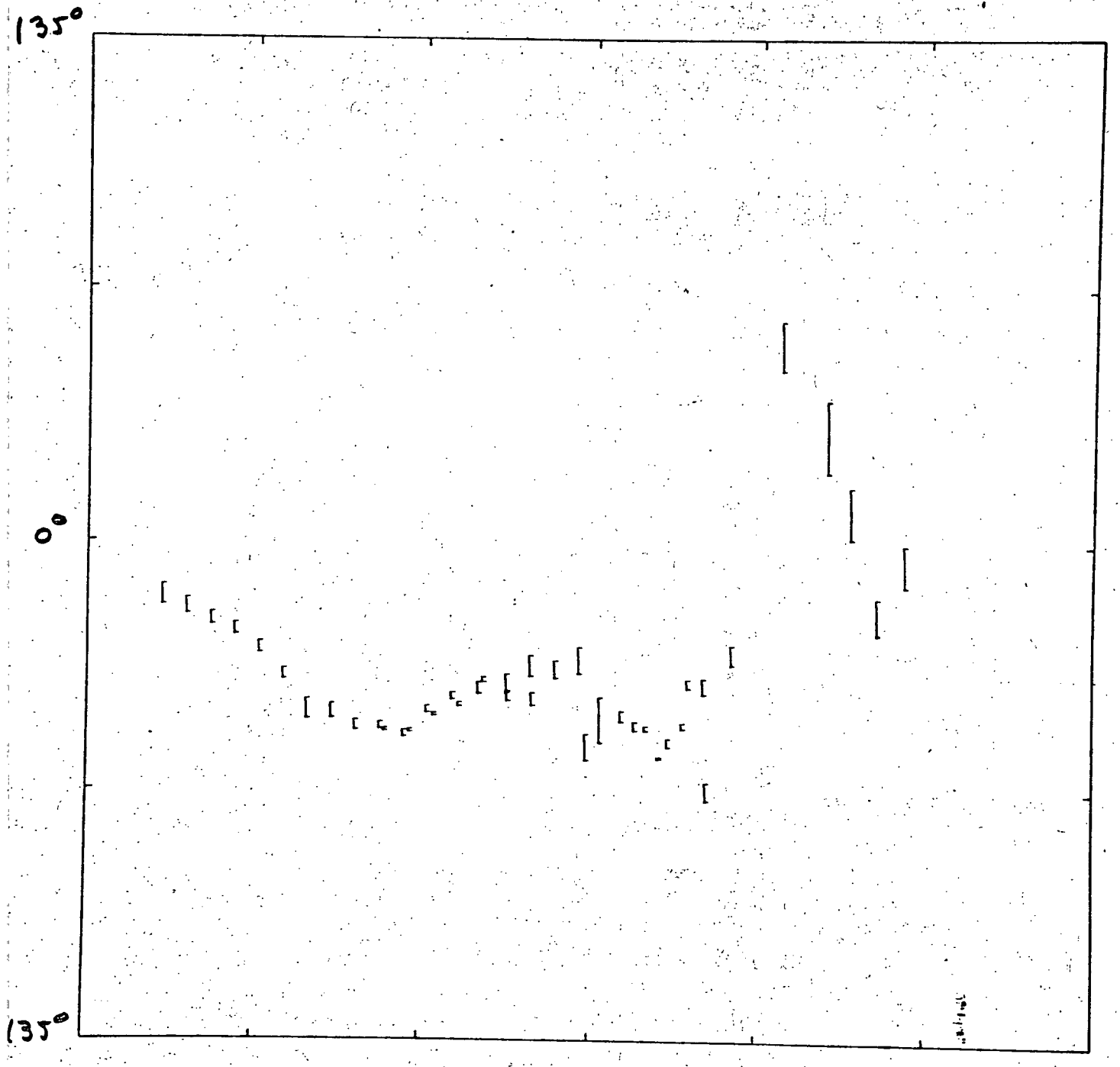
Power Spectra

H_z

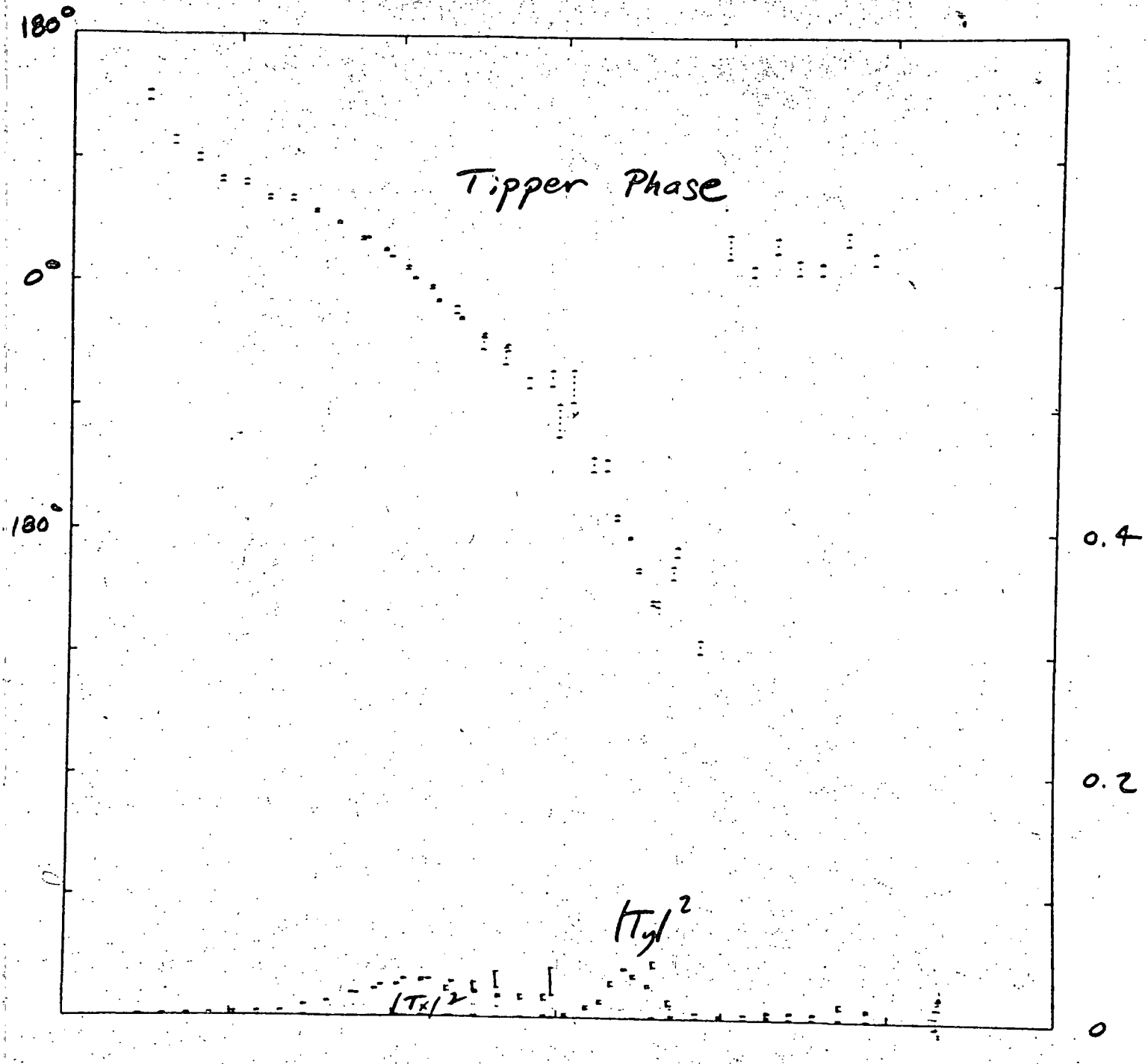


Station 4

Tipper Strike

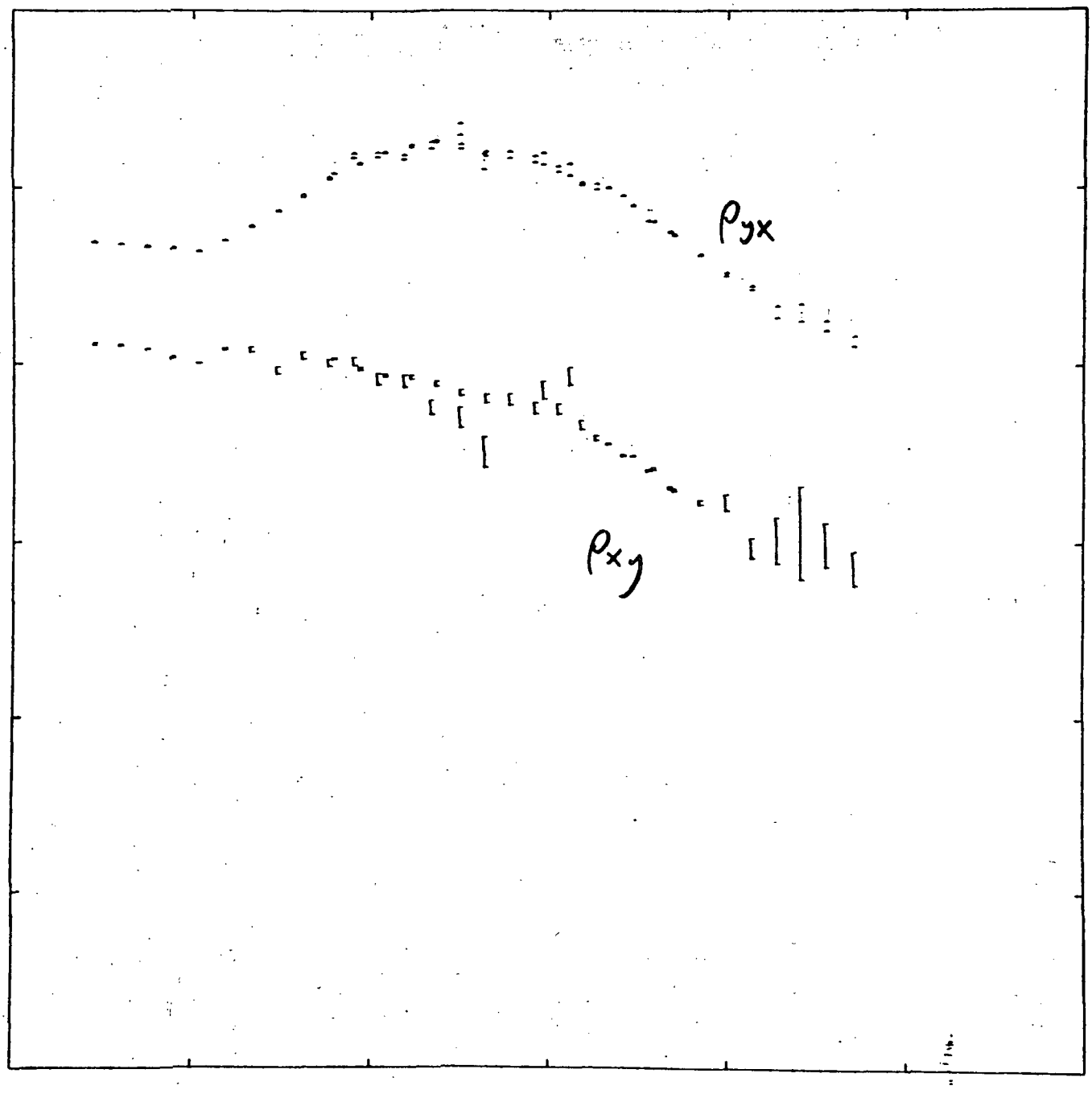


Station 4

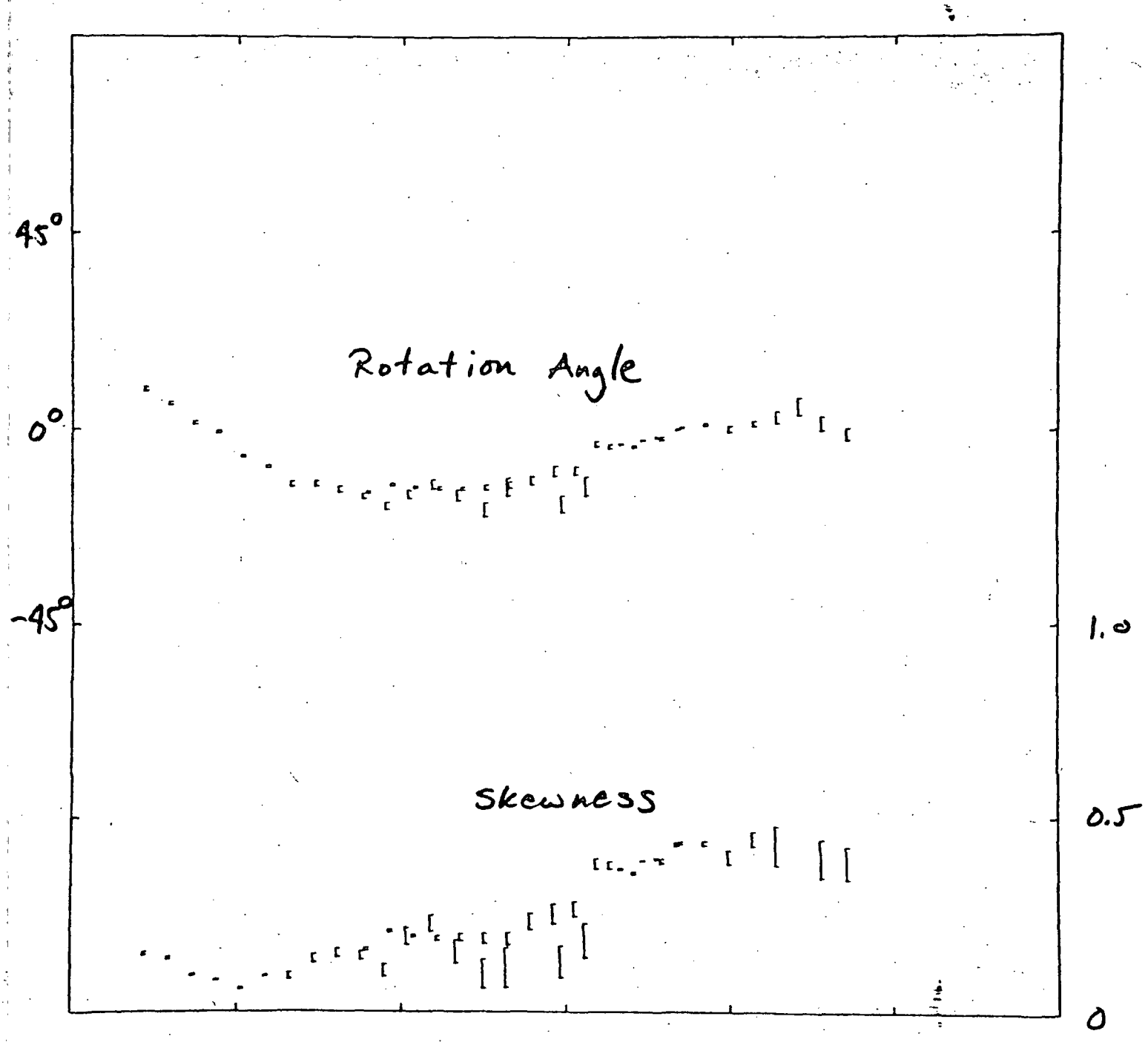


Station 5

Apparent Resistivities

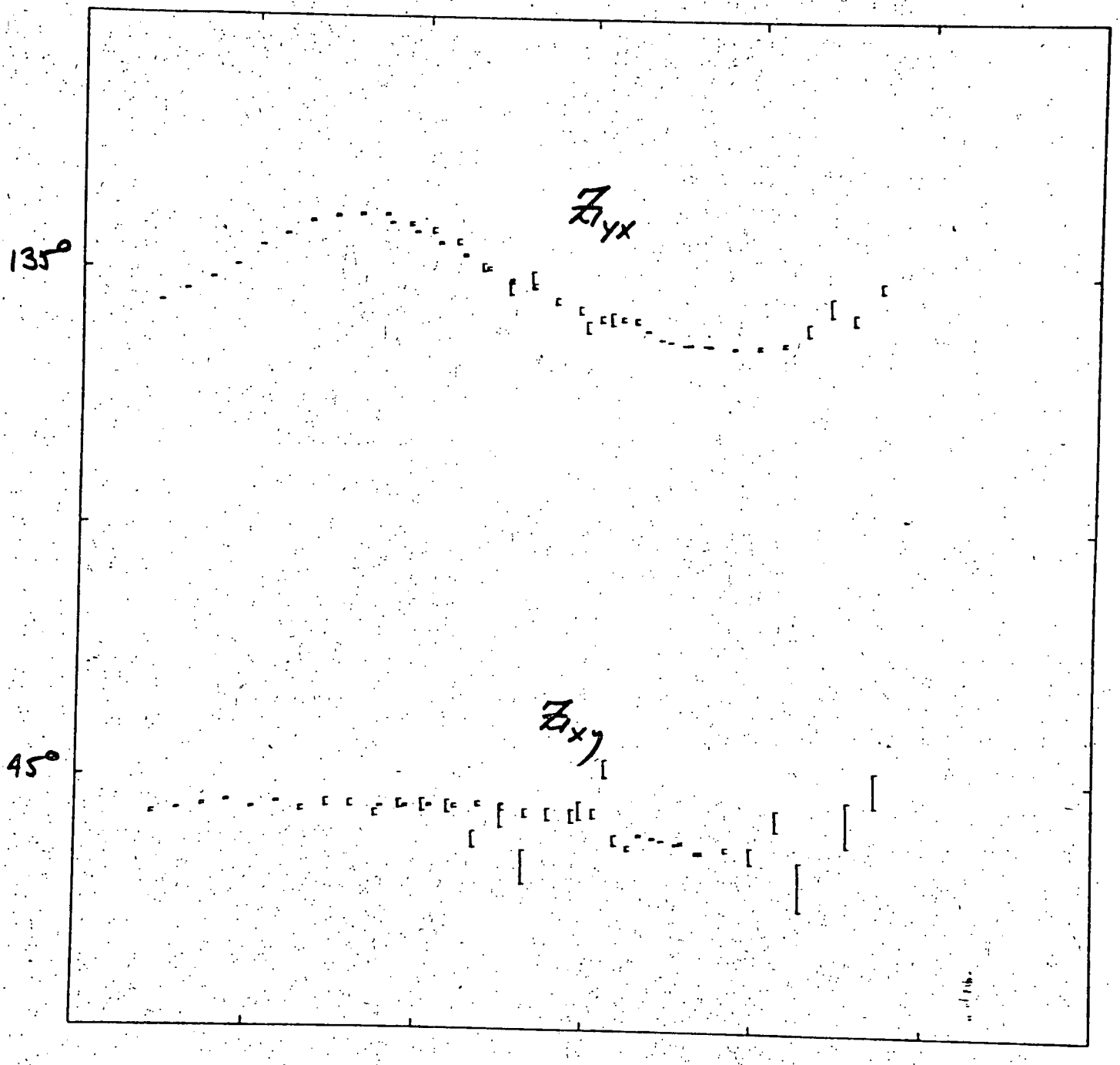


Station 5



Station 5

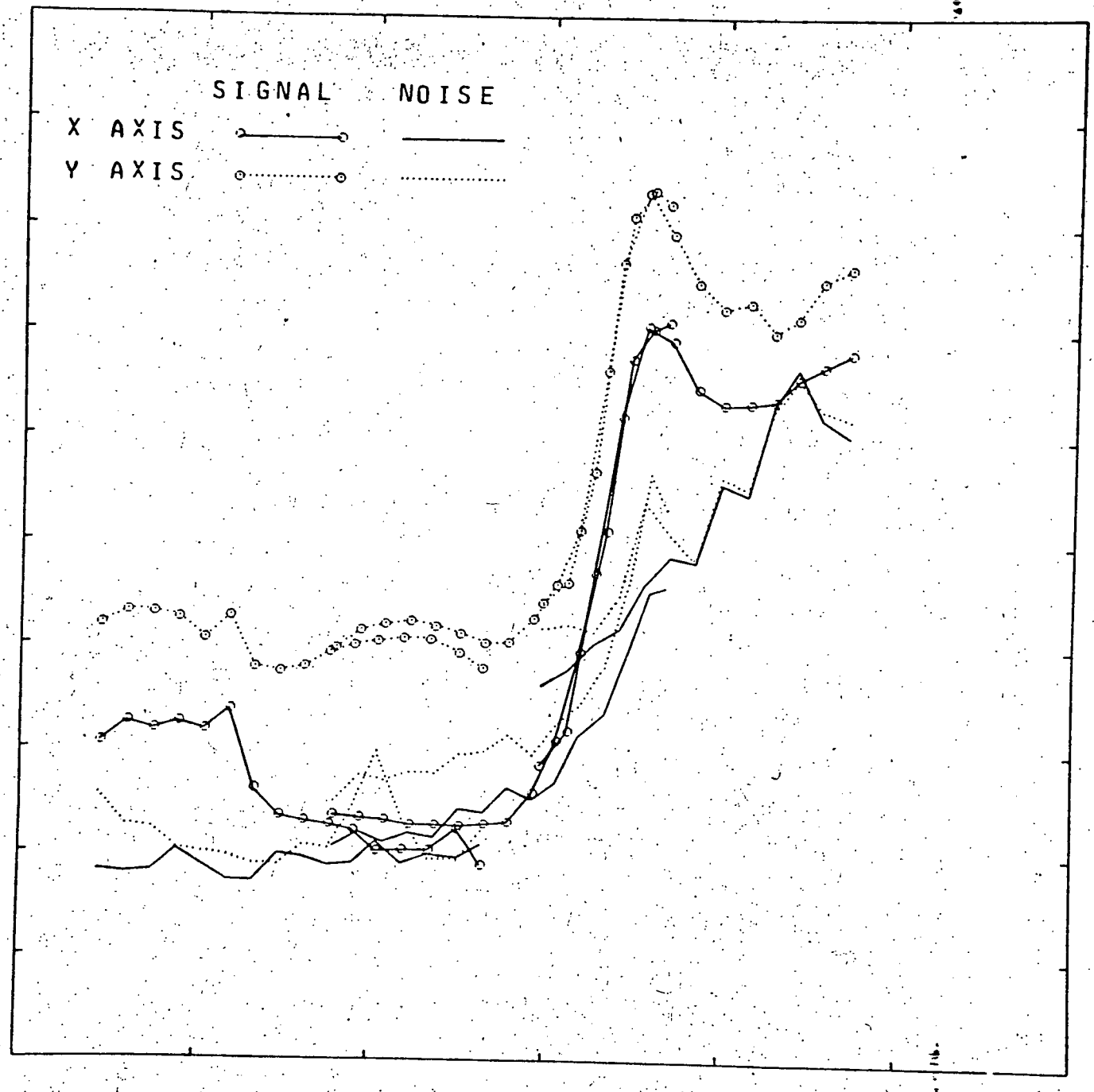
Phase Angles



Station 5

Power Spectra

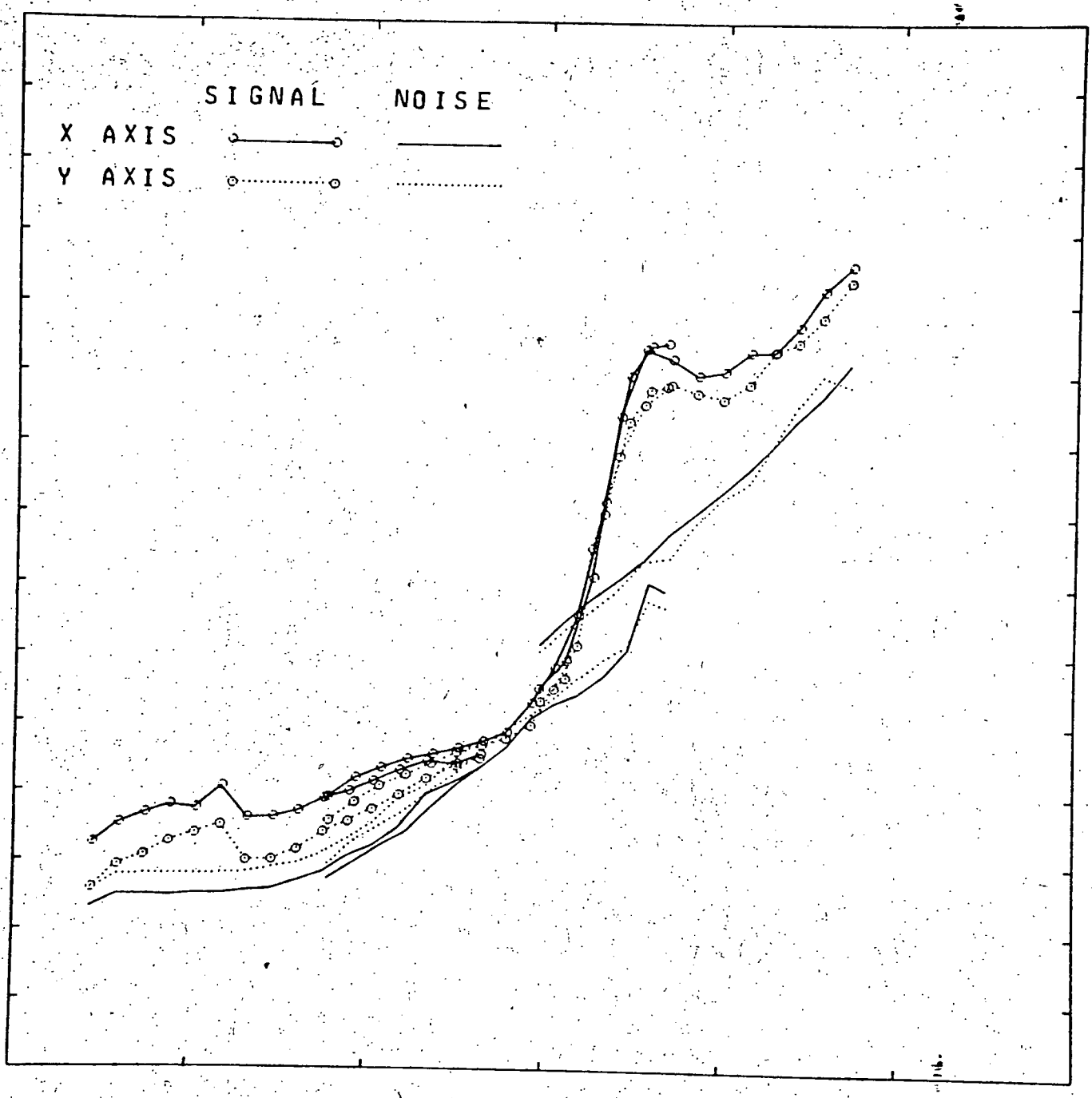
E



Station 5

Power Spectra

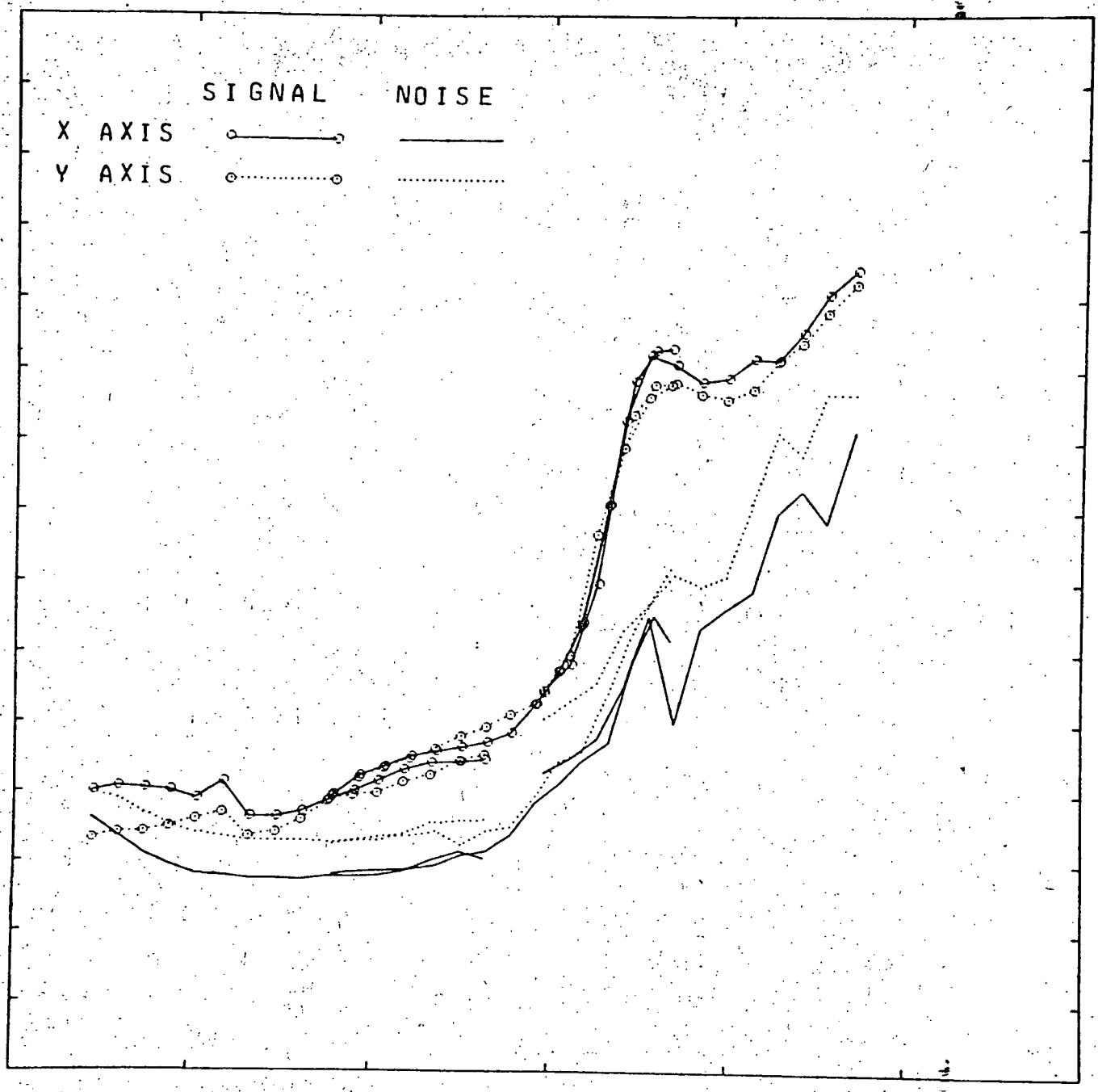
H



Station 5

Power Spectra

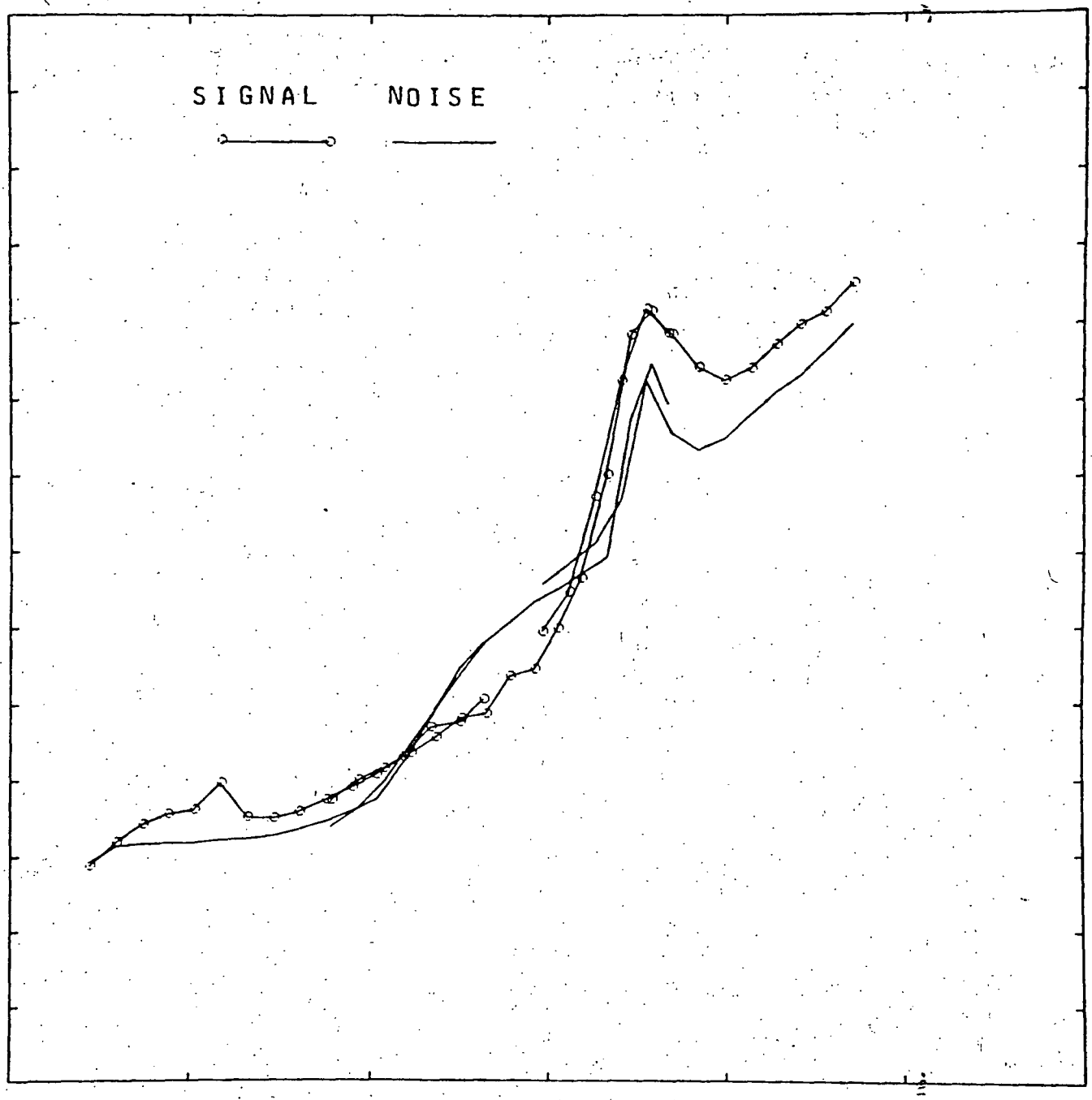
R



Station 5

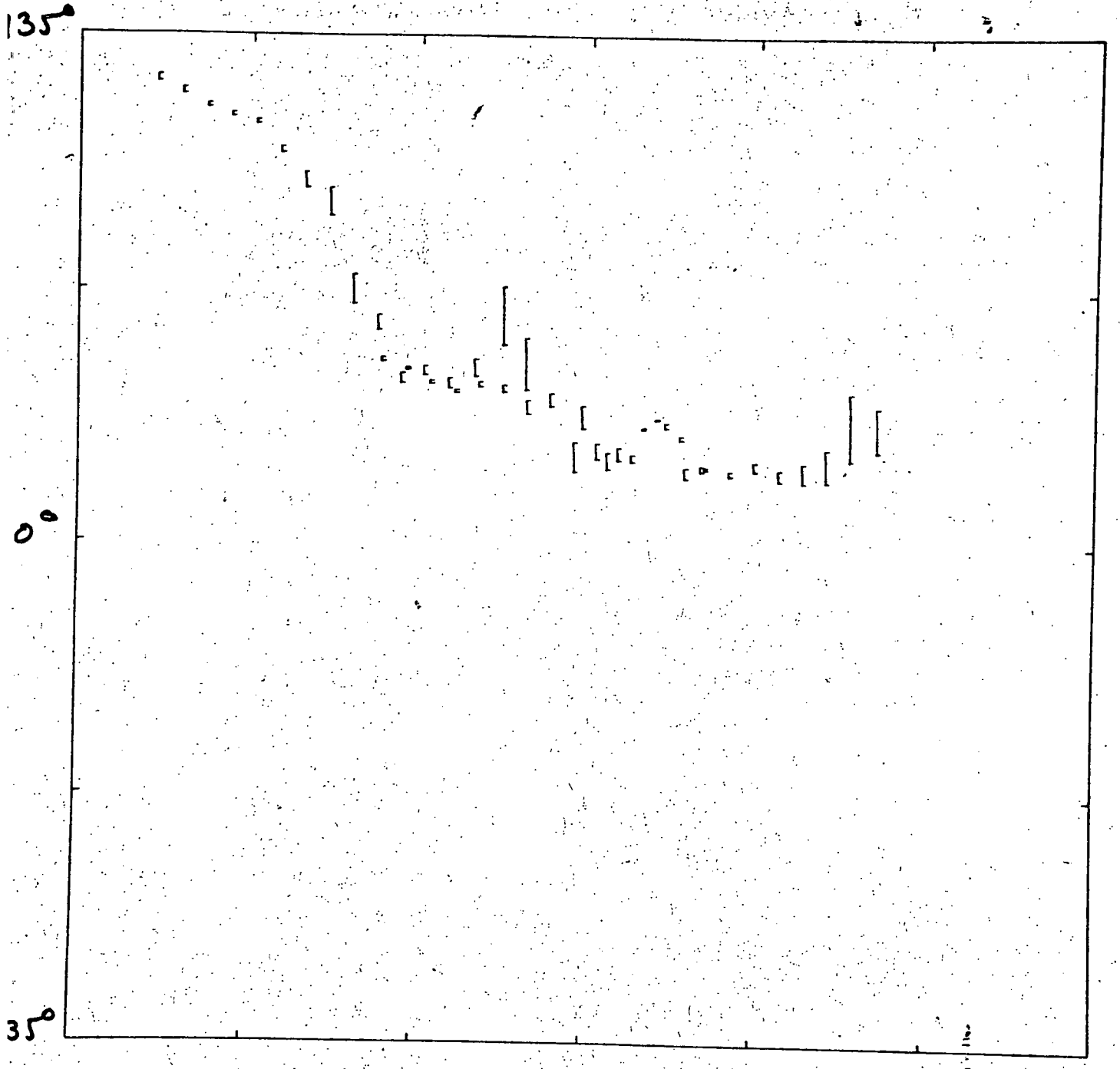
Power Spectra

H_z

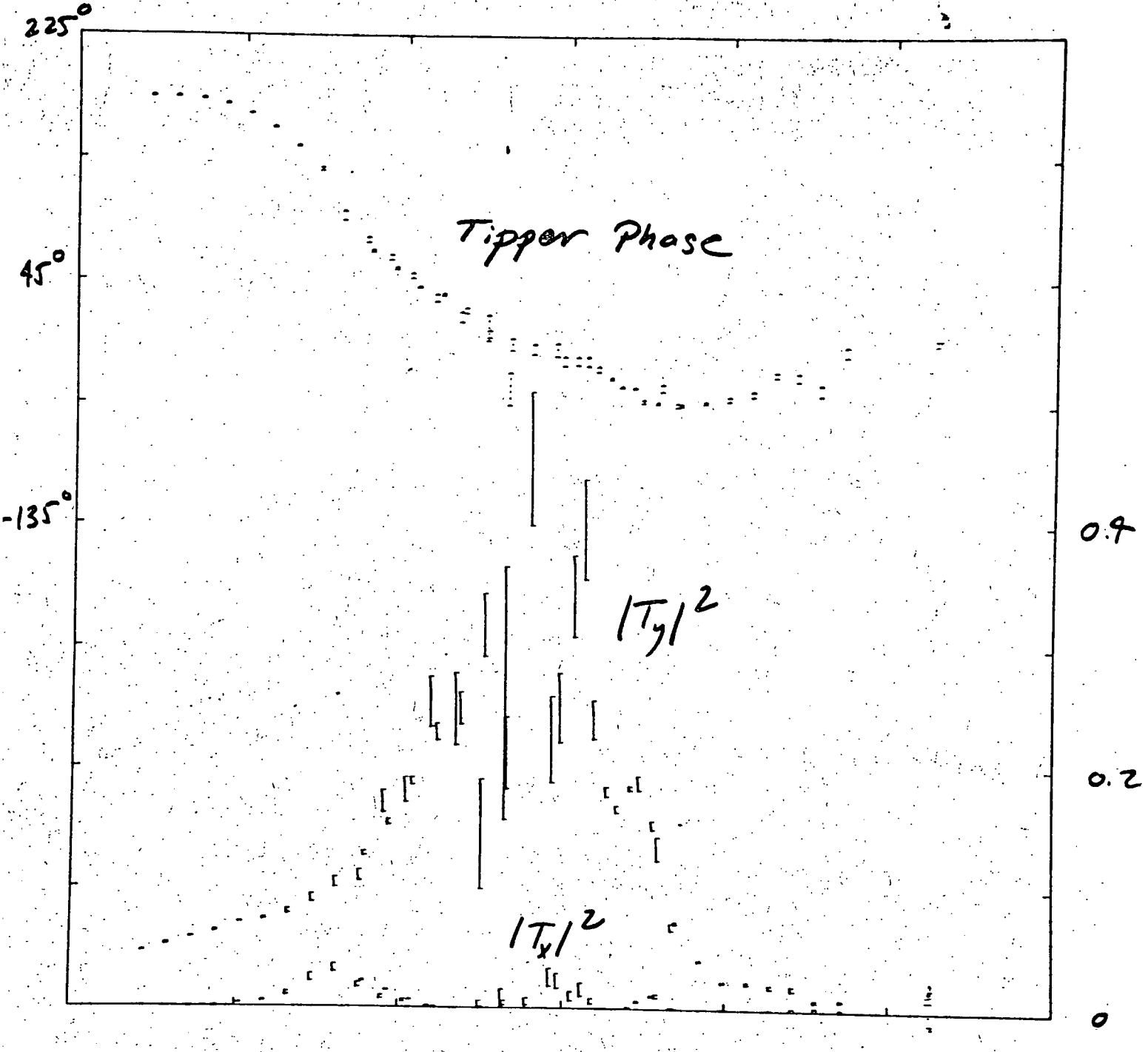


Station 5

Tipper Strike

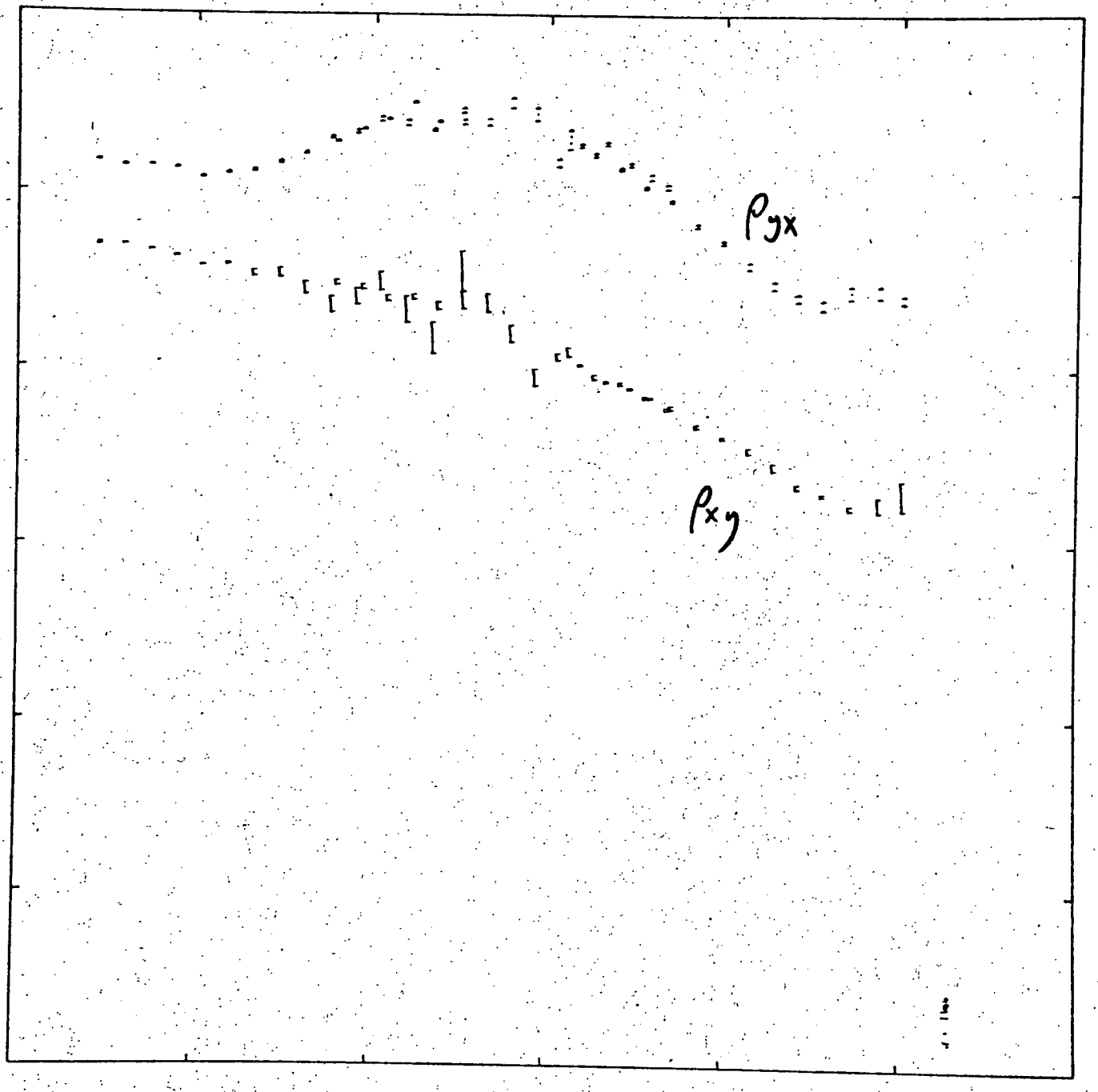


Station 5

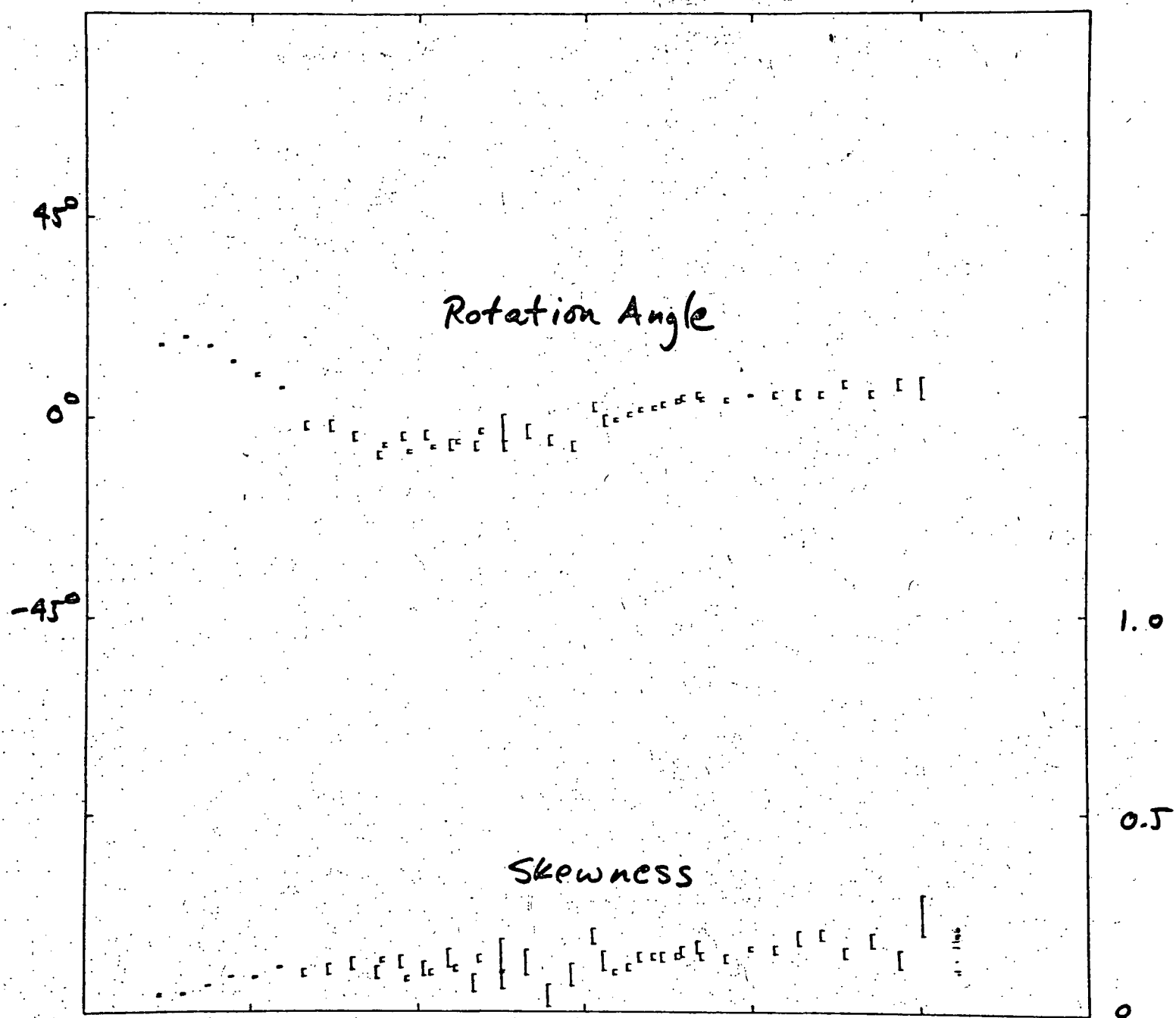


Station 6

Apparent Resistivities

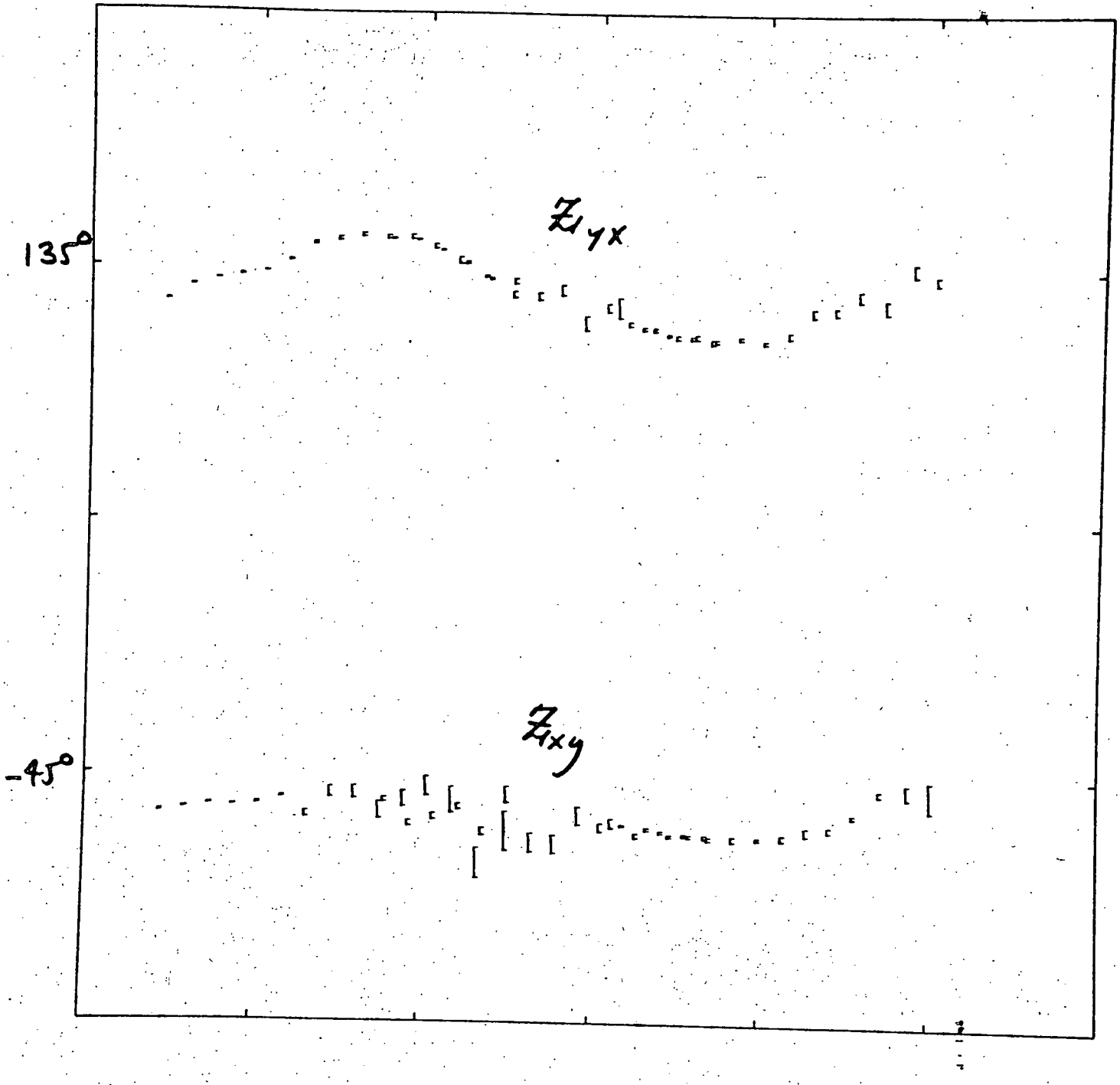


Station 6



Station 6

Phase Angles



Station 6

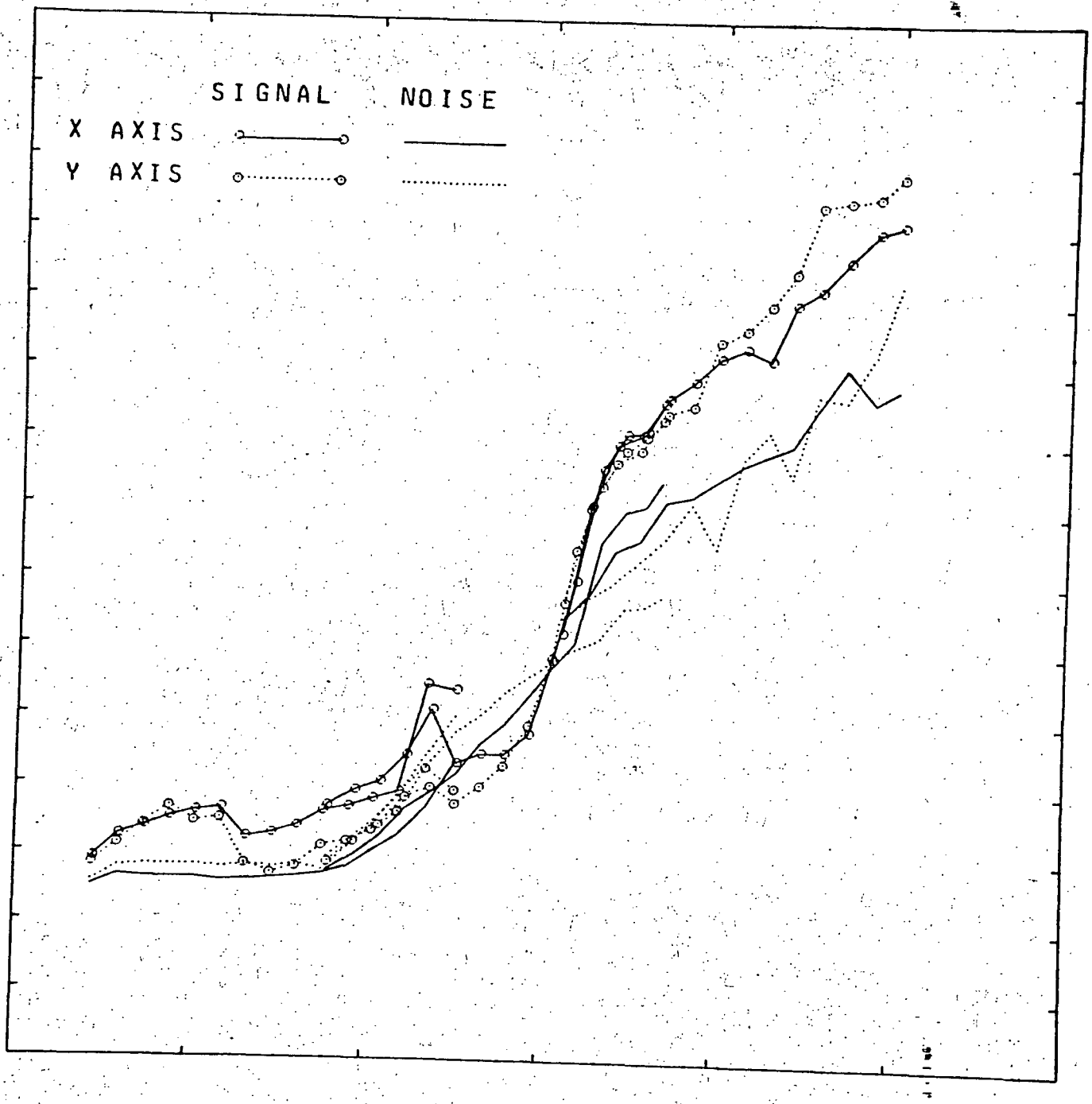
Power Spectra

E

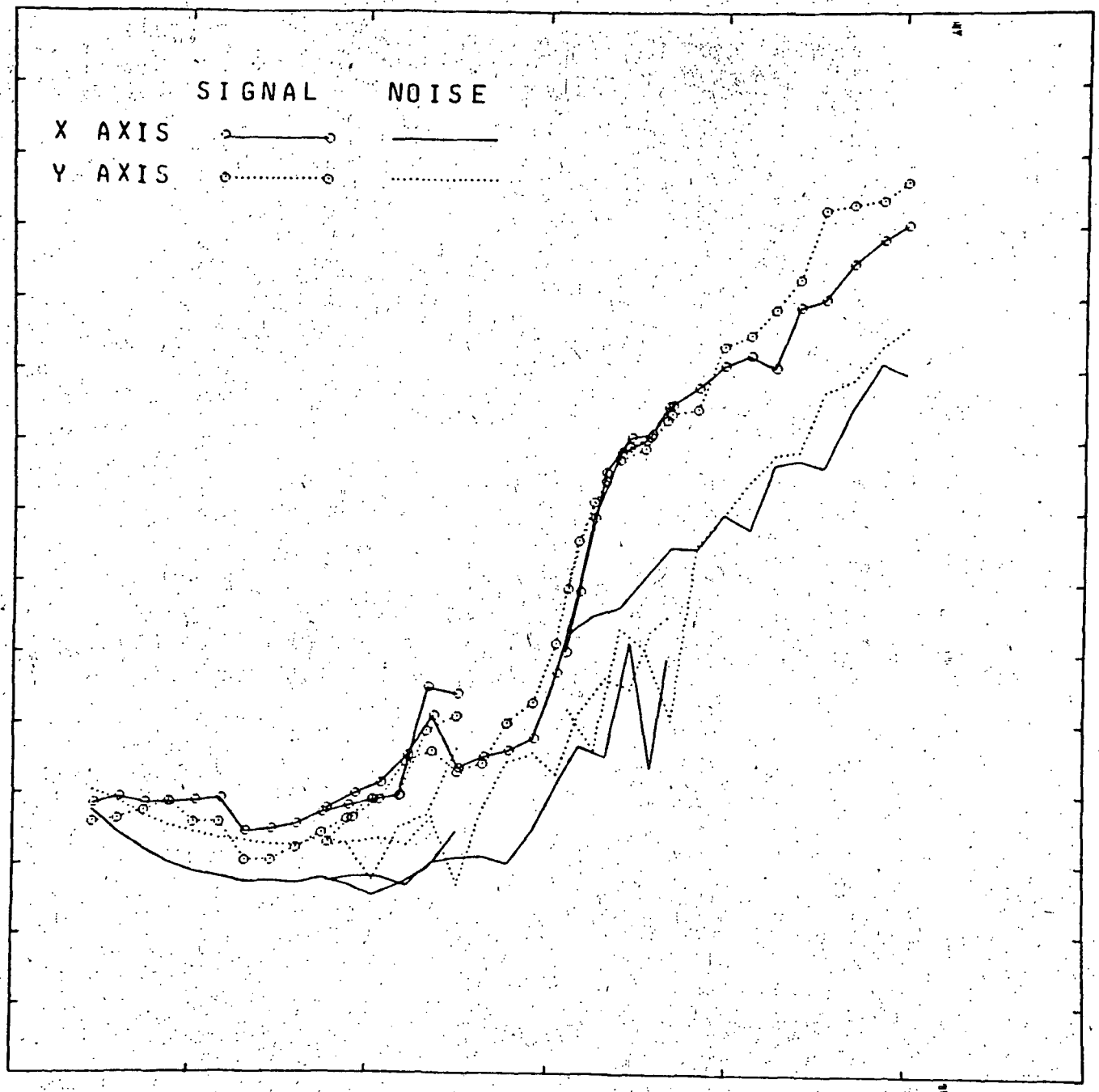
Station 6

Power Spectra

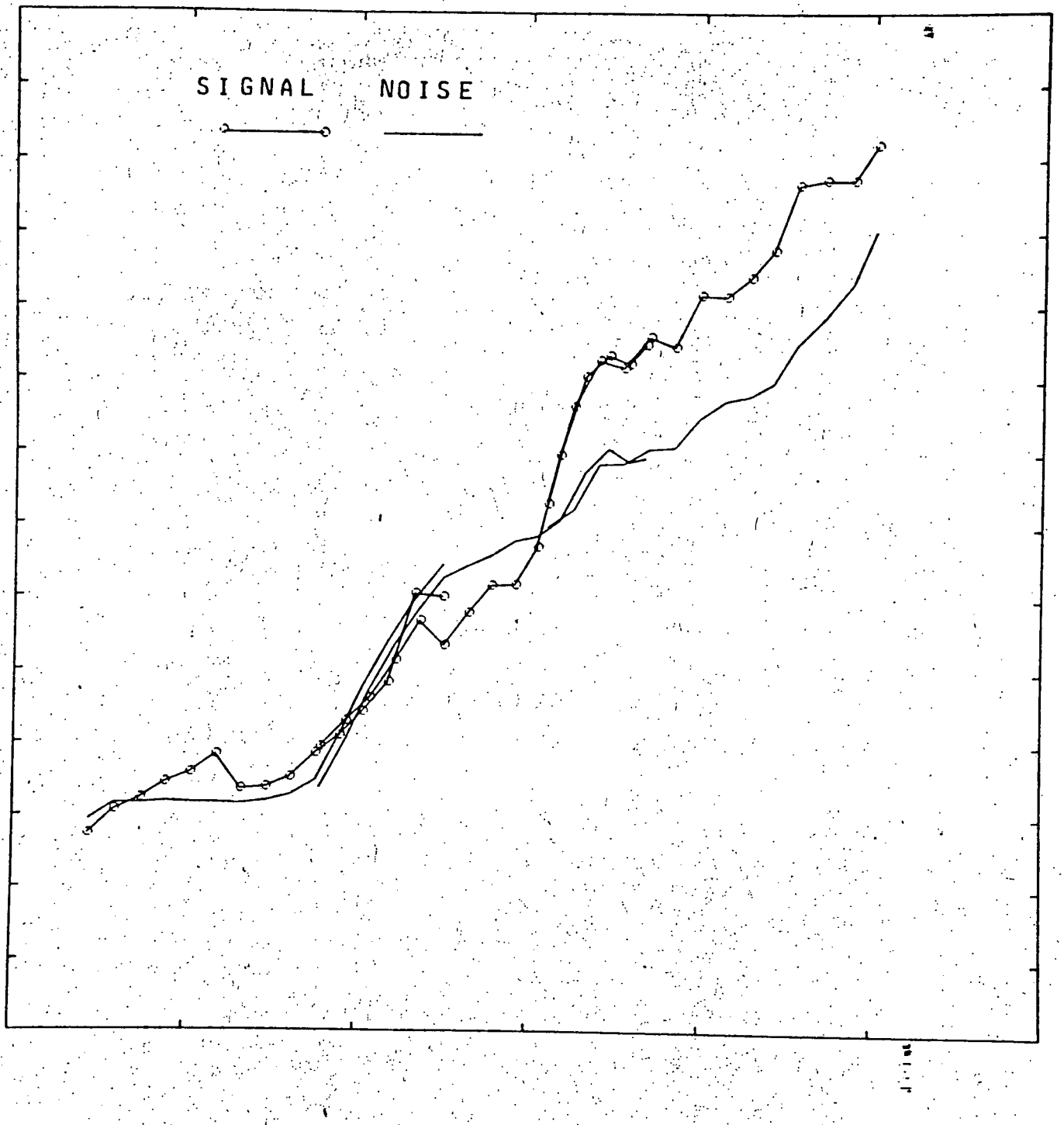
H.



Station 6
Power Spectra
R

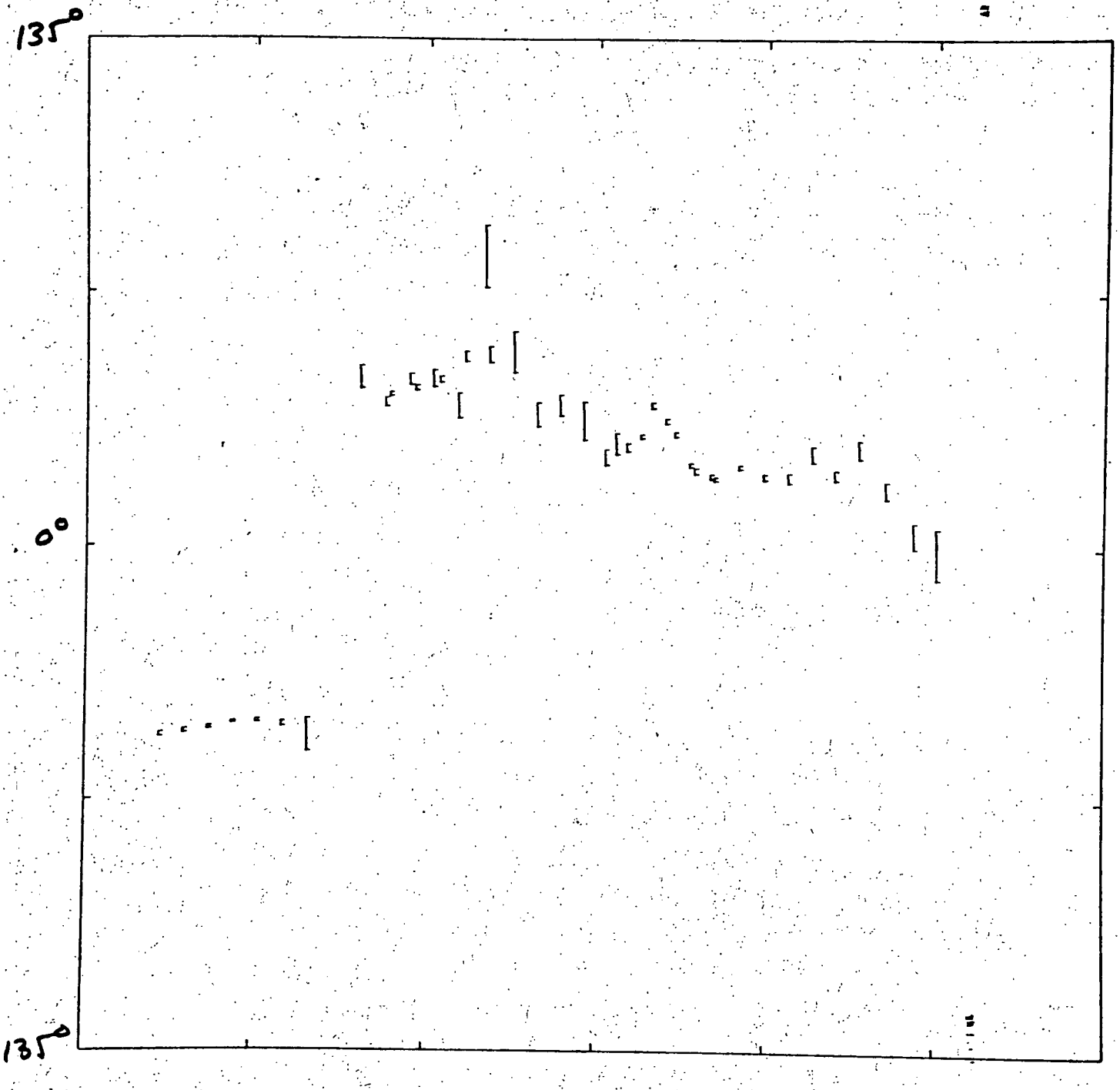


Station 6
Power Spectra
H_z

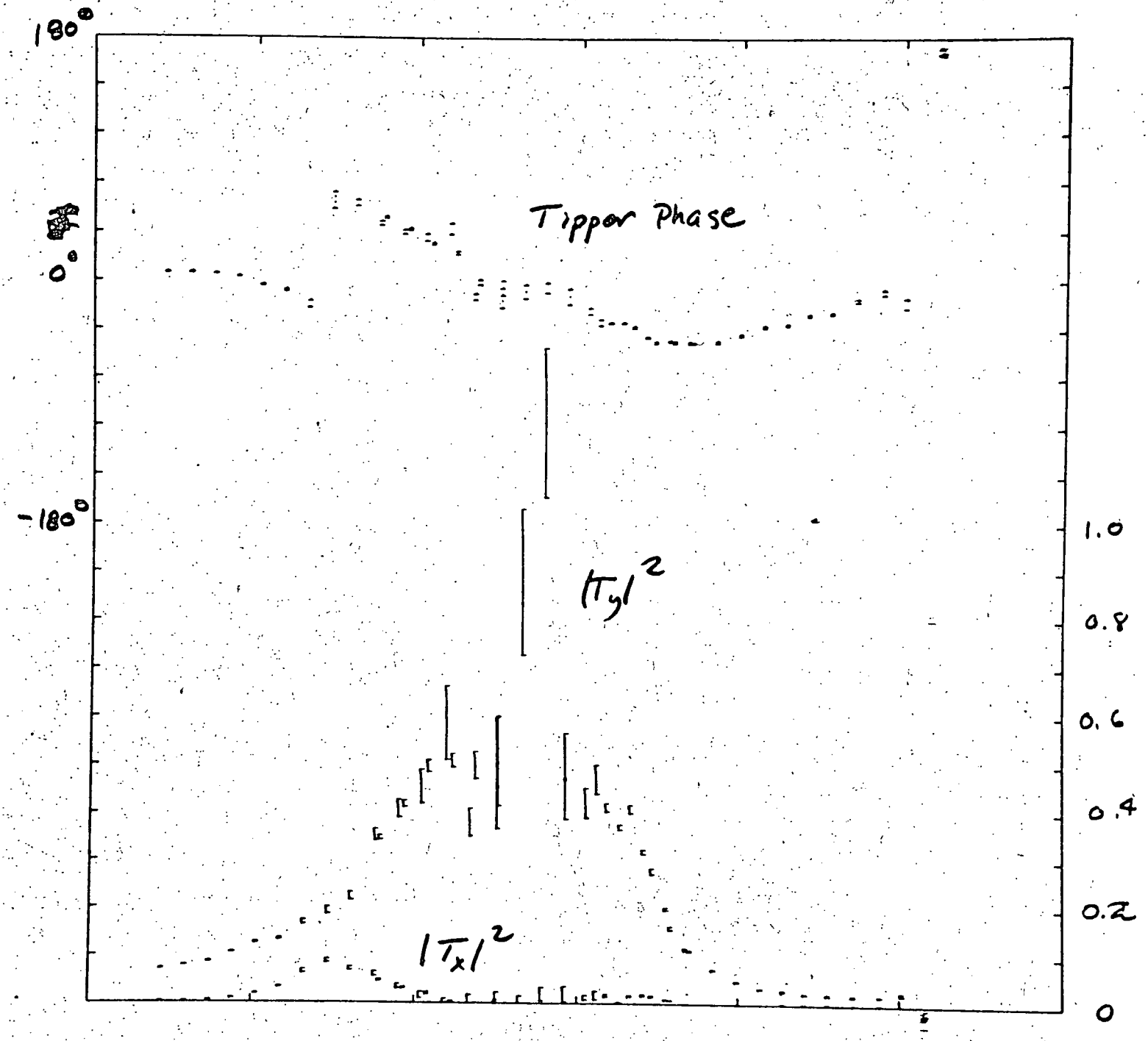


Station 6

Tipper Strike

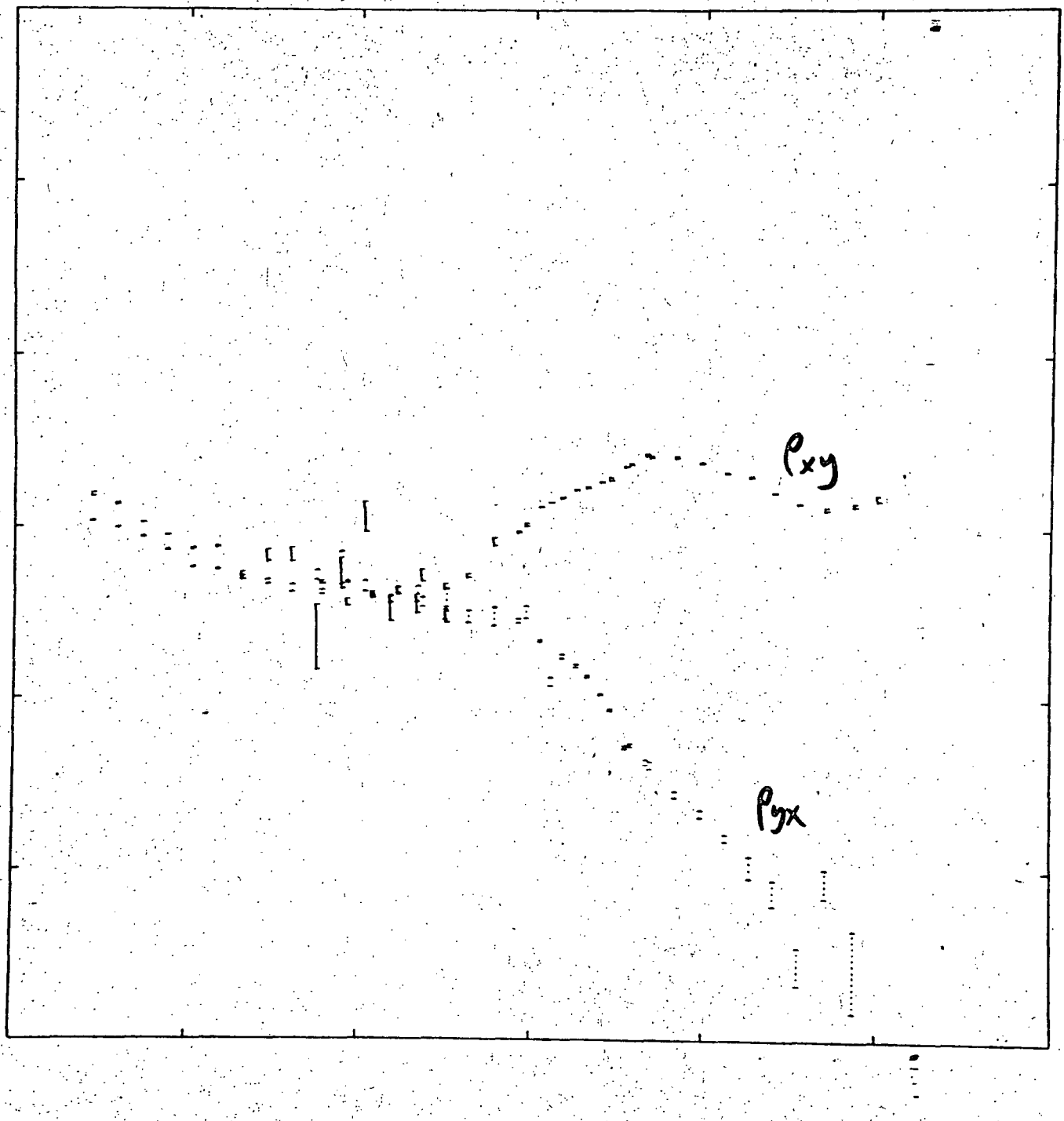


Station 6

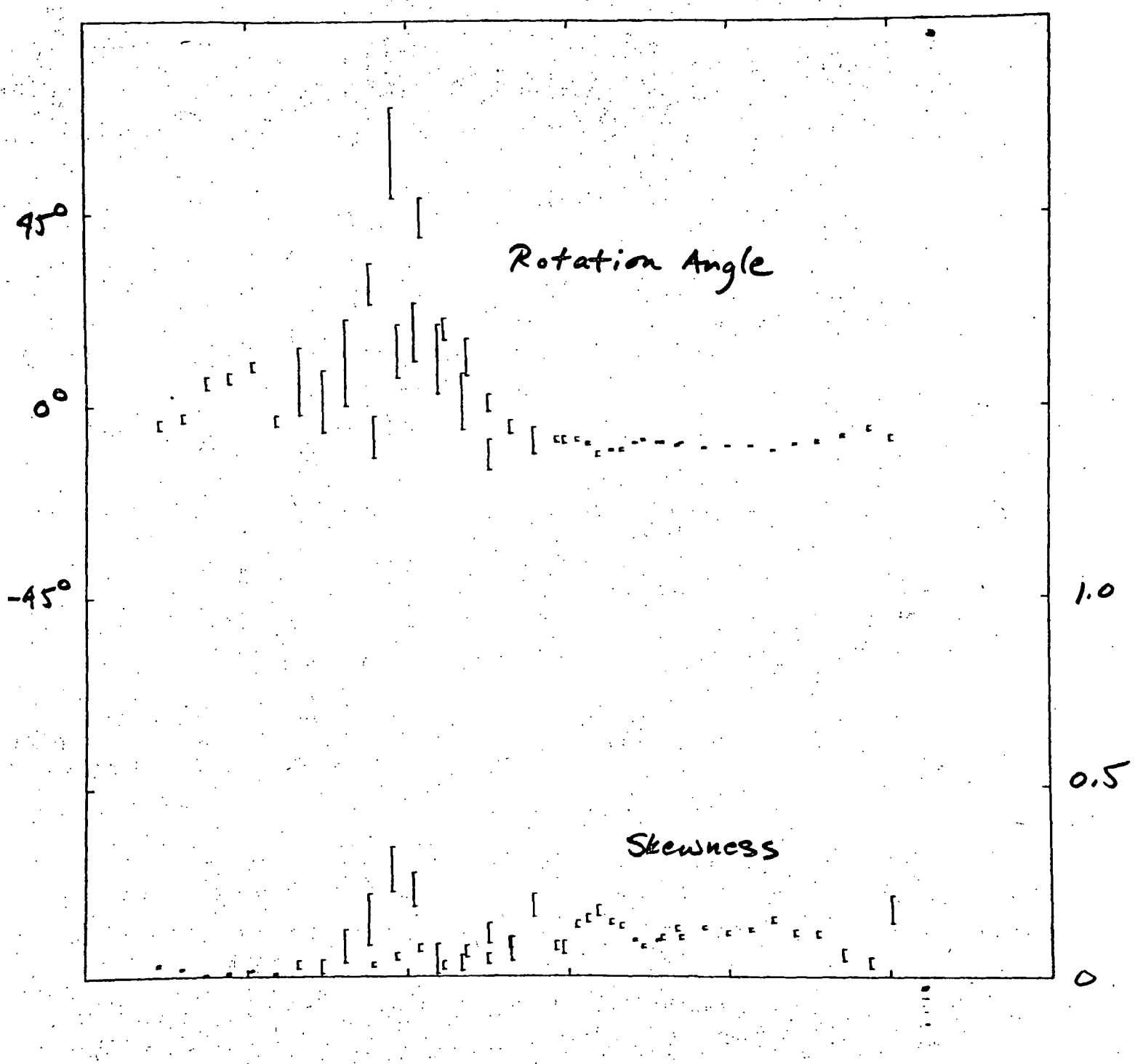


Station 7

Apparent Resistivities

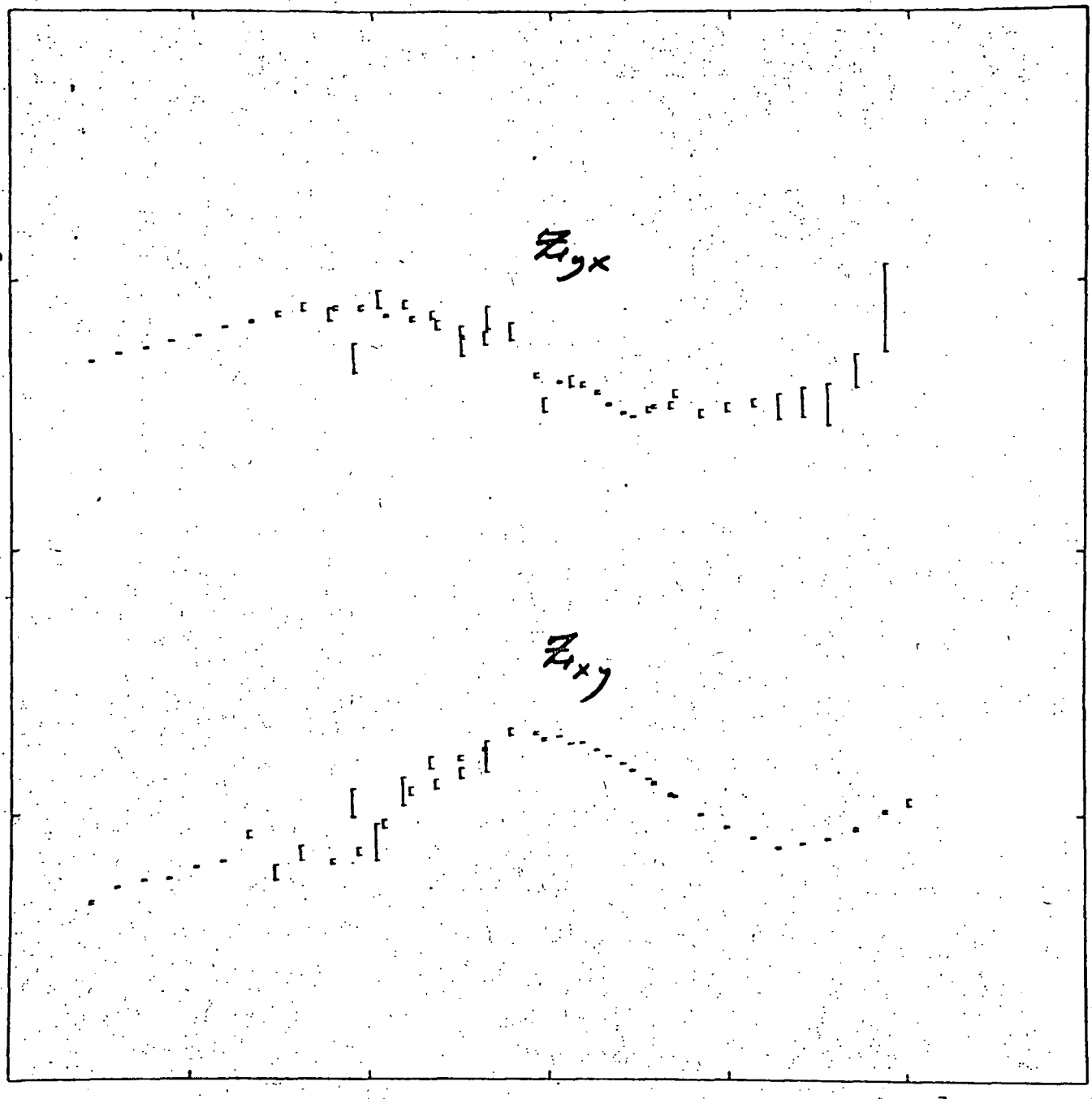


Station 7



Station 7

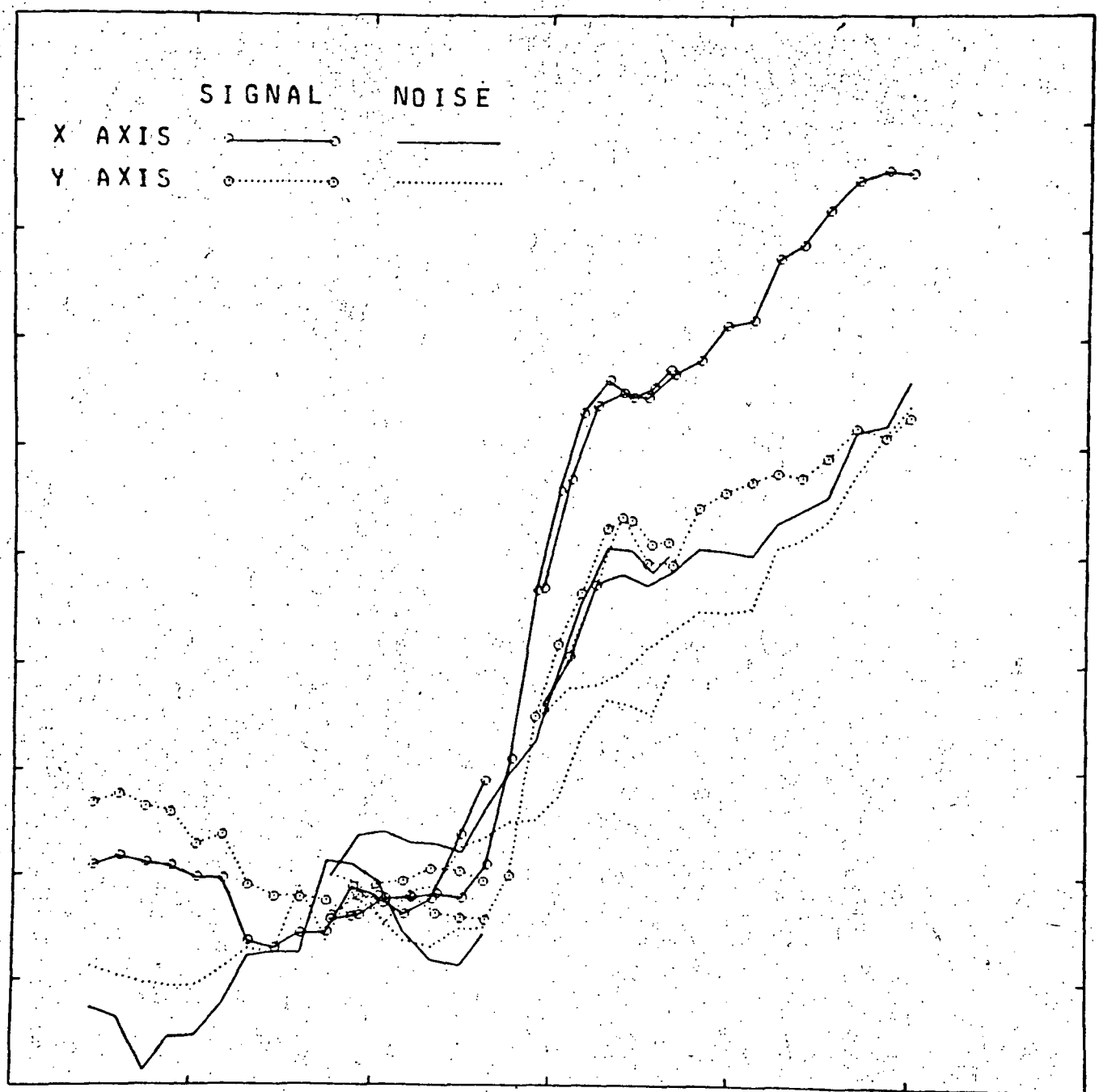
Phase Angles



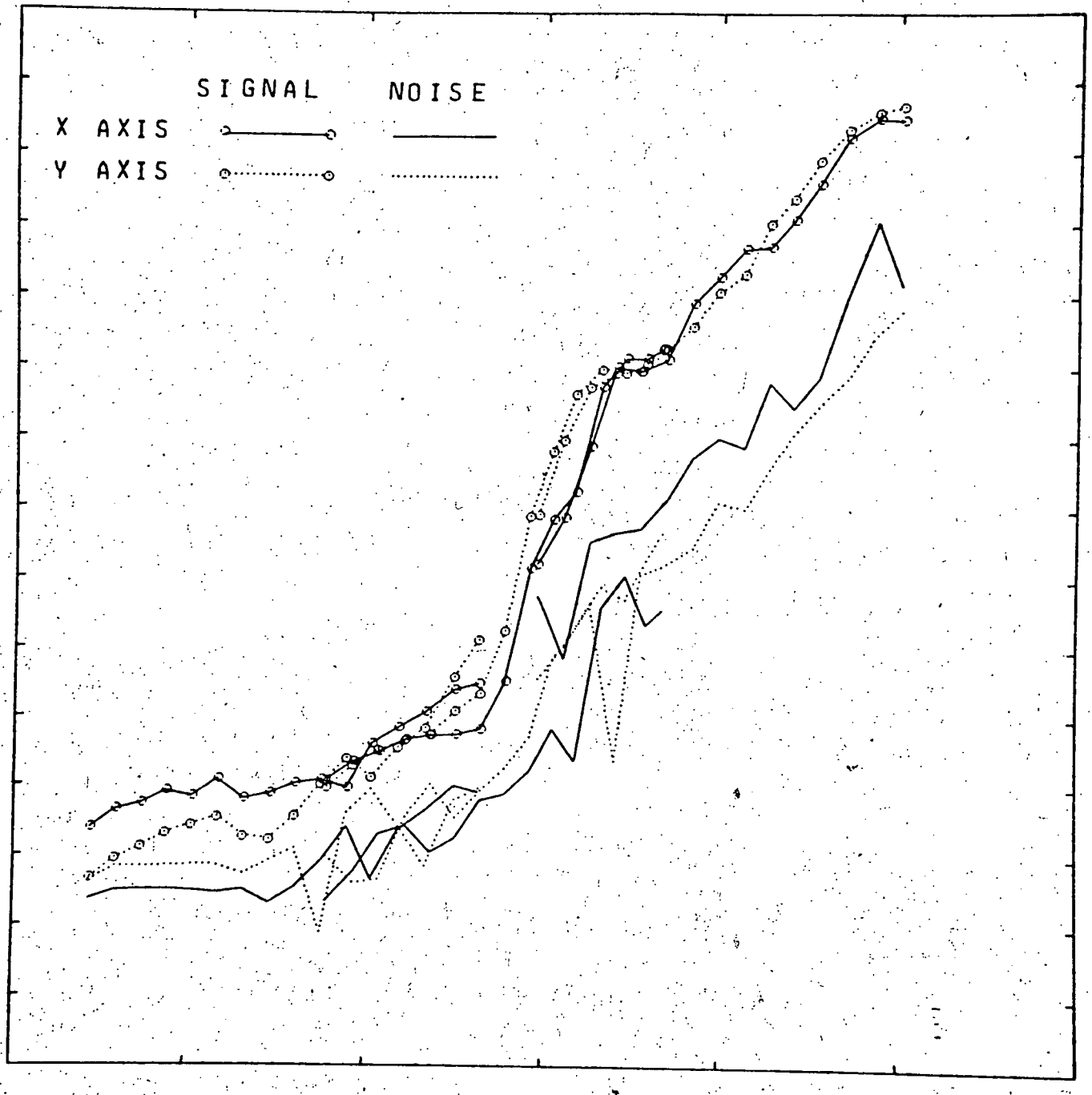
Station 7

Power Spectra

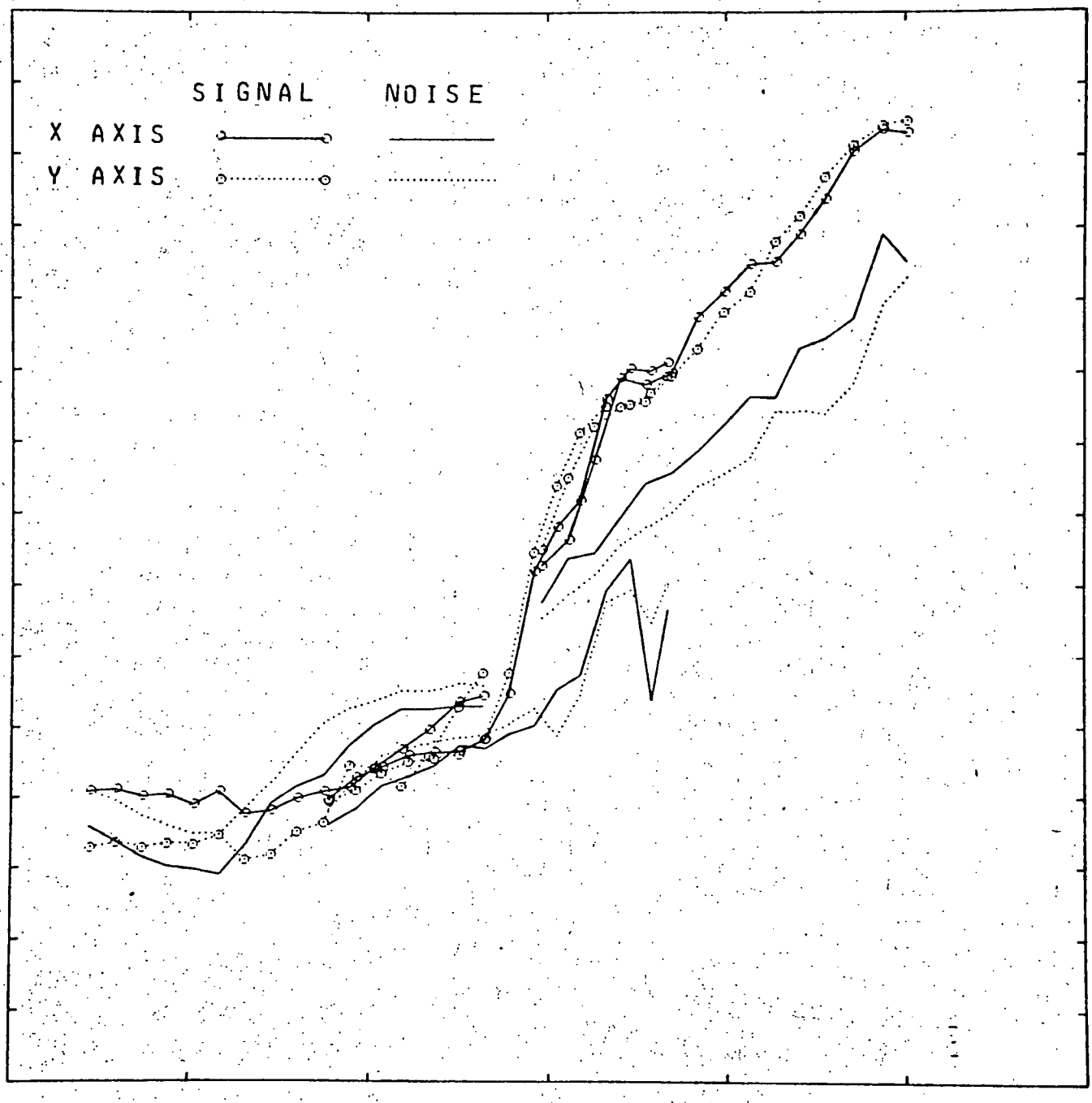
E



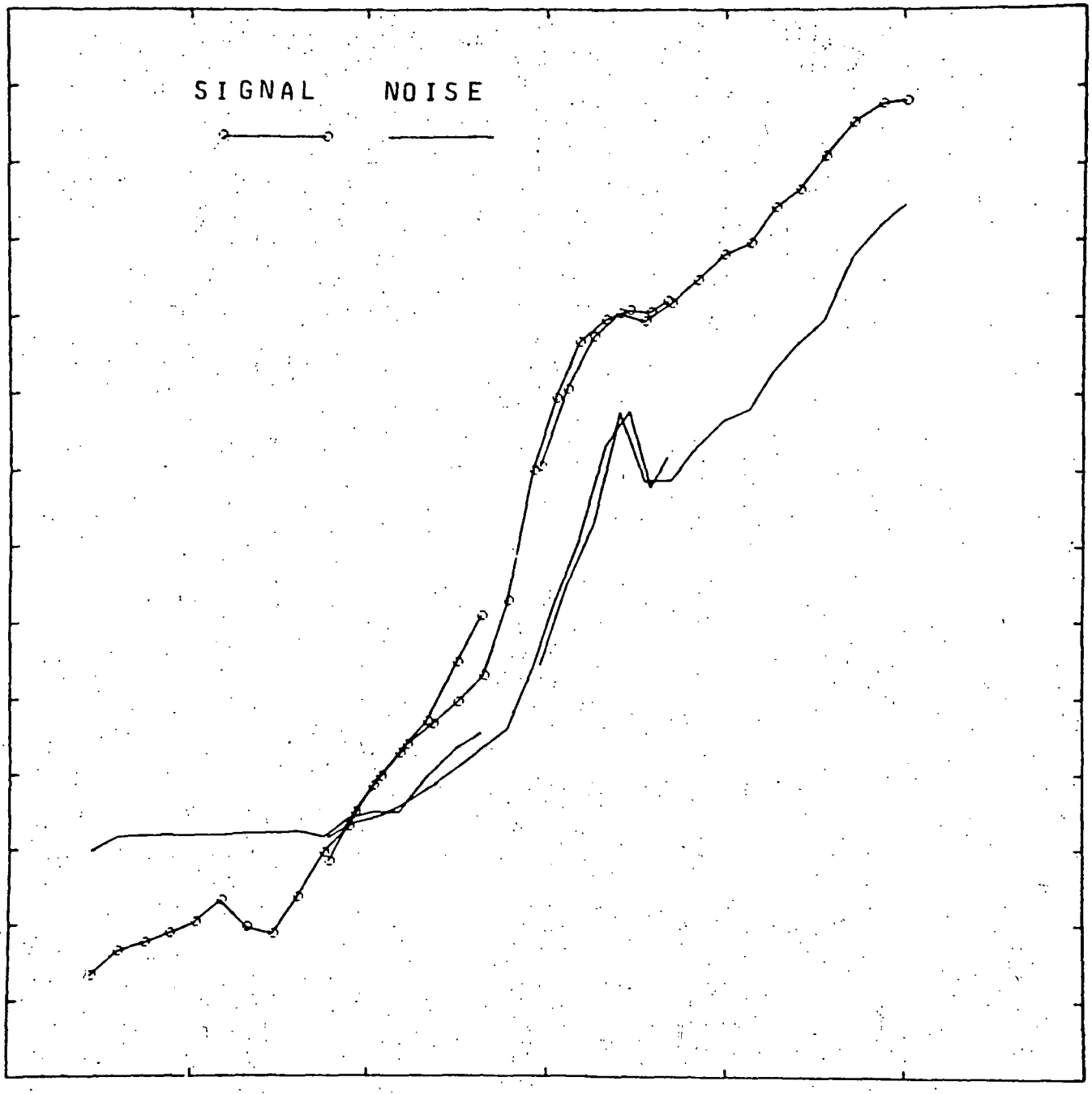
Station 7
Power Spectra
H



Station 7
Power Spectra
R

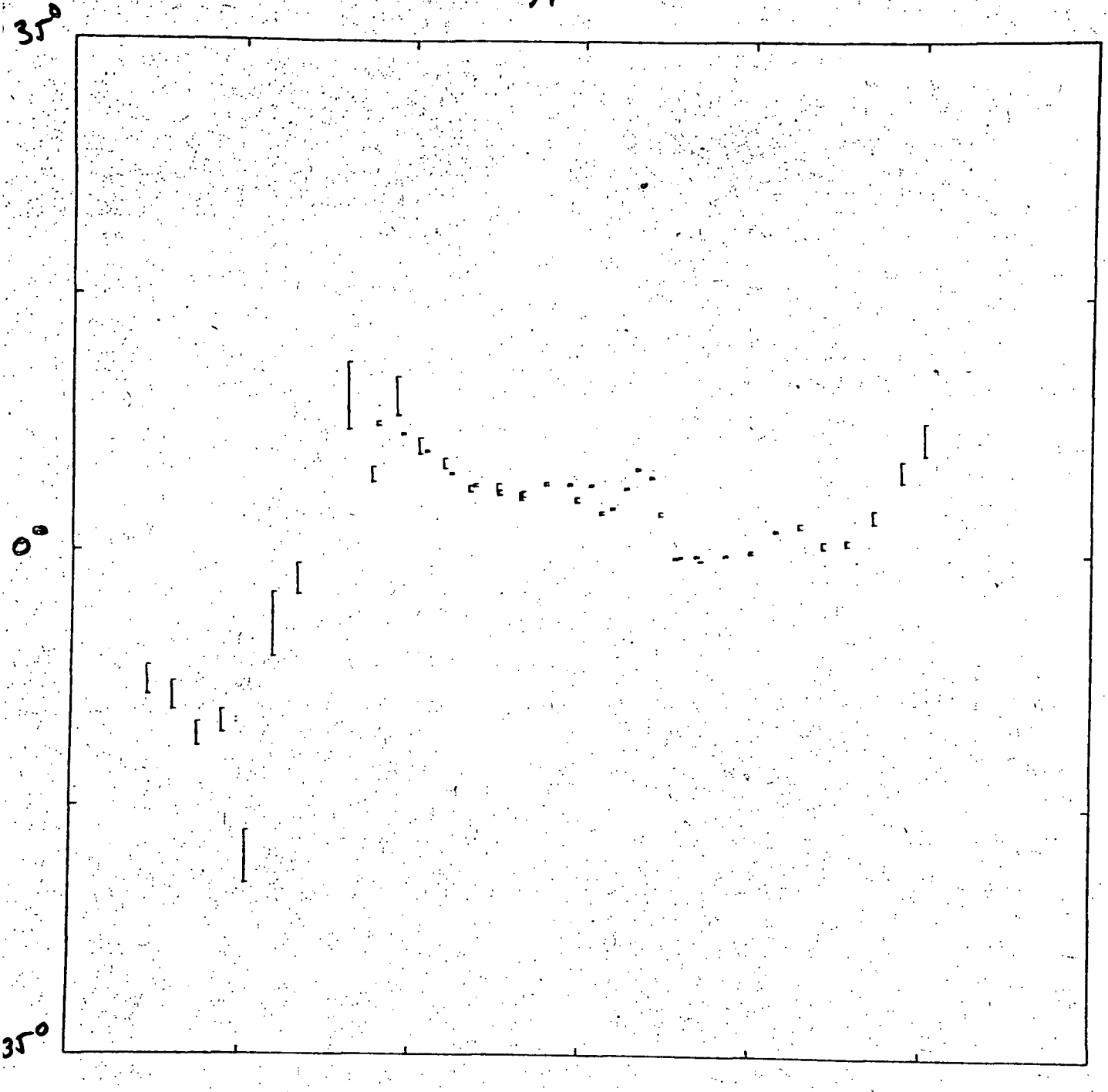


Station 7
Power Spectra
H_z

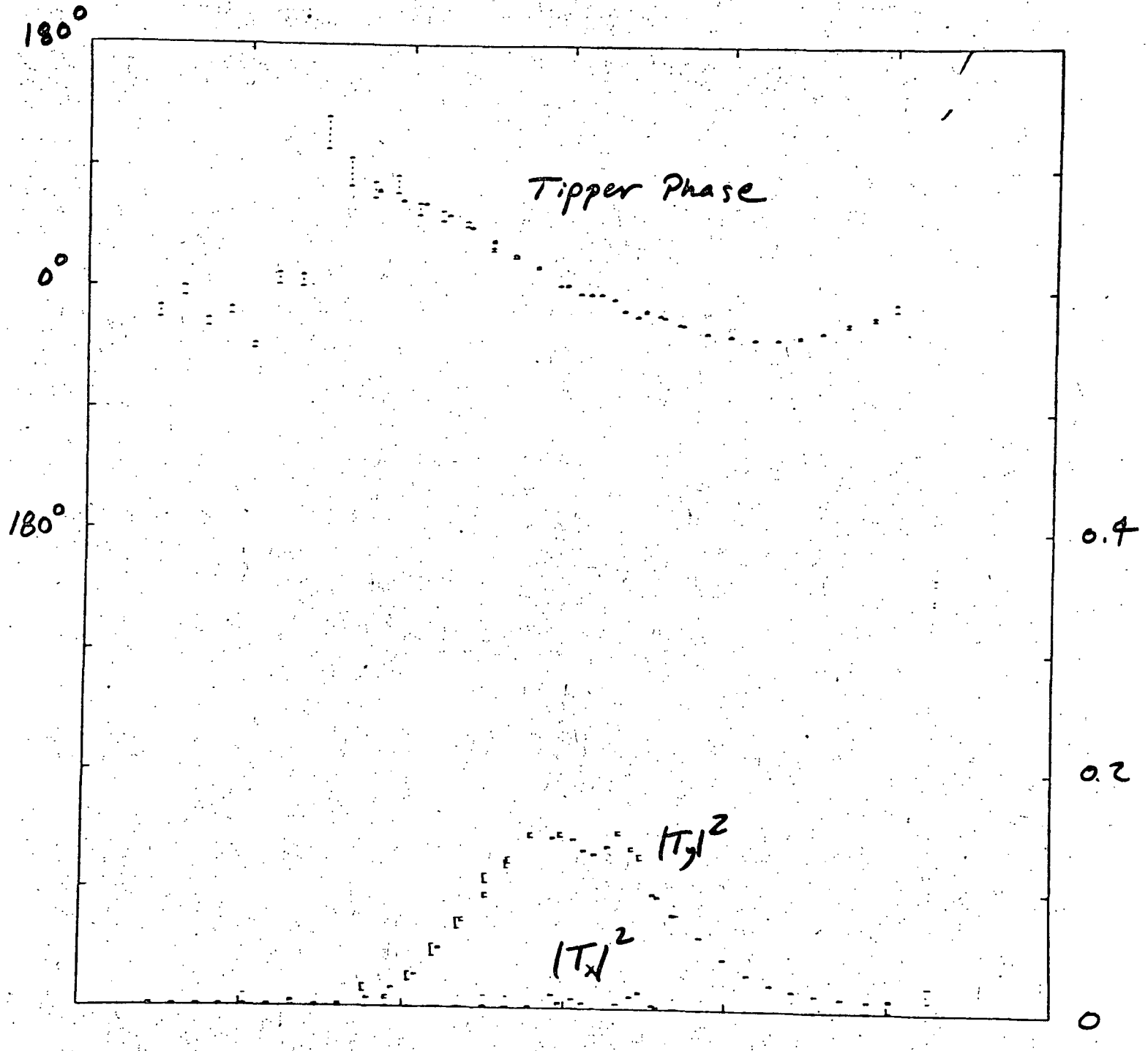


Station 7

Tipper strike

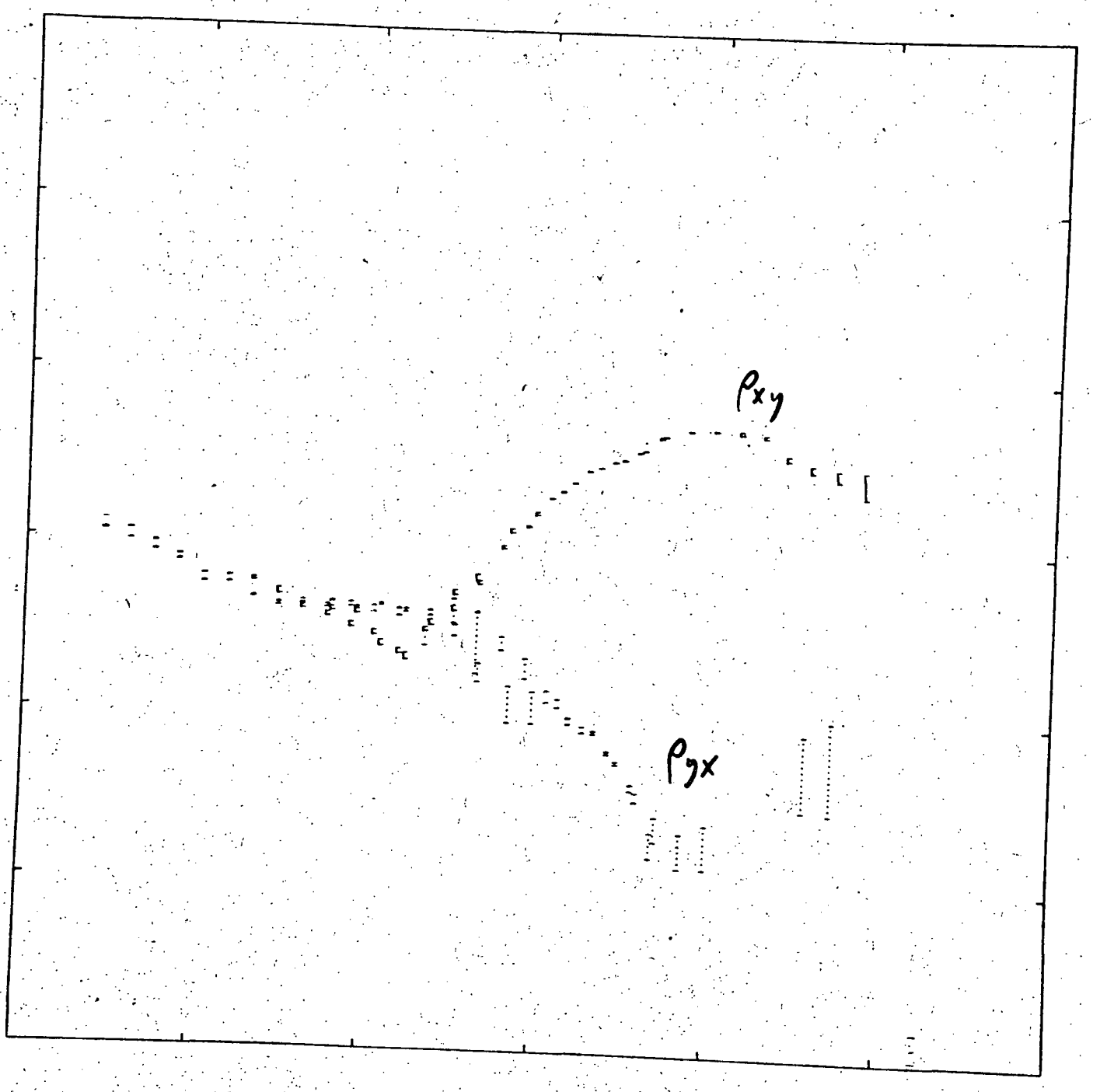


Station 7

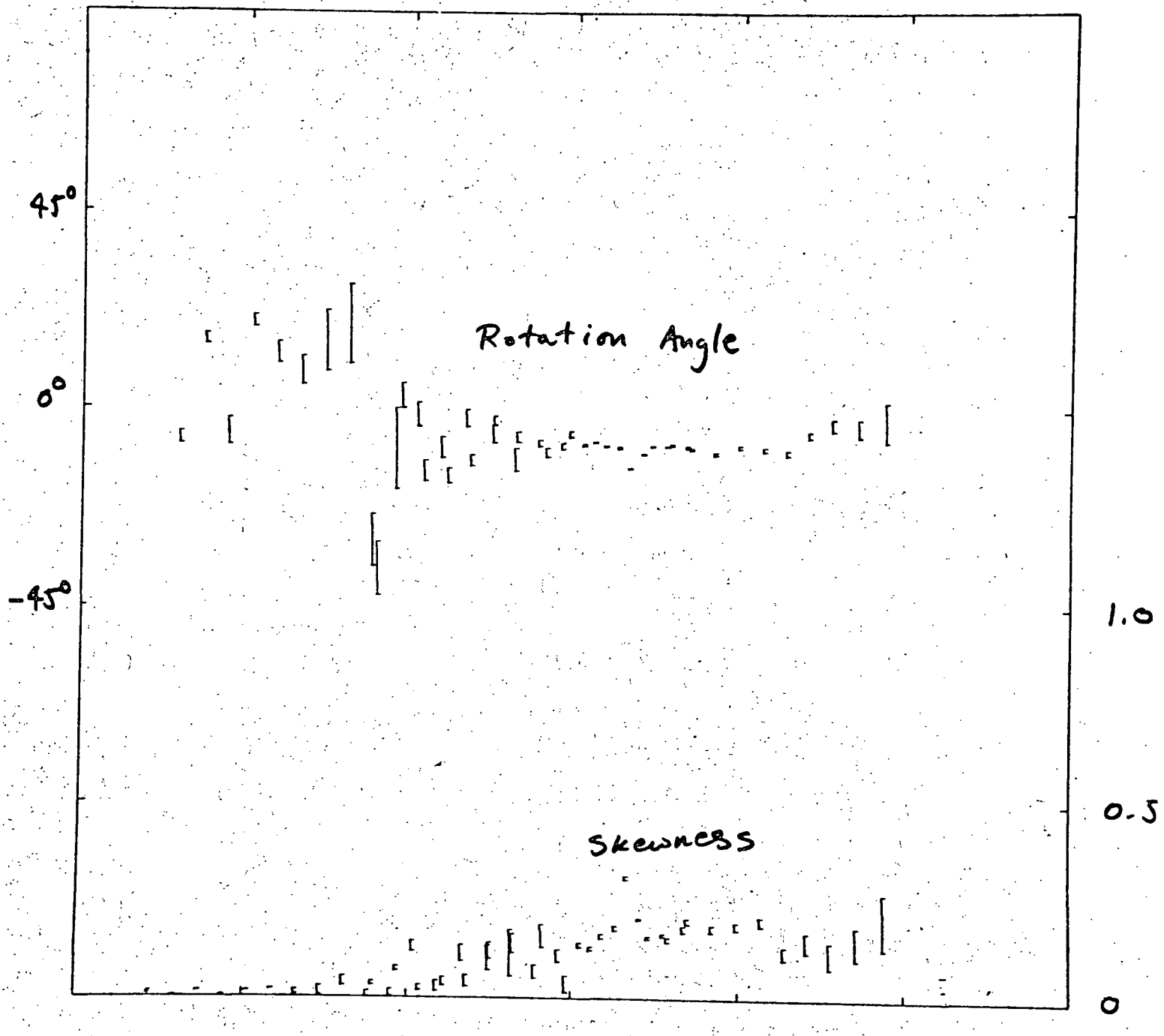


Station 8

Apparent Resistivities

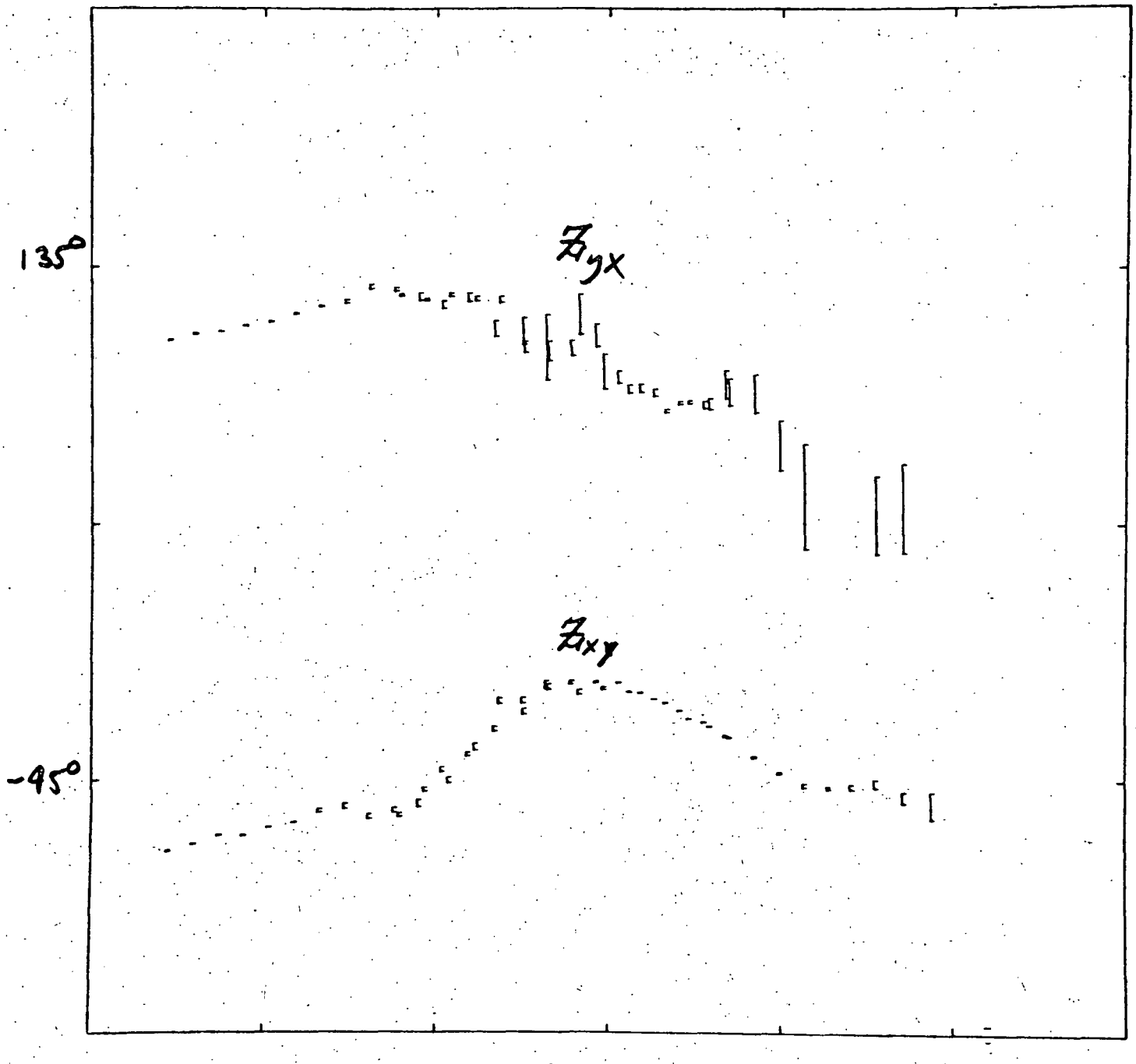


Station 8



Station 8

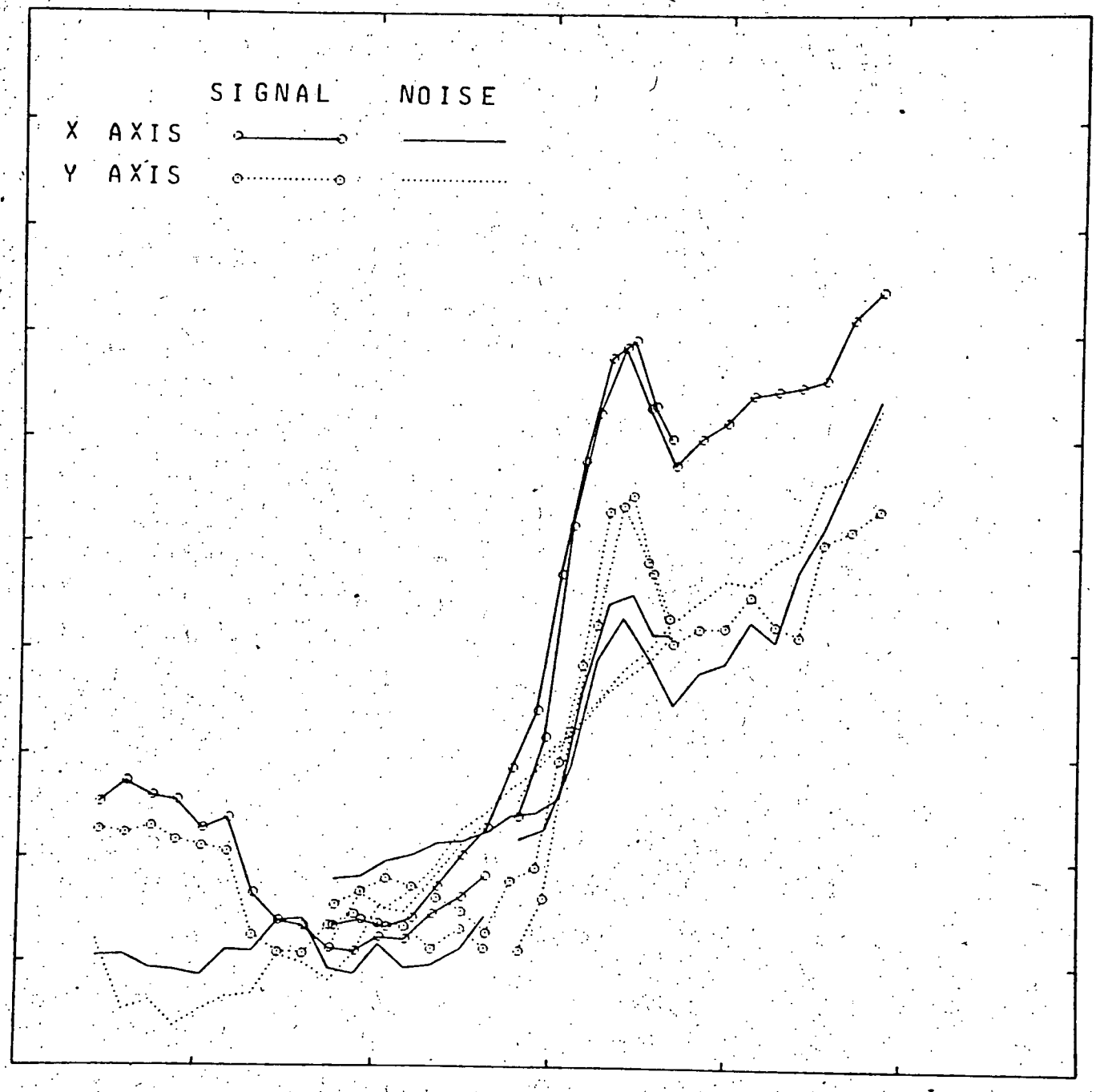
Phase Angles



Station 8

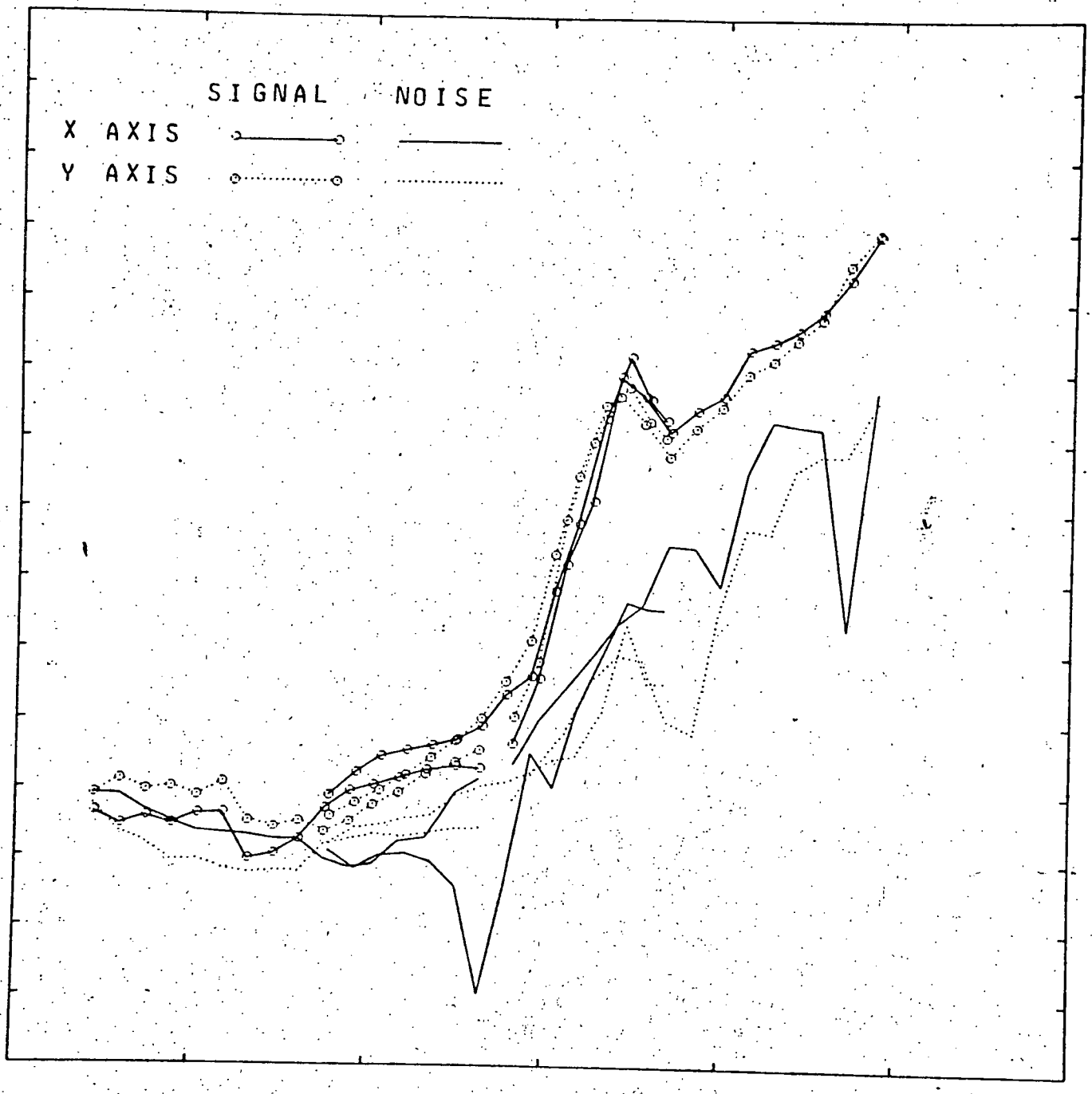
Power Spectra

E



Station 8
Power Spectra
H

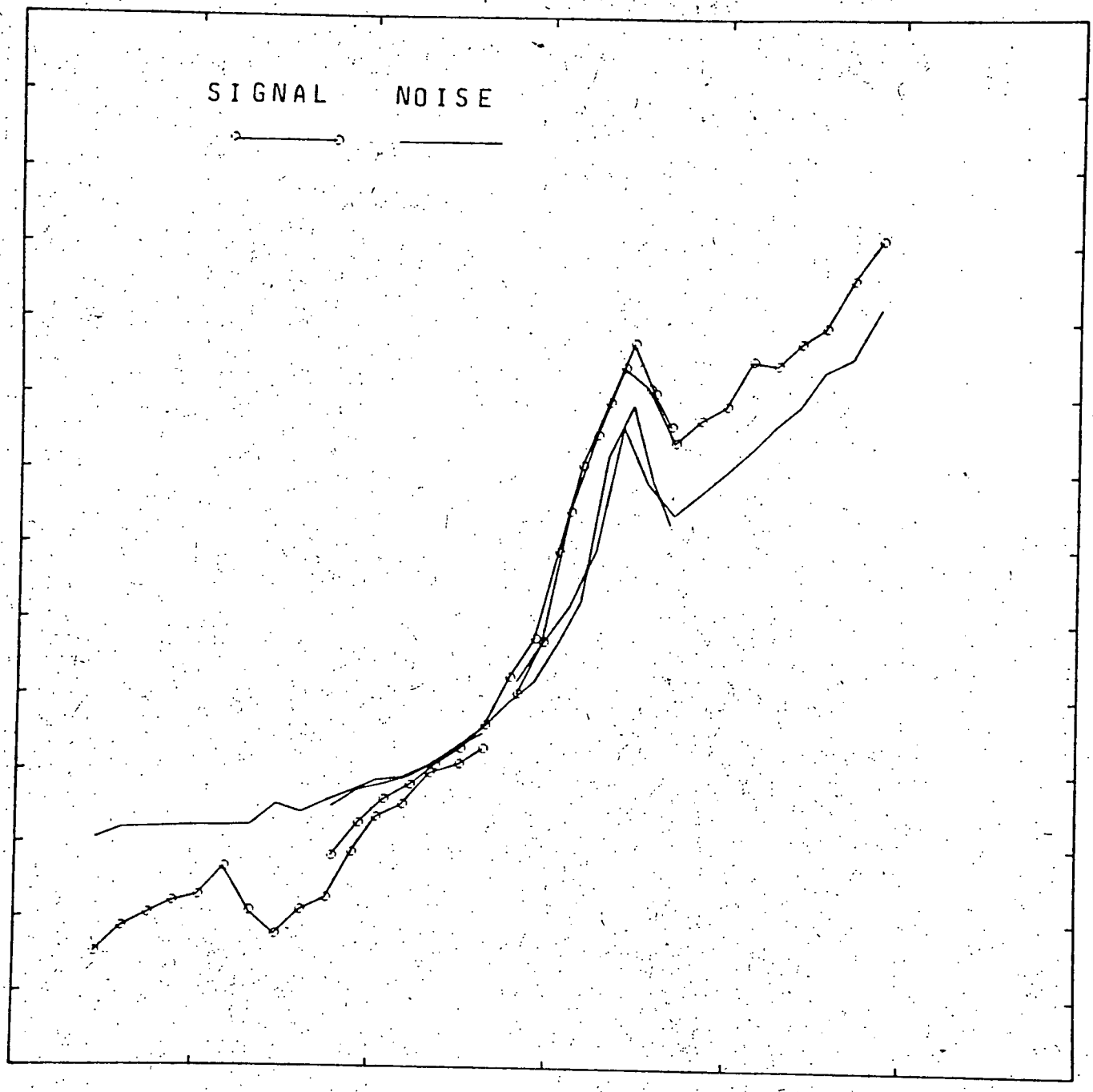
Station 8
Power Spectra
R



Station 8

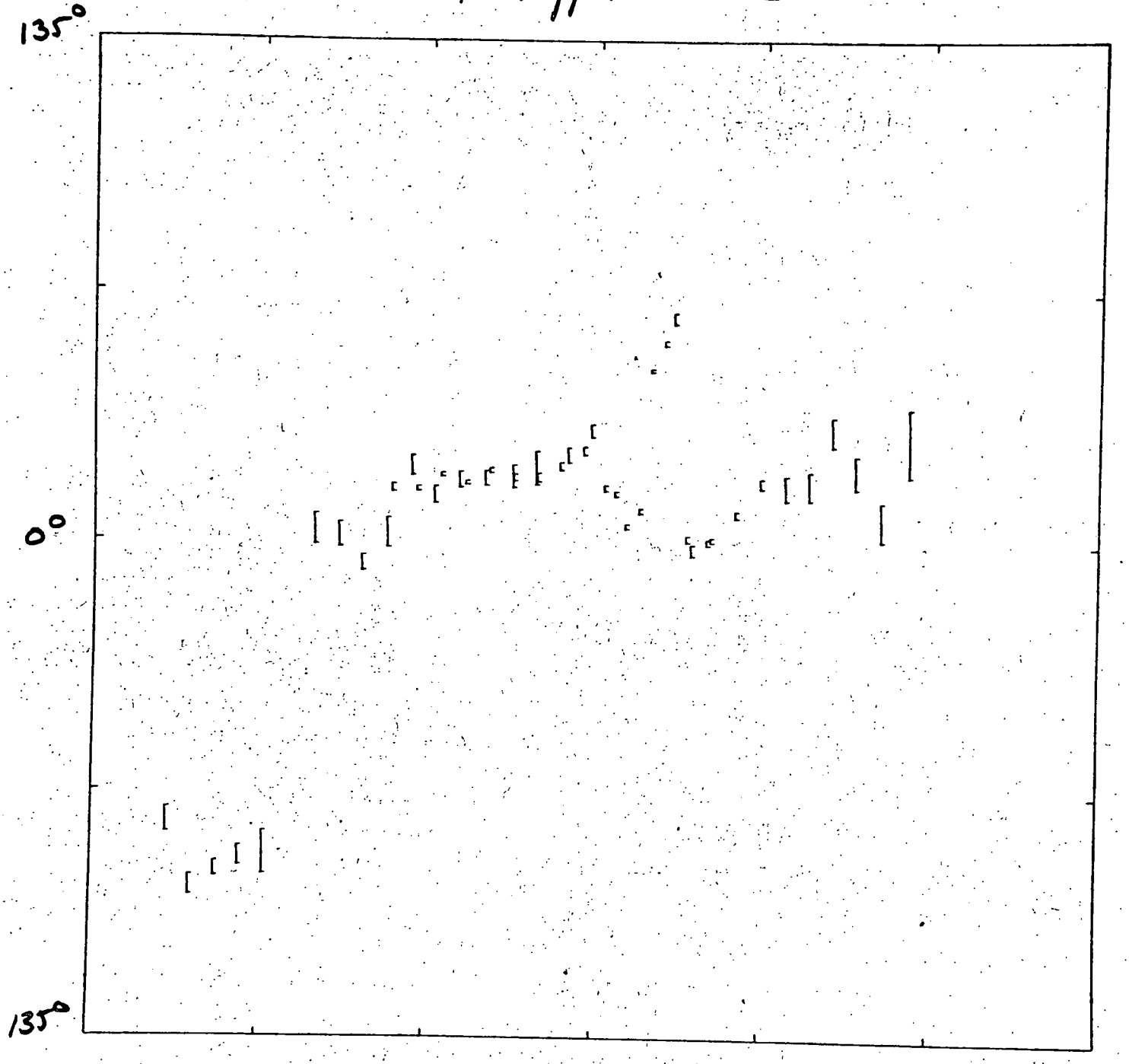
Power Spectra

H_z



Station 8

Tipper Strike



Station 8