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26. *Surface Waves and Layered Structures. Part 2. Theoretical dispersion curves for suboceanic surface waves.*

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1. Introduction

Effect of oceanic water on the Rayleigh waves propagated along the ocean bottom was first examined by Bromwich in the beginning of this century. But the problem regained importance since Stoneley disclosed the marked effect of the ocean on Rayleigh waves of comparatively short periods, with the result that many authors were stimulated to study the problem.[1)-10)] Among these studies, the works of Pekeris,

1) R. STONELEY, "The Effect of the Ocean on Rayleigh Waves," *Mon. Not. Roy. Astron. Soc., Geophys. Suppl.*, **1** (1926), 349.

2) C. L. PEKERIS, "Theory of Propagation of Explosive Sound in Shallow Water," *Geol. Soc. Amer., Memoir*, **27** (1948).

3) F. PRESS and M. EWING, "Low-speed Layer in Water-covered Areas," *Geophysics*, **13** (1948), 404.

4) F. PRESS, M. EWING and I. TOLSTOY, "The Airy Phase of Shallow-focus Submarine Earthquakes," *Bull. Seis. Soc. Amer.*, **40** (1950), 111.

5) F. PRESS and M. EWING, "Propagation of Explosive Sound in a Liquid Layer Overlying a Semi-infinite Elastic Solid," *Geophysics*, **15** (1950), 426.

6) M. EWING and F. PRESS, "Crustal Structure and Surface Wave Dispersion," *Bull. Seism. Soc. Amer.*, **40** (1950), 271.

7) W. S. JARDETZKY and F. PRESS, "Crustal Structure and Surface Wave Dispersion, Part III: Theoretical Dispersion Curves for Suboceanic Rayleigh Waves," *Bull. Seism. Soc. Amer.*, **43** (1953), 137.

8) I. TOLSTOY, "Dispersive Properties of a Fluid Layer Overlying a Semi-infinite Elastic Solid," *Bull. Seism. Soc. Amer.*, **44** (1954), 493.

9) C. L. PEKERIS and I. M. LONGMAN, "Ray Theory Solution of the Problem of Propagation of Explosive Sound in a Layered Liquid," *Jour. Acoust. Soc. Amer.*, **30** (1958), 323.

10) F. F. EVISON, C. E. INGHAM, R. H. ORR and J. H. Le FORT, "Thickness of the Earth's Crust in Antarctica and the Surrounding Oceans," *Geophys. Jour.*, **3** (1960), 289.

Ewing, Press and Tolstoy are representative. However, the complexity of calculation and paucity of observations have prevented progress in the study of crustal structures under the oceans. It is only a short time since a new impetus was given to these studies through the installations of long period seismographs at stations near the margin of oceans. It has recently been revealed that the dispersion curves of the surface waves propagated along the different paths are subjected to conspicuous variation. But the seismologists who discovered such marked features are confronting difficulty in obtaining theoretical dispersion curves complying with the observed ones.

In order to make a contribution, if possible, to such a study, we started to calculate theoretical dispersion curves corresponding to a wide variation of crustal structures, as we had an opportunity to use the electronic computer IBM 704 for a short period. Here a part of the result will be described.

2. Dispersion curves of Rayleigh waves across oceans.

In the present calculation a two-layered structure including the water layer is assumed, and some reference was made to the results of seismic prospecting carried out in some regions of the Pacific, Atlantic and Indian Oceans,[11)-15)] but to cover a possible wider variation of the crustal structure and topography along ridges, trenches etc., the parameters such as the velocities and the densities in the crust and subcrust, and the ratios of the thicknesses of the two layers are chosen from wide ranges, while the ocean depths of 1 km and 5 km were treated in each case. In most of the cases the Poisson's ratio, is taken as 1/4.

11) M. EWING, G. H. SUTTON and C. B. OFFICER, "Seismic Refraction Measurements in the Atlantic Oceans, Part VI: Typical Deep Stations, North America Basin," *Bull. Seism. Soc. Amer.*, **44** (1954), 21.

12) R. W. RAITT, "Seismic Refraction Studies of Bikini and Kawahalein Atolls," *Proc. Pap. U. S. Geol. Surv.*, **260** (1954), 507.

13) R. W. RAITT, "Seismic Refraction Studies of the Pacific Ocean Basin Part I: Crustal Thickness of the Central Equatorial Pacific," *Bull. Geol. Soc. Amer.*, **67** (1956), 1623.

14) M. N. Hill, "Recent Geophysical Exploration of the Ocean Floor," *Physics and Chemistry of the Earth*, Vol. **2** (1957), 129.

15) J. EWING and M. EWING, "Seismic-refraction Measurements in the Atlantic Ocean Basin, in the Mediterranean Sea, on the Mid-Atlantic Ridge, and in the Norwegian Sea," *Bull. Geol. Soc. Amer.*, **70** (1959), 291.

The cases treated are grouped and the results are graphically represented in Figs. 1 through 49, and the values of the parameters in the respective groups are tabulated in Table A. The calculated values for every case are shown in Tables 1 to 49. In every case, we have calculated both of the phase and group velocities, but in these figures only the group velocity curves are shown, for simplicity and on the consideration of practical utility. We have chosen a considerable range in each parameter in our calculation, but sometimes an appropriate dispersion curve is missed to keep in harmony with the observational result. In such a case interpolation or extrapolation will easily be made by means of our more or less systematic calculations.

It is also to be stated that we have limited our calculation to the dispersion curve of the fundamental mode, and in addition, branches in the long and short period ranges are not calculated in order to avoid too much complication in the use of the computer. But it is well-known that the dispersion curve in the long period branch approaches asymptotically the velocity of the wave in the semi-infinite substratum, so that our omission of this branch from the calculation is of no importance. In case there is no low velocity layer, a similar asymptotic approach to the lowest velocity in the surface layer is expected in the short period range. More over in the limiting case of the short period, the existence of a boundary wave usually called the Stoneley wave is to be expected. We have already reported the results of our study on the amplitude distribution of such a boundary wave on both sides of the boundary.[16] Stoneley waves propagated along the fluid/solid interface have also been studied by E. Strick et al.[17)-18)] Effects of the limited thicknesses of the layers to such a guided boundary wave is a problem to be studied in the future. Anyhow, the study of the oceanic Rayleigh wave in the period range from 1 to 12 seconds remains at present as an unsolved problem in theory and observation.

Even though our present results is not a complete solution of the problem, the aim of our present calculation is to offer the investigators an immediate clue as to the inference of the crustal structure of the first approximation. In order to discuss the problem thoroughly and

16) R. YAMAGUCHI and Y. SATÔ, "Stoneley Wave—Its Velocity, Orbit and the Distribution of Amplitude," *Bull. Earthq. Res. Inst.*, **33** (1955), 549.

17) E. STRICK and A. S. GINZBARG, "Stoneley Wave Velocities for a Fluid-Solid Interface," *Bull. Seis. Soc. Amer.*, **46** (1956), 281.

18) E. STRICK et al., "Propagation of Elastic Wave Motion from an Impulsive Source along a Fluid/Solid Interface," *Phil. Trans. Roy. Soc.*, [A], **251** (1959), 455.

explain the long period component of the surface wave so called the mantle wave, the more detailed structure of the deeper portion of the subcrust must be taken into consideration, while the short period components of the surface wave are subjected considerably to minor small scaled structures at the upper portion of the crust.

We therefore hope that our present results may be of use in the study of the crustal structure at present based on the current observations of the waves in a narrower range of period than ours which extend from ca. 10 sec. to 100 sec. We believe that the deviations in the observed data from our calculation will give definite clues as to the difference in the crustal structure from our assumption.

Now, in the following a brief explanation of our results will be made. In Figs. 1 through 6 are included the cases partly dealt with by other authors. Our intension of including them is in part to check our calculation to begin with. The cases of $H_1=H_2$ indicated with the others in Figs. 1 and 2 correspond to the cases III and I calculated by Jardetzky and Press. Fig. 3 shows extended cases of their case II with an additional sedimentary layer under the ocean. The difference between their result and the present one in Fig. 3 is found to be very small, so that it will not be possible to detect the difference in these structures from observations, unless they are provided with accuracies less than 0.1 km/sec. in their velocity. It will therefore be necessary to refine observations and find adequate means of correction to the effect of the gradual change in the oceanic depth along the path and to eliminate the effect of refraction at the continental border etc. in the discussion of such a delicate structure.

Figs. 4 and 5 include the cases studied by Mitra for the interpretation of microseisms.[19] From these figures we can clearly observe the difference in the effect on dispersion curves when the sedimentary layer of a lower velocity is replaced by basaltic layer of higher velocity. For the models in Fig. 6 the densities of the solid media are assumed to be nearly equal, while the elastic moduli are those used by Nagamune for the explanation of the waves across the North Pacific basin.[20]

When we approach from the ocean to the continent, we may expect the thickness of the crustal layer to increase gradually. In the regions

19) M. MITRA, "Rayleigh Waves in a Multi-layered Medium with Application to Microseisms," *Mon. Not. Roy. Astr. Soc., Geophys. Suppl.*, **7** (1957), 324.

20) T. NAGAMUNE, "On the Travel Time and the Dispersion of Surface Waves (III): Dispersion of Surface Waves and Structure of North and Central Pacific Basin," *Geophys. Mag.*, **28** (1957), 1.

of not only continental margin, but also near suboceanic ridges and trenches, the intermediate layer may be subjected to some variation while the substratum (or the mantle) undergoes little variation. Therefore, the wide range of variation in the parameters concerning this intermediate layer was chosen for our calculation. Considering the convenience of actual use in comparison with the observations, the cases treated are grouped according to the velocity of the shear wave in the mantle, and are shown in the respective figures.

The cases of ultramafic rock having a compressional wave velocity of 7.95 km/sec in the substratum are shown in Figs. 7 through 12. The observed variation of dispersion curves in different oceanic paths seems to be well explained by these curves, as was actually the case in the sub-oceanic Rayleigh waves along the different paths across the Pacific and in the SE Asian seas.[21] We can see from Fig. 8 that a maximum and a minimum of group velocity appear in the range of the shorter period when the thickness of the intermediate layer is considerably larger than that of the water layer. Such a conspicuous feature is to be certainly correlated to the intermediate layer as is also inferred from the nearness of the velocities.

Figs. 9 through 12 indicate the cases when the solid layer has the characteristics of volcanic or consolidated sediments in which the velocity of the compressional wave takes a value in the range from 3 to 5 km/sec.

The cases in which the velocity of the compressional wave in the substratum, composed of ultra-basic rock is equal to 8.3 km/sec are shown in Figs. 13 through 18. Among these, the first three figures indicate the cases where the velocity Vp_2 of the P-wave in the intermediate layer is equal to 7 km/sec, while the rest indicates the case of $Vp_2=5$ km/sec. As is shown in these figures, the ratios of the densities in the intermediate layer and the subcrust are not the same in all cases. But no remarkable difference can be seen in the variation of the density contrast as above mentioned.

Very precise observation will be required to discriminate the difference in density distribution if desired. The density contrast of the crust to the mantle in the case of Fig. 17 is taken to be larger than that in Fig. 16 and the comparison of the two figures reveals to us

21) T. A. SANTÔ, "Rayleigh Wave Dispersions across the Oceanic Basin around Japan (Part III)—On the Crust of the South-Western Pacific Ocean—," *Bull. Earthq. Res. Inst.*, **39** (1961), 1.

that the increase in the dencity of the intermediate layer is accompanied by a decrease in the group velocity for the wave of long period, although the difference is very slight.

The effect of the density contrast between the water and the solid layers seems, on the contrary, to be seen in the short period range of the Lr wave.

The influence of the variation of the oceanic depth on the group velocity when the crust remains the same will be seen from a comparison of the two curves in Figs. 16 and 18 for (H_1=1.0 km, H_2=25 km) and (H_1=5 km, H_2=25 km). We see in the range of period below 20 sec a remarkable influence from variation in the oceanic depth.

Figs. 19 through 28 illustrate the cases when the velocity Vp_3 of of the compressional wave in the mantle equals 8.1 km/sec. Figs. 29 through 43 and Figs. 44 through 49 represent the cases of Vp_3=7.8 km/sec and 7.5 km/sec respectively.

A brief description of marked features revealed from our calculations will be added here. We have already seen in each figure the effect of the variation of the thickness of the water layer (H_1) or the intermediate layer (H_2) while the other parameters remain constant. It was revealed therefrom that the variation of H_2 has great influence on the dispersion curve. In order to see the influences of the other parameters, we picked out cases for the different values of the parameter while the other parameters remain constant, and showed them side by side in Figs. 50 through 53. In Fig. 50 the effect of H_1 is illustrated. The most interesting feature is the shifting of the dispersion curve to the right (longer period side). As was mentioned in section 4 of Part 1, the second remarkable feature is the appearance of the maximum and minimum group velocities in a short period range when the H_1 become small.

Fig. 51 shows the effect of the variation of the velocity in the mantle. As is already known the most remarkable effect of the velocity in the subcrust is in the asymptotic value of the group velocity (and of course also the phase velocity) which tends to wards the velocity of the wave when the surface layers are removed. But it is rather astonishing that the effect of the variation of the velocity in the mantle is almost invisible in the period range below ca. 15 sec. in the models concerned.

The next Fig. 52 shows the effect of the variation of velocity in the intermediate layer. It is clearly seen that effect is most marked

in the intermediate range of period from 15 to 50 sec. Fig. 53 indicates the effect of the variation of densities in the crust and mantle. As already stated, the conspicuous slightness of the influences of the density variations in both the crust and subcrust is to be specially noted.

3. Guidance in fitting experimental data to theoretical curves.

A consideration of convenience of actual use in comparison with the observations, is outlined in the five figures of Fig. 54 through Fig. 58.

They are grouped according to the thickness of the water layer (H_1) and the value of the group velocity at the period of 30 sec., since there is some relation between those two. That classification is serviceable in finding the most desirable model.

In the figures, the model shown by V60795 R2830 H15 means $Vp_2=6.0$ km/sec, $Vp_3=7.95$ km/sec, $\rho_2=2.8$ g/cm^3, $\rho_3=3.0$ g/cm^3 and $H_2=15$ km, and so on.

From these figures we can see that there are no methods for unique solution of the crustal structure from the utility of the observations of dispersion curves. However, it is important to enable us to get a clue to the problem.

4. Suboceanic Love Waves

Theoretically speaking, a water layer overlying a crust has no effect on the Love wave provided the water is perfect fluid and has no viscosity. But in view of the utility in the practical problem the dispersion curves of Love waves for most of the above cases are calculated and shown graphically in Figs. 1L through 48L. We hope, although the calculation itself involves no particularity, but the results are not barren in the elucidation of some new features in the actual observations.

Acknowledgements

The writers' sincere gratitude is expressed to Prof. H. Kawasumi for his kind guidance.

Their thanks are also due to Dr. H. Itô, chief of the Electronic Computation Center at the Japan Meteorological Agency, by whose courtesy the opportunity of using the IBM 704 electronic computer was given, and also to the other members of the office staff.

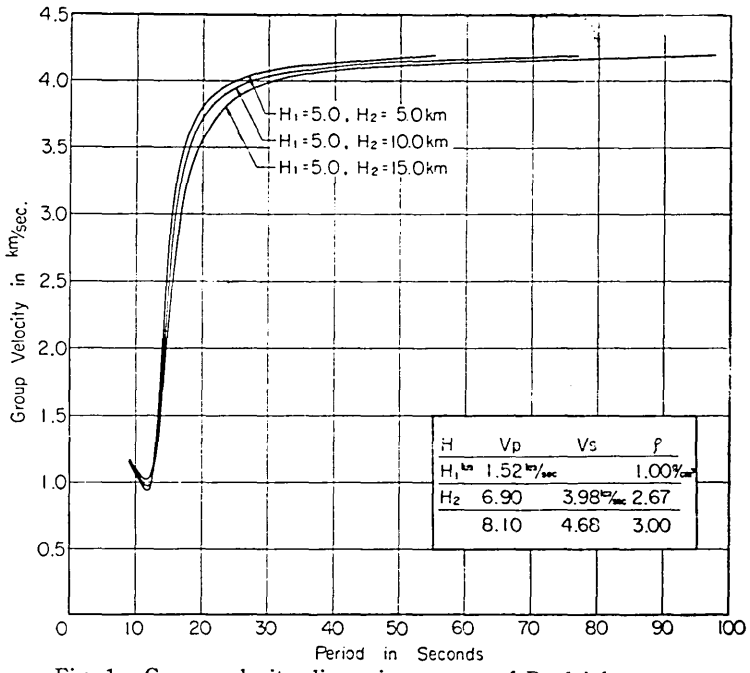


Fig. 1. Group velocity dispersion curves of Rayleigh waves.

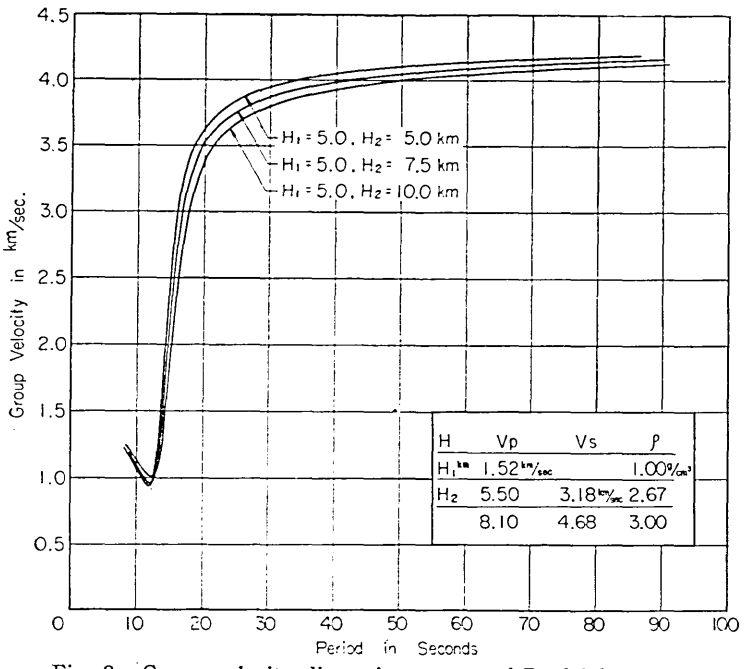


Fig. 2. Group velocity dispersion curves of Rayleigh waves.

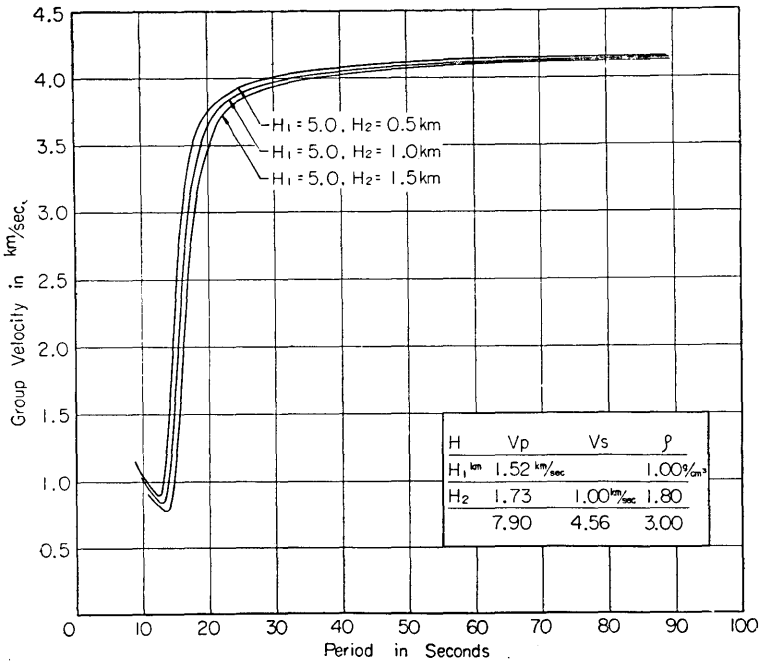


Fig. 3. Group velocity dispersion curves of Rayleigh waves.

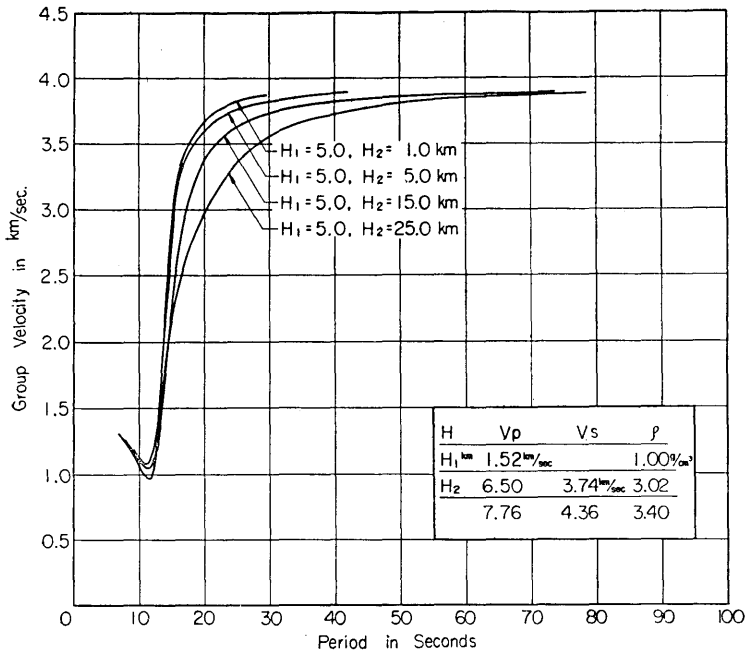


Fig. 4. Group velocity dispersion curves of Rayleigh waves.

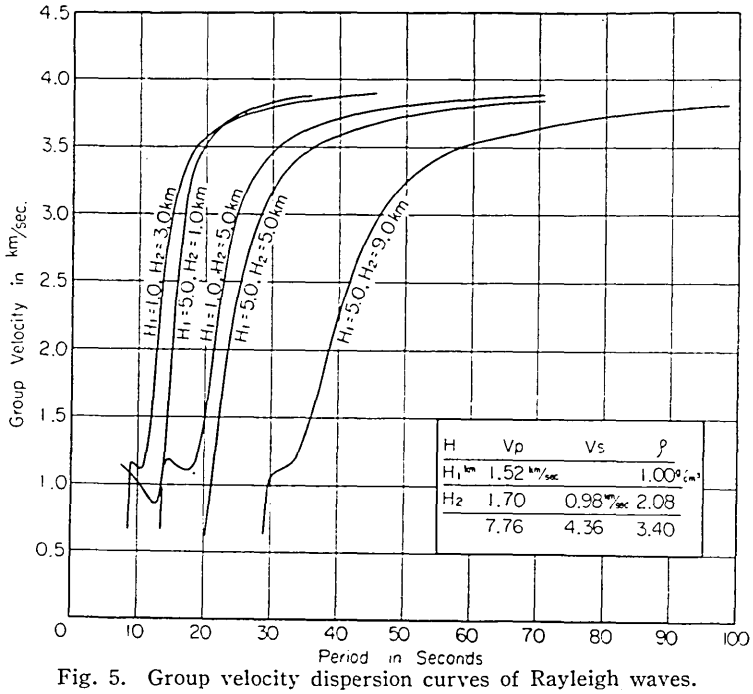


Fig. 5. Group velocity dispersion curves of Rayleigh waves.

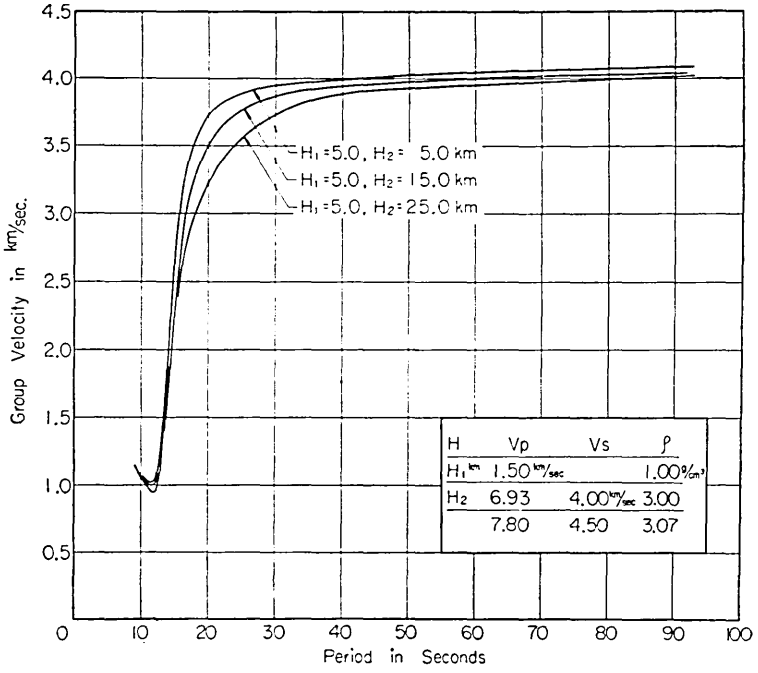
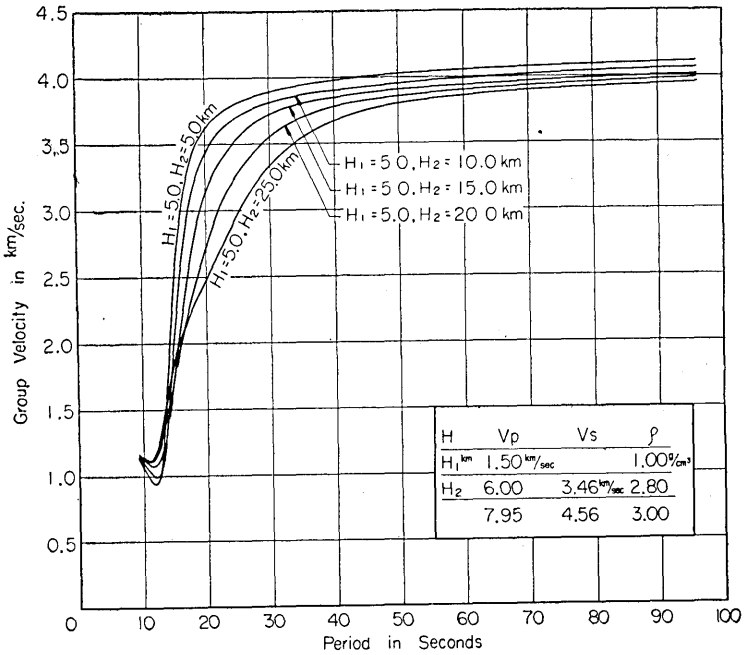


Fig. 6. Group velocity dispersion curves of Rayleigh waves.



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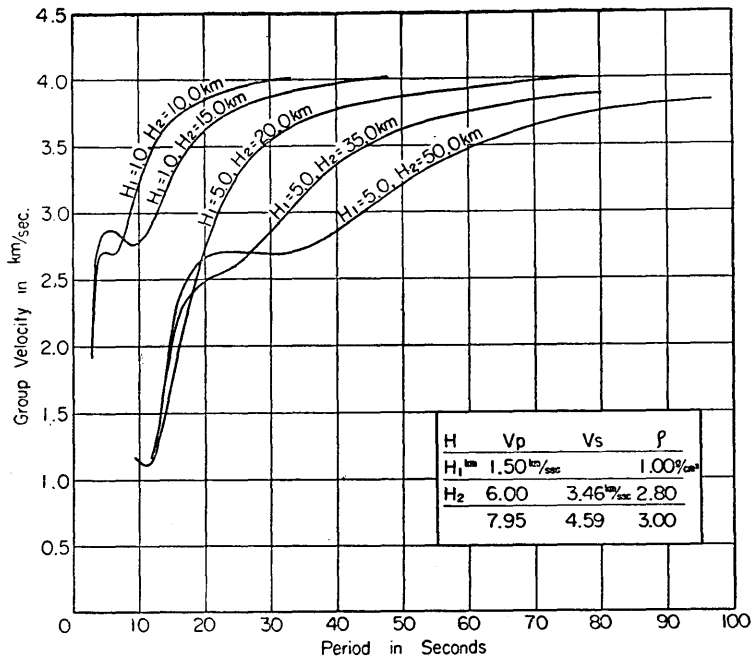
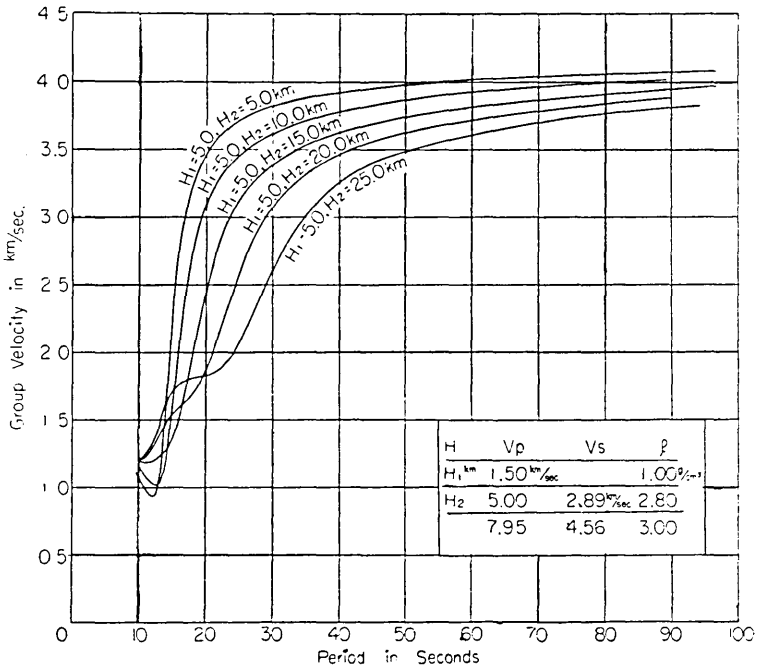


Fig. 8. Group velocity dispersion curves of Rayleigh waves.



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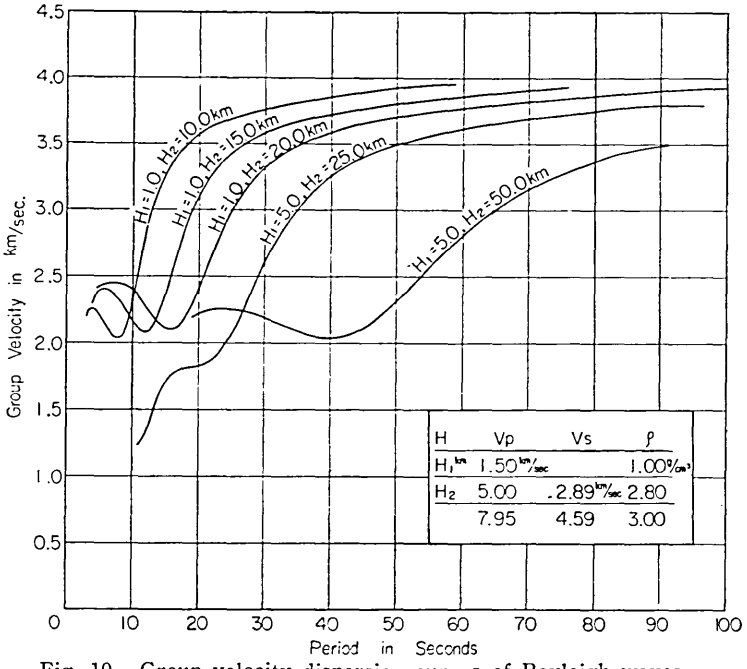

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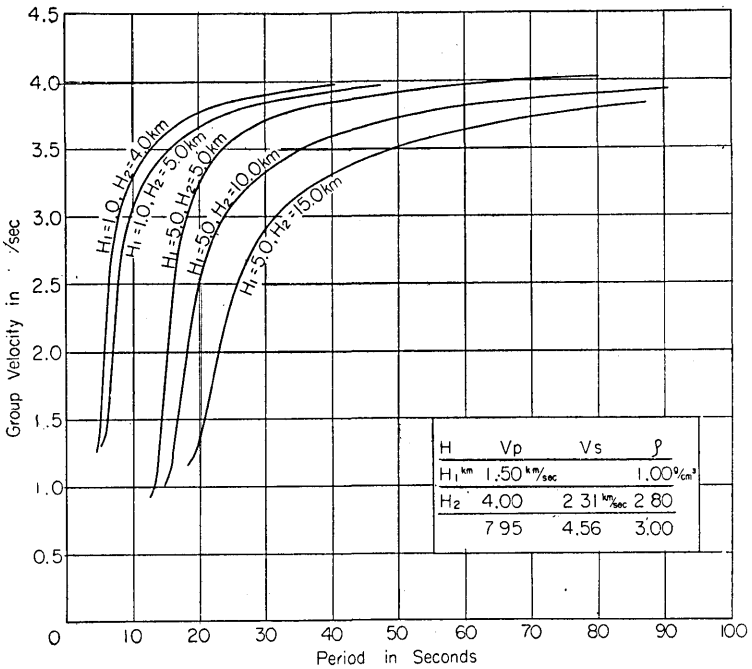

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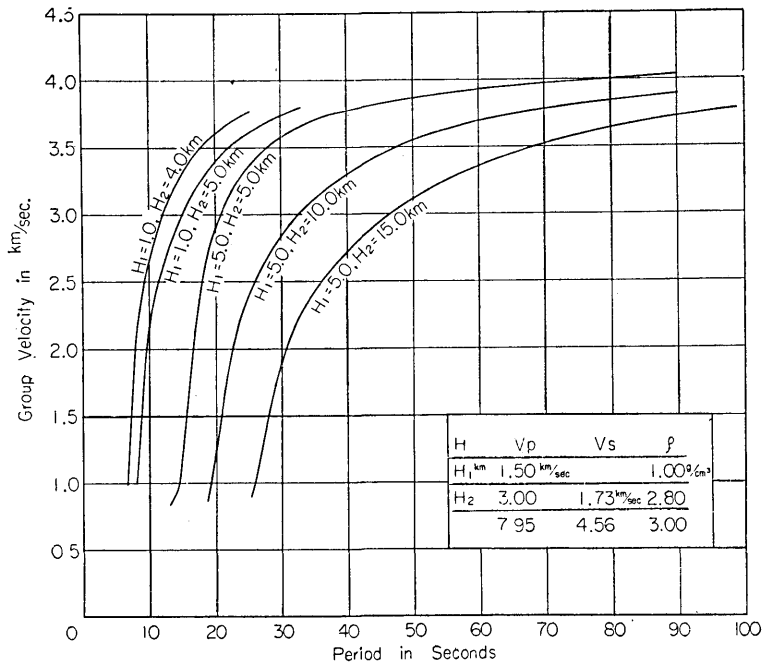

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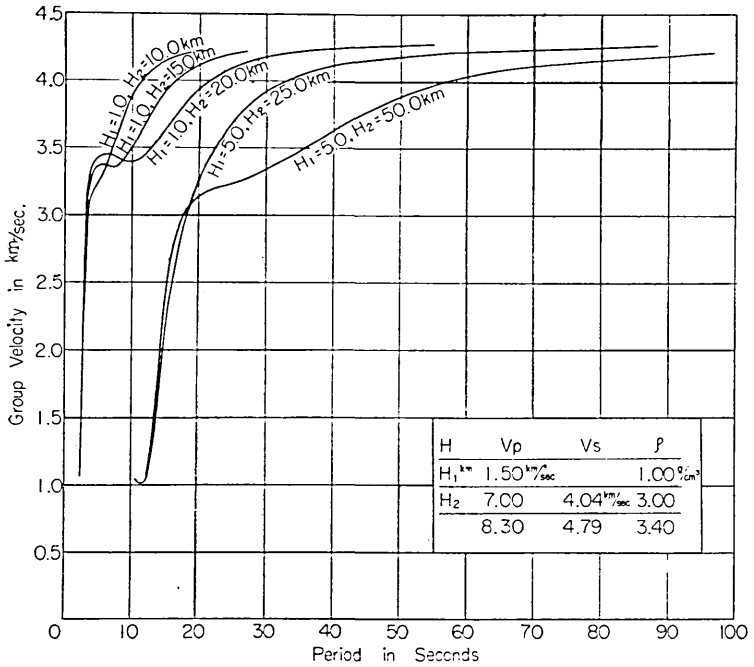

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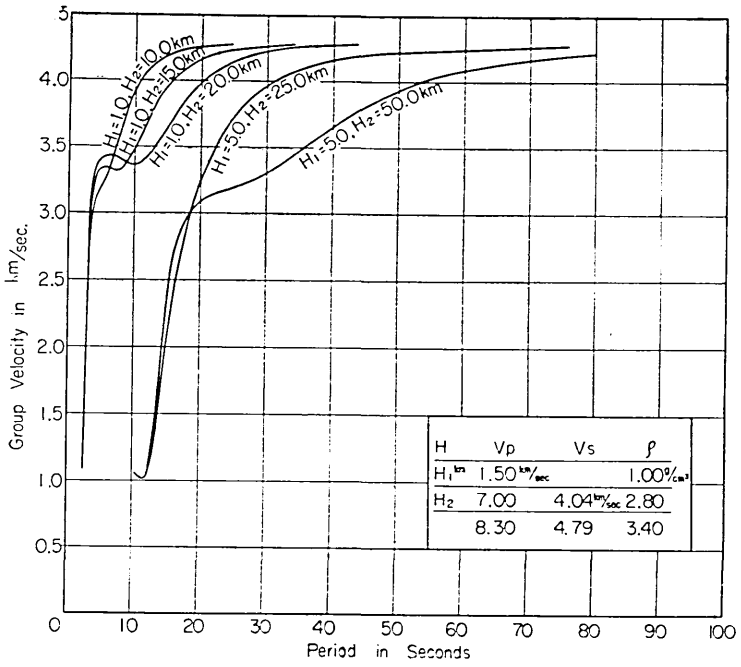

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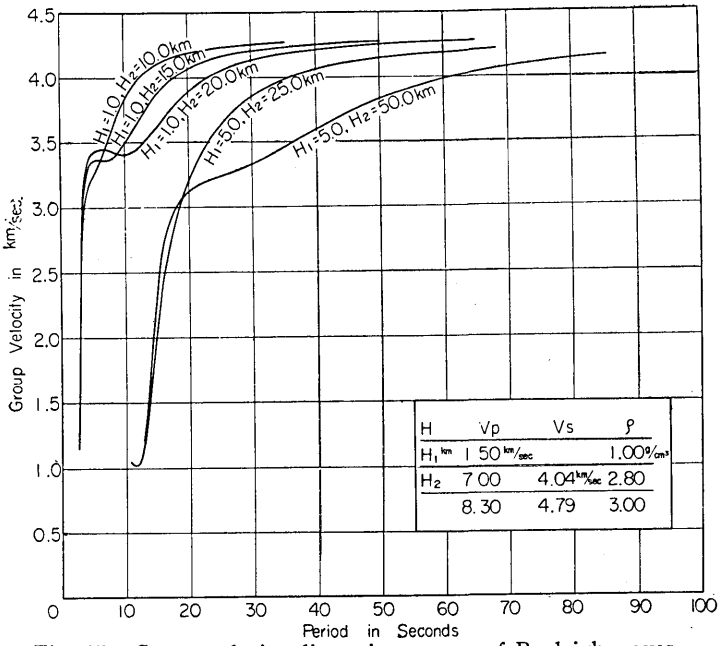
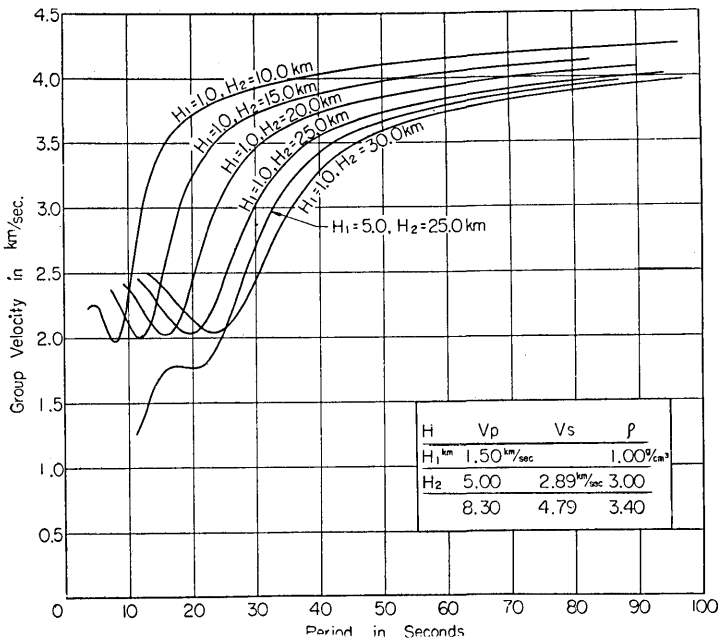


Fig. 15. Group velocity dispersion curves of Rayleigh waves.



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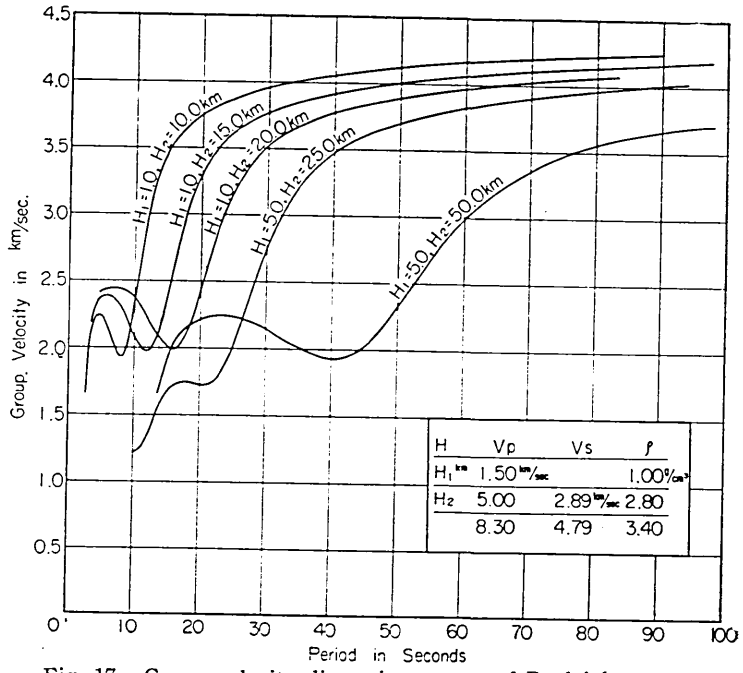

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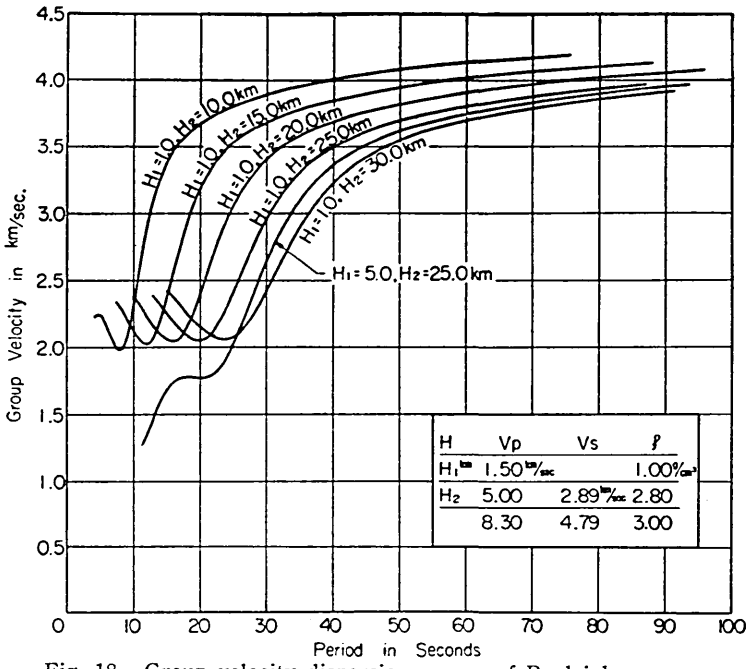

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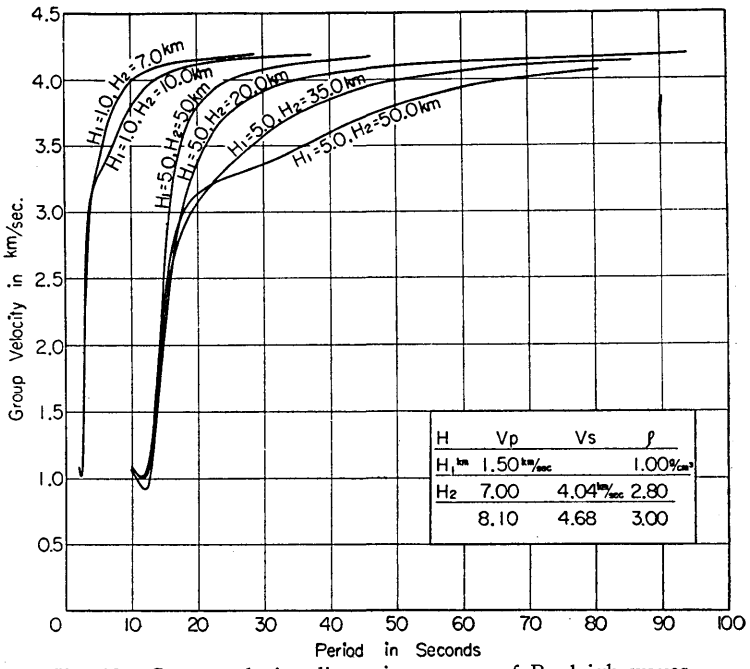
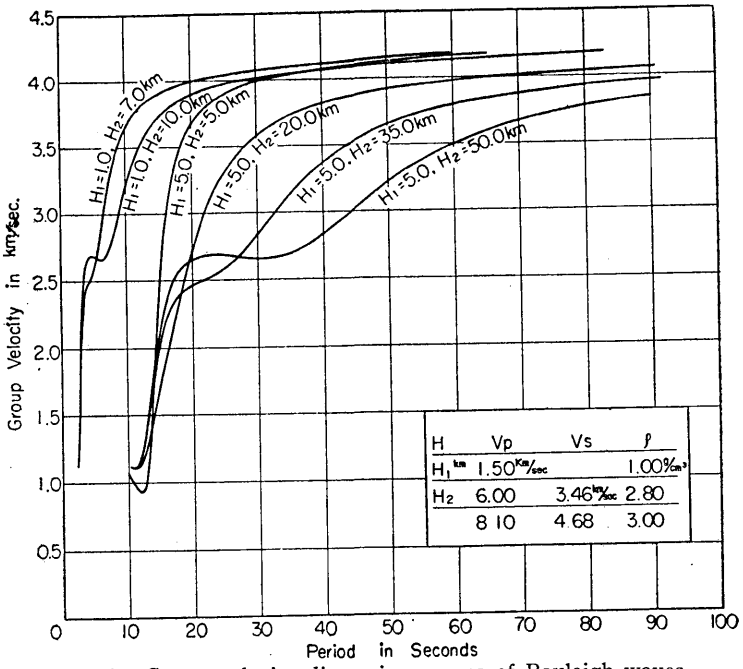


Fig. 19. Group velocity dispersion curves of Rayleigh waves.



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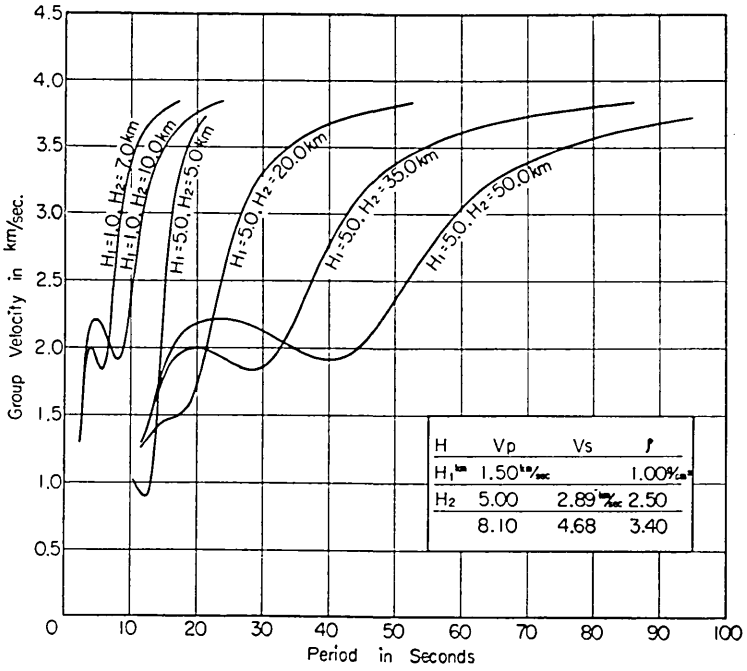

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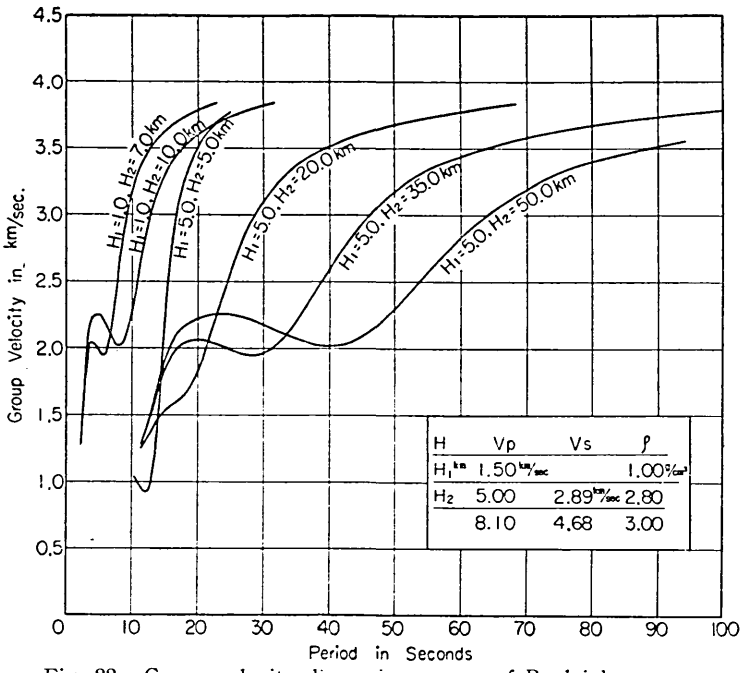

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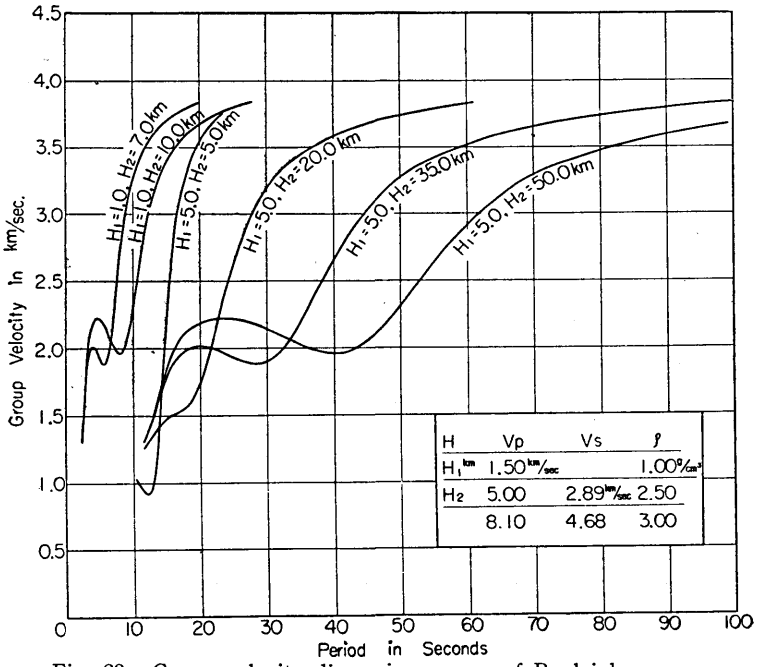

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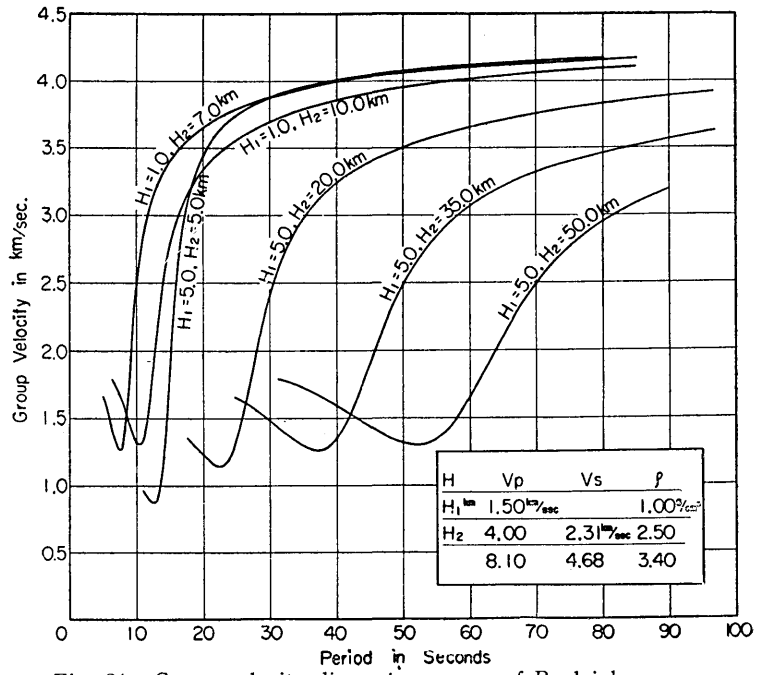
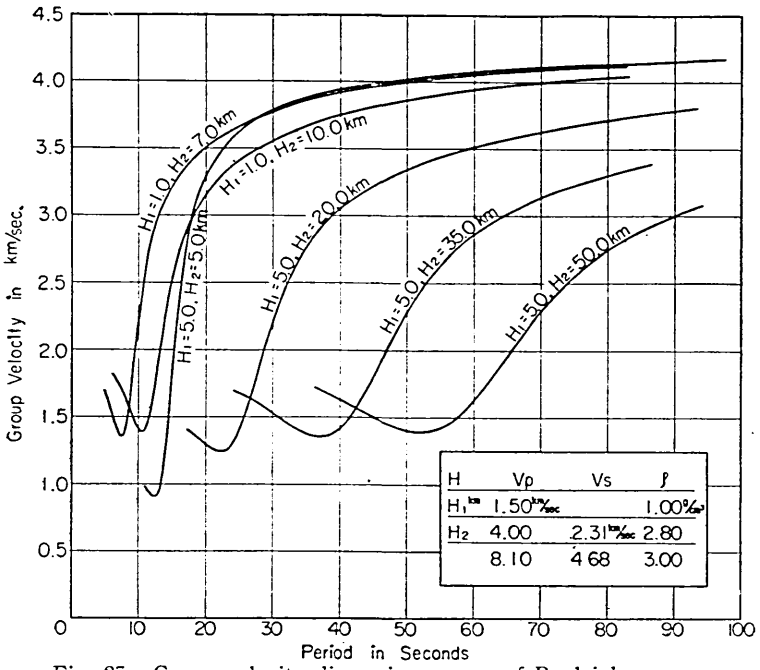


Fig. 24. Group velocity dispersion curves of Rayleigh waves.



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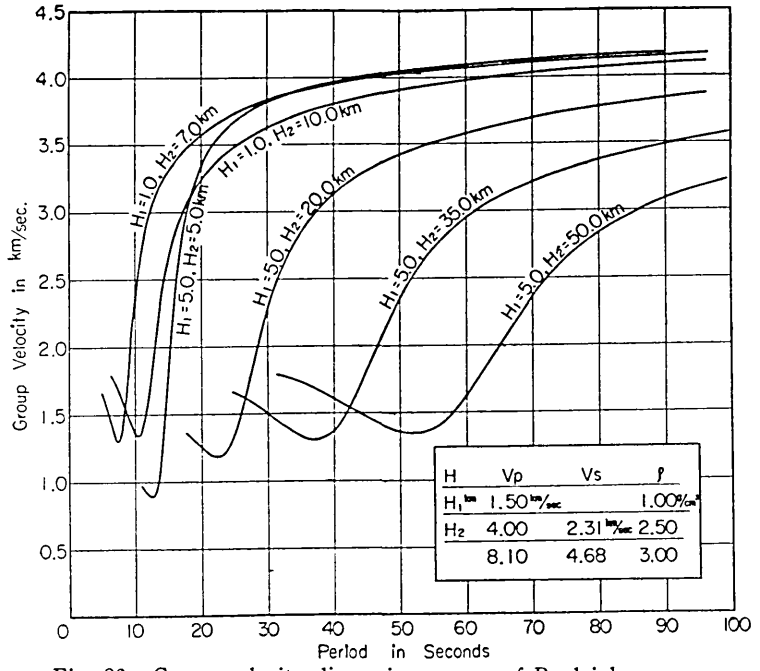

Fig. 26. Group velocity dispersion curves of Rayleigh waves.

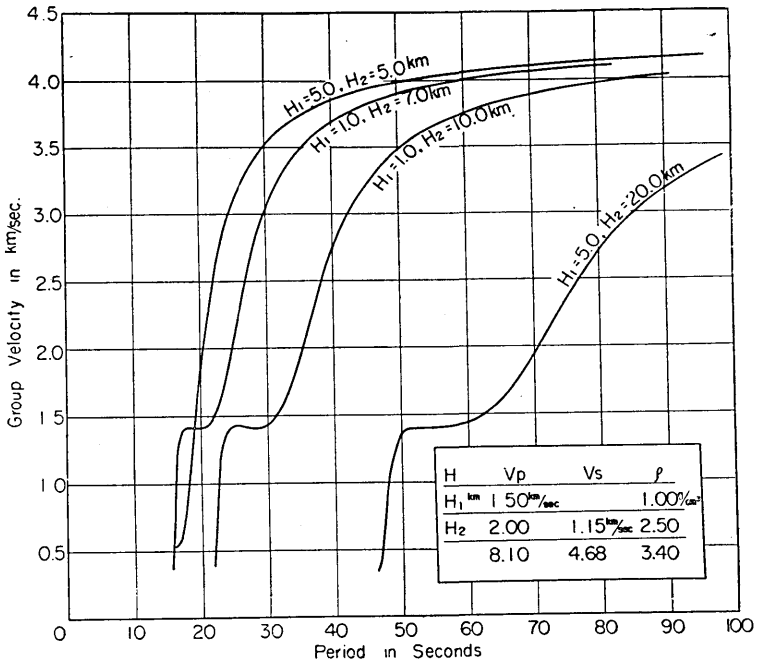

Fig. 27. Group velocity dispersion curves of Rayleigh waves.

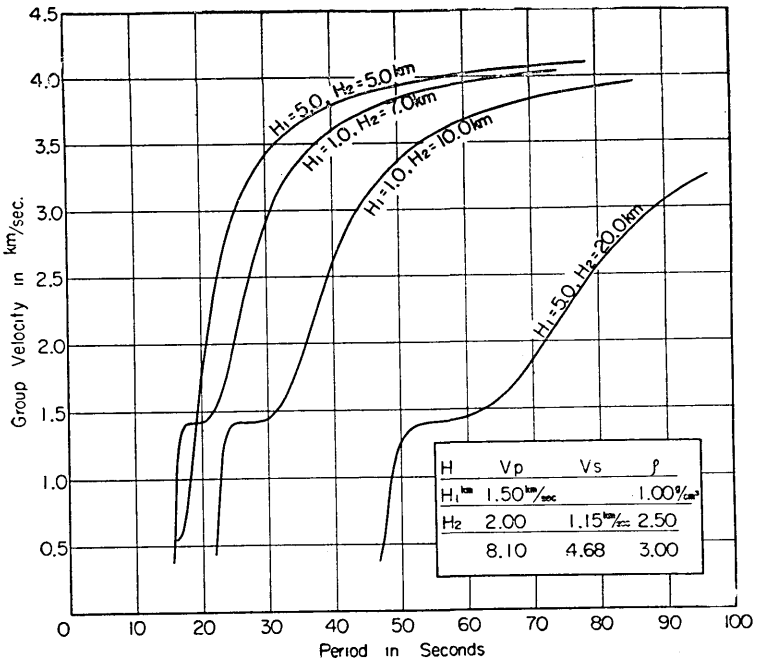

Fig. 28. Group velocity dispersion curves of Rayleigh waves.

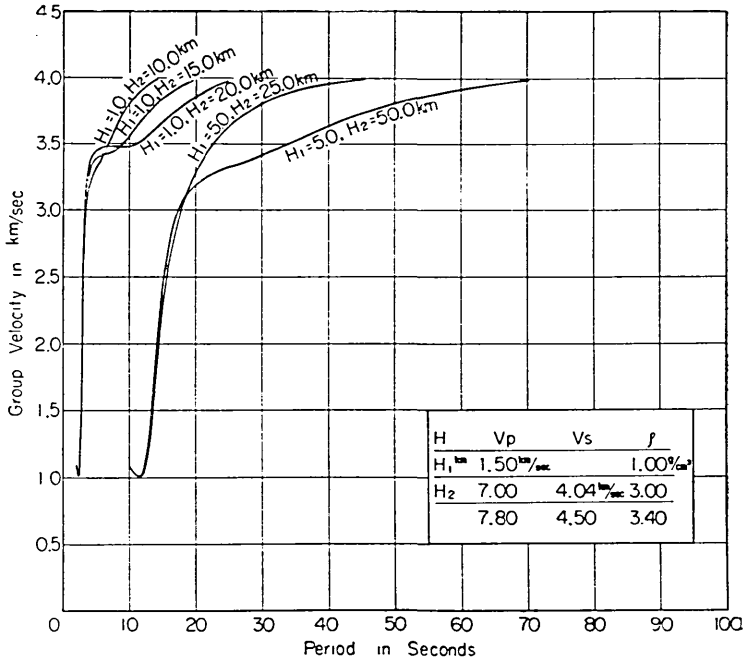

Fig. 29. Group velocity dispersion curves of Rayleigh waves.

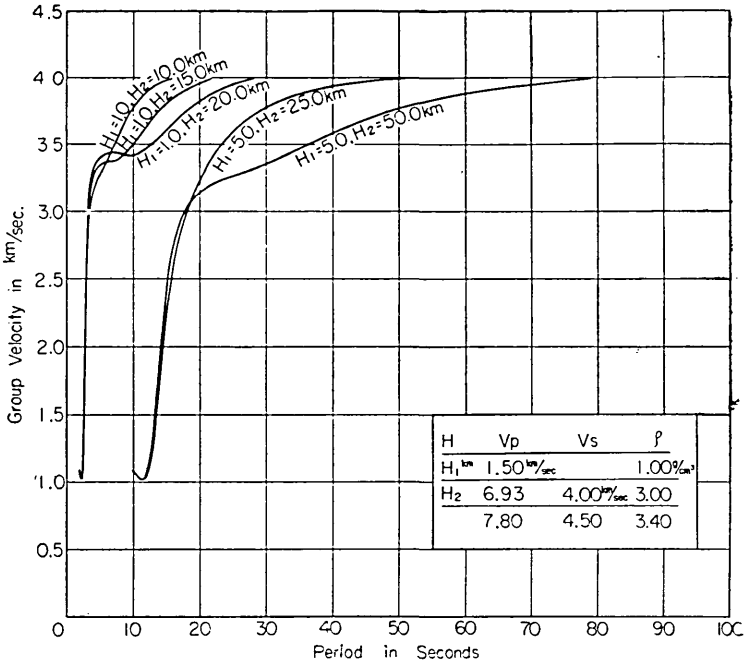

Fig. 30. Group velocity dispersion curves of Rayleigh waves.

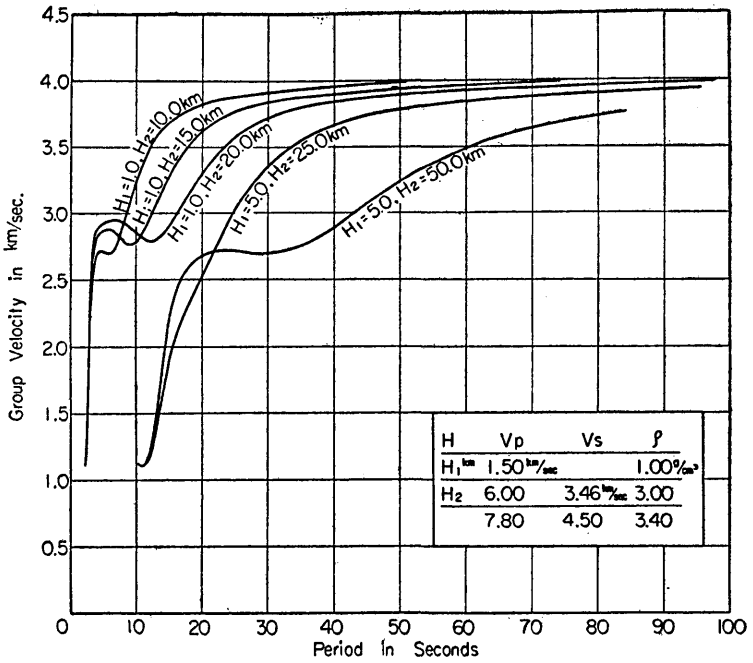

Fig. 31. Group velocity dispersion curves of Rayleigh waves.

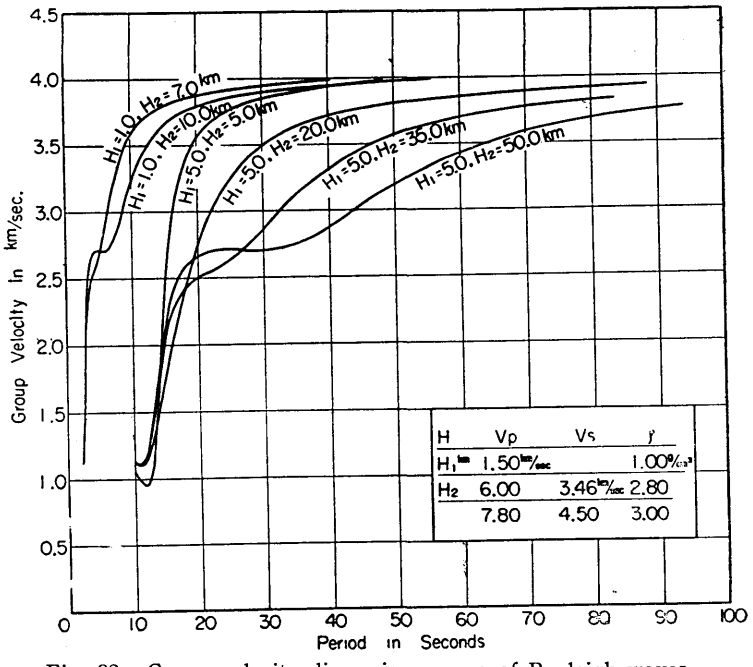

Fig. 32. Group velocity dispersion curves of Rayleigh waves.

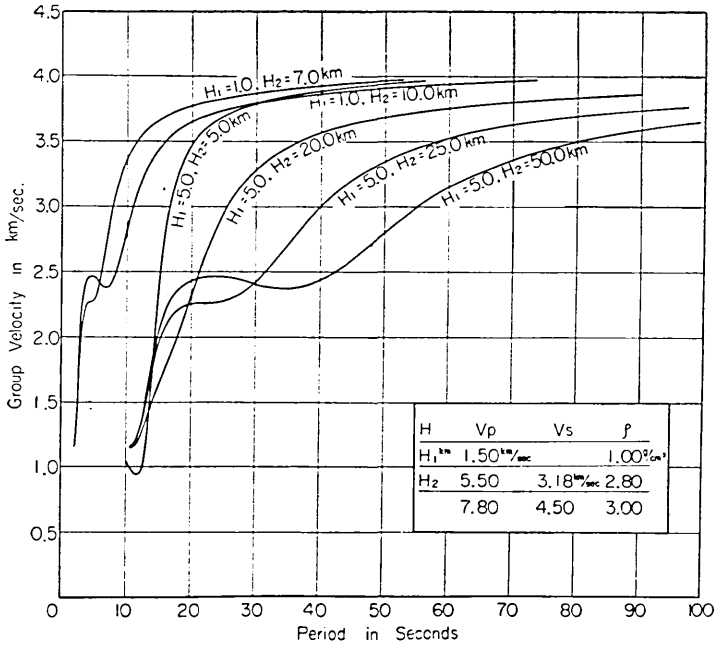

Fig. 33. Group velocity dispersion curves of Rayleigh waves.

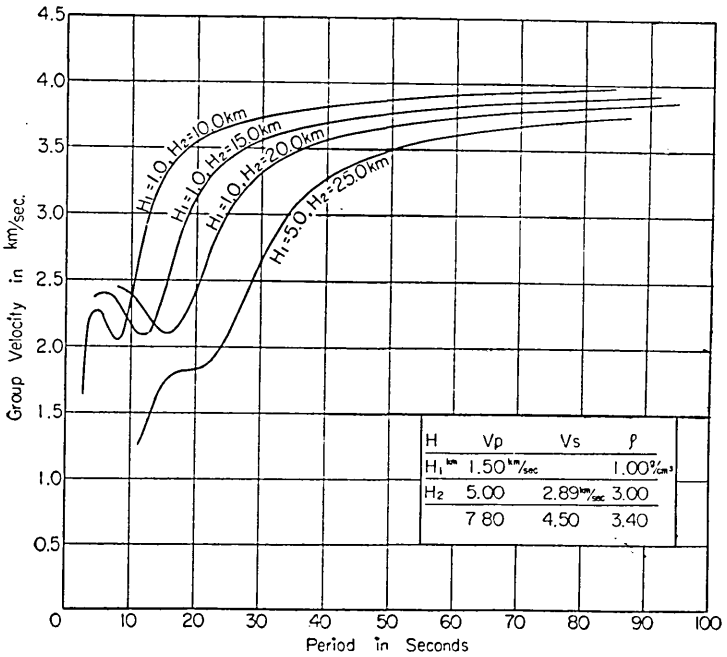

Fig. 34. Group velocity dispersion curves of Rayleigh waves.

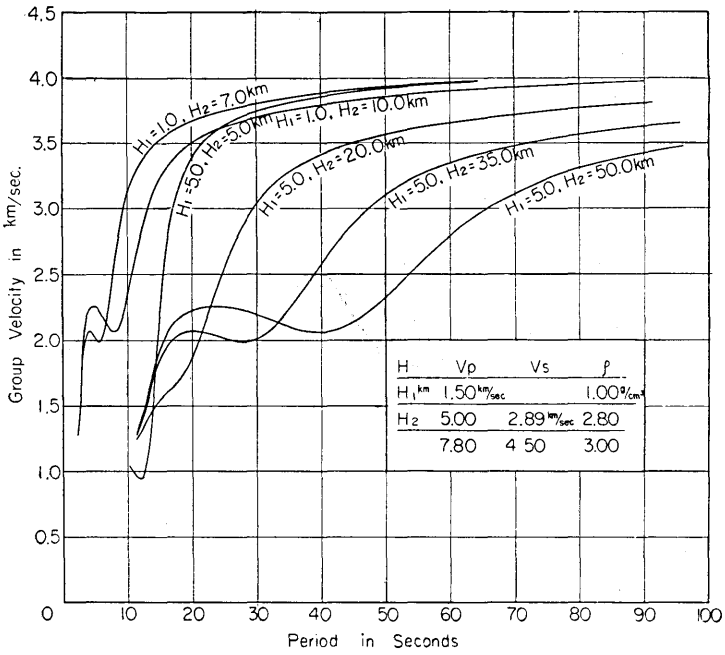

Fig. 35. Group velocity dispersion curves of Rayleigh waves.

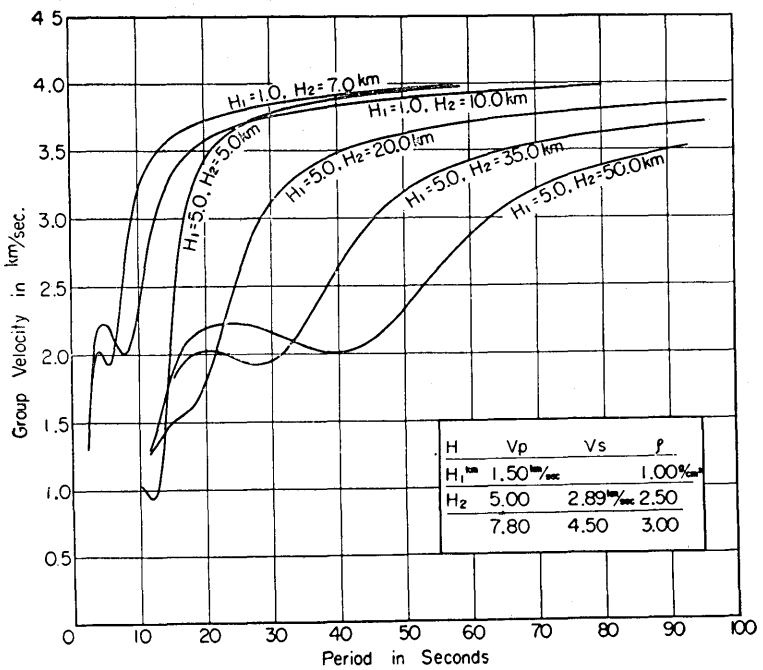

Fig. 36. Group velocity dispersion curves of Rayleigh waves.

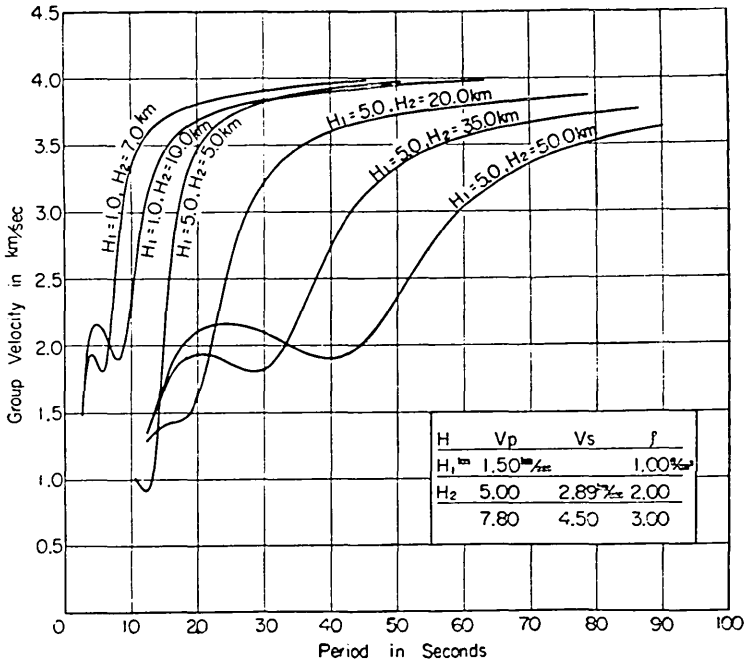

Fig. 37. Group velocity dispersion curves of Rayleigh waves.

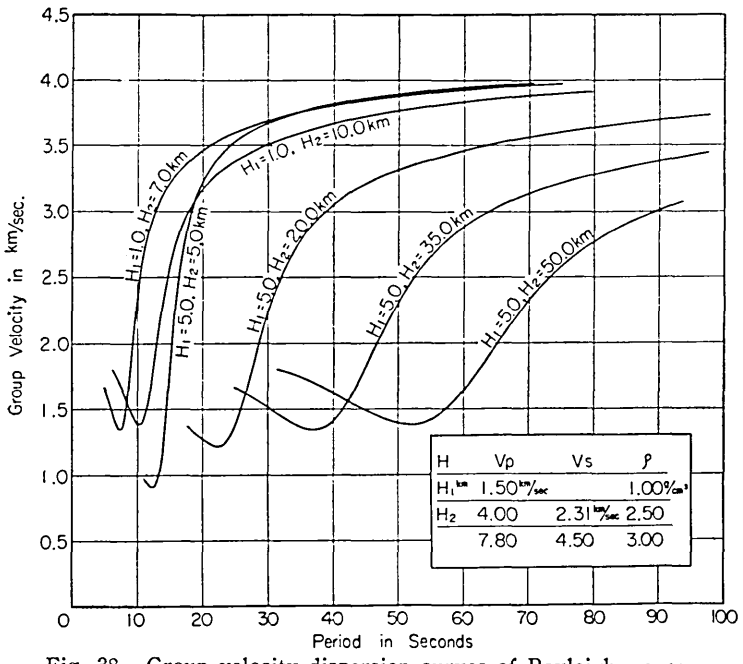

Fig. 38. Group velocity dispersion curves of Rayleigh waves.

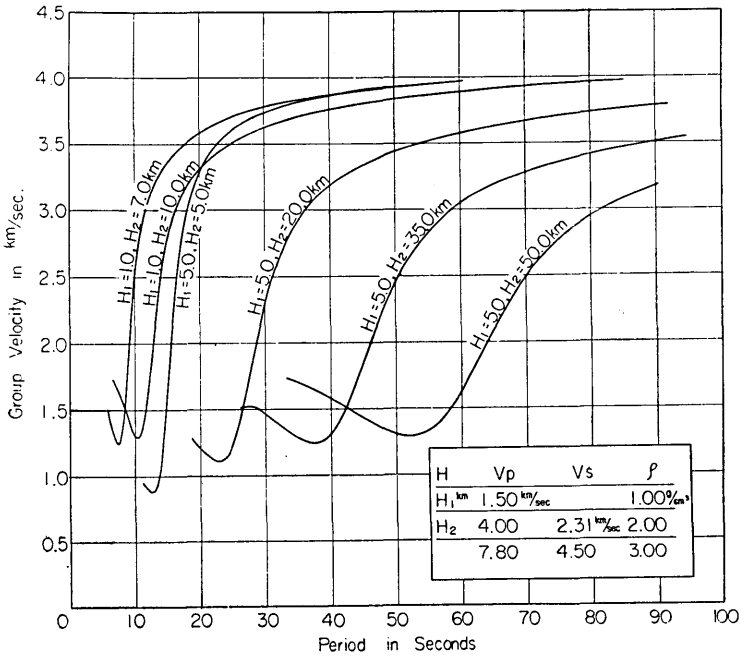

Fig. 39. Group velocity dispersion curves of Rayleigh waves.

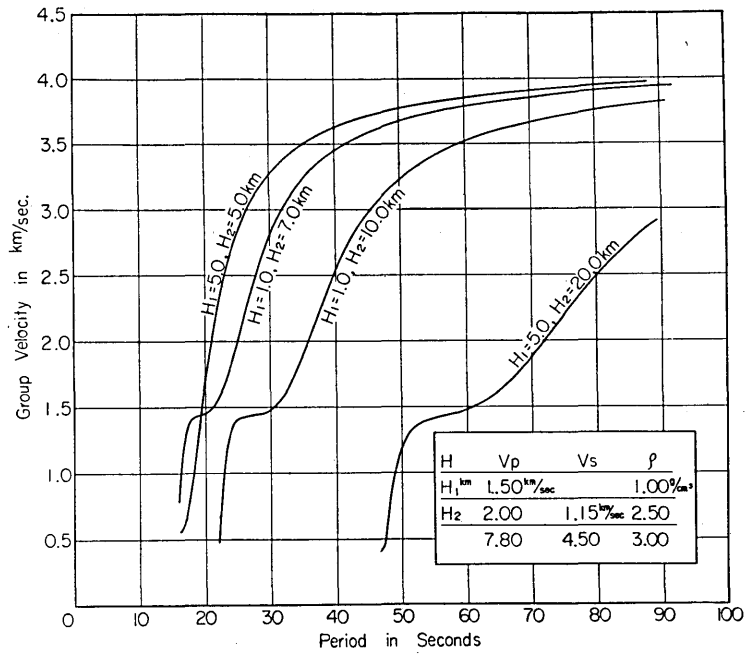

Fig. 40. Group velocity dispersion curves of Rayleigh waves.

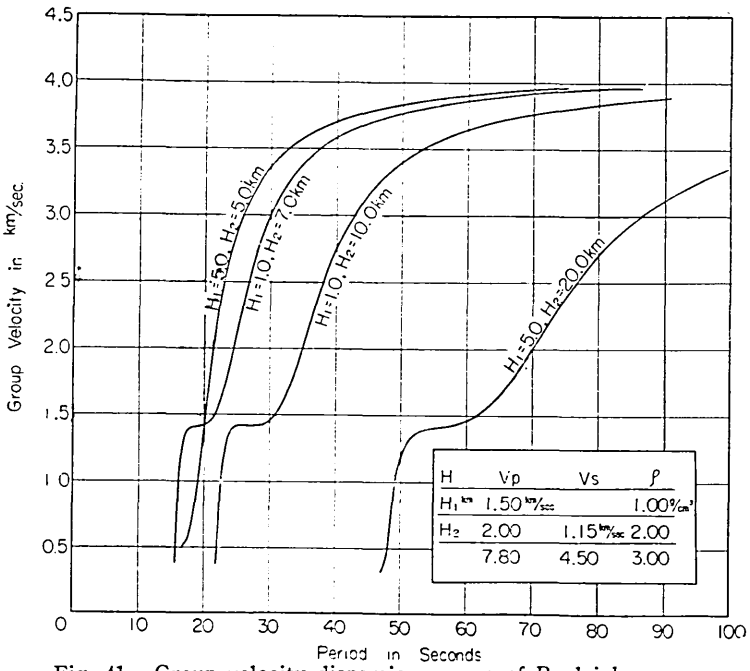

Fig. 41. Group velocity dispersion curves of Rayleigh waves.

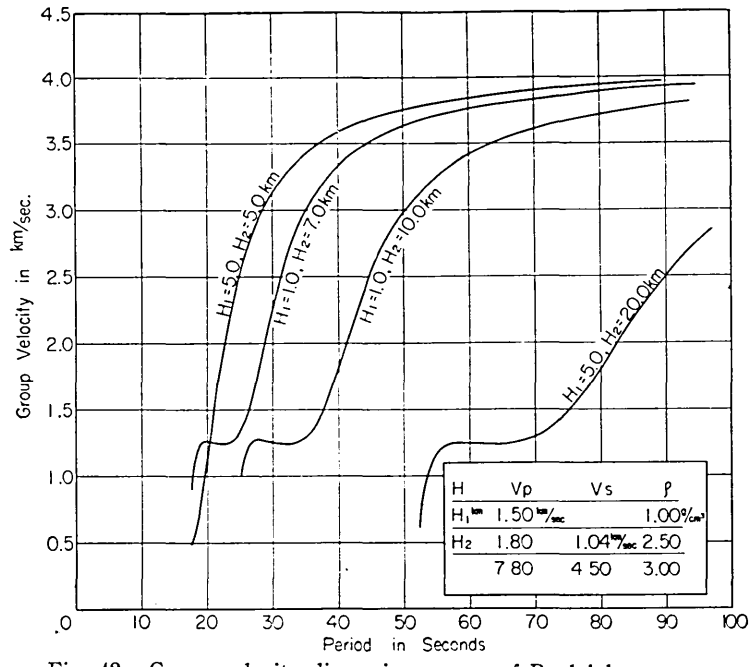

Fig. 42. Group velocity dispersion curves of Rayleigh waves.

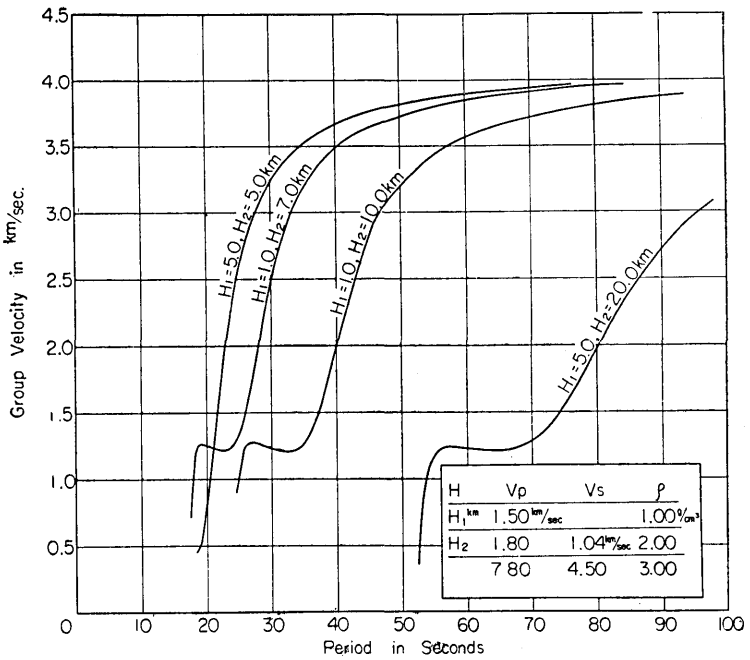

Fig. 43. Group velocity dispersion curves of Rayleigh waves.

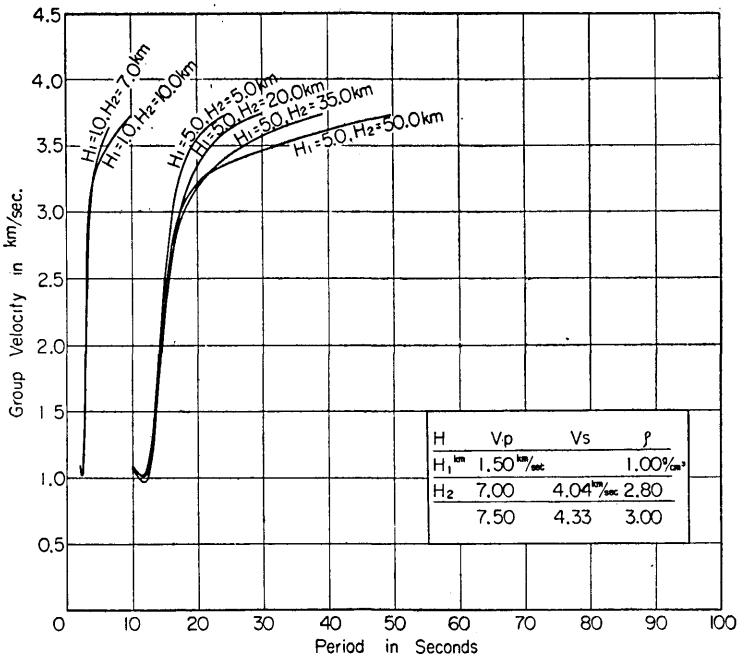

Fig 44. Group velocity dispersion curves of Rayleigh waves.

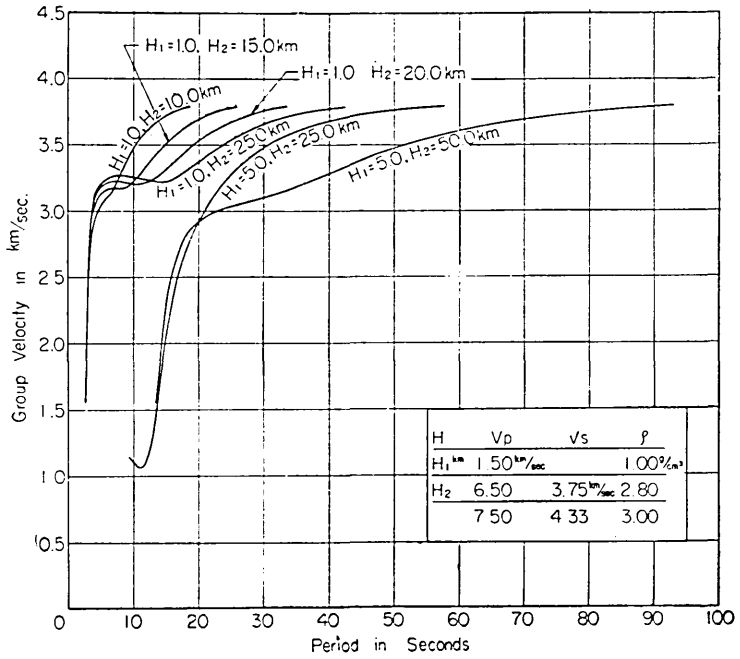

Fig. 45. Group velocity dispersion curves of Rayleigh waves.

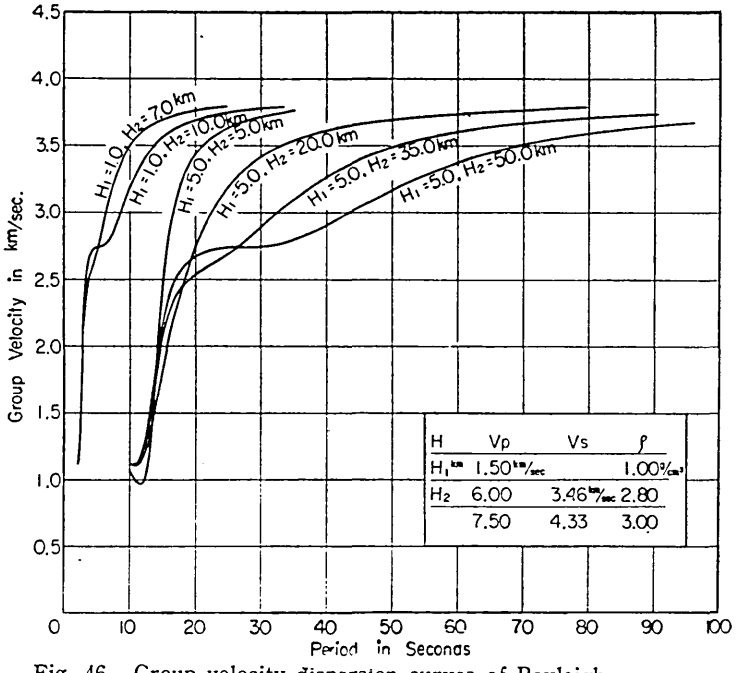

Fig. 46. Group velocity dispersion curves of Rayleigh waves.

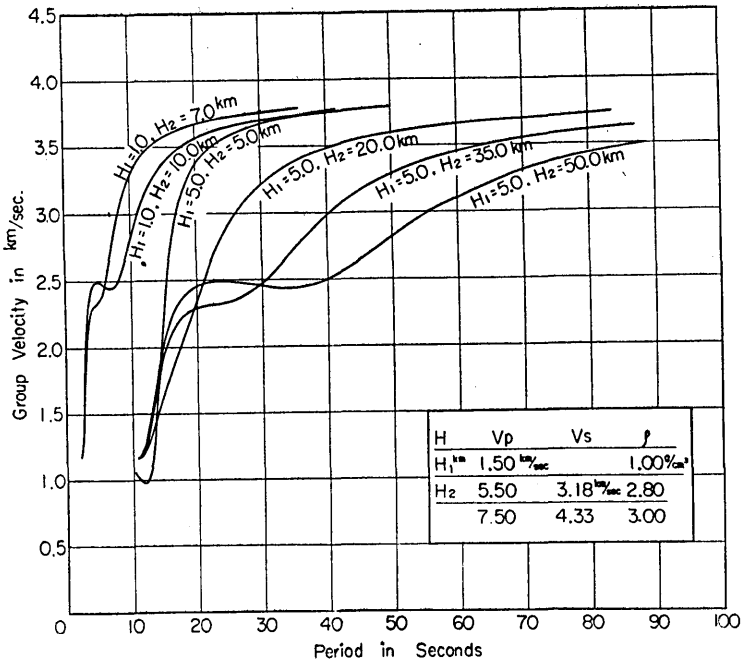

Fig. 47. Group velocity dispersion curves of Rayleigh waves.

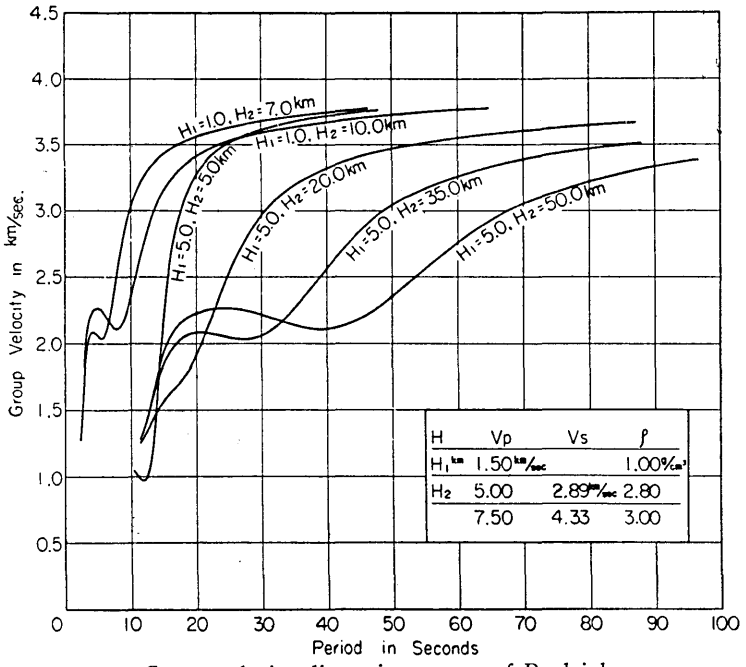

Fig. 48. Group velocity dispersion curves of Rayleigh waves.

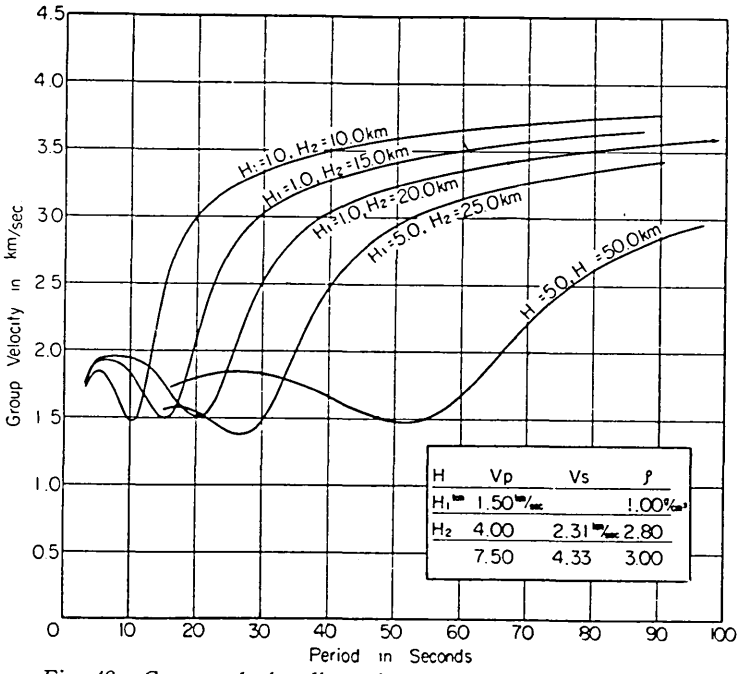

Fig. 49. Group velocity dispersion curves of Rayleigh waves.

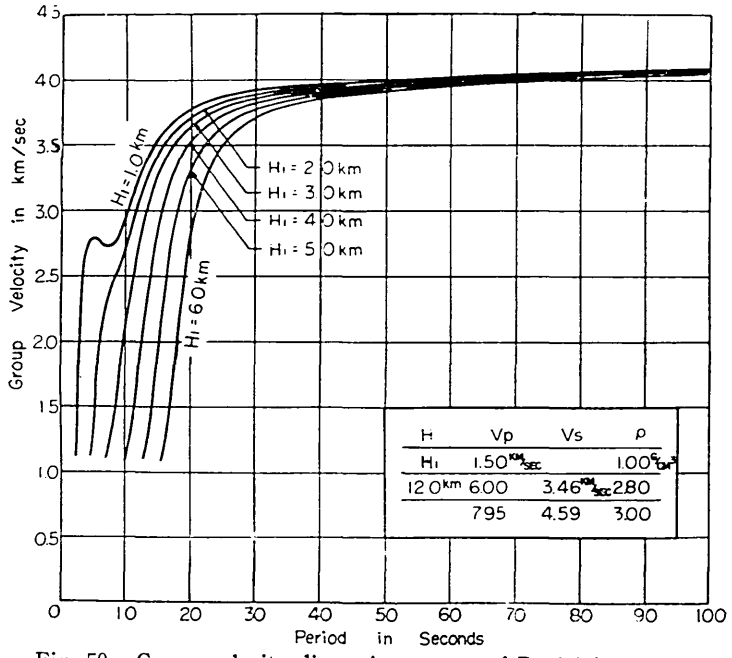

Fig. 50. Group velocity dispersion curves of Rayleigh waves.

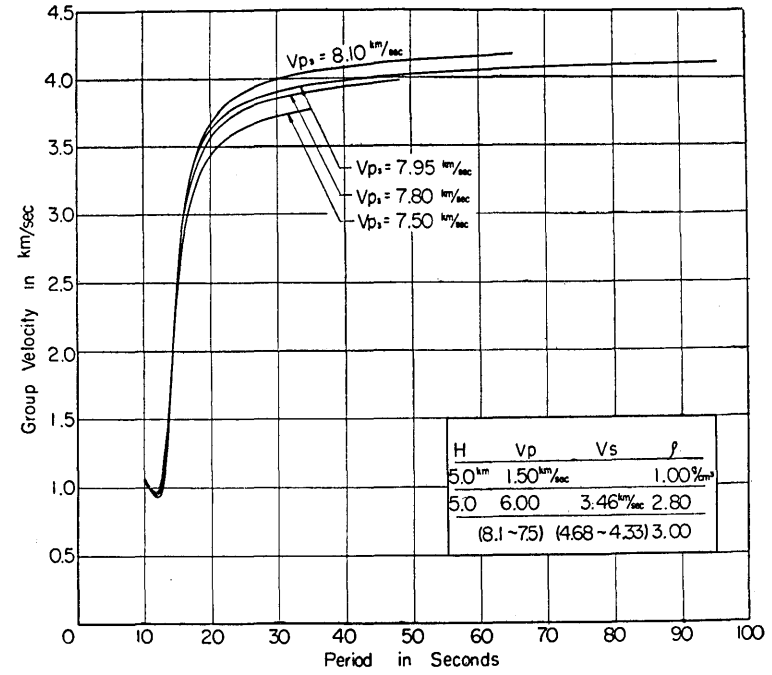

Fig. 51. Group velocity dispersion curves of Rayleigh waves.

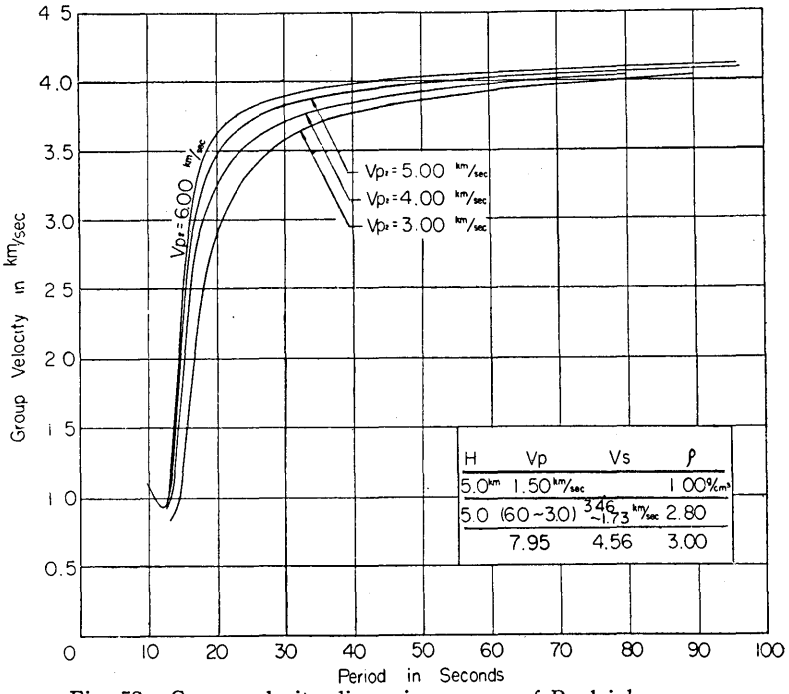

Fig. 52. Group velocity dispersion curves of Rayleigh waves.

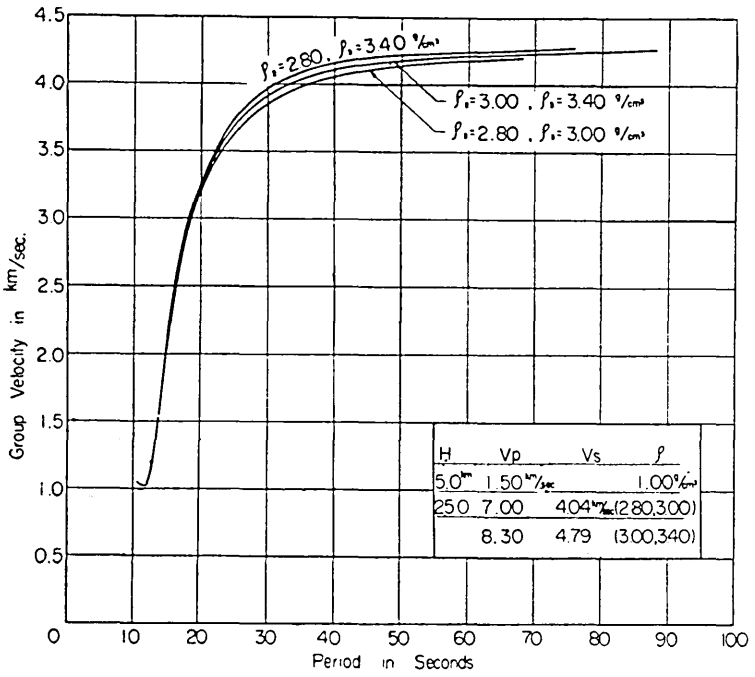

Fig. 53. Group velocity dispersion curves of Rayleigh waves.

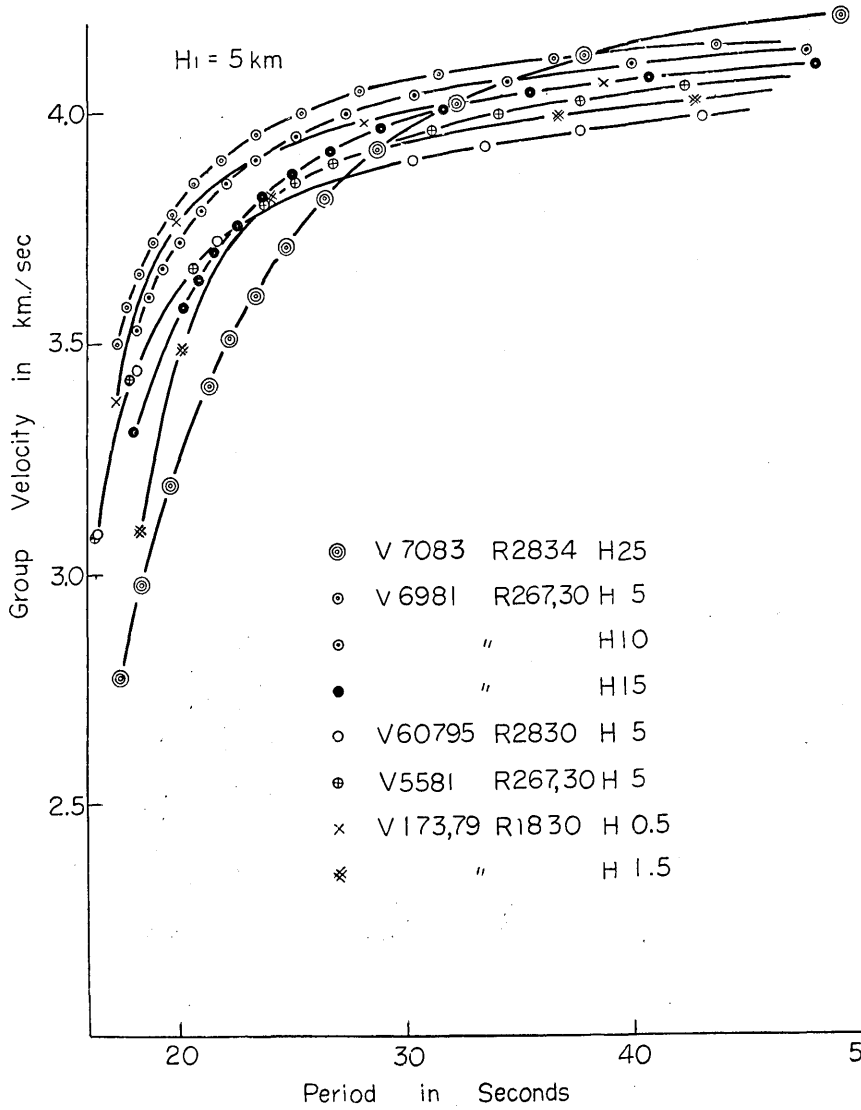

Fig. 54. Group velocity dispersion curves of Rayleigh waves for the various cases.

V7083 R2834 H25 means $Vp_2=7.0$ km/sec, $Vp_3=8.3$ km, $\rho_2=2.8$ g/cm^3, $\rho_3=3.4$ g/cm^3, and $H_2=25$ km.

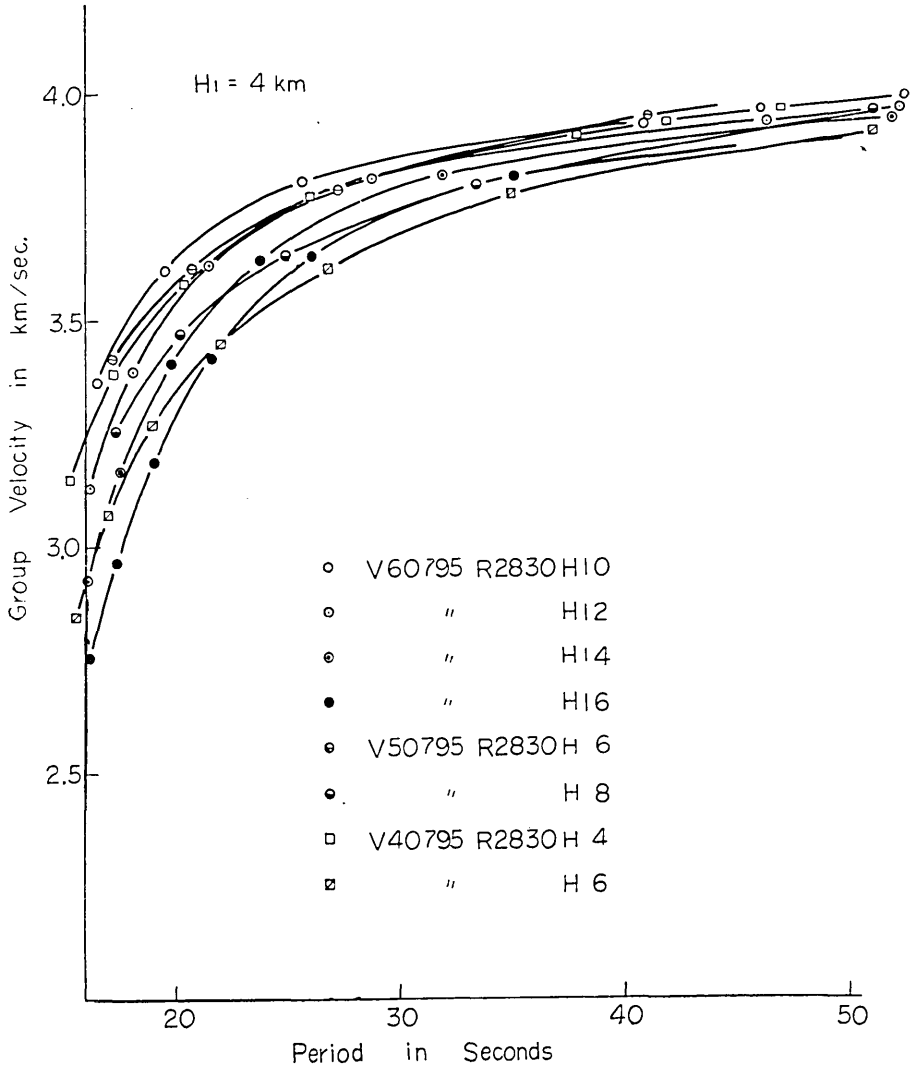

Fig. 55. Group velocity dispersion curves of Rayleigh waves for the various cases.

V60795 R2830 H10 means $Vp_2=6.0$ km/sec, $Vp_3=7.95$ km/sec, $\rho_2=2.8$ g/cm^3, $\rho_3=3.0$ g/cm^3, and $H_2=10$ km.

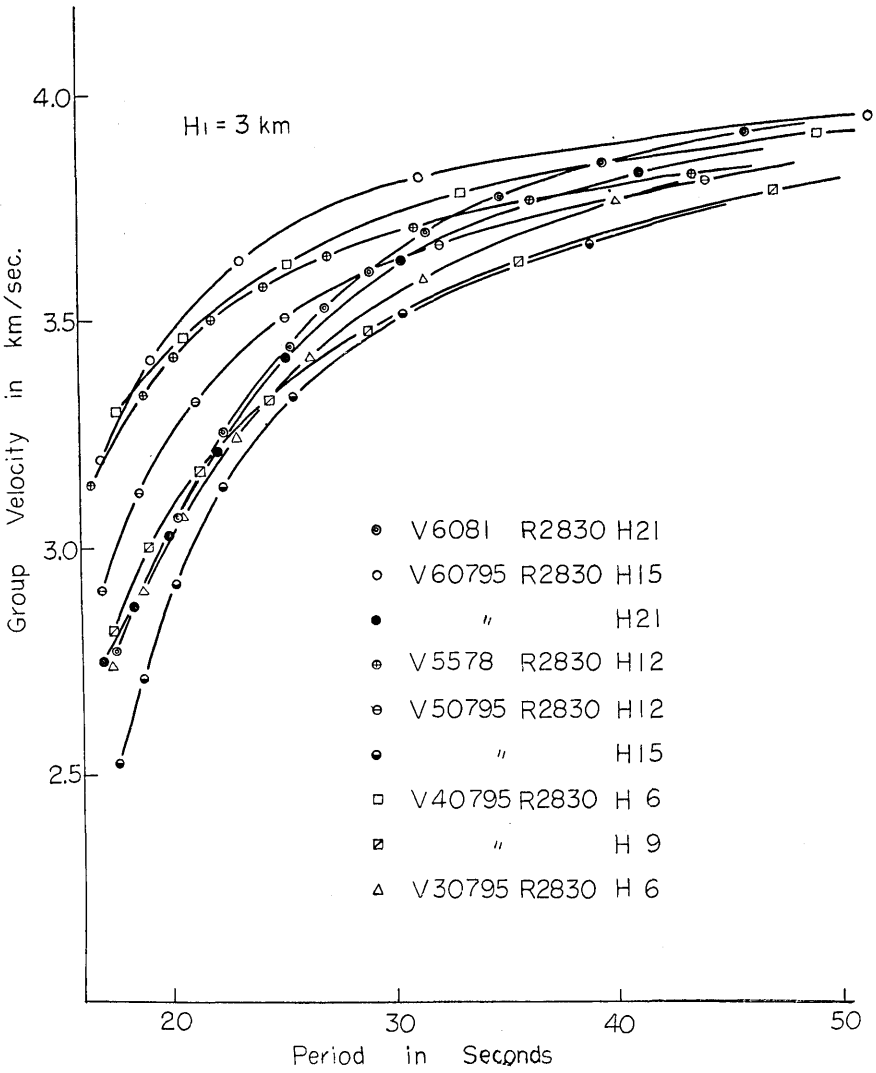

Fig. 56. Group velocity dispersion curves of Rayleigh waves for the various cases.

V6081 R2830 H21 means $Vp_2=6.0$ km/sec, $Vp_3=8.1$ km/sec, $\rho_2=2.8$ g/cm^3, $\rho_3=3.0$ g/cm^3, and $H_2=21$ km.

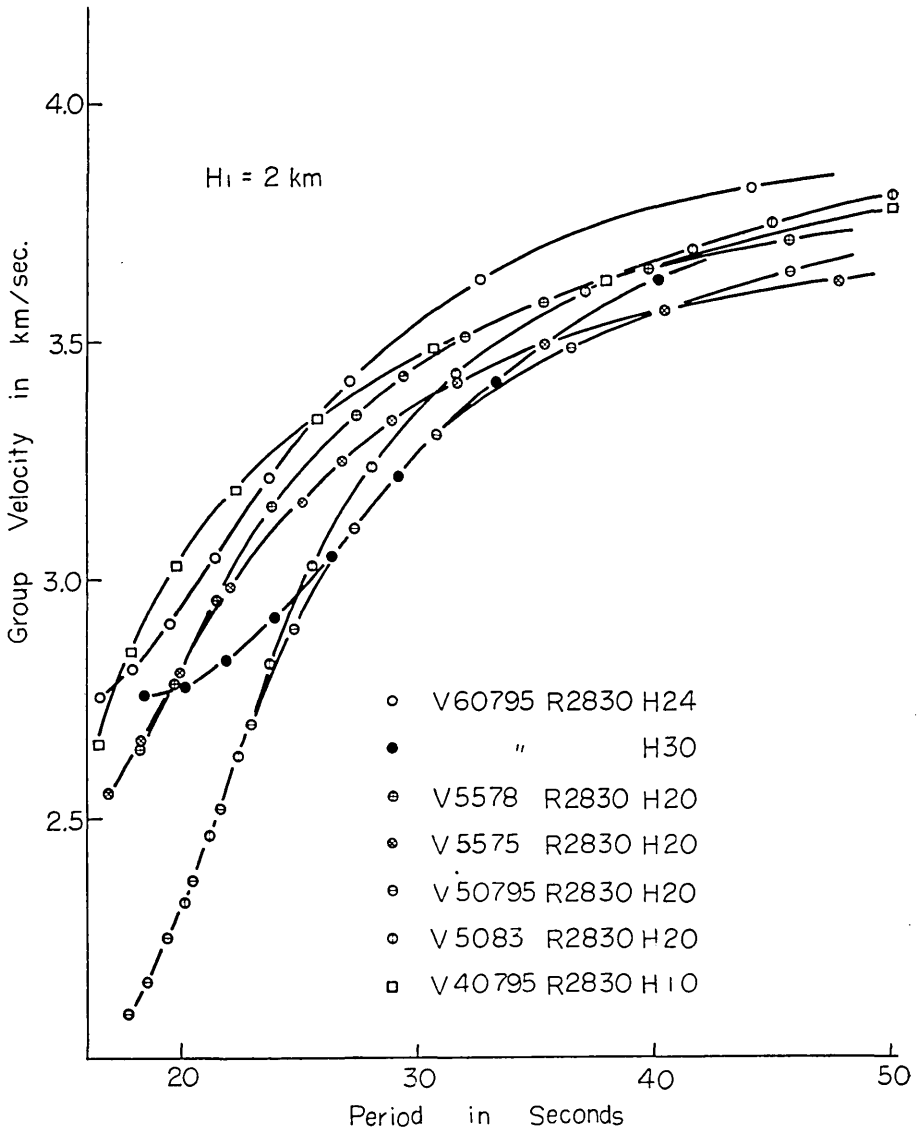

Fig. 57. Group velocity dispersion curves of Rayleigh waves for the various cases.

V60795 R2830 H24 means $Vp_2=6.0$ km/sec, $Vp_3=7.95$ km/sec, $\rho_2=2.8$ g/cm^3, $\rho_3=3.0$ g/cm^3, and $H_2=24$ km.

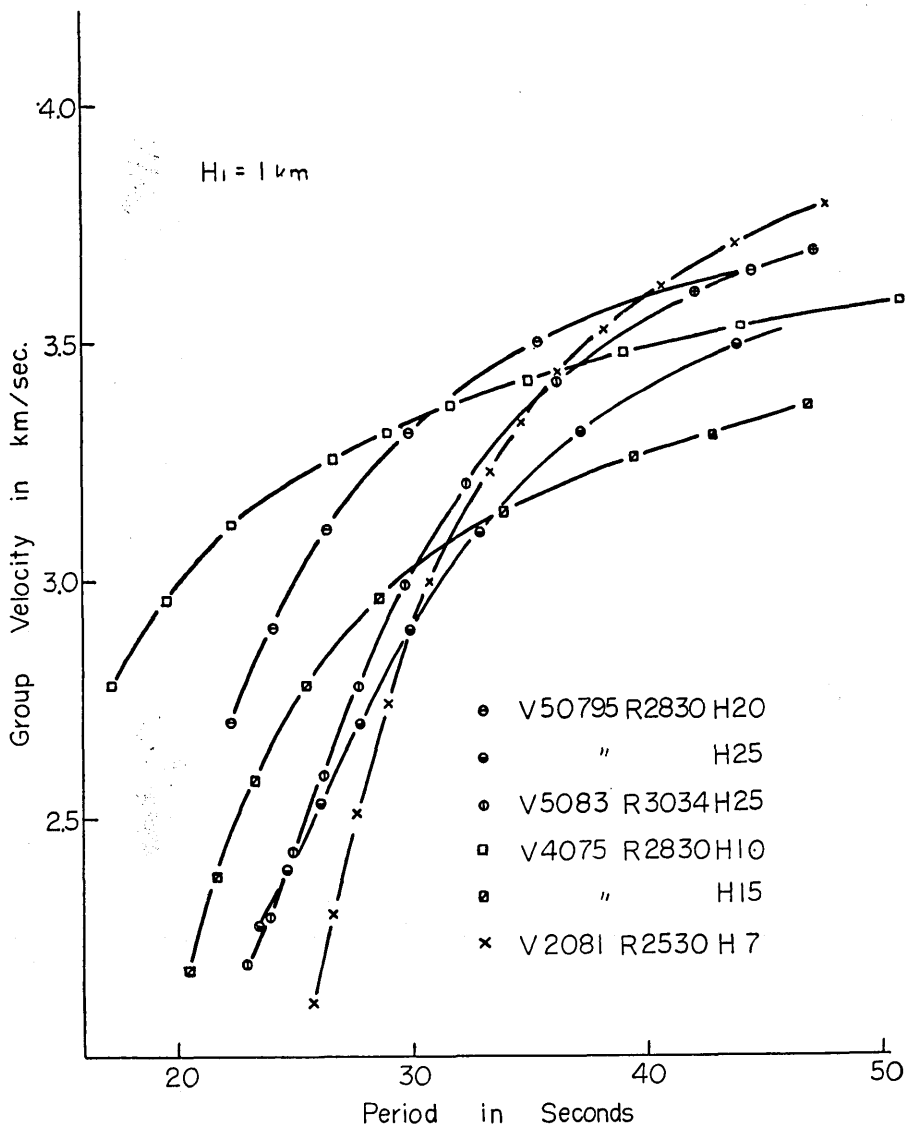

Fig. 58. Group velocity dispersion curves of Rayleigh waves for the various cases.

V50795 R2830 H20 means $Vp_2=5.0$ km/sec, $Vp_3=7.95$ km/sec, $\rho_2=2.8$ g/cm^3, $\rho_3=3.0$ g/cm^3, and $H_2=20$ km.

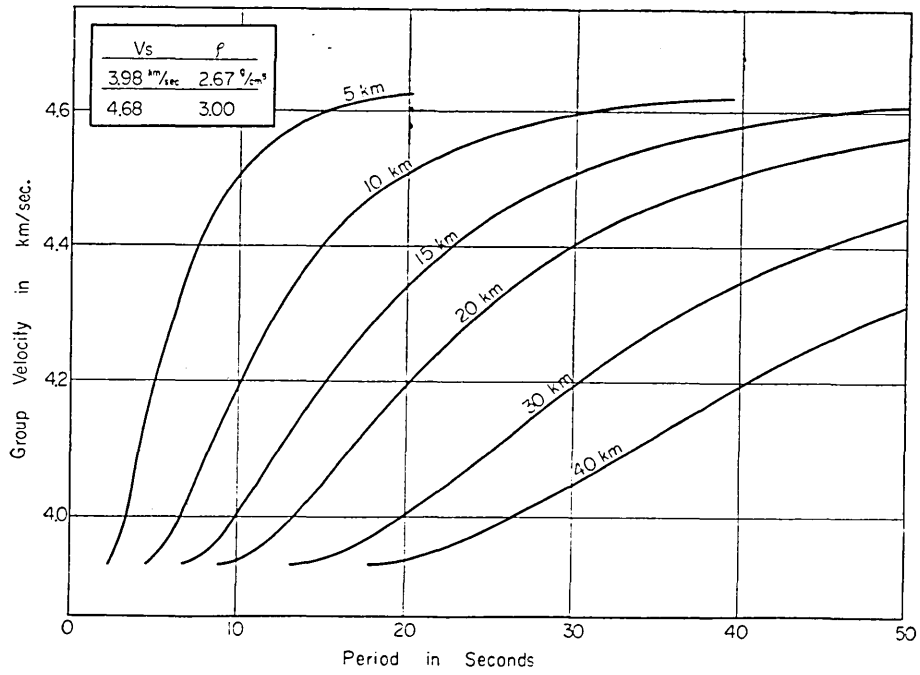

Fig. 1L. Group velocity dispersion curves of Love waves.

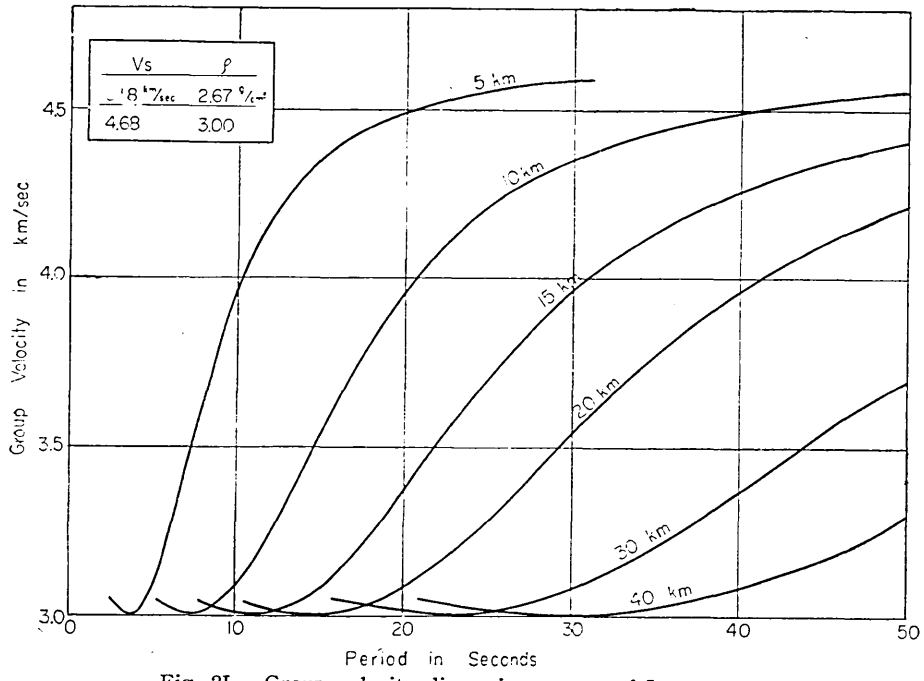

Fig. 2L. Group velocity dispersion curves of Love waves.

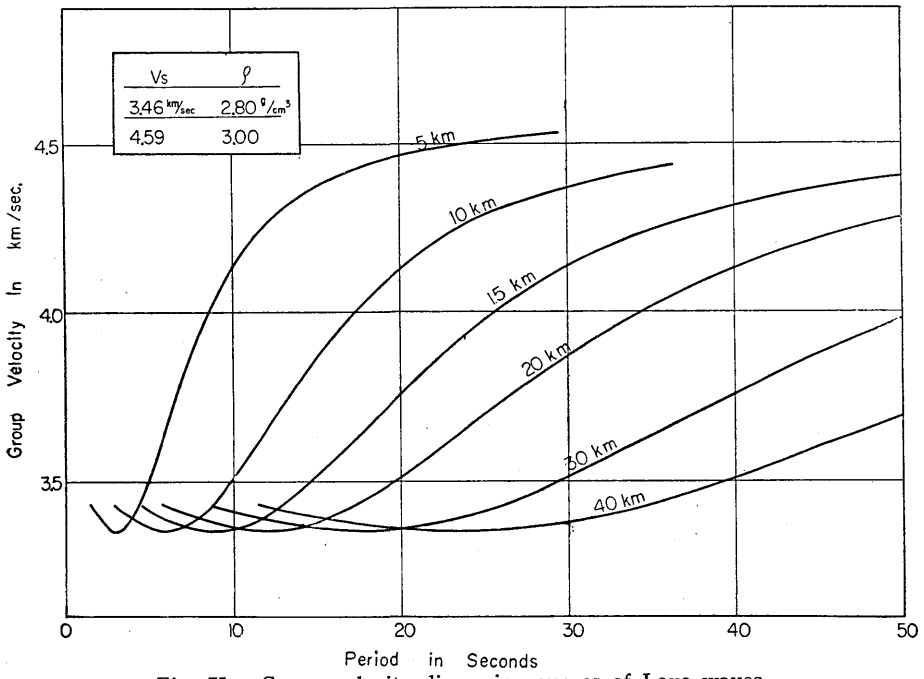

Fig. 7L. Group velocity dispersion curves of Love waves.

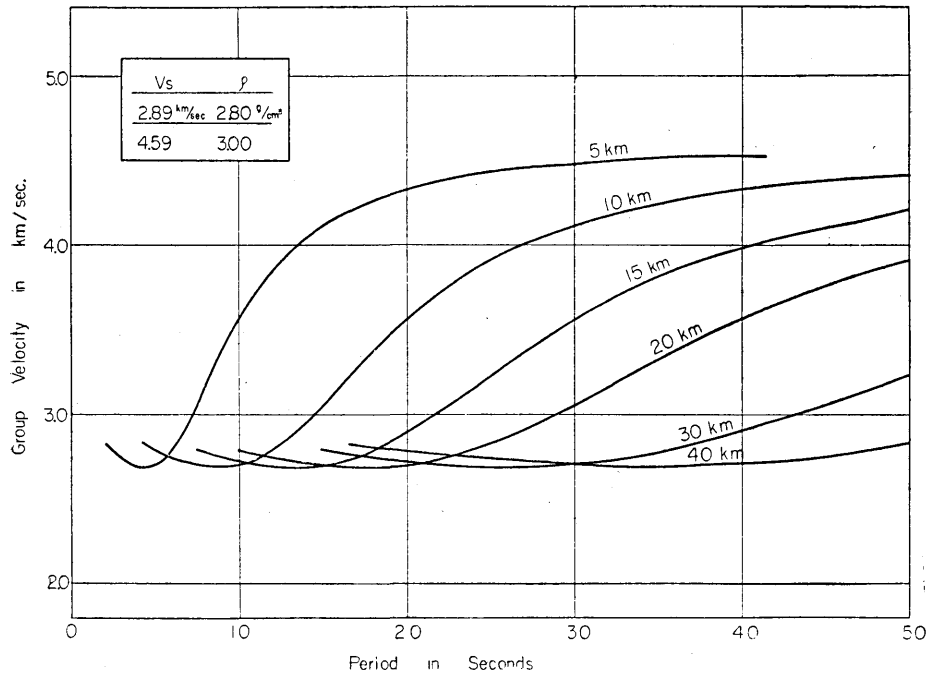

Fig. 9L. Group velocity dispersion curves of Love waves.

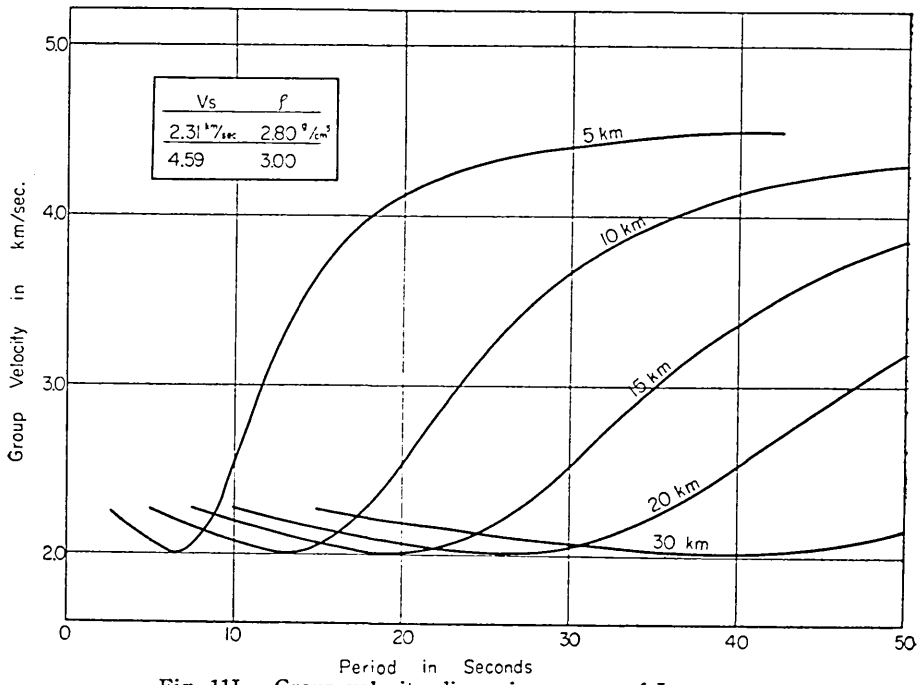

Fig. 11L. Group velocity dispersion curves of Love waves.

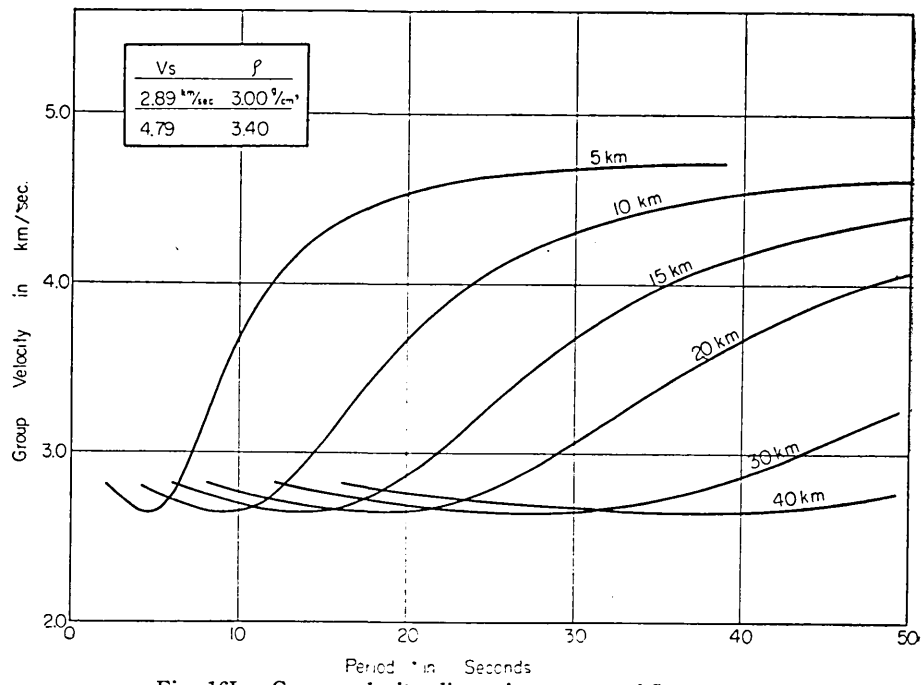

Fig. 16L. Group velocity dispersion curves of Love waves.

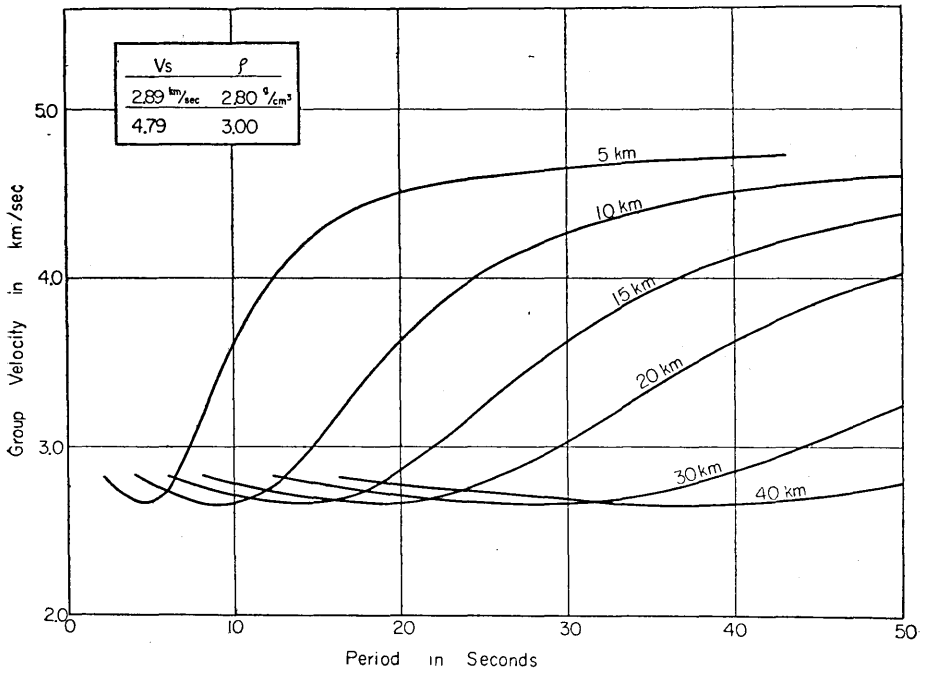

Fig. 18L. Group velocity dispersion curves of Love waves.

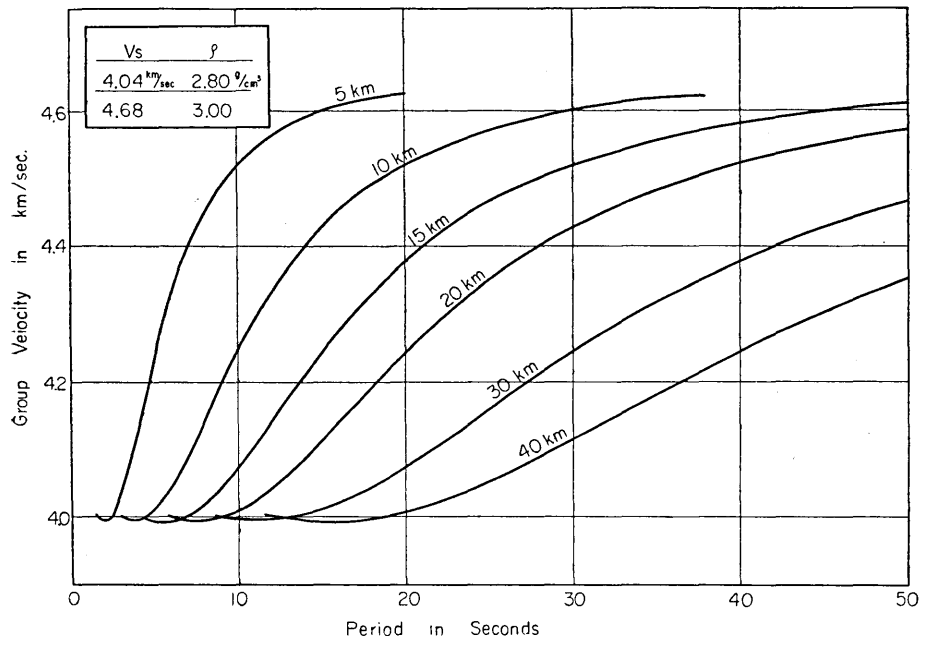

Fig. 19L. Group velocity dispersion curves of Love waves.

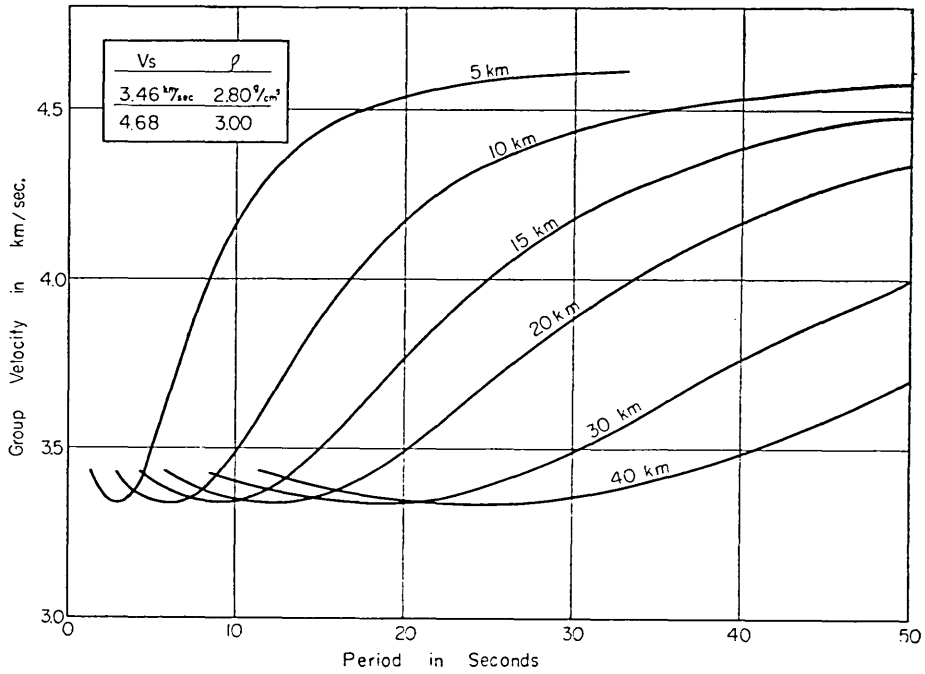

Fig. 20L. Group velocity dispersion curves of Love waves.

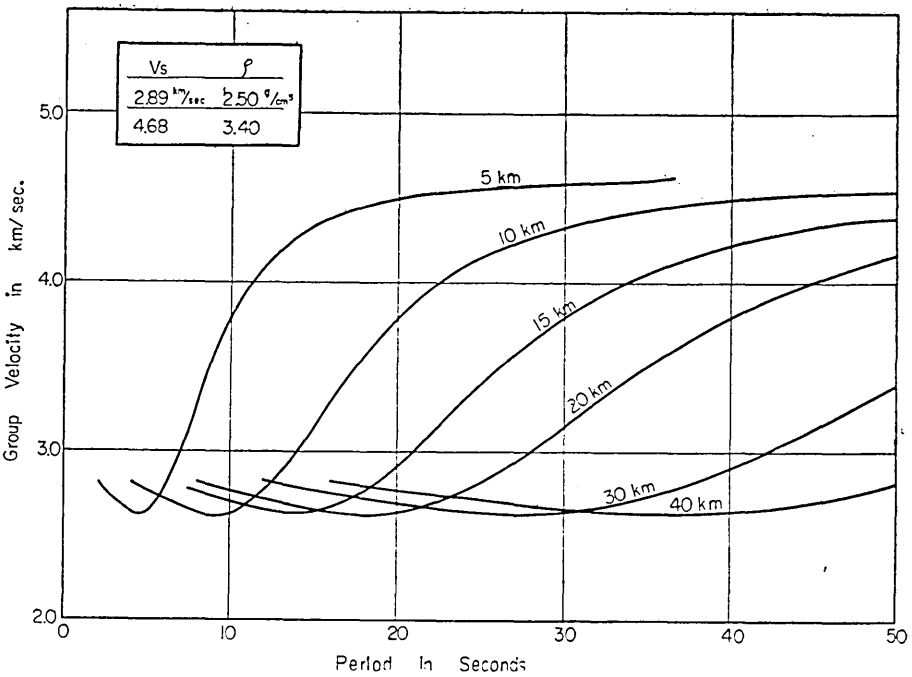

Fig. 21L. Group velocity dispersion curves of Love waves.

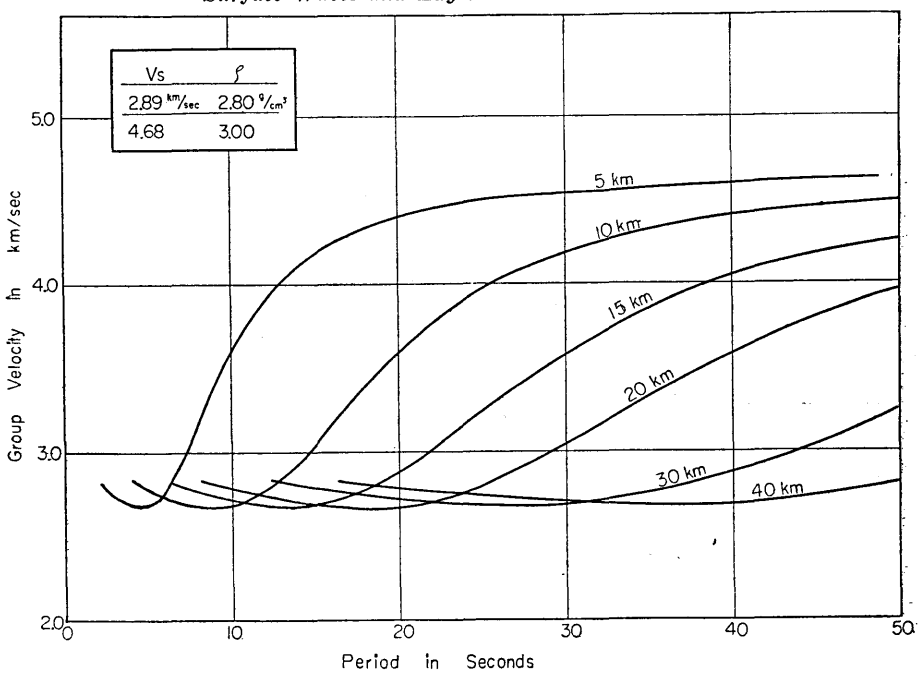

Fig. 22L. Group velocity dispersion curves of Love waves.

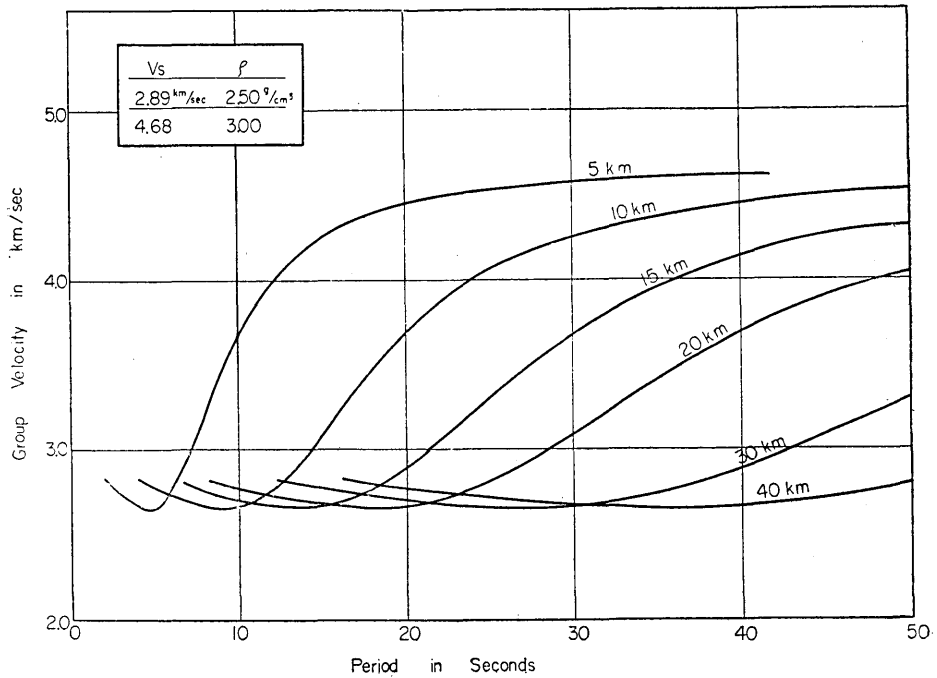

Fig. 23L. Group velocity dispersion curves of Love waves.

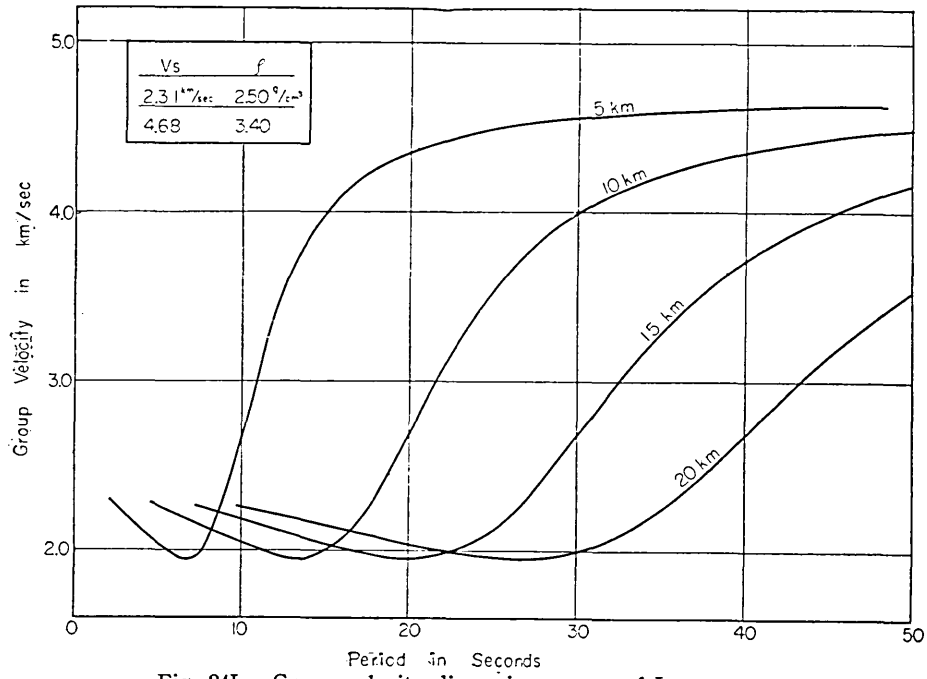

Fig. 24L. Group velocity dispersion curves of Love waves.

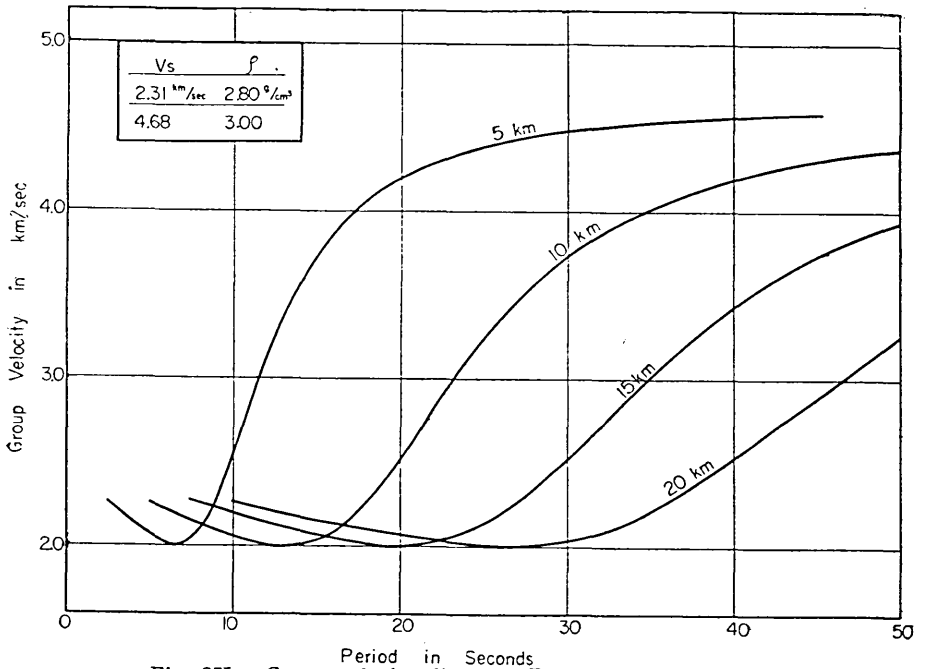

Fig. 25L. Group velocity dispersion curves of Love waves.

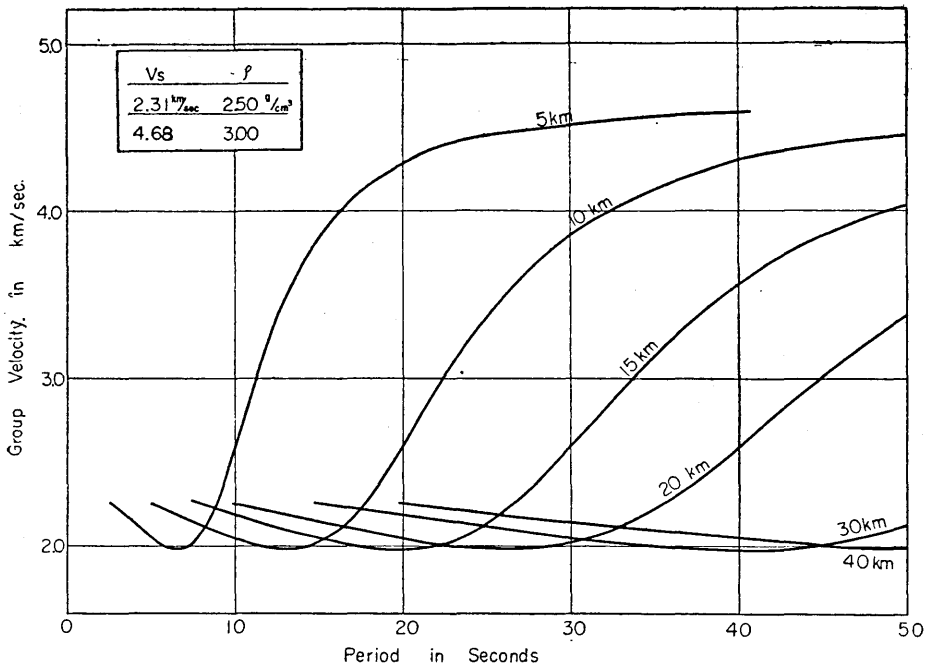

Fig. 26L. Group velocity dispersion curves of Love waves.

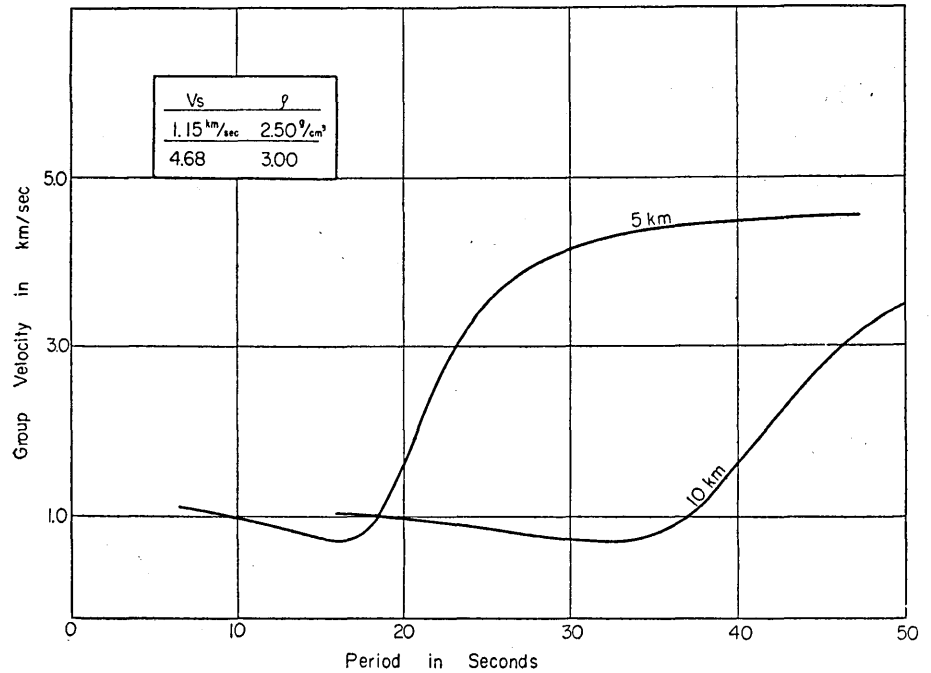

Fig. 28L. Group velocity dispersion curves of Love waves.

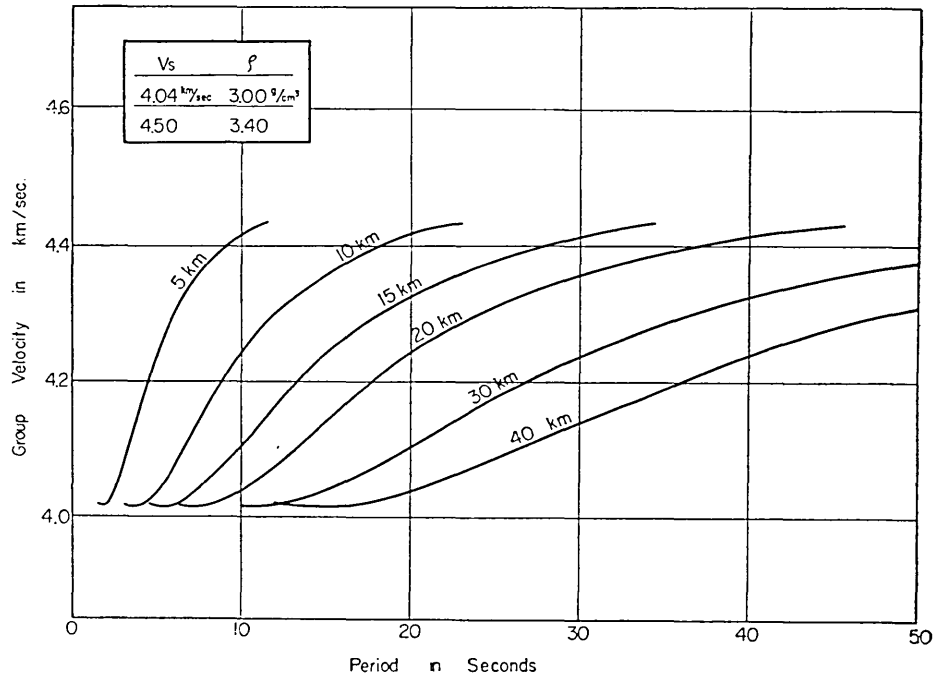

Fig. 29L. Group velocity dispersion curves of Love waves

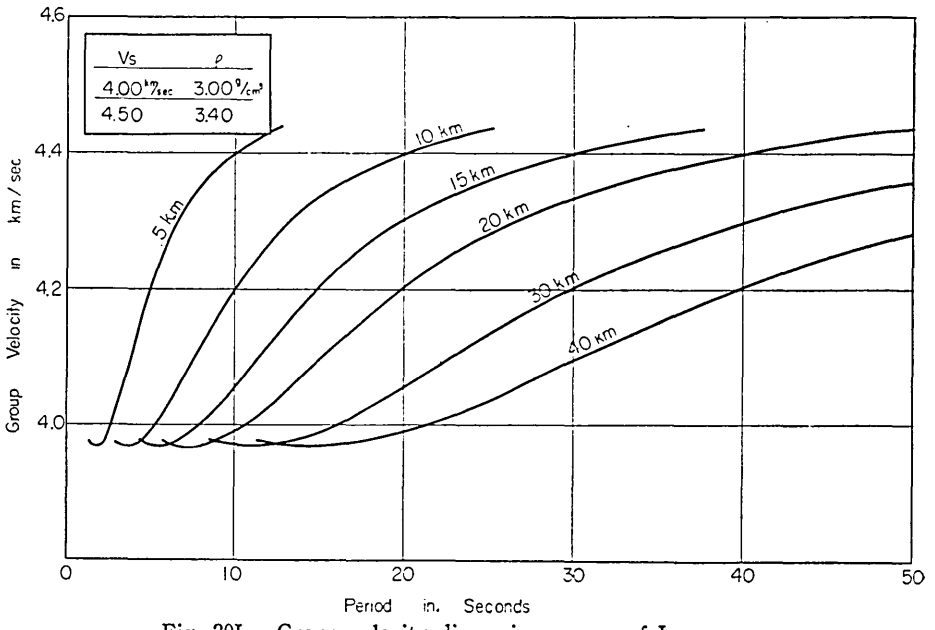

Fig. 30L. Group velocity dispersion curves of Love waves.

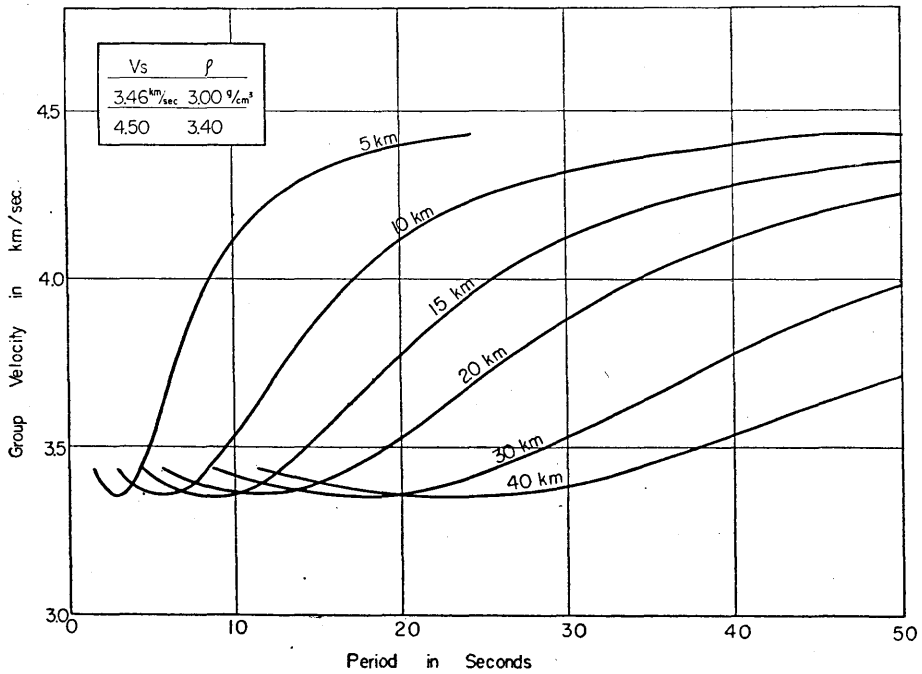

Fig. 31L. Group velocity dispersion curves of Love waves.

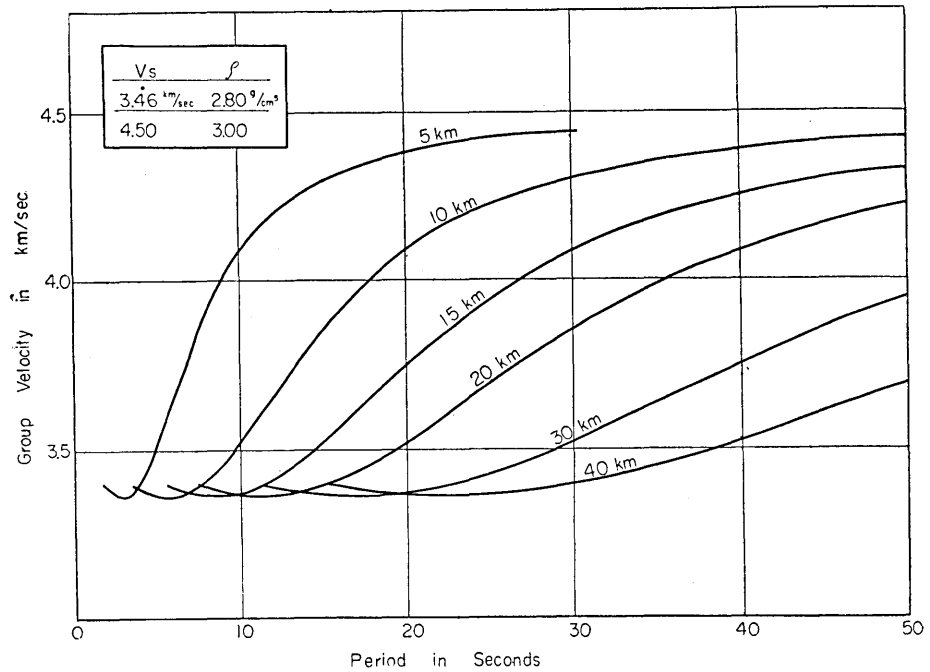

Fig. 32L. Group velocity dispersion curves of Love waves.

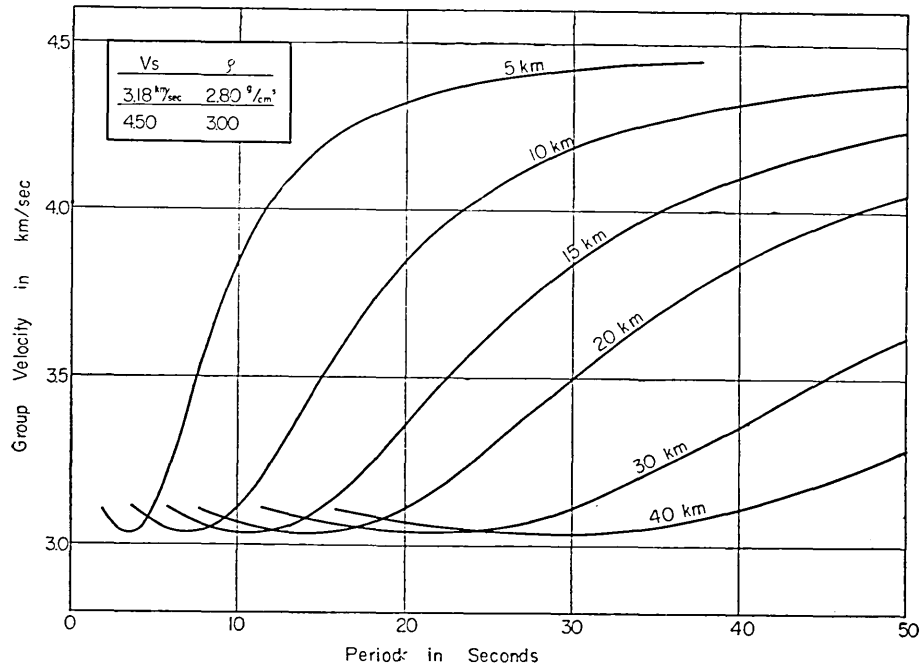

Fig. 33L. Group velocity dispersion curves of Love waves.

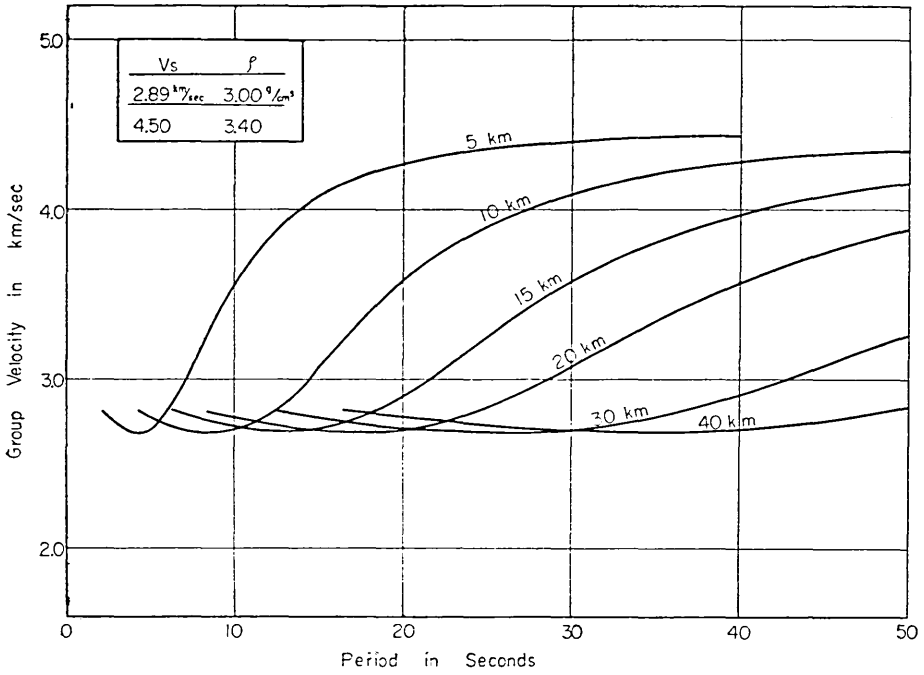

Fig. 34L. Group velocity dispersion curves of Love waves.

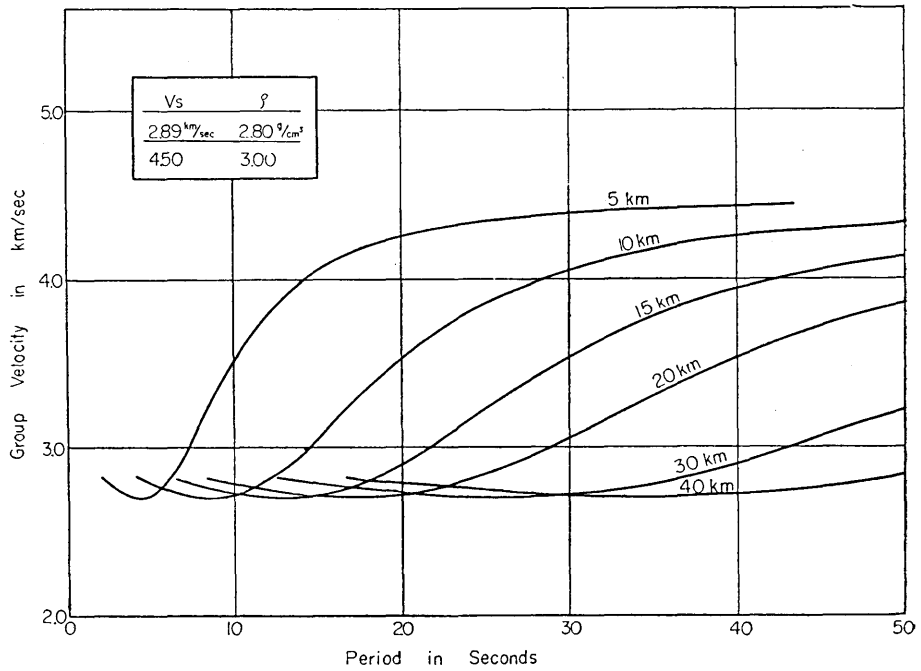

Fig. 35L. Group velocity dispersion curves of Love waves.

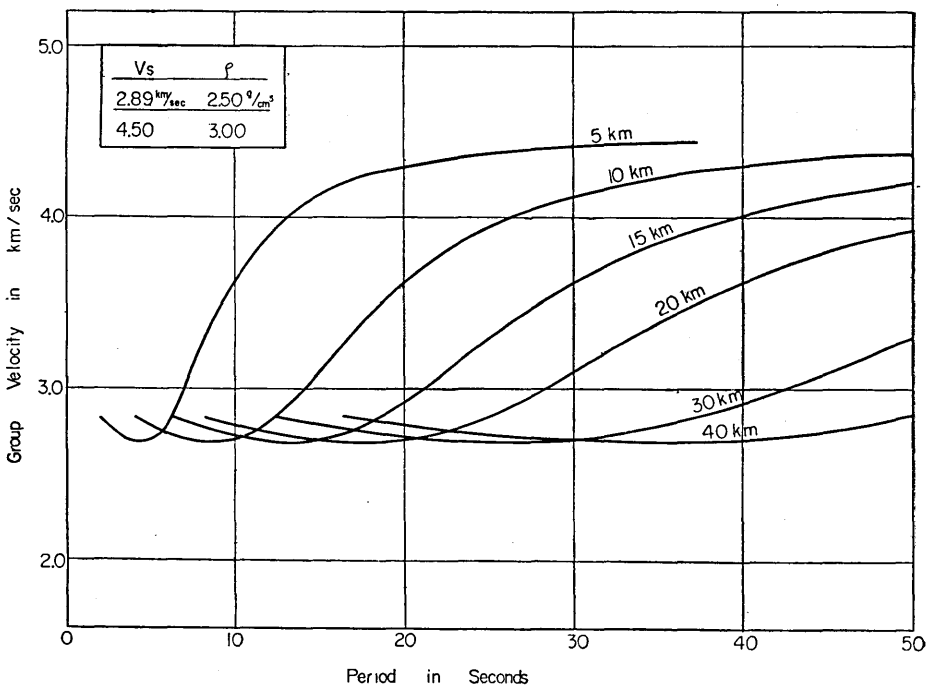

Fig. 36L. Group velocity dispersion curves of Love waves.

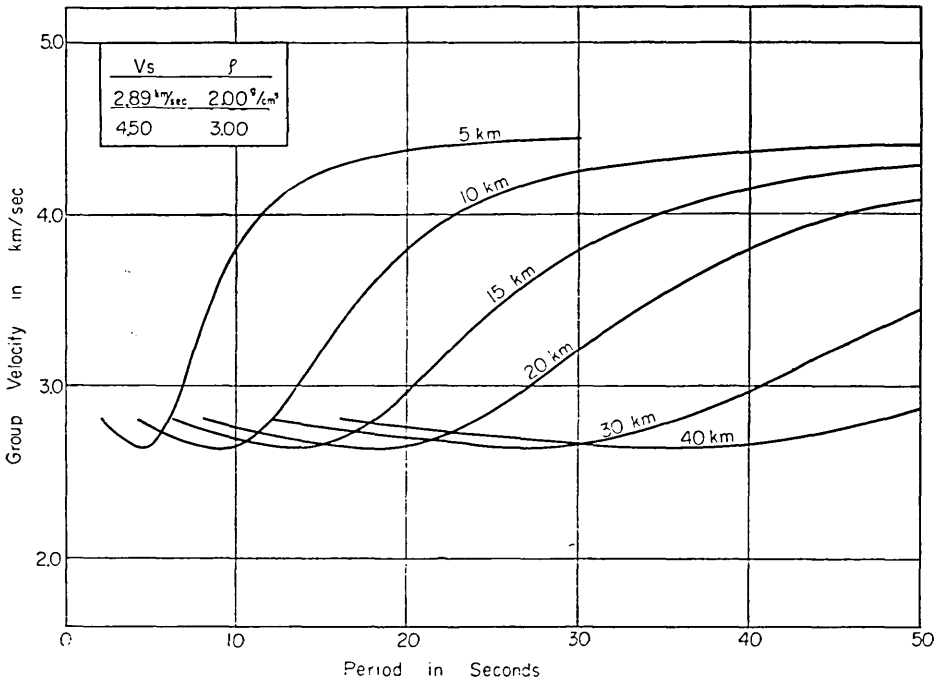

Fig. 37L. Group velocity dispersion curves of Love waves.

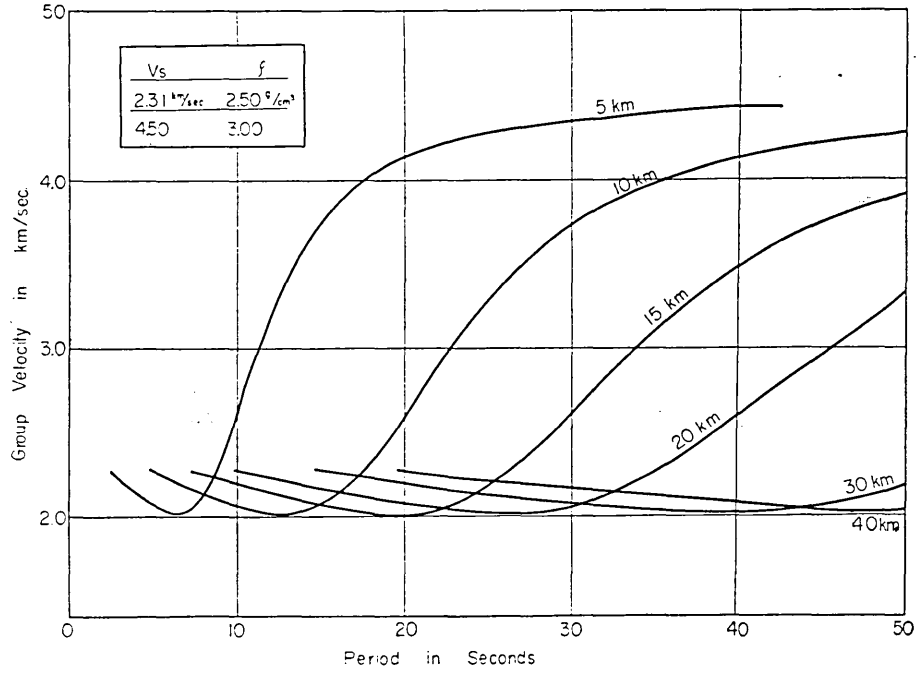

Fig. 38L. Group velocity dispersion curves of Love waves.

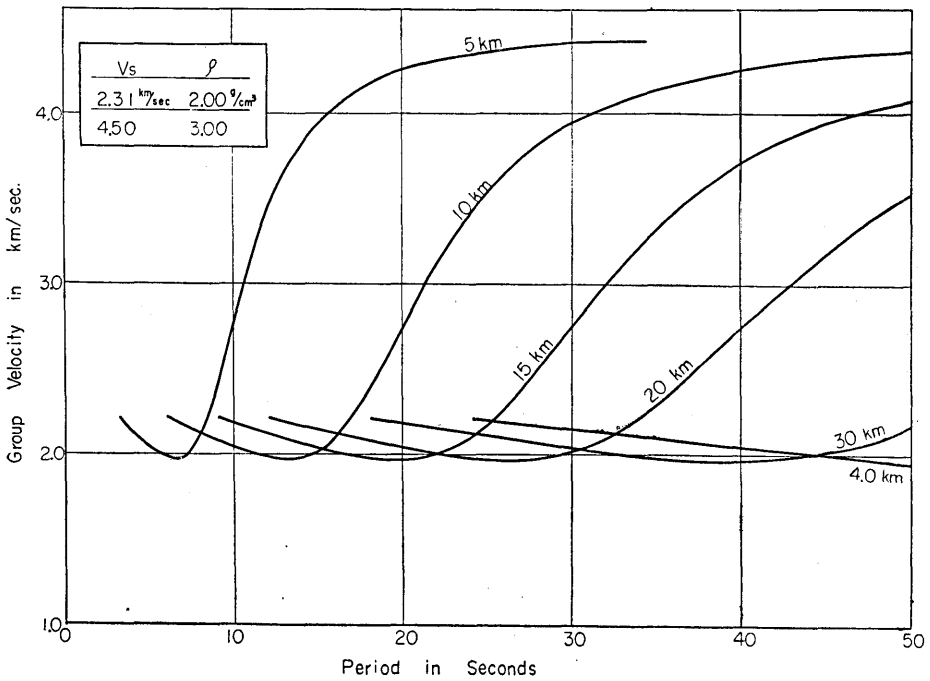

Fig. 39L. Group velocity dispersion curves of Love waves.

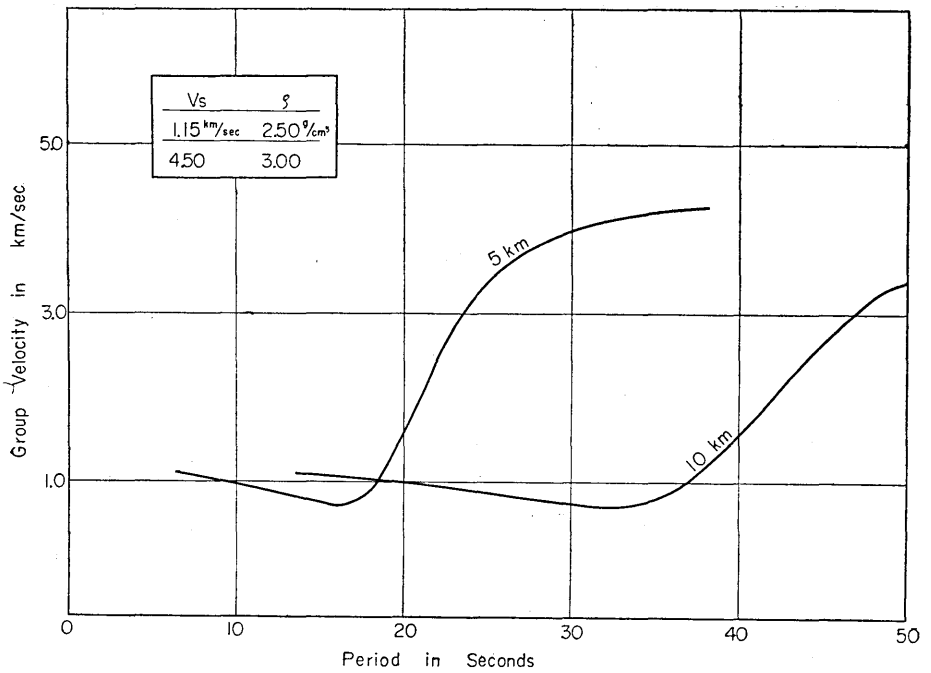

Fig. 40L. Group velocity dispersion curves of Love waves.

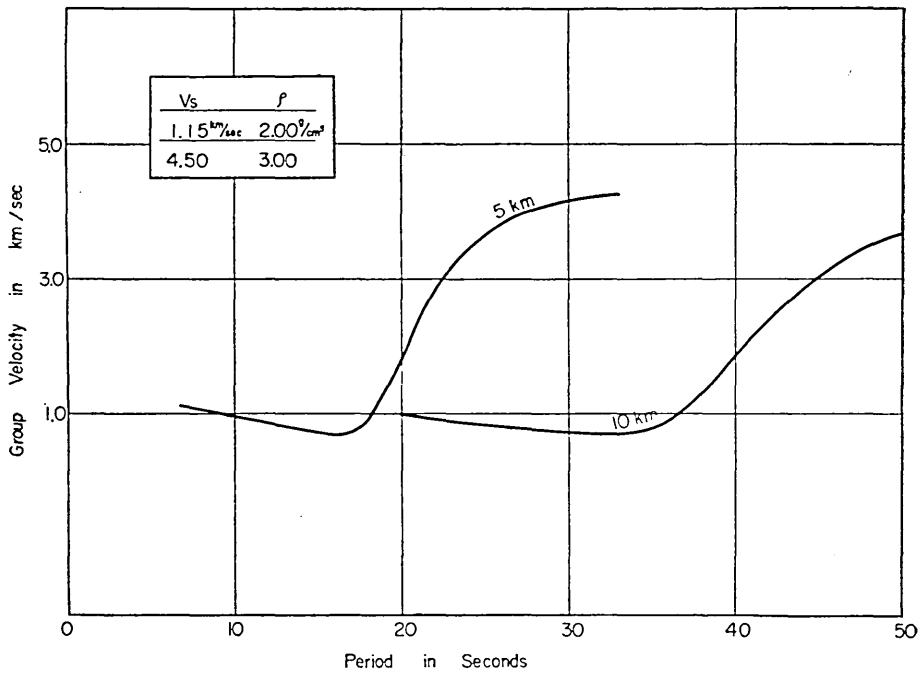

Fig. 41L. Group velocity dispersion curves of Love waves.

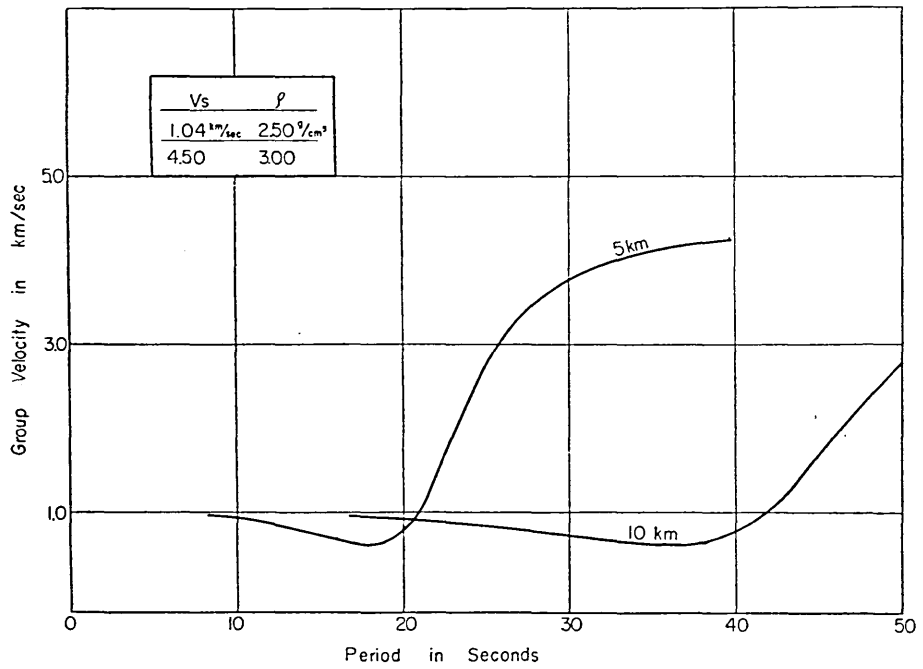

Fig. 42L. Group velocity dispersion curves of Love waves.

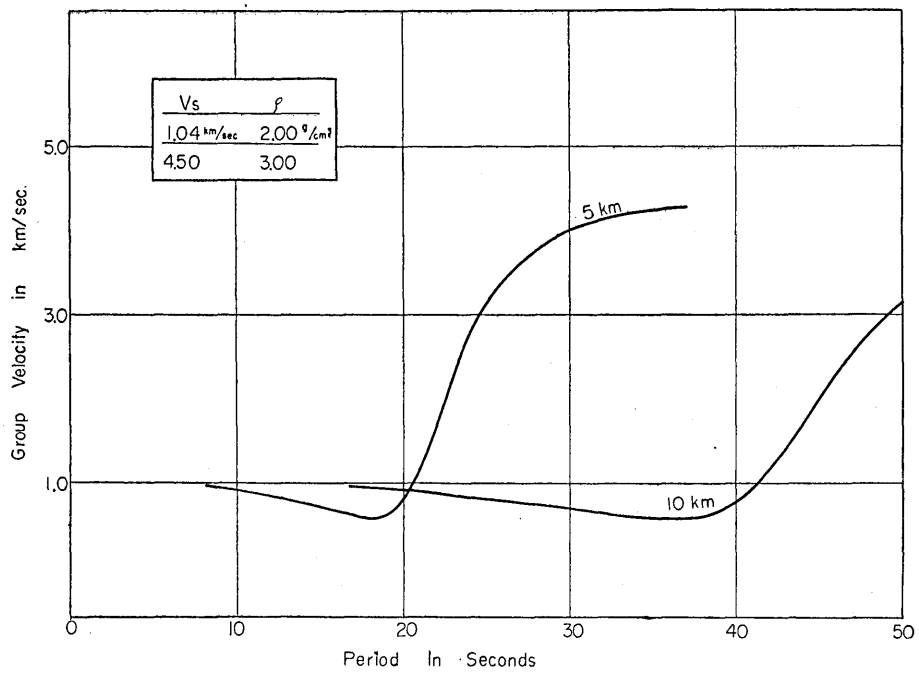

Fig. 43L. Group velocity dispersion curves of Love waves

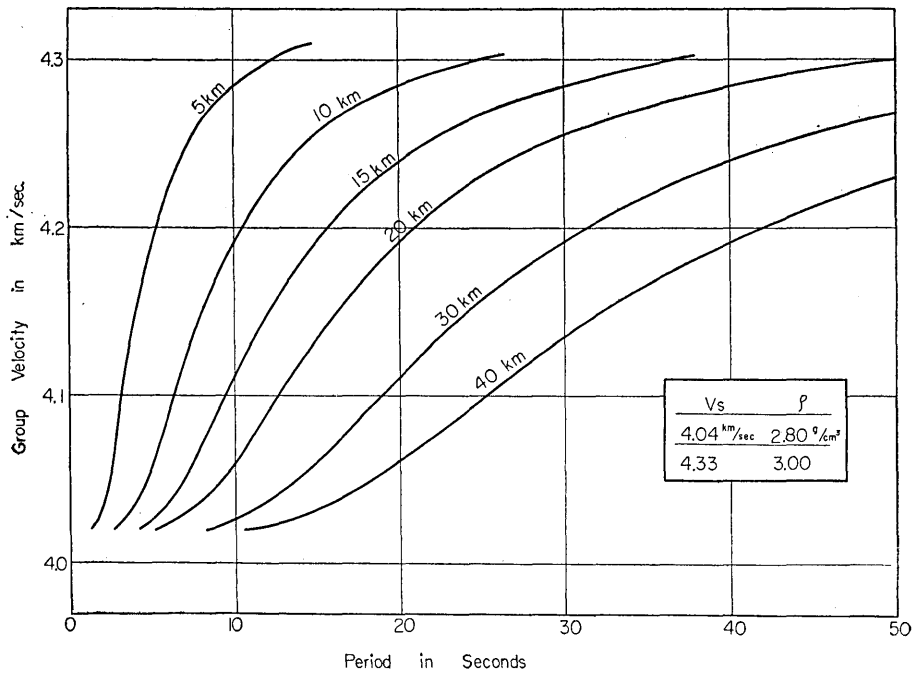

Fig. 44L. Group velocity dispersion curves of Love waves.

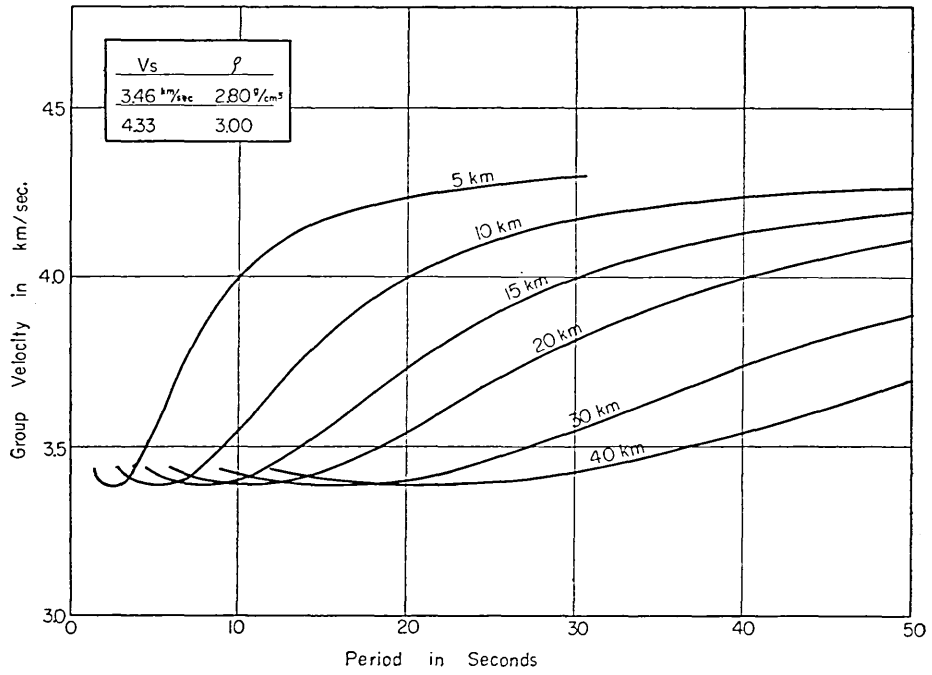

Fig. 46L. Group velocity dispersion curves of Love waves.

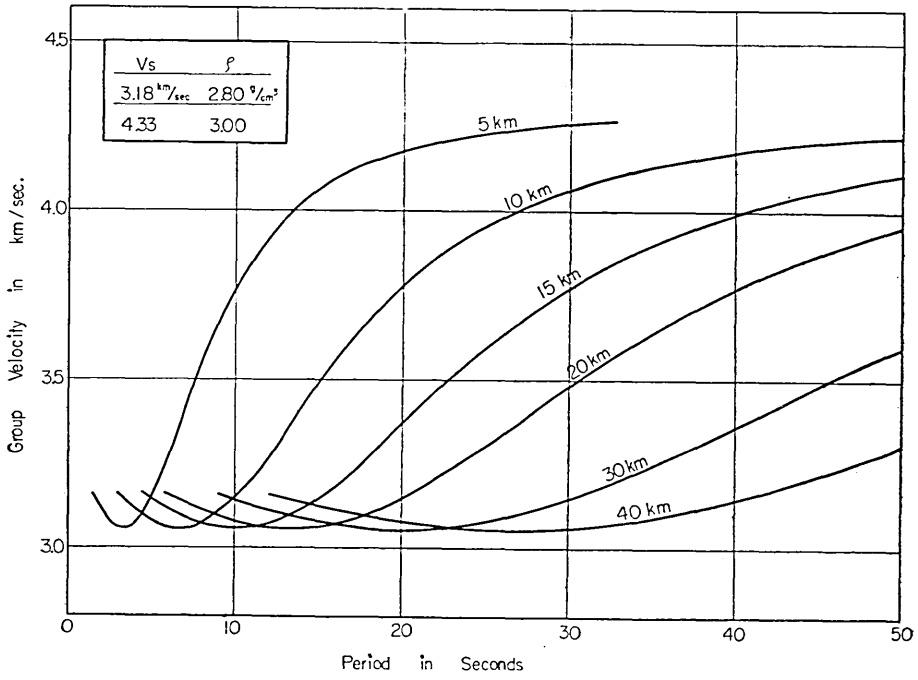

Fig. 47L. Group velocity dispersion curves of Love waves.

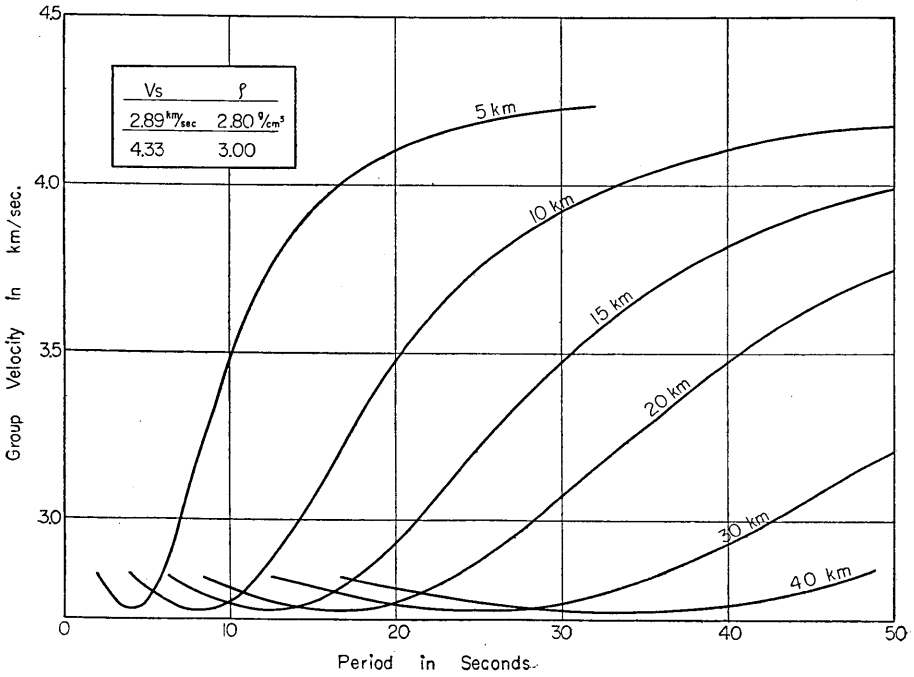

Fig. 48L. Group velocity dispersion curves of Love waves.

Table A

Fig. No.	Vp_2	Vp_3	ρ_2	ρ_3	H_2/H_1
1	6.9 km/sec	8.1 km/sec	2.67 g/cm³	3.0 g/cm³	1— 3
2	5.5	8.1	2.67	3.0	1— 2
3	1.73	7.9	1.8	3.0	0.1—0.3
4	6.5	7.76	3.02	3.4	0.2— 5
5	1.7	7.76	2.08	3.4	0.2— 3
6	6.93	7.8	3.0	3.07	1— 5
7	6.0	7.95	2.8	3.0	1— 5
8	6.0	7.95	2.8	3.0	4—15
9	5.0	7.95	2.8	3.0	1— 5
10	5.0	7.95	2.8	3.0	5—20
11	4.0	7.95	2.8	3.0	1— 5
12	3.0	7.95	2.8	3.0	1— 5
13	7.0	8.3	3.0	3.4	5—20
14	7.0	8.3	2.8	3.4	5—20
15	7.0	8.3	2.8	3.0	5—20
16	5.0	8.3	3.0	3.4	5—30
17	5.0	8.3	2.8	3.4	5—20
18	5.0	8.3	2.8	3.0	5—30
19	7.0	8.1	2.8	3.0	1—10
20	6.0	8.1	2.8	3.0	1—10
21	5.0	8.1	2.5	3.4	1—10
22	5.0	8.1	2.8	3.0	1—10
23	5.0	8.1	2.5	3.0	1—10
24	4.0	8.1	2.5	3.4	1—10
25	4.0	8.1	2.8	3.0	1—10
26	4.0	8.1	2.5	3.0	1—10
27	2.0	8.1	2.5	3.4	1—10
28	2.0	8.1	2.5	3.0	1—10
29	7.0	7.8	3.0	3.4	5—20
30	6.93	7.8	3.0	3.4	5—20
31	6.0	7.8	3.0	3.4	5—20
32	6.0	7.8	2.8	3.0	1—10
33	5.5	7.8	2.8	3.0	1—10
34	5.0	7.8	3.0	3.4	5—20
35	5.0	7.8	2.8	3.0	1—10
36	5.0	7.8	2.5	3.0	1—10
37	5.0	7.8	2.0	3.0	1—10
38	4.0	7.8	2.5	3.0	1—10
39	4.0	7.8	2.0	3.0	1—10
40	2.0	7.8	2.5	3.0	1—10
41	2.0	7.8	2.0	3.0	1—10
42	1.8	7.8	2.5	3.0	1—10
43	1.8	7.8	2.0	3.0	1—10
44	7.0	7.5	2.8	3.0	1—10
45	6.5	7.5	2.8	3.0	5—25
46	6.0	7.5	2.8	3.0	1—10
47	5.5	7.5	2.8	3.0	1—10
48	5.0	7.5	2.8	3.0	1—10
49	4.0	7.5	2.8	3.0	5—20

Vp_i=compressional velocity of ith layer,
Vs_i=shear velocity of ith layer, ($=Vp_i/\sqrt{3}$ for most of the cases)
ρ_i=density of ith layer,
H_i=thickness of ith layer.

Tables 1—49.

The dimensionless values of phase velocity (V/V_1) and wave length (L/H_1) for the various thickness ratios (H_2/H_1). Computed values are based on the constants H, V, ρ of the first layer. For example: H21 represents H_2/H_1, the ratio of thickness of the secondary layer to the first layer (water layer). V21 represents Vp_2/V_1, the ratio of compressional wave velocity. V2S1 represents Vs_2/V_1. RO21 represents ρ_2/ρ_1, the ratio of density.

Table 1.

RO21=2.670 V21=4.540 V2S1=2.621
RO31=3.000 V31=5.329 V3S1=3.077

V/V_1	L/H_1
H21=1.000	
2.82	209.32
2.81	97.466
2.80	63.071
2.79	46.518
2.78	36.895
2.77	30.698
2.76	26.443
2.75	23.393
2.74	21.133
2.73	19.416
2.72	18.084
2.71	17.029
2.70	16.177
2.69	15.479
2.68	14.897
2.67	14.405
2.66	13.984
2.65	13.618
2.63	13.297
2.60	12.321
2.55	11.495
2.50	10.889
2.45	10.401
2.40	9.9819
2.35	9.6074
2.30	9.2634
2.25	8.9400
2.20	8.6320
2.15	8.3349
2.10	8.0461
2.05	7.7636
2.00	7.4856
1.95	7.2107
1.90	6.9608
1.85	6.6669
1.80	6.3962
1.75	6.1252
1.70	5.8533
1.65	5.5797
1.60	5.3034
1.55	5.0237
1.50	4.7395
1.45	4.4494
1.40	4.1520
1.35	3.8451
1.30	3.5256
1.25	3.1897
H21=1.200	
2.70	16.548
2.65	13.797
2.60	12.433
2.55	11.577
2.50	10.954
2.45	10.454
2.40	10.029
2.35	9.649
2.30	9.3011
2.25	8.9751
2.20	8.6642
2.15	8.3651
2.10	8.0746
2.05	7.7901
2.00	7.5108
1.95	7.2346
1.90	6.9608
1.85	6.6884
1.80	6.4165
1.75	6.1444
1.70	5.8715
1.65	5.5968
1.60	5.3195
1.55	5.0388
1.50	4.7534
1.45	4.4624
1.40	4.1638
1.35	3.8557
1.30	3.5349
1.25	3.1975
H21=1.400	
2.70	66.918
2.65	13.986
2.60	12.556
2.55	11.668
2.50	11.027
2.45	10.516
2.40	10.082
2.35	9.6969
2.30	9.3442
2.25	9.0143
2.20	8.7002
2.15	8.3983
2.10	8.1055
2.05	7.8192
2.00	7.5379
1.95	7.2597
1.90	6.9843
1.85	6.7106
1.80	6.4372
1.75	6.1638
1.70	5.8894
1.65	5.6135
1.60	5.3349
1.55	5.0529
1.50	4.7662
1.45	4.4738
1.40	4.1739
1.35	3.8643
1.30	3.5421
1.25	3.2030
H21=1.600	
2.70	17.297
2.65	14.191
2.60	12.694
2.55	11.771
2.50	11.110
2.45	10.586
2.40	10.143
2.35	9.7504
2.30	9.3917
2.25	9.0571
2.20	8.7397
2.15	8.4346
2.10	8.1386
2.05	7.8496
2.00	7.5661
1.95	7.2859
1.90	7.0086
1.85	6.7327
1.80	6.4578
1.75	6.1827

(to be continued)

Table 1. (continued)

V/V_1	L/H_1
1.70	5.9066
1.65	5.6291
1.60	5.3490
1.55	5.0654
1.50	4.7774
1.45	4.4834
1.40	4.1820
1.35	3.8709
1.30	3.5473
1.25	3.2068
H21=1.800	
2.70	17.691
2.65	14.416
2.60	12.849
2.55	11.890
2.50	11.205
2.45	10.666
2.40	10.211
2.35	9.8095
2.30	9.4445
2.25	9.1042
2.20	8.7822
2.15	8.4729
2.10	8.1734
2.05	7.8817
2.00	7.5949
1.95	7.3126
1.90	7.0327
1.85	6.7547
1.80	6.4778
1.75	6.2006
1.70	5.9227
1.65	5.6434
1.60	5.3616
1.55	5.0763
1.50	4.7867

V/V_1	L/H_1
1.45	4.4913
1.40	4.1883
1.35	3.8757
1.30	3.5508
1.25	3.2092
H21=2.000	
2.82	312.90
2.81	142.94
2.80	90.321
2.79	64.833
2.78	49.893
2.77	40.215
2.76	33.560
2.75	28.818
2.74	25.355
2.73	22.777
2.72	20.819
2.71	19.302
2.70	18.105
2.69	17.142
2.68	16.353
2.67	15.696
2.66	15.140
2.65	14.664
2.64	14.252
2.60	13.023
2.55	12.022
2.50	11.318
2.45	10.7540
2.40	10.2859
2.35	9.8747
2.30	9.5017
2.25	9.1550
2.20	8.8271
2.15	8.5132
2.10	8.2099

V/V_1	L/H_1
2.05	7.9142
2.00	7.6244
1.95	7.3390
1.90	7.0565
1.85	6.7761
1.80	6.4966
1.75	6.2174
1.70	5.9375
1.65	5.6562
1.60	5.3726
1.55	5.0857
1.50	4.7944
1.45	4.4974
1.40	4.1931
1.35	3.8793
1.30	3.5532
1.25	3.2106
H21=3.000	
2.80	117.099
2.79	82.678
2.78	62.445
2.77	49.325
2.76	40.362
2.75	34.080
2.74	29.592
2.73	26.321
2.72	23.881
2.71	22.012
2.70	20.544
2.69	19.363
2.68	18.393
2.67	17.581
2.66	16.890
2.65	16.296
2.64	15.776

V/V_1	L/H_1
2.60	14.216
2.55	12.936
2.50	12.034
2.45	11.340
2.40	10.770
2.35	10.280
2.30	9.8449
2.25	9.4477
2.20	9.0784
2.15	8.7295
2.10	8.3966
2.05	8.0752
2.00	7.7631
1.95	7.4581
1.90	7.1585
1.85	6.8626
1.80	6.5697
1.75	6.2785
1.70	5.9880
1.65	5.6973
1.60	5.4053
1.55	5.1112
1.50	4.8137
1.45	4.5115
1.40	4.2029
1.35	3.8857
1.30	3.5570
1.25	3.2127

Table 2.

RO21=2.670 V21=3.61842 V2S1=2.08909
RO31=3.000 V31=5.32894 VS31=3.07667

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=1.250		H21=1.500		H21=1.750	
2.80	98.176	2.80	114.29	2.80	130.49	2.80	146.64
2.79	72.528	2.79	84.270	2.79	96.044	2.79	107.83
2.78	57.459	2.78	66.594	2.78	75.770	2.78	84.954
2.77	47.564	2.77	54.963	2.77	62.399	2.77	69.881
2.76	40.592	2.76	46.740	2.76	52.948	2.76	59.188
2.75	35.426	2.75	40.634	2.75	45.914	2.75	51.234
2.74	31.458	2.74	35.933	2.74	40.484	2.74	45.080
2.73	28.327	2.73	32.207	2.73	36.172	2.73	40.192
2.72	25.810	2.72	29.197	2.72	32.681	2.72	36.218
2.71	23.748	2.71	26.721	2.71	29.799	2.71	32.939
2.70	22.041	2.70	24.661	2.70	27.392	2.70	30.192
2.69	20.608	2.69	22.928	2.69	25.360	2.69	27.864
2.68	19.399	2.68	21.454	2.68	23.626	2.68	25.878
2.67	18.368	2.67	20.196	2.67	22.142	2.67	24.171
2.66	17.484	2.66	19.112	2.66	20.859	2.66	22.694
2.65	16.721	2.65	18.175	2.65	19.748	2.65	21.410
2.64	16.059	2.64	17.361	2.64	18.779	2.64	20.289
2.60	14.125	2.60	14.985	2.60	15.950	2.60	17.008
2.55	12.656	2.55	13.210	2.55	13.848	2.55	14.574
2.50	11.705	2.50	12.095	2.50	12.553	2.50	13.086
2.45	11.015	2.45	11.311	2.45	11.662	2.45	12.076
2.40	10.470	2.40	10.708	2.40	10.991	2.40	11.329
2.35	10.012	2.35	10.211	2.35	10.449	2.35	10.733
2.30	9.6085	2.30	9.7805	2.30	9.9862	2.30	10.231
2.25	9.2422	2.25	9.3944	2.25	9.5758	2.25	9.7911
2.20	8.9016	2.20	9.0386	2.20	9.2008	2.20	9.3932
2.15	8.5792	2.15	8.7040	2.15	8.8513	2.15	9.0245
2.10	8.2700	2.10	8.3851	2.10	8.5197	2.10	8.6768
2.05	7.9710	2.05	8.0776	2.05	8.2019	2.05	8.3453
2.00	7.6793	2.00	7.7789	2.00	7.8936	2.00	8.0253
1.95	7.3928	1.95	7.4862	1.95	7.5931	1.95	7.7139
1.90	7.1103	1.90	7.1982	1.90	7.2978	1.90	7.4089
1.85	6.8305	1.85	6.9134	1.85	7.0062	1.85	7.1088
1.80	6.5522	1.80	6.6307	1.80	6.7174	1.80	6.8116
1.75	6.2745	1.75	6.3488	1.75	6.4298	1.75	6.5164
1.70	5.9966	1.70	6.0670	1.70	6.1426	1.70	6.2219
1.65	5.7177	1.65	5.7844	1.65	5.8547	1.65	5.9269
1.60	5.4368	1.60	5.4999	1.60	5.5651	1.60	5.6305
1.55	5.1531	1.55	5.2126	1.55	5.2727	1.55	5.3313
1.50	4.8652	1.50	4.9212	1.50	4.9763	1.50	5.0283
1.45	4.5721	1.45	4.6245	1.45	4.6743	1.45	4.7198
1.40	4.2721	1.40	4.3208	1.40	4.3652	1.40	4.4039
1.35	3.9631	1.35	4.0077	1.35	4.0465	1.35	4.0785
1.30	3.6422	1.30	3.6824	1.30	3.7153	1.30	3.7404
1.25	3.3053	1.25	3.3404	1.25	3.3669	1.25	3.3853

(to be continued)

Table 2. (continued)

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=2.000		2.70	33.033	2.35	11.069	1.75	6.6076
		2.69	30.421	2.30	10.522		
		2.68	28.184	2.25	10.046	1.70	6.3036
2.80	162.78	2.67	26.260			1.65	5.9996
2.79	119.61	2.66	24.591	2.20	9.6186	1.60	5.6946
2.78	94.167			2.15	9.2263	1.55	5·3870
2.77	77.369	2.65	23.140	2.10	8.8587	1.50	5.0759
2.76	65.456	2.64	21.870	2.05	8.5094		
		2.60	18.148	2.00	8.1742	1.45	4.7595
2.75	56.572	2.55	15.382			1.40	4.4360
2.74	49.708	2.50	13.695	1.95	7.8492	1.35	4.1033
2.73	44.238			1.90	7.5321	1.30	3.7584
2.72	39.793	2.45	12.560	1.85	7.2203	1.25	3.3972
2.71	36.118	2.40	11.727	1.80	6.9126		

Table 3.

RO21=1.800 V21=1.140 V2S1=0.658
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1
H21=0.100	
2.75	133.17
2.74	62.367
2.73	41.722
2.72	32.092
2.71	26.621
2.70	23.149
2.69	20.779
2.65	16.008
2.60	13.642
2.55	12.420
2.50	11.623
2.45	11.028
2.40	10.541
2.35	10.120
2.30	9.7413
2.25	9.3911
2.20	9.0615
2.15	8.7464
2.10	8.4423
2.05	8.1465
2.00	7.8565
1.95	7.5711
1.90	7.2889
1.85	7.0088
1.80	6.7300
1.75	6.4518
1.70	6.1732
1.65	5.8936
1.60	5.6123
1.55	5.3283
1.50	5.0408
1.45	4.7486
1.40	4.4506
1.35	4.1450
1.30	3.8300
1.25	3.5023
1.20	3.1582
1.15	2.7915
1.10	2.3929
1.05	1.9468
H21=0.200	
2.75	159.50
2.74	74.285
2.73	49.279
2.72	37.530
2.71	30.801
2.70	26.506
2.69	23.558
2.65	17.615
2.60	14.720
2.55	13.274
2.50	12.360
2.45	11.692
2.40	11.157
2.35	10.700
2.30	10.294
2.25	9.9211
2.20	9.5721
2.15	9.2404
2.10	8.9217
2.05	8.6121
2.00	8.3101
1.95	8.0133
1.90	7.7205
1.85	7.4309
1.80	7.1430
1.75	6.8564
1.70	6.5701
1.65	6.2836
1.60	5.9959
1.55	5.7065
1.50	5.4144
1.45	5.1190
1.40	4.8192
1.35	4.5137
1.30	4.2011
1.25	3.8797
1.20	3.5470
1.15	3.2001
1.10	2.8355
1.05	2.4496
H21=0.300	
2.75	186.02
2.74	86.377
2.73	57.058
2.72	43.214
2.71	35.243
2.70	30.123
2.69	26.594
2.65	19.426
2.60	15.936
2.55	14.227
2.50	13.173
2.45	12.419
2.40	11.826
2.35	11.328
2.30	10.889
2.25	10.490
2.20	10.119
2.15	9.7679
2.10	9.4321
2.05	9.1076
2.00	8.7915
1.95	8.4821
1.90	8.1778
1.85	7.8772
1.80	7.5793
1.75	7.2833
1.70	6.9884
1.65	6.6940
1.60	6.3992
1.55	6.1034
1.50	5.8061
1.45	5.5065
1.40	5.2038
1.35	4.8970
1.30	4.5853
1.25	4.2676
1.20	3.9425
1.15	3.6086
1.10	3.2647
1.05	2.9103

Table 4.

RO21=3.0197 V21=4.27631 V2S1=2.46052
RO31=3.4030 V31=5.10526 V3S1=2.86842

V/V_1	L/H_1
H21=0.200	
2.61	27.786
2.60	22.869
2.59	19.837
2.58	17.810
2.57	16.373
2.56	15.309
2.55	14.492
2.54	13.845
2.50	12.199
2.45	11.086
2.40	10.374
2.35	9.8405
2.30	9.4021
2.25	9.0194
2.20	8.6719
2.15	8.3482
2.10	8.0406
2.05	7.7448
2.00	7.4570
1.95	7.1754
1.90	6.8978
1.85	6.6229
1.80	6.3495
1.75	6.0768
1.70	5.8036
1.65	5.5293
1.60	5.2527
1.55	4.9729
1.50	4.6889
1.45	4.3992
1.40	4.1022
1.35	3.7959
1.30	3.4773
1.25	3.1423
1.20	2.7845
1.15	2.3930
H21=0.600	
2.61	35.265
2.60	28.086
2.59	23.624
2.58	20.636
2.57	18.534
2.56	16.995
2.55	15.833
2.54	14.930
2.50	12.738
2.45	11·373
2.40	10.556
2.35	9.9705
2.30	9.5028
2.25	9.1014
2.20	8.7420
2.15	8.4093
2.10	8.0955
2.05	7.7948
2.00	7.5033
1.95	7.2185
1.90	6.9383
1.85	6.6613
1.80	6.3863
1.75	6.1119
1.70	5.8375
1.65	5.5619
1.60	5.2843
1.55	5.0037
1.50	4.7189
1.45	4.4287
1.40	4.1313
1.35	3.8247
1.30	3.5060
1.25	3.1711
1.20	2.8136
1.15	2.4230
H21=1.000	
2.61	42.650
2.60	33.235
2.59	27.347
2.58	23.390
2.57	20.613
2.56	18.593
2.55	17.081
2.54	15.925
2.50	13.212
2.45	11.626
2.40	10.721
2.35	10.093
2.30	9.6014
2.25	9.1852
2.20	8.8150
2.15	8.4752
2.10	8.1558
2.05	7.8504
2.00	7.5553
1.95	7.2674
1.90	6.9844
1.85	6.7052
1.80	6.4280
1.75	6.1518
1.70	5.8756
1.65	5.5984
1.60	5.3193
1.55	5.0372
1.50	4.7510
1.45	4.4593
1.40	4.1605
1.35	3.8523
1.30	3.5320
1.25	3.1951
1.20	2.8353
1.15	2.4413
H21=1.400	
2.61	49.928
2.60	38.291
2.59	30.981
2.58	26.065
2.57	22.622
2.56	20.132
2.55	18.287
2.54	16.891
2.50	13.698
2.45	11.905
2.40	10.915
2.35	10.243
2.30	9.7243
2.25	9.2903
2.20	8.9072
2.15	8.5575
2.10	8.2304
2.05	7.9185
2.00	7.6181
1.95	7.3255
1.90	7.0385
1.85	6.7554
1.80	6.4749
1.75	6.1955
1.70	5.9161
1.65	5.6361
1.60	5.3541
1.55	5.0693
1.50	4.7804
1.45	4.4859
1.40	4.1843
1.35	3.8732
1.30	3.5497
1.25	3.2095
1.20	2.8462
1.15	2.4484
H21=1.800	
2.61	57.122
2.60	43.265
2.59	34.544
2·58	28.683
2.57	24.593
2.56	21.659
2.55	19.507
2.54	17.893
2.50	14.258
2.45	12.255
2.40	11.166
2.35	10.438
2.30	9.8830
2.25	9.4236
2.20	9.0224
2.15	8.6586
2.10	8.3198
2.05	7.9985
2.00	7.6898
1.95	7.3901
1.90	7.0969
1.85	6.8083
1.80	6.5224
1.75	6.2384
1.70	5.9547

(to be continued)

Table 4. (continued)

V/V_1	L/H_1
1.65	5.6705
1.60	5.3846
1.55	5.0959
1.50	4.8033
1.45	4.5054
1.40	4.2003
1.35	3.8860
1.30	3.5594
1.25	3.2163
1.20	2.8504
H21=2.200	
2.61	64.240
2.60	48.173
2.59	38.050
2.58	31.263
2.57	26.554
2.56	23.211
2.55	20.781
2.54	18.971
2.50	14.925
2.45	12.697
2.40	11.487
2.35	10.685
2.30	10.081
2.25	9.5872
2.20	9.1602
2.15	8.7758
2.10	8.4210
2.05	8.0865
2.00	7.7666
1.95	7.4575
1.90	7.1559
1.85	6.8598
1.80	6.5674
1.75	6.2772
1.70	5.9882
1.65	5.6990
1.60	5.4085
1.55	5.1157
1.50	4.8193
1.45	4.5179
1.40	4.2098
1.35	3.8928
1.30	3.5639
1.25	3.2190
1.20	2.8516
1.15	2.4510
H21=2.600	
2.61	71.310
2.60	53.033
2.59	41.511
2.58	33.822
2.57	28.529
2.56	24.808
2.55	22.129
2.54	20.143
2.50	15.709
2.45	13.237
2.40	11.883
2.35	10.987
2.30	10.319
2.25	9.7796
2.20	9.3180
2.15	8.9070
2.10	8.5310
2.05	8.1792
2.00	7.8452
1.95	7.5238
1.90	7.2119
1.85	6.9069
1.80	6.6068
1.75	6.3100
1.70	6.0150
1.65	5.7206
1.60	5.4258
1.55	5.1290
1.50	4.8294
1.45	4.5252
1.40	4.2148
1.35	3.8960
1.30	3.5657
1.25	3.2201
1.20	2.8521
1.15	2.4513
H21=3.000	
2.61	78.344
2.60	57.839
2.59	44.938
2.58	36.369
2.57	30.527
2.56	26.458
2.55	23.551
2.54	21.406
2.50	16.600
2.45	13.871
2.40	12.353
2.35	11.345
2.30	10.597
2.25	9.9992
2.20	9.4937
2.15	9.0489
2.10	8.6462
2.05	8.2734
2.00	7.9218
1.95	7.5864
1.90	7.2628
1.85	6.9480
1.80	6.6396
1.75	6.3359
1.70	6.0353
1.65	5.7362
1.60	5.4373
1.55	5.1375
1.50	4.8353
1.45	4.5291
1.40	4.2172
1.35	3.8975
1.30	3.5665
1.25	3.2202
1.20	2.8522
1.15	2.4514
H21=3.400	
2.61	85.326
2.60	62.618
2.59	48.341
2.58	38.916
2.57	32.552
2.56	28.160
2.55	25.041
2.54	22.748
2.50	17.581
2.45	14.589
2.40	12.893
2.35	11.756
2.30	10.913
2.25	10.244
2.20	9.6840
2.15	9.1983
2.10	8.7634
2.05	8.3653
2.00	7.9941
1.95	7.6429
1.90	7.3067
1.85	6.9819
1.80	6.6655
1.75	6.3553
1.70	6.0496
1.65	5.7466
1.60	5.4446
1.55	5.1425
1.50	4.8386
1.45	4.5311
1.40	4.2184
1.35	3.8980
1.30	3.5668
1.25	3.2205
1.20	2.8521
1.15	2.4512
H21=3.800	
2.61	92.303
2.60	67.379
2.59	51.735
2.58	41.467
2.57	34.600
2.56	29.907
2.55	26.591
2.54	24.154
2.50	18.635
2.45	15.377
2.40	13.493
2.35	12.215
2.30	11.263
2.25	10.510
2.20	9.8868
2.15	9.3521
2.10	8.8798
2.05	8.4533
2.00	8.0602
1.95	7.6922
1.90	7.3434

(to be continued)

Table 4. (continued)

V/V_1	L/H_1
1.85	7.0087
1.80	6.6851
1.75	6.3693
1.70	6.0594
1.65	5.7532
1.60	5.4491
1.55	5.1453
1.50	4.8403
1.45	4.5322
1.40	4.2190
1.35	3.8983
1.30	3.5670
1.25	3.2204
1.20	2.8524
1.15	2.4523
H21=4.200	
2.61	99.221
2.60	72.114
2.59	55.111
2.58	44.020
2.57	36.677
2.56	31.693
2.55	28.188
2.54	25.611
2.50	19.746
2.45	16.222
2.40	14.146
2.35	12.717
2.30	11.645
2.25	10.797
2.20	10.099

V/V_1	L/H_1
2.15	9.5075
2.10	8.9931
2.05	8.5351
2.00	8.1190
1.95	7.7341
1.90	7.3730
1.85	7.0296
1.80	6.6994
1.75	6.3790
1.70	6.0659
1.65	5.7574
1.60	5.4517
1.55	5.1469
1.50	4.8412
1.45	4.5326
1.40	4.2193
1.35	3.8984
1.30	3.5669
1.25	3.2205
1.20	2.8525
1.15	2.4524
H21=4.600	
2.61	106.15
2.60	76.814
2.59	58.477
2.58	46.583
2.57	38.772
2.56	33.510
2.55	29.822
2.54	27.110
2.50	20.899
2.45	17.112

V/V_1	L/H_1
2.40	14.843
2.35	13.257
2.30	12.055
2.25	11.100
2.20	10.318
2.15	9.6625
2.10	9.1009
2.05	8.6094
2.00	8.1698
1.95	7.7686
1.90	7.3961
1.85	7.0450
1.80	6.7095
1.75	6.3856
1.70	6.0700
1.65	5.7599
1.60	5.4532
1.55	5.1477
1.50	4.8416
1.45	4.5329
1.40	4.2194
1.35	3.8984
1.30	3.5671
1.25	3.2209
1.20	2.8523
1.15	2.4520
H21=5.000	
2.61	113.09
2.60	81.515
2.59	61.833
2.58	49.156
2.57	40.886

V/V_1	L/H_1
2.56	35.361
2.55	31.486
2.54	28.641
2.50	22.086
2.45	18.038
2.40	15.574
2.35	13.828
2.30	12.489
2.25	11.417
2.20	10.541
2.15	9.8143
2.10	9.2021
2.05	8.6755
2.00	8.2125
1.95	7.7962
1.90	7.4138
1.85	7.0560
1.80	6.7163
1.75	6.3899
1.70	6.0724
1.65	5.7615
1.60	5.4540
1.55	5.1482
1.50	4.8419
1.45	4.5331
1.40	4.2193
1.35	3.8985
1.30	3.5671
1.25	3.2203
1.20	2.8531
1.15	2.4513

Table 5.

RO21=2.0824 V21=1.11842 V2S1=0.64473
RO31=3.403 V31=5.10526 V3S1=2.86842

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=0.2000		H21=0.600		H21=1.000		H21=1.400	
2.61	34.361	2.61	57.831	2.61	82.281	2.61	106.94
2.60	27.943	2.60	46.291	2.60	65.767	2.60	85.547
2.59	23.940	2.59	38.969	2.59	55.268	2.59	71.908
2.58	21.243	2.58	33.945	2.58	48.043	2.58	62.527
2.57	19.320	2.57	30.307	2.57	42.786	2.57	55.698
2.56	17.895	2.56	27.563	2.56	38.803	2.56	50.522
2.55	16.802	2.55	25.430	2.55	35.697	2.55	46.477
2.54	15.938	2.54	23.729	2.54	33.204	2.54	43.239
2.50	13.777	2.50	19.418	2.50	26.819	2·50	34.926
2.45	12.369	2.45	16.656	2.45	22.633	2.45	29.470
2.40	11.504	2.40	15.060	2.40	20.160	2.40	26.246
2.35	10.879	2.35	13.987	2.35	18.484	2.35	24.058
2.30	10.376	2.30	13.187	2.30	17.235	2.30	22.420
2.25	9.9462	2.25	12.544	2.25	16.243	2.25	21.106
2.20	9.5610	2.20	11.998	2.20	15.415	2.20	20.000
2.15	9.2056	2.15	11.516	2.15	14.700	2.15	19.033
2.10	8.8713	2.10	11.077	2.10	14.066	2.10	18.162
2.05	8.5513	2.05	10.669	2.05	13.493	2.05	17.357
2.00	8.2421	2.00	10.284	2.00	12.966	2.00	16.604
1.95	7.9404	1.95	8.9155	1.95	12.476	1.95	15.890
1.90	7.6448	1.90	9.5599	1.90	12.015	1.90	15.207
1.85	7.3535	1.85	9.2146	1.85	11.577	1.85	14.550
1.80	7.0646	1.80	8.8762	1.80	11.157	1.80	13.923
1.75	6.7778	1.75	8.5445	1.75	10.752	1.75	13.335
1.70	6.4915	1.70	8.2173	1.70	10.358	1.70	12.794
1.65	6.2054	1.65	7.8937	1.65	9.9733	1.65	12.298
1.60	5.9183	1.60	7.5728	1.60	9.5958	1.60	11.833
1.55	5.6296	1.55	7.2536	1.55	9.2236	1.55	11.385
1.50	5.3384	1.50	6.9360	1.50	8.8561	1.50	10.948
1.45	5.0437	1.45	6.6188	1.45	8.4917	1.45	10.518
1.40	4.7445	1.40	6.3018	1.40	8.1297	1.40	10.092
1.35	4.4396	1.35	5.9842	1.35	7.7698	1.35	9.6693
1.30	4.1272	1.30	5.6660	1.30	7.4109	1.30	9.2487
1.25	3.8056	1.25	5.3463	1.25	7.0530	1.25	8.8296
1.20	3.4721	1.20	5.0252	1.20	6.6952	1.20	8.4115
1.15	3.1237	1.15	4.7020	1.15	6.3372	1.15	7.9937
1.10	2.7563	1.10	4.3768	1.10	5.9788	1.10	7.5753
1.05	2.3661	1.05	4.0500	1.05	5.6194	1.05	7.1559
1.00	1.9549	1.00	3.7221	1.00	5.2587	1.00	6.7345
0.95	1.5512	0.95	3.3949	0.95	4.8959	0.95	6.3103
0.90	1.2251	0.90	3.0708	0.90	4.5308	0.90	5.8815
0.85	1.0040	0.85	2.7534	0.85	4.1623	0.85	5.4459
0.80	0.8498	0.80	2.4464	0.80	3.7892	0.80	5.0005
0.75	0.7286	0.75	2.1520	0.75	3.4088	0.75	4.5406
0.70	0.5695	0.70	1.8684	0.70	3.0162	0.70	4.0569

(to be continued)

Table 5. (continued)

V/V_1	L/H_1
H21=1.800	
2.61	131.78
2.60	105.44
2.59	88.677
2.58	77.146
2.57	68.772
2.56	62.417
2.55	57.459
2.54	53.483
2.50	43.300
2.45	36.650
2.40	32.738
2.35	30.090
2.30	28.119
2.25	26.536
2.20	25.200
2.15	24.028
2.10	22.961
2.05	21.972
2.00	21.037
1.95	20.140
1.90	19.273
1.85	18.424
1.80	17.588
1.75	16.764
1.70	15.943
1.65	15.129
1.60	14.338
1.55	13.667
1.50	13.126
1.45	12.615
1.40	12.115
1.35	11.619
1.30	11.127
1.25	10.637
1.20	10.148
1.15	9.6595
1.10	9.1703
1.05	8.6800
1.00	8.1874
0.95	7.6903
0.90	7.1876
0.85	6.6756
0.80	6.1507
0.75	5.6058
0.70	5.0293

V/V_1	L/H_1
H21=2.200	
2.61	156.60
2.60	125.42
2.59	105.52
2.58	91.848
2.57	81.904
2.56	74.390
2.55	68.509
2.54	63.810
2.50	51.787
2.45	43.967
2.40	39.381
2.35	36.293
2.30	33.983
2.25	32.135
2.20	30.564
2.15	29.177
2.10	27.912
2.05	26.730
2.00	25.611
1.95	24.532
1.90	23.487
1.85	22.457
1.80	21.445
1.75	20.440
1.70	19.437
1.65	18.434
1.60	17.426
1.55	16.412
1.50	15.439
1.45	14.756
1.40	14.170
1.35	13.596
1.30	13.027
1.25	12.460
1.20	11.895
1.15	11.330
H21=2.600	
2.61	181.52
2.60	145.40
2.59	122.38
2.58	106.59
2.57	95.128
2.56	86.409

V/V_1	L/H_1
2.55	79.624
2.54	74.210
2.50	60.352
2.45	51.357
2.40	46.099
2.35	42.562
2.30	39.913
2.25	37.787
2.20	35.978
2.15	34.370
2.10	32.899
2.05	31.524
2.00	30.214
1.95	28.953
1.90	27.721
1.85	26.514
1.80	25.321
1.75	24.139
1.70	22.957
1.65	21.770
1.60	20.578
1.55	19.376
1.50	18.158
1.45	16.993
1.40	16.247
1.35	15.587
1.30	14.937
1.25	14.292
1.20	13.648
1.15	13.005
H21=3.000	
2.61	206.32
2.60	165.36
2.59	139.31
2.58	121.37
2.57	108.34
2.56	98.469
2.55	90.779
2.54	84.635
2.50	68.939
2.45	58.773
2.40	52.862
2.35	48.861
2.30	45.878
2.25	43.473
2.20	41.409

V/V_1	L/H_1
2.15	39.579
2.10	37.905
2.05	36.330
2.00	34.827
1.95	33.375
1.90	31.962
1.85	30.577
1.80	29.206
1.75	27.841
1.70	26.479
1.65	25.115
1.60	23.740
1.55	22.348
1.50	20.940
1.45	19.515
1.40	18.350
1.35	17.590
1.30	16.856
1.25	16.129
1.20	15.405
1.15	14.682
H21=3.400	
2.61	231.23
2.60	185.36
2.59	156.26
2.58	136.17
2.57	121.54
2.56	110.55
2.55	101.96
2.54	95.065
2.50	77.555
2.45	66.226
2.40	59.636
2.35	55.191
2.30	51.854
2.25	49.159
2.20	46.862
2.15	44.800
2.10	42.910
2.05	41.143
2.00	39.448
1.95	37.807
1.90	36.215
1.85	34.640
1.80	33.086
1.75	31.542

(to be continued)

Table 5. (continued)

V/V_1	L/H_1
1.70	30.001
1.65	28.456
1.60	26.900
1.55	25.325
1.50	23.726
1.45	22.099
1.40	20.544
1.35	19.600
1.30	18.781
1.25	17.971
1.20	17.166
1.15	16.361
H21=3.800	
2.61	256.08
2.60	205.43
2.59	173.17
2.58	150.93
2.57	134.84
2.56	122.62
2.55	113.14
2.54	105.54
2.50	86.163
2.45	73.703
2.40	66.434
2.35	61.524
2.30	57.851
2.25	54.860
2.20	52.312
2.15	50.028
2.10	47.923
2.05	45.950
2.00	44.062
1.95	42.245
1.90	40.460
1.85	38.708
1.80	36.973
1.75	35.255
1.70	33.528
1.65	31.804
1.60	30.063
1.55	28.301
1.50	26.514
1.45	24.695

V/V_1	L/H_1
1.40	22.872
1.35	21.624
1.30	20.708
1.25	19.815
1.20	18.927
1.15	18.040
H21=4.200	
2.61	280.90
2.60	225.52
2.59	190.05
2.58	165.74
2.57	148.06
2.56	134.71
2.55	124.29
2.54	115.99
2.50	94.818
2.45	81.172
2.40	73.233
2.35	67.858
2.30	63.839
2.25	60.579
2.20	57.768
2.15	55.252
2.10	52.946
2.05	50.765
2.00	48.691
1.95	46.670
1.90	44.711
1.85	42.773
1.80	40.861
1.75	38.961
1.70	37.058
1.65	35.147
1.60	33.223
1.55	31.278
1.50	29.301
1.45	27.288
1.40	25.253
1.35	23.663
1.30	22.641
1.25	21.662
1.20	20.692
1.15	19.720

V/V_1	L/H_1
H21=4.600	
2.61	306.16
2.60	245.38
2.59	206.91
2.58	180.53
2.57	161.31
2.56	146.79
2.55	135.52
2.54	126.45
2.50	103.45
2.45	88.652
2.40	80.025
2.35	74.220
2.30	69.850
2.25	66.291
2.20	63.217
2.15	60.488
2.10	57.953
2.05	55.590
2.00	53.306
1.95	51.104
1.90	48.957
1.85	46.847
1.80	44.749
1.75	42.660
1.70	40.583
1.65	38.495
1.60	36.387
1.55	34.256
1.50	32.096
1.45	29.889
1.40	27.645
1.35	25.722
1.30	24.578
1.25	23.511
1.20	22.457
1.15	21.402

V/V_1	L/H_1
H21=5.000	
2.61	330.71
2.60	265.43
2.59	223.99
2.58	195.32
2.57	174.58
2.56	158.86
2.55	146.64
2.54	136.95
2.50	112.106
2.45	96.156
2.40	86.833
2.35	80.554
2.30	75.830
2.25	71.988
2.20	68.695
2.15	65.720
2.10	62.992
2.05	60.413
2.00	57.932
1.95	55.552
1.90	53.217
1.85	50.910
1.80	48.632
1.75	46.374
1.70	44.111
1.65	41.839
1.60	39.545
1.55	37.238
1.50	34.880
1.45	32.485
1.40	30.040
1.35	27.812
1.30	26.519
1.25	25.361
1.20	24.223
1.15	23.086

Table 6.

RO21=3.000 V21=4.620 V2S1=2.662
RO31=3.072 V31=5.200 V3S1=3.000

V/V_1	L/H_1
H21=1.000	
2.75	196.23
2.74	88.821
2.73	57.108
2.72	42.104
2.71	33.491
2.70	27.994
2.65	16.949
2.60	13.699
2.55	12.202
2.50	11.300
2.45	10.659
2.40	10.152
2.35	9.7229
2.30	9.3426
2.25	8.9945
2.20	8.6684
2.15	8.3584
2.10	8.0596
2.05	7.7698
2.00	7.4859
1.95	7.2066
1.90	6.9305
1.85	6.6565
1.80	6.3834
1.75	6.1106
1.70	5.8371
1.65	5.5622
1.60	5.2849
1.55	5.0045
1.50	4.7195
1.45	4.4291
1.40	4.1312
1.35	3.8238
1.30	3.5041
H21=1.500	
2.75	241.31
2.74	107.79
2.73	68.310
2.72	49.545
2.71	38.739
2.70	31.830
2.65	18.077
2.60	14.207
2.55	12.499
2.50	11.502
2.45	10.810
2.40	10.272
2.35	9.8222
2.30	9.4273
2.25	9.0685
2.20	8.7342
2.15	8.4171
2.10	8.1133
2.05	7.8185
2.00	7.5305
1.95	7.2476
1.90	6.9685
1.85	6.6915
1.80	6.4158
1.75	6.1405
1.70	5.8647
1.65	5.5876
1.60	5.3082
1.55	5.0256
1.50	4.7387
1.45	4.4461
1.40	4.1461
1.35	3.8366
1.30	3.5147
H21=2.000	
2.75	296.11
2.74	126.62
2.73	79.322
2.72	56.831
2.71	43.862
2.70	35.574
2.65	19.270
2.60	14.813
2.55	12.876
2.50	11.766
2.45	11.007
2.40	10.428
2.35	9.9499
2.30	9.5343
2.25	9.1593
2.20	8.8127
2.15	8.4862
2.10	8.1739
2.05	7.8723
2.00	7.5784
1.95	7.2902
1.90	7.0062
1.85	6.7252
1.80	6.4458
1.75	6.1670
1.70	5.8880
1.65	5.6078
1.60	5.3257
1.55	5.0405
1.50	4.7511
1.45	4.4562
1.40	4.1542
1.35	3.8428
1.30	3.5192
H21=2.500	
2.75	330.58
2.74	145.28
2.73	90.254
2.72	64.012
2.71	48.895
2.70	39.259
2.65	20.577
2.60	15.549
2.55	13.356
2.50	12.102
2.45	11.257
2.40	10.620
2.35	10.103
2.30	9.6586
2.25	9.2623
2.20	8.8992
2.15	8.5592
2.10	8.2360
2.05	7.9253
2.00	7.6239
1.95	7.3292
1.90	7.0395
1.85	6.7536
1.80	6.4697
1.75	6.1872
1.70	5.9047
1.65	5.6217
1.60	5.3368
1.55	5.0493
1.50	4.7579
1.45	4.4613
1.40	4.1578
1.35	3.8452
1.30	3.5207
H21=3.000	
2.75	375.43
2.74	163.87
2.73	101.06
2.72	71.123
2.71	53.869
2.70	42.911
2.65	22.007
2.60	16.420
2.55	13.939
2.50	12.512
2.45	11.555
2.40	10.845
2.35	10.276
2.30	9.7951
2.25	9.3715
2.20	8.9874
2.15	8.6310
2.10	8.2951
2.05	7.9736
2.00	7.6636
1.95	7.3618
1.90	7.0663
1.85	6.7753
1.80	6.4872
1.75	6.2011
1.70	5.9157
1.65	5.6301
1.60	5.3432
1.55	5.0541
1.50	4.7612
1.45	4.4635
1.40	4.1592
1.35	3.8460
1.30	3.5211

(to be continued)

Table 6. (continued)

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=3.500		H21=4.000		H21=4.500		H21=5.000	
2.75	420.18	2.75	464.13	2.75	509.12	2.75	552.87
2.74	182.46	2.74	200.98	2.74	219.50	2.74	237.75
2.73	111.82	2.73	122.52	2.73	133.24	2.73	143.90
2.72	78.165	2.72	85.176	2.72	92.128	2.72	99.080
2.71	58.791	2.71	63.679	2.71	68.547	2.71	73.416
2.70	46.543	2.70	50.172	2.70	53.790	2.70	57.414
2.65	23.549	2.65	25.179	2.65	26.882	2.65	28.635
2.60	17.410	2.60	18.498	2.60	19.662	2.60	20.884
2.55	14.620	2.55	15.383	2.55	16.215	2.55	17.105
2.50	12.990	2.50	13.531	2.50	14.126	2.50	14.765
2.45	11.900	2.45	12.284	2.45	12.702	2.45	13.150
2.40	11.097	2.40	11.372	2.40	11.663	2.40	11.968
2.35	10.464	2.35	10.663	2.35	10.866	2.35	11.070
2.30	9.9379	2.30	10.082	2.30	10.225	2.30	10.361
2.25	9.4813	2.25	9.5882	2.25	9.6879	2.25	9.7790
2.20	9.0729	2.20	9.1520	2.20	9.2229	2.20	9.2840
2.15	8.6979	2.15	8.7571	2.15	8.8076	2.15	8.8489
2.10	8.3475	2.10	8.3918	2.10	8.4278	2.10	8.4562
2.05	8.0149	2.05	8.0485	2.05	8.0743	2.05	8.0934
2.00	7.6960	2.00	7.7211	2.00	7.7397	2.00	7.7525
1.95	7.3874	1.95	7.4060	1.95	7.4191	1.95	7.4279
1.90	7.0860	1.90	7.0999	1.90	7.1093	1.90	7.1152
1.85	6.7905	1.85	6.8008	1.85	6.8071	1.85	6.8112
1.80	6.4989	1.80	6.5063	1.80	6.5108	1.80	6.5133
1.75	6.2098	1.75	6.2151	1.75	6.2181	1.75	6.2198
1.70	5.9222	1.70	5.9259	1.70	5.9280	1.70	5.9290
1.65	5.6347	1.65	5.6374	1.65	5.6386	1.65	5.6392
1.60	5.3465	1.60	5.3482	1.60	5.3490	1.60	5.3493
1.55	5.0563	1.55	5.0573	1.55	5.0578	1.55	5.0579
1.50	4.7628	1.50	4.7633	1.50	4.7637	1.50	4.7638
1.45	4.4646	1.45	4.4649	1.45	4.4649	1.45	4.4650
1.40	4.1598	1.40	4.1599	1.40	4.1600	1.40	4.1601
1.35	3.8462	1.35	3.8464	1.35	3.8465	1.35	3.8464
1.30	3.5821	1.30	3.5213	1.30	3.5214	1.30	3.5214

Table 7—8.

RO21=2.800 V21=4.000 V2S1=2.310
RO31=3.000 V31=5.300 V3S1=3.040

V/V_1	L/H_1
H21=0.500	
2.78	96.952
2.77	61.813
2.76	45.627
2.75	36.394
2.74	30.487
2.73	26.424
2.72	23.491
2.71	21.293
2.70	19.602
2.69	18.270
2.65	14.997
2.60	13.009
2.55	11.889
2.50	11.136
2.45	10.564
2.40	10.095
2.35	9.6877
2.30	9.3211
2.25	8.9818
2.20	8.6619
2.15	8.3562
2.10	8.0607
2.05	7.7730
2.00	7.4911
1.95	7.2131
1.90	6.9379
1.85	6.6647
1.80	6.3924
1.75	6.1201
1.70	5.8472
1.65	5.5728
1.60	5.2960
1.55	5.0159
1.50	4.7316
1.45	4.4417
1.40	4.1446
1.35	3.8384
1.30	3.5200
1.25	3.1857
H21=1.000	
2.78	140.21
2.77	88.333
2.76	64.300
2.75	50.477
2.74	41.533
2.73	35.305
2.72	30.750
2.71	27.293
2.70	24.605
2.69	22.470
2.65	17.212
2.60	14.148
2.55	12.569
2.50	11.591
2.45	10.899
2.40	10.357
2.35	9.9028
2.30	9.5042
2.25	9.1419
2.20	8.8084
2.15	8.4857
2.10	8.1799
2.05	7.8835
2.00	7.5941
1.95	7.3100
1.90	7.0295
1.85	6.7516
1.80	6.4752
1.75	6.1993
1.70	5.9229
1.65	5.6455
1.60	5.3658
1.55	5.0832
1.50	4.7963
1.45	4.5041
1.40	4.2046
1.35	3.8960
1.30	3.5751
1.25	3.2379
H21=1.500	
2.78	183.37
2.77	114.97
2.76	83.167
2.75	64.802
2.74	52.873
2.73	44.522
2.72	38.375
2.71	33.684
2.70	30.011
2.69	27.072
2.65	19.758
2.60	15.512
2.55	13.403
2.50	12.165
2.45	11.328
2.40	10.698
2.35	10.185
2.30	9.7461
2.25	9.3536
2.20	8.9934
2.15	8.6558
2.10	8.3346
2.05	8.0256
2.00	7.7251
1.95	7.4316
1.90	7.1426
1.85	6.8568
1.80	6.5733
1.75	6.2906
1.70	6.0081
1.65	5.7246
1.60	5.4392
1.55	5.1508
1.50	4.8584
1.45	4.5603
1.40	4.2550
1.35	3.9403
1.30	3.6130
1.25	3.2688
H21=2.000	
2.78	226.65
2.77	141.60
2.76	102.03
2.75	79.175
2.74	64.284
2.73	53.846
2.72	46.134
2.71	40.228
2.70	35.589
2.69	31.869
2.65	22.553
2.60	17.134
2.55	14.470
2.50	12.932
2.45	11.915
2.40	11.168
2.35	10.575
2.30	10.076
2.25	9.6387
2.20	9.2431
2.15	8.8768
2.10	8.5316
2.05	8.2020
2.00	7.8842
1.95	7.5746
1.90	7.2718
1.85	6.9733
1.80	6.6782
1.75	6.3847
1.70	6.0920
1.65	5.7991
1.60	5.5045
1.55	5.2075
1.50	4.9067
1.45	4.6008
1.40	4.2879
1.35	3.9658
1.30	3.6317
1.25	3.2815
H21=2.500	
2.78	269.91
2.77	168.26
2.76	120.91
2.75	93.568
2.74	75.727
2.73	63.210
2.72	53.948
2.71	46.839
2.70	41.247
2.69	36.758
2.65	25.513
2.60	18.990
2.55	15.781
2.50	13.921
2.45	12.692

(to be continued)

Table 7—8. (continued)

V/V_1	L/H_1
2.40	11.796
2.35	11.094
2.30	10.512
2.25	10.010
2.20	9.5614
2.15	9.1520
2.10	8.7706
2.05	8.4100
2.00	8.0653
1.95	7.7326
1.90	7.4089
1.85	7.0922
1.80	6.7804
1.75	6.4721
1.70	6.1658
1.65	5.8606
1.60	5.5551
1.55	5.2482
1.50	4.9386
1.45	4.6248
1.40	4.3053
1.35	3.9777
1.30	3.6392
1.25	3.2857
H21=3.000	
2.78	312.90
2.77	194.90
2.76	139.83
2.75	107.98
2.74	72.588
2.73	61.784
2.72	53.477
2.71	46.951
2.70	41.701
2.69	28.584
2.65	21.020
2.60	17.294
2.55	15.112
2.50	13.655
2.45	12.587
2.40	11.750
2.35	11.061
2.30	10.471
2.25	9.9511
2.20	9.4811

V/V_1	L/H_1
2.10	9.0484
2.05	8.6445
2.00	8.2626
1.95	7.8977
1.90	7.5462
1.85	7.2054
1.80	6.8727
1.75	6.5465
1.70	6.2249
1.65	5.9066
1.60	5.5901
1.55	5.2740
1.50	4.9570
1.45	4.6374
1.40	4.3133
1.35	3.9825
1.30	3.6418
1.25	3.2869
H21=3.500	
2.78	356.21
2.77	221.57
2.76	158.72
2.75	122.35
2.74	98.662
2.73	81.975
2.72	69.622
2.71	60.138
2.70	52.667
2.69	46.678
2.68	41.803
2.65	31.728
2.60	23.172
2.55	18.953
2.50	16.458
2.45	14.771
2.40	13.521
2.35	12.535
2.30	11.720
2.25	11.023
2.20	10.410
2.15	9.8615
2.10	9.3614
2.05	8.8998
2.00	8.4690
1.95	8.0628
1.90	7.6768

V/V_1	L/H_1
1.85	7.3071
1.80	6.9059
1.75	6.6055
1.70	6.2684
1.65	5.9379
1.60	5.6120
1.55	5.2889
1.50	4.9666
1.45	4.6433
1.40	4.3167
1.35	3.9842
1.30	3.6427
1.25	3.2872
H21=4.000	
2.78	399.32
2.77	248.06
2.76	177.55
2.75	136.78
2.74	110.10
2.73	91.376
2.72	77.460
2.71	66.803
2.70	58.404
2.69	51.663
2.68	46.192
2.65	34.922
2.60	25.404
2.55	20.714
2.50	17.915
2.45	16.001
2.40	14.568
2.35	13.426
2.30	12.473
2.25	11.654
2.20	10.933
2.15	10.288
2.10	9.7038
2.05	9.1700
2.00	8.6780
1.95	8.2214
1.90	7.7951
1.85	7.3936
1.80	7.0128
1.75	6.6488
1.70	6.2982
1.65	5.9577

V/V_1	L/H_1
1.60	5.6248
1.55	5.2968
1.50	4.9712
1.45	4.6459
1.40	4.3180
1.35	3.9849
1.30	3.6429
1.25	3.2873
H21=4.500	
2.78	442.58
2.77	274.81
2.76	196.53
2.75	151.17
2.74	121.60
2.73	100.75
2.72	85.317
2.71	73.479
2.70	64.155
2.69	56.668
2.68	50.606
2.65	38.147
2.60	27.692
2.55	22.539
2.50	19.445
2.45	17.311
2.40	15.698
2.35	14.398
2.30	13.303
2.25	12.353
2.20	11.511
2.15	10.754
2.10	10.070
2.05	9.4491
2.00	8.8841
1.95	8.3695
1.90	7.8985
1.85	7.4639
1.80	7.0596
1.75	6·6792
1.70	6.3174
1.65	5.9695
1.60	5.6317
1.55	5.3006
1.50	4.9735
1.45	4.6469
1.40	4.3186

(to be continued)

Table 7—8. (continued)

V/V_1	L/H_1
1.35	3.9850
1.30	3.6429
1.25	3.2873
H21=5.000	
2.78	486.04
2.77	301.18
2.76	215.27
2.75	165.56
2.74	133.04
2.73	110.15
2.72	93.162
2.71	80.162
2.70	69.906
2.69	61.680
2.68	55.021
2.65	41.393
2.60	30.018
2.55	24.409
2.50	21.027
2.45	18.677
2.40	16.885
2.35	15.428
2.30	14.192
2.25	13.106
2.20	12.134
2.15	11.254
2.10	10.455
2.05	9.7324
2.00	9.0832
1.95	8.5034
1.90	7.9852
1.85	7.5186
1.80	7.0932
1.75	6.6994
1.70	6.3292
1.65	5.9763
1.60	5.6354
1.55	5.3026
1.50	4.9743
1.45	4.6474
1.40	4.3189
1.35	3.9852
1.30	3.6430
1.25	3.2874

V/V_1	L/H_1
H21=5.500	
2.78	529.00
2.73	119.51
2.70	75.638
2.68	59.457
2.65	44.661
2.60	32.370
2.55	26.314
2.50	22.642
2.45	20.080
2.40	18.113
2.35	16.503
2.30	15.122
2.25	13.900
2.20	12.793
2.15	11.780
2.10	10.853
2.05	10.015
2.00	9.2714
1.95	8.6210
1.90	8.0557
1.85	7.5595
1.80	7.1162
1.75	6.7121
1.70	6.3562
1.65	5.9799
1.60	5.6374
1.55	5.3036
1.50	4.9748
H21=6.000	
2.78	572.55
2.73	128.91
2.70	81.404
2.68	63.885
2.65	47.939
2.60	34.743
2.55	28.236
2.50	24.283
2.45	21.508
2.40	19.370
2.35	17.607
2.30	16.084
2.25	14.724
2.20	13.480
2.15	12.327

V/V_1	L/H_1
2.10	11.261
2.05	10.295
2.00	9.4459
1.95	8.7218
1.90	8.1108
1.85	7.5889
1.80	7.1317
1.75	6.7200
1.70	6.3402
1.65	5.9818
1.60	5.6382
1.55	5.3039
1.50	4.9748
H21=6.500	
2.78	614.96
2.73	138.33
2.70	87.167
2.68	68.328
2.65	51.231
2.60	37.129
2.55	30.176
2.50	25.940
2.45	22.957
2.40	20.646
2.35	18.733
2.30	17.070
2.25	15.573
2.20	14.188
2.15	12.890
2.10	11.676
2.05	10.568
2.00	9.6057
1.95	8.8063
1.90	8.1529
1.85	7.6096
1.80	7.1416
1.75	6.7247
1.70	6.3424
1.65	5.9829
1.60	5.6387
1.55	5.3042
1.50	4.9750

V/V_1	L/H_1
H21=7.000	
2.78	659.05
2.73	147.70
2.70	92.926
2.68	72.772
2.65	54.519
2.60	39.524
2.55	32.128
2.50	27.609
2.45	24.419
2.40	21.937
2.35	19.876
2.30	18.074
2.25	16.438
2.20	14.913
2.15	13.465
2.10	12.094
2.05	10.833
2.00	9.7490
1.95	8.8752
1.90	8.1843
1.85	7.6235
1.80	7.1480
1.75	6.7276
1.70	6.3435
1.65	5.9835
1.60	5.6388
H21=7.500	
2.78	702.21
2.73	157.07
2.70	98.662
2.68	77.204
2.65	57.827
2.60	41.925
2.55	34.090
2.50	29.290
2.45	25.893
2.40	23.241
2.35	21.030
2.30	19.088
2.25	17.317
2.20	15.651
2.15	14.051

(to be continued)

Table 7—8. (continued)

V/V_1	L/H_1
2.10	12.514
2.05	11.089
2.00	9.8762
1.95	8.9304
1.90	8.2070
1.85	7.6330
1.80	7.1520
1.75	6.7293
1.70	6.3445
1.65	5.9836
1.60	5.6390
H21=8.000	
2.78	744.89
2.73	166.41
2.70	104.43
2.68	81.662
2.65	61.123
2.60	44.338
2.55	36.057
2.50	30.979
2.45	27.371
2.40	24.554
2.35	22.193
2.30	20.115
2.25	18.208
2.20	16.399
2.15	14.645
2.10	12.934
2.05	11.332
2.00	9.9870
1.95	8.9733
1.90	8.2233
1.85	7.6392
1.80	7.1543
1.75	6.7304
1.70	6.3448
1.65	5.9838
1.60	5.6392
H21=8.500	
2.78	788.24
2.73	175.85
2.70	110.19
2.68	86.117
2.65	64.445
2.60	46.754
2.55	38.034
2.50	32.670
2.45	28.860
2.40	25.872
2.35	23.366
2.30	21.148
2.25	19.105
2.20	17.156
2.15	15.243
2.10	13.353
2.05	11.564
2.00	10.082
1.95	9.0063
1.90	8.2346
1.85	7.6432
1.80	7.1559
1.75	6.7307
1.70	6.3449
1.65	5.9839
1.60	5.6392
H21=9.000	
2.78	831.53
2.73	185.22
2.70	115.95
2.68	90.572
2.65	67.753
2.60	49.175
2.55	40.009
2.50	34.367
2.45	30.351
2.40	27.195
2.35	24.542
2.30	22.187
2.25	20.010
2.20	17.918
2.15	15.848
2.10	13.770
2.05	11.784
2.00	10.163
1.95	9.0313
1.90	8.2425
1.85	7.6457
1.80	7.1567
1.75	6.7313
1.70	6.3449
H21=9.500	
2.78	873.89
2.73	194.60
2.70	121.71
2.68	95.019
2.65	71.064
2.60	51.601
2.55	41.994
2.50	36.073
2.45	31.845
2.40	28.524
2.35	25.722
2.30	23.233
2.25	20.919
2.20	18.685
2.15	16.455
2.10	14.185
2.05	11.990
2.00	10.230
1.95	9.0497
1.90	8.2478
1.85	7.6473
1.80	7.1571
1.75	6.7313
1.70	6.3449
H21=10.000	
2.78	917.50
2.73	204.01
2.70	127.44
2.68	99.463
2.65	74.392
2.60	54.027
2.55	43.974
2.50	37.778
2.45	33.343
2.40	29.854
2.35	26.908
2.30	24.280
2.25	21.833
2.20	19.458
2.15	17.065
2.10	14.597
2.05	12.182
2.00	10.286
1.95	9.0631
1.90	8.2515
1.85	7.6485
1.80	7.1575
H21=10.500	
2.78	962.09
2.73	213.31
2.70	133.24
2.68	103.92
2.65	77.693
2.60	56.457
2.55	45.961
2.50	39.481
2.45	34.847
2.40	31.189
2.35	28.094
2.30	25.332
2.25	22.750
2.20	20.232
2.15	17.676
2.10	15.005
2.05	12.361
2.00	10.331
1.95	9.0730
1.90	8.2533
1.85	7.6494
1.80	7.1579
H21=11.000	
2.78	1003.3
2.73	222.73
2.70	139.00
2.68	108.38
2.65	81.020
2.60	58.886
2.55	47.948
2.50	41.187
2.45	36.348
2.40	32.522
2.35	29.284
2.30	26.386

(to be continued)

Table 7—8. (continued)

V/V_1	L/H_1
2.25	23.668
2.20	21.010
2.15	18.289
2.10	15.409
2.05	12.526
2.00	10.366
1.95	9.0807
1.90	8.2549
H21=11.500	
2.78	1048.3
2.73	232.17
2.70	144.71
2.68	112.80
2.65	84.339
2.60	61.313
2.55	49.939
2.50	42.904
2.45	37.855
2.40	33.861
2.35	30.477
2.30	27.441
2.25	24.591
2.20	21.789
2.15	18.903
2.10	15.811
2.05	12.678
2.00	10.395
1.95	9.0855
1.90	8.2565
H21=12.000	
2.78	1088.20
2.73	241.54
2.70	150.46
2.68	117.27
2.65	87.671
2.60	63.742
2.55	51.934
2.50	44.615
2.45	39.361
2.40	35.199
2.35	31.669
2.30	28.499
2.25	25.515
2.20	22.570
2.15	19.518
2.10	16.206
2.05	12.816
2.00	10.418
1.95	9.0893
1.90	8.2573
H21=12.500	
2.78	1131.2
2.73	250.96
2.70	156.21
2.68	121.71
2.65	90.988
2.60	66.185
2.55	53.925
2.50	46.325
2.45	40.867
2.40	36.539
2.35	32.862
2.30	29.559
2.25	26.441
2.20	23.355
2.15	20.135
2.10	16.599
2.05	12.941
2.00	10.436
1.95	9.0919
1.90	8.2584
H21=13.000	
2.78	1177.8
2.73	260.35
2.70	162.01
2.68	126.19
2.65	94.323
2.60	68.620
2.55	55.917
2.50	48.037
2.45	42.374
2.40	37.883
2.35	34.058
2.30	30.618
2.25	27.366
2.20	24.137
2.15	20.751
2.10	16.986
2.05	13.055
2.00	10.449
H21=13.500	
2.78	1216.8
2.73	269.63
2.70	167.72
2.68	130.61
2.65	97.651
2.60	71.045
2.55	57.918
2.50	49.755
2.45	43.884
2.40	39.223
2.35	35.257
2.30	31.681
2.25	28.295
2.20	24.922
2.15	21.367
2.10	17.369
2.05	13.155
2.00	10.458
H21=14.000	
2.78	1264.7
2.73	278.98
2.70	173.48
2.68	135.06
2.65	100.94
2.60	73.500
2.55	59.914
2.50	51.467
2.45	45.394
2.40	40.571
2.35	36.456
2.30	32.741
2.25	29.224
2.20	25.709
2.15	21.984
2.10	17.746
2.05	13.244
2.00	10.467
H21=14.500	
2.78	1303.1
2.73	288.36
2.70	179.28
2.68	139.53
2.65	104.30
2.60	75.928
2.55	61.902
2.50	53.190
2.45	46.908
2.40	41.912
2.35	37.650
2.30	33.807
2.25	30.152
2.20	26.495
2.15	22.600
2.10	18.119
2.05	13.322
2.00	10.471
H21=15.000	
2.78	1351.0
2.73	297.70
2.70	185.08
2.68	143.98
2.65	107.61
2.60	78.356
2.55	63.901
2.50	54.903
2.45	48.417
2.40	43.257
2.35	38.850
2.30	34.870
2.25	31.084
2.20	27.284
2.15	23.216
2.10	18.489
2.05	13.391
2.00	10.477

Table 9.

RO21=2.800 V21=3.340 V2S1=1.930
RO31=3.000 V31=5.300 V3S1=3.040

V/V_1	L/H_1
H21=0.500	
2.78	115.64
2.77	73.700
2.76	54.278
2.75	43.138
2.74	35.957
2.73	30.962
2.70	22.398
2.65	16.403
2.60	13.801
2.55	12.389
2.50	11.482
2.45	10.823
2.40	10.299
2.35	9.8560
2.30	9.4644
2.25	9.1068
2.20	8.7736
2.15	8.4571
2.10	8.1534
2.05	7.8588
2.00	7.5711
1.95	7.2884
1.90	7.0092
1.85	6.7326
1.80	6.4572
1.75	6.1822
1.70	5.9070
1.65	5.6305
1.60	5.3520
1.55	5.0705
1.50	4.7849
1.45	4.4940
1.40	4.1963
1.35	3.8897
1.30	3.5716
1.25	3.2381
H21=1.000	
2.78	178.29
2.77	112.93
2.76	82.580
2.75	65.055
2.74	53.667
2.73	45.680
2.70	31.673
2.65	21.331
2.60	16.616
2.55	14.107
2.50	12.615
2.45	11.629
2.40	10.911
2.35	10.345
2.30	9.8709
2.25	9.4558
2.20	9.0803
2.15	8.7320
2.10	8.4034
2.05	8.0890
2.00	7.7847
1.95	7.4883
1.90	7.1976
1.85	6.9108
1.80	6.6267
1.75	6.3441
1.70	6.0620
1.65	5.7793
1.60	5.4952
1.55	5.2087
1.50	4.9184
1.45	4.6234
1.40	4.3216
1.35	4.0113
1.30	3.6895
1.25	3.3520
H21=1.500	
2.78	241.09
2.77	152.37
2.76	111.15
2.75	87.329
2.74	71.818
2.73	60.899
2.70	41.634
2.65	27.119
2.60	20.243
2.55	16.466
2.50	14.221
2.45	12.786
2.40	11.793
2.35	11.051
2.30	10.458
2.25	9.9586
2.20	9.5207
2.15	9.1246
2.10	8.7580
2.05	8.4126
2.00	8.0828
1.95	7.7642
1.90	7.4542
1.85	7.1503
1.80	6.8508
1.75	6.5541
1.70	6.2588
1.65	5.9639
1.60	5.6681
1.55	5.3702
1.50	5.0687
1.45	4.7622
1.40	4.4489
1.35	4.1263
1.30	3.7912
1.25	3.4391
H21=2.000	
2.78	303.67
2.77	191.92
2.76	139.83
2.75	109.70
2.74	90.064
2.73	76.255
2.70	51.809
2.65	33.233
2.60	24.287
2.55	19.281
2.50	16.266
2.45	14.340
2.40	13.022
2.35	12.058
2.30	11.306
2.25	10.689
2.20	10.160
2.15	9.6912
2.10	9.2650
2.05	8.8699
2.00	8.4969
1.95	8.1412
1.90	7.7979
1.85	7.4640
1.80	7.1369
1.75	6.8146
1.70	6.4954
1.65	6.1776
1.60	5.8598
1.55	5.5405
1.50	5.2181
1.45	4.8910
1.40	4.5573
1.35	4.2144
1.30	3.8594
1.25	3.4880
H21=2.500	
2.78	366.35
2.77	231.44
2.76	168.48
2.75	132.11
2.74	108.38
2.73	91.685
2.70	62.067
2.65	39.478
2.60	28.527
2.55	22.350
2.50	18.609
2.45	16.210
2.40	14.566
2.35	13.365
2.30	12.433
2.25	11.673
2.20	11.028
2.15	10.463
2.10	9.9534
2.05	9.4858
2.00	9.0490
1.95	8.6356
1.90	8.2401
1.85	7.8581
1.80	7.4865

(to be continued)

Table 9. (continued)

V/V_1	L/H_1
1.75	7.1223
1.70	6.7643
1.65	6.4096
1.60	6.0569
1.55	5.7046
1.50	5.3516
1.45	4.9959
1.40	4.6361
1.35	4.2705
1.30	3.8961
1.25	3.5095
H21=3.000	
2.78	429.29
2.77	270.90
2.76	197.29
2.75	154.57
2.74	126.68
2.73	107.10
2.70	72.343
2.65	45.793
2.60	32.866
2.55	25.557
2.50	21.125
2.45	18.280
2.40	16.328
2.35	14.897
2.30	13.784
2.25	12.874
2.20	12.102
2.15	11.425
2.10	10.816
2.05	10.258
2.00	9.7387
1.95	9.2482
1.90	8.7808
1.85	8.3309
1.80	7.8953
1.75	7.4710
1.70	7.0557
1.65	6.6482
1.60	6.2470
1.55	5.8511
1.50	5.4598
1.45	5.0719
1.40	4.6865
1.35	4.3010
1.30	3.9128
1.25	3.5174
H21=3.500	
2.78	492.55
2.77	310.45
2.76	225.85
2.75	177.00
2.74	145.03
2.73	122.55
2.70	82.659
2.65	52.139
2.60	37.258
2.55	28.836
2.50	23.741
2.45	20.469
2.40	18.222
2.35	16.571
2.30	15.281
2.25	14.225
2.20	13.324
2.15	12.531
2.10	11.817
2.05	11.159
2.00	10.545
1.95	9.9640
1.90	9.4083
1.85	8.8729
1.80	8.3546
1.75	7.8506
1.70	7.3600
1.65	6.8831
1.60	6.4204
1.55	5.9727
1.50	5.5402
1.45	5.1217
1.40	4.7148
1.35	4.3159
1.30	3.9197
1.25	3.5200
H21=4.000	
2.78	555.25
2.77	350.15
2.76	254.69
2.75	199.50
2.74	163.35
2.73	137.99
2.70	92.993
2.65	58.504
2.60	41.674
2.55	32.162
2.50	26.411
2.45	22.727
2.40	20.195
2.35	18.329
2.30	16.870
2.25	15.669
2.20	14.641
2.15	13.734
2.10	12.912
2.05	12.152
2.00	11.438
1.95	10.758
1.90	10.105
1.85	9.4711
1.80	8.8539
1.75	8.2527
1.70	7.6688
1.65	7.1066
1.60	6.5716
1.55	6.0678
1.50	5.5954
1.45	5.1515
1.40	4.7295
1.35	4.3224
1.30	3.9222
1.25	3.5210
H21=4.500	
2.78	617.91
2.77	389.35
2.76	283.28
2.75	221.86
2.74	181.69
2.73	153.46
2.70	103.29
2.65	64.875
2.60	46.118
2.55	35.513
2.50	29.118
2.45	25.028
2.40	22.216
2.35	20.141
2.30	18.513
2.25	17.171
2.20	16.019
2.15	14.998
2.10	14.068
2.05	13.206
2.00	12.391
1.95	11.609
1.90	10.852
1.85	10.112
1.80	9.3839
1.75	8.6697
1.70	7.9751
1.65	7.3130
1.60	6.6976
1.55	6.1375
1.50	5.6311
1.45	5.1679
1.40	4.7365
1.35	4.3252
1.30	3.9233
1.25	3.5212
H21=5.000	
2.78	679.95
2.77	428.93
2.76	312.14
2.75	244.41
2.74	200.05
2.73	168.98
2.70	113.65
2.65	71.251
2.60	50.567
2.55	38.882
2.50	31.849
2.45	27.355
2.40	24.267
2.35	21.985
2.30	20.192
2.25	18.710
2.20	17.434
2.15	16.301
2.10	15.266
2.05	14.301

(to be continued)

Table 9. (continued)

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
2.00	13.384	1.75	9.0956	1.50	5.6525	1.25	3.5217
1.95	12.500	1.70	8.2743	1.45	5.1767		
1.90	11.637	1.65	7.4986	1.40	4.7399		
1.85	10.784	1.60	6.7985	1.35	4.3262		
1.80	9.9365	1.55	6.1862	1.30	3.9237		

Table 10.

RO21=2.800 V21=3.333 V2S1=1.924
RO31=3.000 V31=5.300 V3S1=3.050

V/V_1	L/H_1
H21=10.000	
2.78	690.71
2.77	526.94
2.76	424.27
2.75	354.49
2.74	303.13
2.73	264.12
2.65	123.29
2.60	89.376
2.55	69.792
2.50	57.866
2.45	50.114
2.40	44.692
2.35	40.603
2.30	37.328
2.25	34.570
2.20	32.160
2.15	29.973
2.10	27.942
2.05	26.008
2.00	24.126
1.95	22.248
1.90	20.331
1.85	18.312
1.80	16.100
1.75	13.558
1.70	10.688
1.65	8.4065
1.60	7.1183
1.55	6.3074
1.50	5.7034
H21=15.000	
2.78	1023.7
2.77	779.88
2.76	628.01
2.75	524.37
2.74	448.20
2.73	390.65
2.65	181.56
2.60	131.41
2.55	102.51
2.50	84.979
2.45	73.626
2.40	65.661
2.35	59.650
2.30	54.833
2.25	50.756
2.20	47.174
2.15	43.922
2.10	40.880
2.05	37.973
2.00	35.118
1.95	32.244
1.90	29.264
1.85	26.045
1.80	22.337
1.75	17.547
1.70	11.520
1.65	8.4626
1.60	7.1268
1.55	6.3098
1.50	5.7038
H21=20.000	
2.78	1353.1
2.77	1031.1
2.76	832.88
2.75	694.06
2.74	593.27
2.73	516.79
2.65	239.96
2.60	173.48
2.55	135.27
2.50	112.14
2.45	97.172
2.40	86.668
2.35	78.739
2.30	72.363
2.25	66.960
2.20	62.217
2.15	57.905
2.10	53.858
2.05	49.968
2.00	46.142
1.95	42.277
1.90	38.232
1.85	33.803
1.80	28.543
1.75	21.063
1.70	11.660
H21=25.000	
2.78	1682.1
2.77	1284.2
2.76	1033.6
2.75	864.78
2.74	738.27
2.73	642.11
2.65	298.39
2.60	215.63
2.55	168.04
2.50	139.30
2.45	120.74
2.40	107.70
2.35	97.837
2.30	89.907
2.25	83.194
2.20	77.273
2.15	71.898
2.10	66.838
2.05	61.977
2.00	57.185
1.95	52.325
1.90	47.209
1.85	41.567
1.80	34.715
1.75	24.130
1.70	11.686
H21=30.000	
2.78	2013.8
2.77	1531.9
2.76	1236.1
2.75	1031.1
2.74	884.40
2.73	768.70
2.65	356.70
2.60	257.75
2.55	200.83
2.50	166.52
2.45	144.30
2.40	128.71
2.35	116.95
2.30	107.43
2.25	99.424
2.20	92.326
2.15	85.887
2.10	79.814
2.05	73.986
2.00	68.220
1.95	62.367
1.90	56.186
1.85	49.317
1.80	40.860
1.75	26.746

Table 11.

RO21=2.800 V21=2.670 V2S1=1.540
RO31=3.000 V31=5.300 V3S1=3.040

V/V_1	L/H_1
H21=0.500	
2.78	131.47
2.77	83.844
2.76	61.784
2.75	49.082
2.74	40.867
2.73	35.132
2.72	30.916
2.71	27.701
2.70	25.178
2.69	23.155
2.65	18.007
2.60	14.796
2.55	13.053
2.50	11.960
2.45	11.191
2.40	10.598
2.35	10.108
2.30	9.6841
2.25	9.3032
2.20	8.9515
2.15	8.6210
2.10	8.3061
2.05	8.0021
2.00	7.7066
1.95	7.4172
1.90	7.1323
1.85	6.8506
1.80	6.5707
1.75	6.2920
1.70	6.0133
1.65	5.7339
H21=1.000	
2.78	210.35
2.77	133.80
2.76	98.210
2.75	77.646
2.74	64.268
2.73	54.880
2.72	47.930
2.71	42.577
2.70	38.335
2.69	34.894
2.65	25.872
2.60	19.889
2.55	16.481
2.50	14.351
2.45	12.928
2.40	11.918
2.35	11.156
2.30	10.547
2.25	10.037
2.20	9.5917
2.15	9.1909
2.10	8.8214
2.05	8.4748
2.00	8.1444
1.95	7.8266
1.90	7.5178
1.85	7.2155
1.80	6.9182
1.75	6.6242
1.70	6.3321
1.65	6.0409
H21=1.500	
2.78	289.33
2.77	183.89
2.76	134.92
2.75	106.59
2.74	88.122
2.73	75.130
2.72	65.511
2.71	58.075
2.70	52.187
2.69	47.383
2.65	34.724
2.60	26.153
2.55	21.111
2.50	17.846
2.45	15.607
2.40	14.011
2.35	12.834
2.30	11.930
2.25	11.208
2.20	10.608
2.15	10.090
2.10	9.6312
2.05	9.2130
2.00	8.8244
1.95	8.4578
1.90	8.1075
1.85	7.7697
1.80	7.4408
1.75	7.1185
1.70	6.8010
1.65	6.4863
H21=2.000	
2.78	368.45
2.77	234.28
2.76	171.75
2.75	135.63
2.74	112.07
2.73	95.513
2.72	83.220
2.71	73.752
2.70	66.219
2.69	60.082
2.65	43.847
2.60	32.791
2.55	26.212
2.50	21.883
2.45	18.865
2.40	16.683
2.35	15.064
2.30	13.828
2.25	12.855
2.20	12.063
2.15	11.395
2.10	10.815
2.05	10.297
2.00	9.8242
1.95	9.3850
1.90	8.9708
1.85	8.5754
1.80	8.1942
1.75	7.8238
1·70	7.4607
1.65	7.1028
H21=2.500	
2.78	447.19
2.77	284.53
2.76	208.64
2.75	164.71
2.74	136.06
2.73	115.95
2.72	101.02
2.71	89.470
2.70	80.312
2.69	72.855
2.65	53.069
2.60	39.566
2.55	31.487
2.50	26.137
2.45	22.380
2.40	19.645
2.35	17.606
2.30	16.051
2.25	14.832
2.20	13.845
2.15	13.020
2.10	12.308
2.05	11.679
2.00	11.108
1.95	10.581
1.90	10.087
1.85	9.6171
1.80	9.1664
1.75	8.7289
1.70	8.3015
1.65	7.8803
H21=3.000	
2.78	526.84
2.77	334.89
2.76	245.45
2.75	193.72
2.74	160.10
2.73	136.42
2.72	118.79
2.71	105.24
2.70	94.461
2.69	85.658

(to be continued)

Table 11. (continued)

V/V_1	L/H_1
2.65	62.337
2.60	46.400
2.55	36.837
2.50	30.491
2.45	26.010
2.40	22.742
2.35	20.302
2.30	18.441
2.25	16.985
2.20	15.810
2.15	14.830
2.10	13.989
2.05	13.246
2.00	12.573
1.95	11.953
1.90	11.373
1.85	10.821
1.80	10.291
1.75	9.7772
1.70	9.2737
1.65	8.7769

H21=3.500

V/V_1	L/A_1
2.78	606.26
2.77	384.98
2.76	282.35
2.75	222.92
2.74	184.16
2.73	156.88
2.72	136.64
2.71	121.02
2.70	108.61
2.69	98.473
2.65	71.638
2.60	53.256
2.55	42.228
2.50	34.889
2.45	29.699
2.40	25.908
2.35	23.074
2.30	20.916
2.25	19.230
2.20	17.872
2.15	16.742
2.10	15.771
2.05	14.914
2.00	14.139
1.95	13.425
1.90	12.757
1.85	12.120
1.80	11.508
1.75	10.913
1.70	10.328
1.65	9.7486

H21=4.000

V/V_1	L/H_1
2.78	685.38
2.77	435.10
2.76	319.11
2.75	251.94
2.74	208.14
2.73	177.31
2.72	154.43
2.71	136.78
2.70	122.76
2.69	111.29
2.65	80.943
2.60	60.138
2.55	47.646
2.50	39.313
2.45	33.421
2.40	29.108
2.35	25.887
2.30	23.436
3.25	21.523
2.20	19.985
2.15	18.705
2.10	17.607
2.05	16.639
2.00	15.762
1.95	14.954
1.90	14.196
1.85	13.473
1.80	12.777
1.75	12.099
1·70	11.431
1.65	10.767

H21=4.500

V/V_1	L/H_1
2.78	764.81
2.77	486.04
2.76	356.21
2.75	281.11
2.74	232.17
2.73	197.89
2.72	172.32
2.71	152.60
2.70	136.93
2.69	124.12
2.65	90.254
2.60	67.029
2.55	53.069
2.50	43.757
2.45	37.161
2.40	32.330
2.35	28.728
2.30	25.984
2.25	23.846
2.20	22.130
2.15	20.702
2.10	19.477
2.05	18.395
2.00	17.418
1.95	16.515
1.90	15.666
1.85	14.859
1.80	14.078
1.75	13.316
1.70	12.564
1.65	11.813

H21=5.000

V/V_1	L/H_1
2.78	842.42
2.77	535.61
2.76	392.62
2.75	310.26
2.74	256.21
2.73	218.33
2.72	190.14
2.71	168.37
2.70	151.08
2.69	137.00
2.65	99.578
2.60	73.922
2.55	58.497
2.50	48.208
2.45	40.912
2.40	35.569
2.35	31.580
2.30	28.549
2.25	26.188
2.20	24.292
2.15	22.716
2.10	21.366
2.05	20.173
2.00	19.093
1.95	18.095
1.90	17.158
1.85	16.263
1.80	15.398
1.75	14.552
1.70	13.714
1.65	12.877

Table 12.

RO21=2.800 V21=2.000 V2S1=1.155
RO31=3.000 V31=5.300 V3S1=3.040

V/V_1	L/H_1
H21=0.500	
2.78	143.74
2.77	91.816
2.76	67.735
2.75	53.875
2.74	44.887
2.73	38.608
2.72	33.986
2.71	30.450
2.70	27.666
2.65	19.660
2.60	15.981
2.55	13.943
2.50	12.663
2.45	11.771
2.40	11.095
2.35	10.547
2.30	10.080
2.25	9.6670
2.20	9.2901
2.15	8.9393
2.10	8.6072
2.05	8.2889
2.00	7.9810
1.95	7.6809
1.90	7.3866
1.85	7.0963
1.80	6.8091
1.75	6.5238
1.70	6.2392
1.65	5.9546
1.60	5.6690
1.55	5.3816
1.50	5.0913
1.45	4.7972
1.40	4.4980
1.35	4.1920
1.30	3.8774
1.25	3.5518
H21=1.000	
2.78	235.14
2.77	150.06
2.76	110.48
2.75	87.656
2.74	72.772
2.73	62.345
2.72	54.624
2.71	48.687
2.70	43.974
2.65	30.116
2.60	23.380
2.55	19.436
2.50	16.864
2.45	15.065
2.40	13.741
2.35	12.724
2.30	11.914
2.25	11.247
2.20	10.678
2.15	10.181
2.10	9.7343
2.05	9.3251
2.00	8.9437
1.95	8.5831
1.90	8.2385
1.85	7.9057
1.80	7.5822
1.75	7.2656
1.70	6.9543
1.65	6.6464
1.60	6.3410
1.55	6.0368
1.50	5.7328
1.45	5.4279
1.40	5.1210
1.35	4.8109
1.30	4.4963
1.25	4.1756
H21=1.500	
2.78	326.81
2.77	208.56
2.76	153.51
2.75	121.80
2.74	101.10
2.73	86.566
2.72	75.794
2.71	67.513
2.70	60.935
2.65	41.506
2.60	31.964
2.55	26.295
2.50	22.523
2.45	19.824
2.40	17.788
2.35	16.194
2.30	14.910
2.25	13.856
2.20	12.974
2.15	12.225
2.10	11.578
2.05	11.008
2.00	10.497
1.95	10.031
1.90	9.5985
1.85	9.1919
1.80	8.8051
1.75	8.4332
1.70	8.0729
1.65	7.7212
1.60	7.3762
1.55	7.0358
1.50	6.6985
1.45	6.3628
1.40	6.0269
1.35	5.6896
1.30	5.3488
1.25	5.0024
H21=2.000	
2.78	418.81
2.77	267.25
2.76	196.68
2.75	155.98
2.74	129.49
2.73	110.88
2.72	97.098
2.71	86.507
2.70	78.070
2.65	53.124
2.60	40.847
2.55	33.521
2.50	28.623
2.45	25.092
2.40	22.403
2.35	20.275
2.30	18.540
2.25	17.097
2.20	15.884
2.15	14.854
2.10	13.971
2.05	13.207
2.00	12.537
1.95	11.938
1.90	11.393
1.85	10.891
1.80	10.418
1.75	9.9703
1.70	9.5401
1.65	9.1235
1.60	8.7171
1.55	8.3184
1.50	7.9245
1.45	7.5336
1.40	7.1434
1.35	6.7514
1.30	6.3551
1.25	5.9514
H21=2.500	
2.78	510.13
2.77	325.77
2.76	239.96
2.75	190.21
2.74	157.94
2.73	135.31
2.72	118.46
2.71	105.52
2.70	95.230
2.65	64.818
2.60	49.823
2.55	40.867
2.50	34.870
2.45	30.527
2.40	27.209
2.35	24.568
2.30	22.403
2.25	20.590

(to be continued)

Table 12. (continued)

V/V_1	L/H_1
2.20	19.054
2.15	17.745
2.10	16.625
2.05	15.662
2.00	14.824
1.95	14.084
1.90	13.419
1.85	12.811
1.80	12.244
1.75	11.709
1.70	11.198
1.65	10.705
1.60	10.225
1.55	9.7547
1.50	9.2908
1.45	8.8303
1.40	8.3704
1.35	7.9078
1.30	7.4393
1.25	6.9604

H21=3.000

V/V_1	L/H_1
2.78	602.01
2.77	384.12
2.76	282.97
2.75	224.57
2.74	186.42
2.73	159.65
2.72	139.83
2.71	124.57
2.70	112.46
2.65	76.549
2.60	58.845
2.55	48.267
2.50	41.174
2.45	36.030
2.40	32.092
2.35	28.949
2.30	26.359
2.25	24.183
2.20	22.333
2.15	20.750
2.10	19.393
2.05	18.229
2.00	17.223
1.95	16.340
1.90	15.552
1.85	14.835
1.80	14.170
1.75	13.544
1.70	12.947
1.65	12.372
1.60	11.813
1.55	11.266
1.50	10.725
1.45	10.188
1.40	9.6518
1.35	9.1109
1.30	8.5620
1.25	7.9989

H21=3.500

V/V_1	L/H_1
2.78	694.63
2.77	442.96
2.76	326.39
2.75	258.91
2.74	214.91
2.73	184.09
2.72	161.30
2.71	143.62
2.70	129.68
2.65	88.303
2.60	67.896
2.55	55.699
2.50	47.505
2.45	41.567
2.40	37.011
2.35	33.369
2.30	30.362
2.25	27.827
2.20	25.663
2.15	23.809
2.10	22.218
2.05	20.853
2.00	19.677
1.95	18.651
1.90	17.737
1.85	16.910
1.80	16.145
1.75	15.426
1.70	14.742
1.65	14.082
1.60	13.442
1.55	12.814
1.50	12.194
1.45	11.578
1.30	10.961
1.35	10.338
1.30	9.7045
1.25	9.0525

H21=4.000

V/V_1	L/H_1
2.78	785.83
2.77	501.67
2.76	369.50
2.75	293.12
2.74	243.37
2.73	208.56
2.72	182.72
2.71	162.78
2.70	146.94
2.65	100.04
2.60	76.950
2.55	63.132
2.50	53.858
2.45	47.122
2.40	41.953
2.35	37.811
2.30	34.386
2.25	31.495
2.20	29.019
2.15	26.894
2.10	25.070
2.05	23.506
2.00	22.160
1.95	20.989
1.90	19.951
1.85	19.012
1.80	18.146
1.75	17.334
1.70	16.561
1.65	15.816
1.60	15.092
1.55	14.383
1.50	13.682
1.45	12.985
1.40	12.285
1.35	11.579
1.30	10.858
1.25	10.115

H21=4.500

V/V_1	L/H_1
2.78	876.86
2.77	560.70
2.76	412.77
2.75	327.43
2.74	271.91
2.73	232.90
2.72	204.01
2.71	181.88
2.70	164.18
2.65	111.82
2.60	86.030
2.55	70.596
2.50	60.222
2.45	52.689
2.40	46.908
2.35	42.270
2.30	38.426
2.25	35.180
2.20	32.395
2.15	29.997
2.10	27.939
2.05	26.177
2.00	24.662
1.95	23.346
1.90	22.181
1.85	21.132
1.80	20.164
1.75	19.257
1.70	18.394
1.65	17.563
1.60	16.756
1.55	15.963
1.50	15.180
1.45	14.401
1.40	13.619
1.35	12.828
1.30	12.019
1.25	11.183

H21=5.000

V/V_1	L/H_1
2.78	969.34
2.77	618.65
2.76	455.91
2.75	361.97
2.74	300.48

(to be continued)

Table 12. (continued)

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
2.73	257.36	2.35	46.729	1.85	23.260	1.35	14.081
2.72	225.46	2.30	42.472	1.80	22.191	1.30	13.184
2.71	200.90	2.25	38.873	1.75	21.188	1.25	12.254
2.70	181.43	2.20	35.777	1.70	20.235		
2.65	123.58	2.15	33.112	1.65	19.318		
2.60	95.089	2.10	30.820	1.60	18.427		
2.55	78.047	2.05	28.857	1.55	17.551		
2.50	66.596	2.00	27.172	1.50	16.686		
2.45	58.259	1.95	25.712	1.45	15.824		
2.40	51.861	1.90	24.423	1.40	14.959		

Table 13.

RO21=3.000 V21=4.667 V2S1=2.694
RO31=3.400 V31=5.533 V3S1=3.194

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.90	136.49	2.90	243.37	2.90	349.91	2.90	455.91
2.88	76.368	2.88	130.44	2.88	184.09	2.88	237.86
2.86	49.746	2.86	82.979	2.86	116.69	2.86	150.55
2.84	37.083	2.84	62.466	2.84	88.592	2.84	114.84
2.82	30.473	2.82	51.955	2.82	74.156	2.82	96.480
2.80	26.494	2.80	45.486	2.80	65.138	2.80	84.909
2.78	23.804	2.78	40.958	2.78	58.765	2.78	76.675
2.76	21.832	2.76	37.538	2.76	53.886	2.76	70.355
2.74	20.304	2.74	34.795	2.74	49.948	2.74	65.212
2.72	19.068	2.72	32.511	2.72	46.640	2.72	60.870
2.70	18.037	2.70	30.549	2.70	43.772	2.70	57.096
2.68	17.157	2.68	28.820	2.68	41.217	2.68	53.728
2.65	16.046	2.65	26.541	2.65	37.816	2.65	49.204
2.60	14.575	2.60	23.298	2.60	32.858	2.60	42.542
2.55	13.421	2.55	20.467	2.55	28.342	2.55	36.348
2.50	12.483	2.50	17.867	2.50	23.879	2.50	29.955
2.45	11.699	2.45	15.449	2.45	19.164	2.45	22.450
2.40	11.034	2.40	13.338	2.40	14.703	2.40	15.180
2.35	10.460	2.35	11.750	2.35	12.091	2.35	12.132
2.30	9.9545	2.30	10.667	2.30	10.759	2.30	10.764
2.25	9.5024	2.25	9.9070	2.25	9.9361		
2.20	9.0909	2.20	9.3275	2.20	9.3380		
2.15	8.7109	2.15	8.8526				
2.10	8.3549	2.10	8.4415				
2.05	8.0176	2.05	8.0706				
2.00	7.6947	2.00	7.7275				
1.95	7.3826	1.95	7.4029				
1.90	7.0790	1.90	7.0916				
1.85	6.7818	1.85	6.7893				
1.80	6.4892	1.80	6.4938				
1.75	6.1996						
1.70	5.9119						
1.65	5.6247						
1.60	5.3368						
1.55	5.0471						
1.50	4.7542						
1.45	4.4566						
1.40	4.1527						

Table 14.

RO21=2.800 V21=4.667 V2S1=2.694
RO31=3.400 V31=5.533 V3S1=3.194

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.90	122.82	2.90	214.20	2.90	304.75	2.90	395.03
2.88	65.720	2.88	106.88	2.88	147.74	2.88	188.54
2.86	42.207	2.86	68.419	2.86	95.655	2.86	123.23
2.84	32.332	2.84	53.864	2.84	76.322	2.84	98.946
2.82	27.325	2.82	46.234	2.82	65.930	2.82	85.772
2.80	24.254	2.80	41.316	2.80	59.109	2.80	77.031
2.78	22.126	2.78	37.755	2.78	54.095	2.78	70.558
2.76	20.533	2.76	34.986	2.76	50.148	2.76	65.419
2.74	19.273	2.74	32.720	2.74	46.882	2.74	61.152
2.72	18.239	2.72	30.796	2.72	44.083	2.72	57.485
2.70	17.366	2.70	29.118	2.70	41.620	2.70	54.244
2.68	16.613	2.68	27.620	2.68	39.406	2.68	51.308
2.65	15.650	2.65	25.622	2.65	36.404	2.65	47.313
2.60	14.353	2.60	22.726	2.60	31.956	2.60	41.320
2.55	13.314	2.55	20.161	2.55	27.833	2.55	35.643
2.50	12.453	2.50	17.780	2.50	23.721	2.50	29.720
2.45	11.720	2.45	15.541	2.45	19.357	2.45	22.774
2.40	11.086	2.40	13.541	2.40	15.101	2.40	15.717
2.35	10.527	2.35	11.967	2.35	12.393	2.35	12.452
2.30	10.029	2.30	10.851	2.30	10.970	2.30	10.978
2.25	9.5788	2.25	10.054	2.25	10.093		
2.20	9.1654	2.20	9.4477	2.20	9.4612		
2.15	8.7813	2.15	8.9521				
2.10	8.4205	2.10	8.5256				
2.05	8.0782	2.05	8.1431				
2.00	7.7500	2.00	7.7904				
1.95	7.4331	1.95	7.4581				
1.90	7.1250	1.90	7.1404				
1.85	6.8235	1.85	6.8331				
1.80	6.5272	1.80	6.5327				
1.75	6.2341						
1.70	5.9432						
1.65	5.6531						
1.60	5.3627						
1.55	5.0706						
1.50	4.7756						
1.45	4.4761						
1.40	4.1703						

Table 15.

RO21=2.800 V21=4.667 V2S1=2.694
RO31=3.000 V31=5.533 V3S1=3.194

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.90	151.70	2.90	271.62	2.90	390.83	2.90	510.13
2.88	87.866	2.88	152.46	2.88	216.63	2.88	280.96
2.86	58.604	2.86	99.080	2.86	139.76	2.86	180.41
2.84	43.392	2.84	73.030	2.84	103.23	2.84	133.55
2.82	34.941	2.82	59.183	2.82	84.091	2.82	109.12
2.80	29.797	2.80	50.781	2.80	72.394	2.80	94.167
2.78	26.365	2.78	45.060	2.78	64.380	2.78	83.817
2.76	23.892	2.76	40.831	2.76	58.398	2.76	76.097
2.74	22.005	2.74	37.519	2.74	58.678	2.74	69.944
2.72	20.503	2.72	34.811	2.72	49.770	2.72	64.842
2.70	19.268	2.70	32.517	2.70	46.442	2.70	60.477
2.68	18.227	2.68	30.525	2.68	43.524	2.68	56.637
2.65	16.925	2.65	27.939	2.65	39.688	2.65	51.549
2.60	15.230	2.60	24.331	2.60	34.216	2.60	44.224
2.55	13.921	2.55	21.249	2.55	29.344	2.55	37.562
2.50	12.871	2.50	18.471	2.50	24.636	2.50	30.845
2.45	12.005	2.45	15.921	2.45	19.772	2.45	23.193
2.40	11.278	2.40	13.704	2.40	15.183	2.40	15.741
2.35	10.656	2.35	12.022	2.35	12.402	2.35	12.451
2.30	10.114	2.30	10.868	2.30	10.971	2.30	10.979
2.25	9.6348	2.25	10.060	2.25	10.093		
2.20	9.2021	2.20	9.4498	2.20	9.4612		
2.15	8.8057	2.15	8.9533				
2.10	8.4365	2.10	8.5259				
2.05	8.0884	2.05	8.1434				
2.00	7.7566	2.00	7.7904				
1.95	7.4374	1.95	7.4583				
1.90	7.1278	1.90	7.1404				
1.85	6.8253	1.85	6.8331				
1.80	6.5282	1.80	6.5327				
1.75	6.2347						
1.70	5.9436						
1.65	5.6533						
1.60	5.3627						
1.55	5.0706						
1.50	4.7756						
1.45	4.4761						
1.40	4.1702						

Table 16.

RO21=3.000 V21=3.333 V2S1=1.924
RO31=3.400 V31=5.533 V3S1=3.194

V/V_1	L/H_1
H21=5.000	
2.90	338.54
2.88	216.41
2.86	157.99
2.84	123.54
2.82	100.85
2.80	84.769
2.78	72.762
2.76	63.470
2.74	56.121
2.72	50.195
2.70	45.342
2.68	41.334
2.66	38.012
2.65	36.569
2.60	30.936
2.55	27.145
2.50	24.443
2.45	22.401
2.40	20.770
2.35	19.406
2.30	18.226
2.25	17.173
2.20	16.211
2.15	15.312
2.10	14.461
2.05	13.642
2.00	12.845
1.95	12.059
1.90	11.277
1.85	10.493
1.80	9.7020
1.75	8.9081
1.70	8.1233
1.65	7.3755
1.60	6.6970
1.55	6.1017
1.50	5.5812
1.45	5.1163
1.40	4.6883
2.35	4.2817
H21=10.000	
2.90	652.86
2.88	417.25
2.86	304.42
2.84	237.77
2.82	193.82
2.80	162.60
2.78	139.31
2.76	121.30
2.74	107.05
2.72	95.522
2.71	90.599
2.70	86.131
2.69	82.058
2.68	78.375
2.67	75.030
2.66	71.978
2.65	69.183
2.64	66.646
2.60	58.395
2.55	51.177
2.50	46.029
2.45	42.129
2.40	38.999
2.35	36.375
2.30	34.082
2.25	32.016
2.20	30.108
2.15	28.314
2.10	26.585
2.05	24.892
2.00	23.202
1.95	21.490
1.90	19.706
1.85	17.799
1.80	15.672
1.75	13.182
1.70	10.337
1.65	8.1536
1.60	6.9474
H21=15.000	
2.90	968.24
2.88	618.06
2.86	451.03
2.84	352.16
2.82	286.91
2.80	240.43
2.78	205.92
2.76	179.17
2.74	157.99
2.72	140.98
2.71	133.64
2.70	127.02
2.69	121.03
2.68	115.53
2.67	110.60
2.66	106.07
2.65	101.93
2.64	98.181
2.60	86.039
2.55	75.392
2.50	67.826
2.45	62.068
2.40	57.457
2.35	53.554
2.30	50.164
2.25	47.094
2.20	44.244
2.15	41.558
2.10	38.961
2.05	36.404
2.00	33.838
1.95	31.206
1.90	28.431
1.85	25.377
1.80	21.800
1.75	17.051
1.70	11.045
H21=20.000	
2.90	1280.4
2.88	818.57
2.86	596.57
2.84	466.23
2.82	379.92
2.80	318.67
2.78	272.68
2.76	237.24
2.74	209.13
2.72	186.36
2.71	176.72
2.70	167.92
2.69	159.95
2.68	152.71
2.67	146.17
2.66	140.17
2.65	134.71
2.64	129.73
2.60	113.71
2.55	99.628
2.50	89.635
2.45	82.045
2.40	75.926
2.35	70.781
2.30	66.261
2.25	62.188
2.20	58.416
2.15	54.832
2.10	51.381
2.05	47.950
2.00	44.514
1.95	40.965
1.90	37.186
1.85	32.985
1.80	27.903
1.75	20.445
1.70	11.143
H21=25.000	
2.90	1594.5
2.88	1021.3
2.86	743.38
2.84	581.21
2.82	472.91
2.80	396.43
2.78	339.08
2.76	295.00
2.74	260.12
2.72	231.81
2.71	219.74
2.70	208.87
2.69	198.87
2.68	189.93
2.67	181.75
2.66	174.36
2.65	167.55

(to be continued)

Table 16. (continued)

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
2.64	161.35	1.90	45.964	2.78	405.80	2.45	122.04
2.60	141.28	1.85	40.598	2.76	352.74	2.40	112.92
2.55	123.92	1.80	33.974	2.74	311.05	2.35	105.27
				2.72	277.37	2.30	98.530
2.50	111.43	1.75	23.359				
2.45	102.00			2.71	252.83	2.25	92.442
2.40	94.423			2.70	249.73	2.20	86.782
2.35	87.992			2.69	237.87	2.15	81.443
2.30	82.381			2.68	227.09	2.10	76.214
		H21=30.000		2.67	217.42	2.05	71.078
2.25	77.332						
2.20	72.602	2.90	1906.4	2.66	208.38	2.00	65.881
2.15	68.128	2.88	1225.5	2.65	200.36	1.95	60.493
2.10	63.791	2.86	891.75	2.64	192.93	1.90	54.739
2.05	59.508	2.84	694.05	2.60	169.05	1.85	48.216
		2.82	566.62	2.55	148.11	1.80	40.027
2.00	55.189						
1.95	50.725	2.80	474.48	2.50	133.32	1.75	25.827

Table 17.

RO21=2.800 V21=3.333 V2S1=1.924
RO31=3.400 V31=5.533 V3S1=3.194

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.90	316.75	2.90	610.58	2.90	904.60	2.90	1194.2
2.88	202.41	2.88	384.35	2.88	575.75	2.88	763.68
2.86	147.48	2.86	283.28	2.86	419.49	2.86	555.25
2.84	115.23	2.84	221.10	2.84	327.01	2.84	432.54
2.82	93.961	2.82	179.91	2.82	266.00	2.82	352.31
2.80	78.884	2.80	150.86	2.80	222.82	2.80	294.80
2.78	67.673	2.78	129.10	2.78	190.57	2.78	252.19
2.76	59.034	2.76	112.33	2.76	165.72	2.76	219.22
2.74	52.213	2.74	99.156	2.74	146.19	2.74	193.29
2.70	42.304	2.70	79.987	2.70	117.81	2.70	155.65
2.65	34.386	2.65	64.769	2.65	95.301	2.65	125.88
2.60	29.374	2.60	55.221	2.60	81.250	2.60	107.34
2.55	26.016	2.55	48.858	2.55	71.898	2.55	94.984
2.50	23.610	2.50	44.292	2.50	65.196	2.50	86.117
2.45	21.772	2.45	40.789	2.45	60.039	2.45	79.322
2.40	20.289	2.40	37.950	2.40	55.844	2.40	73.774
2.35	19.036	2.35	35.535	2.35	52.272	2.35	69.043
2.30	17.940	2.30	33.404	2.30	49.110	2.30	64.851
2.25	16.953	2.25	31.468	2.25	46.234	2.25	61.036
2.20	16.045	2.20	29.668	2.20	43.550	2.20	57.466
2.15	15.193	2.15	27.960	2.15	40.991	2.15	54.050
2.10	14.380	2.10	26.308	2.10	38.507	2.10	50.736
2.05	13.596	2.05	24.683	2.05	36.047	2.05	47.453
2.00	12.829	2.00	23.056	2.00	33.569	2.00	44.125
1.95	12.070	1.95	21.399	1.95	31.020	1.95	40.686
1.90	11.314	1.90	19.674	1.90	28.323	1.90	37.011
1.85	10.555	1.85	17.825	1.85	25.359	1.85	32.921
1.80	9.7879	1.80	15.771	1.80	21.893	2.80	27.981
1.75	9.0148	1.75	13.380	1.75	17.349	1.75	20.858
1.70	8.2457	1.70	10.638	1.70	11.511	1.70	11.647
1.65	7.5033	1.65	8.4032				
1.60	6.8176	1.60	7.1179				
1.55	6.2075						
1.50	5.6708						
1.45	5.1914						
1.40	4.7511						
1.35	4.3350						

Table 18.

RO21=2.800 V21=3.333 V2S1=1.924
RO31=3.000 V31=5.533 V3S1=3.194

V/V_1	L/H_1
H21=5.000	
2.90	360.75
2.88	230.86
2.86	168.54
2.84	132.06
2.82	107.91
2.80	90.760
2.78	78.002
2.76	68.106
2.74	60.235
2.72	53.859
2.70	48.632
2.68	44.281
2.66	40.644
2.65	39.060
2.60	32.816
2.55	28.585
2.50	25.570
2.45	23.305
2.40	21.514
2.35	20.034
2.30	18.761
2.25	17.635
2.20	16.616
2.15	15.671
2.10	14.781
2.05	13.929
2.00	13.103
1.95	12.295
1.90	11.494
1.85	10.694
1.80	8.8908
1.75	9.0855
1.70	8.2897
1.65	7.5269
1.60	6.8285
1.55	6.2121
1.50	5.6724
1.45	5.1919
1.40	4.7511
1.35	4.3352
H21=10.000	
2.90	695.19
2.88	444.03
2.86	324.21
2.84	253.51
2.82	206.91
2.80	173.80
2.78	148.99
2.76	129.90
2.74	114.66
2.72	102.29
2.70	92.151
2.68	83.754
2.66	76.760
2.65	73.717
2.60	61.758
2.55	53.688
2.50	47.979
2.45	43.674
2.40	40.248
2.35	37.407
2.30	34.948
2.25	32.753
2.20	30.740
2.15	28.857
2.10	27.059
2.05	25.307
2.00	23.569
1.95	21.816
1.90	20.000
1.85	18.071
1.80	15.939
1.75	13.474
1.70	10.665
1.65	8.4043
1.60	7.1183
H21=15.000	
2.90	1028.6
2.88	657.87
2.86	479.25
2.84	374.94
2.82	305.72
2.80	256.85
2.78	220.08
2.76	191.66
2.74	169.07
2.72	150.82
2.70	135.80
2.68	123.40
2.66	113.00
2.65	108.46
2.60	90.850
2.55	79.003
2.50	70.594
2.45	64.237
2.40	59.212
2.35	55.010
2.30	51.365
2.25	48.101
2.20	45.113
2.15	42.295
2.10	39.594
2.05	36.951
2.00	34.315
1.95	31.620
1.90	28.793
1.85	25.707
1.80	22.121
1.75	17.453
1.70	11.517
H21=20.000	
2.90	1361.7
2.88	871.81
2.86	635.46
2.84	496.45
2.82	405.04
2.80	339.88
2.78	291.20
2.76	253.51
2.74	223.52
2.72	199.44
2.70	179.42
2.68	163.05
2.66	149.28
2.65	143.23
2.60	119.99
2.55	104.31
2.50	93.219
2.45	84.836
2.40	78.215
2.35	72.651
2.30	67.826
2.25	63.502
2.20	59.519
2.15	55.773
2.10	52.182
2.05	48.639
2.00	45.100
1.95	41.467
1.90	37.621
1.85	33.371
1.80	28.271
1.75	20.966
H21=25.000	
2.90	1695.4
2.88	1083.2
2.86	789.93
2.84	618.06
2.82	504.03
2.80	423.01
2.78	362.58
2.76	315.39
2.74	277.99
2·72	248.03
2.70	223.25
2.68	202.71
2.66	185.63
2.65	178.13
2.60	149.14
2.55	129.61
2.50	115.84
2.45	105.48
2.40	97.219
2.35	90.263
2.30	84.281
2.25	78·886
2.20	73.937
2.15	69.272
2.10	64.767
2.05	60.334
2.00	55.899
1.95	51.324
1.90	46.455
1.85	41.033
1.80	34.388
1.75	24.033

(to be continued)

Table 18. (continued)

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=30.000		2.78	433.70	2.55	154.96	2.10	77.350
		2.76	377.58	2.50	138.48		
		2.74	332.76	2.45	126.06	2.05	72.033
2.90	2032.9	2.72	296.50	2.40	116.18	2.00	66.701
2.88	1299.8			2.35	107.95	1.95	61.183
2.86	946.87	2.70	266.97			1.90	55.303
2.84	739.54	2.68	242.43	2.30	100.75	1.85	48.698
2.82	603.28	2.66	221.71	2.25	94.285		
		2.65	213.05	2.20	88.355	1.80	40.481
2.80	505.82	2.60	178.23	2.15	82.742	1.75	26.664

Table 19.

RO21=2.800 V21=4.667 V2S1=2.694
RO31=3.000 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.84	68.684	2.84	156.95	2.84	243.57	2.84	330.20
2.82	38.867	2.82	79.638	2.82	118.88	2.82	157.81
2.80	27.494	2.80	49.963	2.80	71.981	2.80	94.126
2.78	21.820	2.78	35.918	2.78	51.345	2.78	67.379
2.76	18.590	2.76	28.609	2.76	41.089	2.76	54.302
2.74	16.580	2.74	24.338	2.74	35.078	2.74	46.552
2.72	15.237	2.72	21.558	2.72	31.053	2.72	41.279
2.70	14.282	2.70	19.591	2.70	28.108	2.70	37.363
2.68	13.567	2.68	18.116	2.68	25.816	2.68	34.268
2.66	13.007	2.66	16.958	2.66	23.949	2.66	31.707
2.64	12.554	2.64	16.020	2.64	22.381	2.64	29.522
2.62	12.176	2.62	15.238	2.62	21.026	2.62	27.605
2.60	11.852	2.60	14.576	2.60	19.835	2.60	25.888
2.58	11.568	2.58	14.005	2.58	18.772	2.58	24.324
2.55	11.198	2.55	13.277	2.55	17.360	2.55	22.185
2.50	10.682	2.50	12.308	2.50	15.379	2.50	19.008
2.45	10.247	2.45	11.544	2.45	13.758	2.45	16.192
2.40	9.8611	2.40	10.914	2.40	12.443	2.40	13.809
2.35	9.5098	2.35	10.376	2.35	11.400	2.35	12.054
2.30	9.1814	2.30	9.9021	2.30	10.581	2.30	10.878
2.25	8.8700	2.25	9.4752	2.25	9.9254	2.25	10.064
2.20	8.5708	2.20	9.0832	2.20	9.3839	2.20	9.4511
2.15	8.2807	2.15	8.7174	2.15	8.9201	2.15	8.9537
2.10	7.9976	2.10	8.3715	2.10	8.5087	2.10	8.5259
2.05	7.7194	2.05	8.0408	2.05	8.1344	2.05	8.1434
2.00	7.4451	2.00	7.7219	2.00	7.7857	2.00	7.7904
1.95	7.1735	1.95	7.4125	1.95	7.4557	1.95	7.4583
1.90	6.9037	1.90	7.1099	1.90	7.1391	1.90	7.1404
1.85	6.6348	1.85	6.8129	1.85	6.8324	1.85	6.8329
1.80	6.3661	1.80	6.5196	1.80	6.5324	1.80	6.5327
1.75	6.0969	1.75	6.2290	1.75	6.2373		
1.70	5.8265	1.70	5.9397	1.70	5.9451		
1.65	5.5543	1.65	5.6509	1.65	5.6540		
1.60	5.2793	1.60	5.3613	1.60	5.3632		
1.55	5.0007	1.55	5.0698	1.55	5.0708		
1.50	4.7175	1.50	4.7751	1.50	4.7758		
1.45	4.4284	1.45	4.4758				
1.40	4.1318	1.40	4.1702				
1.35	3.8256	1.35	3.8560				

Table 20.

RO21=2.800 V21=4.000 V2S1=2.309
RO31=3.000 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.84	97.684	2.84	280.16	2.84	462.71	2.84	645.01
2.82	55.232	2.82	153.85	2.82	252.61	2.82	351.01
2.80	38.438	2.80	103.08	2.80	168.14	2.80	232.99
2.78	29.586	2.78	75.756	2.78	122.55	2.78	169.27
2.76	24.238	2.76	58.798	2.76	94.250	2.76	129.78
2.74	20.749	2.74	47.459	2.74	75.437	2.74	103.51
2.72	18.359	2.72	39.558	2.72	62.463	2.72	85.564
2.70	16.660	2.70	33.929	2.70	53.350	2.70	73.022
2.68	15.413	2.68	29.830	2.68	46.791	2.68	64.068
2.66	14.470	2.66	26.775	2.66	41.945	2.66	57.482
2.64	13.737	2.64	24.439	2.64	38.246	2.64	52.443
2.62	13.149	2.62	22.602	2.62	35.326	2.62	48.467
2.60	12.667	2.60	21.118	2.60	32.962	2.60	45.222
2.58	12.262	2.58	19.893	2.58	30.988	2.58	42.519
2.55	11.757	2.55	18.400	2.55	28.555	2.55	39.174
2.50	11.095	2.50	16.513	2.50	25.413	2.50	34.812
2.45	10.569	2.45	15.088	2.45	22.965	2.45	31.385
2.40	10.126	2.40	13.945	2.40	20.934	2.40	28.497
2.35	9.7300	2.35	12.989	2.35	19.162	2.35	25.948
2.30	9.3739	2.30	12.162	2.30	17.565	2.30	23.597
2.25	9.0397	2.25	11.431	2.25	16.079	2.25	21.355
2.20	8.7226	2.20	10.774	2.20	14.667	2.20	19.139
2.15	8.4187	2.15	10.175	2.15	13.308	2.15	16.873
2.10	8.1250	2.10	9.6257	2.10	12.004	2.10	14.513
2.05	7.8368	2.05	9.1159	2.05	10.792	2.05	12.170
2.00	7.5550	2.00	8.6420	2.00	9.7346	2.00	10.295
1.95	7.2783	1.95	8.1978	1.95	8.8725	1.95	9.0717
1.90	7.0020	1.90	7.7801	1.90	8.1855	1.90	8.2574
1.85	6.7284	1.85	7.3845	1.85	7.6254	1.85	7.6519
1.80	6.4542	1.80	7.0073	1.80	7.1497	1.80	7.1602
1.75	6.1821	1.75	6.6459	1.75	6.7293		
1.70	5.9075	1.70	6.2966	1.70	6.3448		
1.65	5.6327	1.65	5.9572	1.65	5.9844		
1.60	5.3544	1.60	5.6246	1.60	5.6396		
1.55	5.0741	1.55	5.2969				
1.50	4.7885	1.50	4.9715				
1.45	4.4977	1.45	4.6462				
1.40	4.1994	1.40	4.3183				
1.35	3.8917	1.35	3.9851				

Table 21.

RO21=2.500 V21=3.333 V2S1=1.924
RO31=3.400 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	19.095	2.72	49.303	2.72	81.094	2.72	113.00
2.70	17.262	2.70	42.632	2.70	69.843	2.70	97.190
2.68	15.906	2.68	37.516	2.68	61.241	2.68	85.083
2.66	14.876	2.66	33.538	2.66	54.562	2.66	75.765
2.64	14.074	2.64	30.409	2.64	49.333	2.64	68.461
2.62	13.437	2.62	27.925	2.62	45.208	2.62	62.709
2.60	12.917	2.60	25.929	2.60	41.904	2.60	58.121
2.58	12.483	2.58	24.301	2.58	39.222	2.58	54.415
2.56	12.115	2.56	22.957	2.56	37.015	2.56	51.349
2.55	11.950	2.55	22.371	2.55	36.050	2.55	50.016
2.50	11.262	2.50	20.043	2.50	32.224	2.50	44.708
2.45	10.724	2.45	18.376	2.45	29.470	2.45	40.886
2.40	10.273	2.40	17.089	2.40	27.328	2.40	37.900
2.35	9.8766	2.35	16.037	2.35	25.562	2.35	35.427
2.30	9.5168	2.30	15.137	2.30	24.035	2.30	33.283
2.25	9.1821	2.25	14.340	2.25	22.670	2.25	31.357
2.20	8.8651	2.20	13.616	2.20	21.415	2.20	29.576
2.15	8.5608	2.15	12.944	2.15	20.235	2.15	27.897
2.10	8.2661	2.10	12.311	2.10	19.104	2.10	26.273
2.05	7.9780	2.05	11.705	2.05	18.003	2.05	24.681
2.00	7.6956	2.00	11.120	2.00	16.914	2.00	23.089
1.95	7.4168	1.95	10.549	1.95	15.822	1.95	21.473
1.90	7.1406	1.90	9.9885	1.90	14.711	1.90	19.790
1.85	6.8659	1.85	9.4347	1.85	13.560	1.85	17.999
1.80	6.5923	1.80	8.8850	1.80	12.351	1.80	16.023
1.75	6.3185	1.75	8.3390	1.75	11.066	1.75	13.755
1.70	6.0441	1.70	7.7970	1.70	9.7207	1.70	11.155
1.65	5.7681	1.65	7.2622	1.65	8.4213	1.65	8.8542
1.60	5.4899	1.60	6.7394	1.60	7.3398	1.60	7.4339
1.55	5.2085	1.55	6.2340	1.55	6.5177		
1.50	4.9230	1.50	5.7506	1.50	5.8769		
1.45	4.6322	1.45	5.2901	1.45	5.3432		
1.40	4.3345	1.40	4.8506				
1.35	4.0279	1.35	4.4269				

Table 22.

RO21=2.800 V21=3.333 V2S1=1.924
RO31=3.000 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	22.724	2.72	64.045	2.72	106.49	2.72	149.00
2.70	20.248	2.70	55.389	2.70	91.862	2.70	128.47
2.68	18.369	2.68	48.632	2.68	80.445	2.68	112.36
2.66	16.912	2.66	43.239	2.66	71.299	2.66	99.474
2.64	15.764	2.64	38.857	2.64	63.918	2.64	89.089
2.62	14.844	2.62	35.266	2.62	57.860	2.62	80.586
2.60	14.097	2.60	32.302	2.60	52.868	2.60	73.599
2.58	13.479	2.58	29.837	2.58	48.742	2.58	67.812
2.56	12.961	2.56	27.773	2.56	45.291	2.56	62.992
2.55	12.733	2.55	26.866	2.55	43.772	2.55	60.892
2.50	11.805	2.50	23.273	2.50	37.805	2.50	52.571
2.45	11.115	2.45	20.762	2.45	33.635	2.45	46.771
2.40	10.565	2.40	18.898	2.40	30.534	2.40	42.444
2.35	10.100	2.35	17.434	2.35	28.082	2.35	39.020
2.30	9.6906	2.30	16.230	2.30	26.047	2.30	36.164
2.25	9.3190	2.25	15.200	2.25	24.292	2.25	33.697
2.20	8.9736	2.20	14.293	2.20	22.726	2.20	31.483
2.15	8.6471	2.15	13.472	2.15	21.291	2.15	29.444
2.10	8.3349	2.10	12.716	2.10	19.950	2.10	27.527
2.05	8.0326	2.05	12.007	2.05	18.666	2.05	25.681
2.00	7.7382	2.00	11.333	2.00	17.418	2.00	23.866
1.95	7.4494	1.95	10.685	1.95	16.183	1.95	22.046
1.90	7.1649	1.90	10.058	1.90	14.937	1.90	20.178
1.85	6.8832	1.85	9.4452	1.85	13.659	1.85	18.200
1.80	6.6033	1.80	8.8447	1.80	12.322	1.80	16.026
1.75	6.3243	1.75	8.2562	1.75	10.908	1.75	13.519
1.70	6.0452	1.70	7.6813	1.70	9.4470	1.70	10.677
1.65	5.7652	1.65	7.1242	1.65	8.1026	1.65	8.4062
1.60	5.4833	1.60	6.5908	1.60	7.0597	1.60	7.1187
1.55	5.1986	1.55	6.0859	1.55	6.2953	1.55	6.3068
1.50	4.9102	1.50	5.6113	1.50	5.7008	1.50	5.7036
1.45	4.6165	1.45	5.1646	1.45	5.2012		
1.40	4.3162	1.40	4.7401				
1.35	4.0071	1.35	4.3309				

Table 23.

RO21=2.500 V21=3.333 V2S1=1.924
RO31=3.000 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	21.269	2.72	56.988	2.72	94.037	2.72	131.15
2.70	19.065	2.70	49.265	2.70	81.033	2.70	112.88
2.68	17.405	2.68	43.280	2.68	70.937	2.68	98.711
2.66	16.130	2.66	38.545	2.66	62.955	2.66	87.513
2.64	15.131	2.64	34.744	2.64	56.587	2.64	78.597
2.62	14.331	2.62	31.676	2.62	51.439	2.62	71.393
2.60	13.682	2.60	29.174	2.60	47.274	2.60	65.586
2.58	13.142	2.58	27.120	2.58	43.864	2.58	60.859
2.56	12.688	2.56	25.413	2.56	41.049	2.56	56.928
2.55	12.486	2.55	24.664	2.55	39.817	2.55	55.221
2.50	11.657	2.50	21.715	2.50	34.965	2.50	48.490
2.45	11.027	2.45	19.641	2.45	31.545	2.45	43.743
2.40	10.514	2.40	18.076	2.40	28.951	2.40	40.140
2.35	10.073	2.35	16.826	2.35	26.863	2.35	37.226
2.30	9.6804	2.30	15.778	2.30	25.097	2.30	34.748
2.25	9.3204	2.25	14.868	2.25	23.547	2.25	32.567
2.20	8.9830	2.20	14.055	2.20	22.145	2.20	30.585
2.15	8.6628	2.15	13.310	2.15	20.845	2.15	28.734
2.10	8.3549	2.10	12.616	2.10	19.614	2.10	26.973
2.05	8.0560	2.05	11.960	2.05	18.427	2.05	25.262
2.00	7.7641	2.00	11.331	2.00	17.265	2.00	23.569
1.95	7.4771	1.95	10.722	1.95	16.108	1.95	21.859
1.90	7.1941	1.90	10.128	1.90	14.938	1.90	20.098
1.85	6.9135	1.85	9.5458	1.85	13.734	1.85	18.231
1.80	6.6343	1.80	8.9708	1.80	12.477	1.80	16.185
1.75	6.3559	1.75	8.4029	1.75	11.148	1.75	13.847
1.70	6.0772	1.70	7.8421	1.70	9.7631	1.70	11.186
1.65	5.7974	1.65	7.2924	1.65	8.4368	1.65	8.8587
1.60	5.5157	1.60	6.7579	1.60	7.3442	1.60	7.4339
1.55	5.2313	1.55	6.2444	1.55	6.5185		
1.50	4.9429	1.50	5.7559	1.50	5.8765		
1.45	4.6495	1.45	5.2925	1.45	5.3435		
1.40	4.3494	1.40	4.8517				
1.35	4.0405	1.35	4.4273				

Table 24.

RO21=2.500 V21=2.667 V2S1=1.540
RO31=3.400 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.84	116.59	2.84	373.31	2.84	629.86	2.84	888.06
2.82	67.021	2.82	213.82	2.82	361.05	2.82	508.21
2.80	47.286	2.80	149.92	2.80	253.36	2.80	356.55
2.78	36.755	2.78	115.68	2.78	195.32	2.78	274.96
2.76	30.247	2.76	94.209	2.76	159.04	2.76	223.99
2.74	25.855	2.74	79.520	2.74	134.21	2.74	188.96
2.72	22.722	2.72	68.861	2.72	116.15	2.72	163.53
2.70	20.392	2.70	60.738	2.70	102.42	2.70	144.13
2.68	18.611	2.68	54.357	2.68	91.593	2.68	128.92
2.66	17.217	2.66	49.201	2.66	82.837	2.66	116.56
2.64	16.107	2.64	44.966	2.64	75.636	2.64	106.41
2.62	15.207	2.62	41.411	2.62	69.587	2.62	97.885
2.60	14.469	2.60	38.404	2.60	64.453	2.60	90.626
2.58	13.854	2.58	35.828	2.58	60.041	2.58	84.369
2.55	13.102	2.55	32.600	2.55	54.508	2.55	76.561
2.50	12.162	2.50	28.483	2.50	47.444	2.50	66.544
2.45	11.459	2.45	25.485	2.45	42.284	2.45	59.252
2.40	10.898	2.40	23.245	2.40	38.443	2.40	53.824
2.35	10.425	2.35	21.519	2.35	35.505	2.35	49.669
2.30	10.009	2.30	20.143	2.30	33.167	2.30	46.375
2.25	9.6308	2.25	19.000	2.25	31.231	2.25	43.654
2.20	9.2801	2.20	18.019	2.20	29.576	2.20	41.326
2.15	8.9490	2.15	17.151	2.15	28.113	2.15	39.265
2.10	8.6320	2.10	16.363	2.10	26.782	2.10	37.388
2.05	8.3257	2.05	15.634	2.05	25.548	2.05	35.648
2.00	8.0271	2.00	14.947	2.00	24.382	2.00	34.004
1.95	7.7344	1.95	14.292	1.95	23.266	1.95	32.427
1.90	7.4462	1.90	13.660	1.90	22.185	1.90	30.894
1.85	7.1611	1.85	13.044	1.85	21.127	1.85	29.387
1.80	6.8779	1.80	12.439	1.80	20.079	1.80	27.893
1.75	6.5958	1.75	11.839	1.75	19.032	1.75	26.394
1.70	6.3139	1.70	11.241	1.70	17.974	1.70	24.874
1.65	6.0316	1.65	10.638	1.65	16.895	1.65	23.310
1.60	5.7478	1.60	10.028	1.60	15.780	1.60	21.681
1.55	5.4617	1.55	9.4031	1.55	14.608	1.55	19.943
1.50	5.1725	1.50	8.7568	1.50	13.349	1.50	18.037
1.45	4.8789	1.45	8.0810	1.45	11.957	1.45	15.844
1.40	4.5798	1.40	7.3659	1.40	10.353	1.40	13.116
1.35	4.2733	1.35	6.6029	1.35	8.4537	1.35	9.5052

Table 25.

RO21=2.800 V21=2.667 V2S1=1.540
RO31=3.000 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.84	143.89	2.84	469.81	2.84	795.79	2.84	1119.9
2.82	82.582	2.82	269.09	2.82	456.31	2.82	642.11
2.80	58.113	2.80	188.71	2.80	319.86	2.80	451.03
2.78	44.990	2.78	145.40	2.78	246.23	2.78	347.03
2.76	36.821	2.76	118.26	2.76	200.34	2.76	282.38
2.74	31.268	2.74	99.613	2.74	168.74	2.74	237.77
2.72	27.263	2.72	86.045	2.72	145.75	2.72	205.33
2.70	24.247	2.70	75.703	2.70	128.12	2.70	180.68
2.68	21.906	2.68	67.559	2.68	114.29	2.68	161.07
2.66	20.045	2.66	60.945	2.66	103.06	2.66	145.20
2.64	18.540	2.64	55.496	2.64	93.797	2.64	132.10
2.62	17.305	2.62	50.906	2.62	85.958	2.62	121.10
2.60	16.278	2.60	46.996	2.60	79.300	2.60	111.67
2.58	15.416	2.58	43.617	2.58	73.523	2.58	103.51
2.55	14.359	2.55	39.349	2.55	66.236	2.55	93.195
2.50	13.044	2.50	33.807	2.50	56.731	2.50	79.764
2.45	12.091	2.45	29.658	2.45	49.602	2.45	69.660
2.40	11.360	2.40	26.498	2.40	44.178	2.40	61.992
2.35	10.769	2.35	24.056	2.35	39.991	2.35	56.063
2.30	10.269	2.30	22.128	2.30	36.700	2.30	51.426
2.25	9.8302	2.25	20.571	2.25	34.049	2.25	47.690
2.20	9.4338	2.20	19.274	2.20	31.953	2.20	44.591
2.15	9.0675	2.15	18.163	2.15	29.973	2.15	41.946
2.10	8.7233	2.10	17.185	2.10	28.314	2.10	39.609
2.05	8.3955	2.05	16.304	2.05	26.821	2.05	37.502
2.00	8.0795	2.00	15.493	2.00	25.442	2.00	35.559
1.95	7.7725	1.95	14.735	1.95	24.150	1.95	33.732
1.90	7.4724	1.90	14.016	1.90	22.920	1.90	31.988
1.85	7.1773	1.85	13.326	1.85	21.732	1.85	30.304
1.80	6.8858	1.80	12.656	1.80	20.571	1.80	28.648
1.75	6.5965	1.75	12.000	1.75	19.424	1.75	27.009
1.70	6.3084	1.70	11.350	1.70	18.276	1.70	25.362
1.65	6.0206	1.65	10.701	1.65	17.115	1.65	23.682
1.60	5.7322	1.60	10.046	1.60	15.920	1.60	21.941
1.55	5.4419	1.55	9.3795	1.55	14.670	1.55	20.094
1.50	5.1488	1.50	8.6927	1.50	13.330	1.50	18.074
1.45	4.8517	1.45	7.9753	1.45	11.845	1.45	15.742
1.40	4.5492	1.40	7.2179	1.40	10.121	1.40	12.798
1.35	4.2395	1.35	6.4134	1.35	8.0693	1.35	8.8866

Table 26.

RO21=2.500 V21=2.667 V2S1=1.540
RO31=3.000 V31=5.400 V3S1=3.118

V/V_1	L/H_1
H21=1.000	
2.84	132.18
2.82	75.917
2.80	53.489
2.78	41.483
2.76	34.029
2.74	28.982
2.72	25.352
2.70	22.345
2.68	20.540
2.66	18.884
2.64	17.553
2.62	16.464
2.60	15.565
2.58	14.813
2.56	14.176
2.54	13.630
2.52	13.158
2.50	12.745
2.48	12.379
2.46	12.053
2.44	11.759
2.42	11.491
2.40	11.245
2.38	11.016
2.36	10.804
2.34	10.604
2.32	10.415
2.30	10.235
2.28	10.064
2.26	9.8997
2.24	9.7411
2.22	9.5881
2.20	9.4398
2.18	9.2955
2.15	9.0852
2.10	8.7499
2.05	8.4278
2.00	8.1168
1.95	7.8134
1.90	7.5160
1.85	7.2229
1.80	6.9329
1.75	6.6646
1.70	6.3574
1.65	6.0701
1.60	5.7828
1.55	5.4921
1.50	5.1994
1.45	4.9027
1.40	4.6007
1.35	4.2916
H21=4.000	
2.84	423.43
2.82	242.33
2.80	170.01
2.78	131.01
2.76	106.62
2.74	89.885
2.72	77.719
2.70	68.454
2.68	61.145
2.66	55.246
2.64	50.374
2.62	46.291
2.60	42.820
2.58	39.827
2.56	37.238
2.54	34.967
2.52	32.978
2.50	31.215
2.48	29.658
2.46	28.269
2.44	27.031
2.42	25.927
2.40	24.932
2.38	24.040
2.36	23.229
2.34	22.493
2.32	21.823
2.30	21.209
2.28	20.642
2.26	20.114
2.24	19.624
2.22	19.165
2.20	18.731
2.18	18.322
2.15	17.745
2.10	16.864
2.05	16.060
2.00	15.312
1.95	14.605
1.90	13.929
1.85	13.276
1.80	12.637
1.75	12.010
1.70	11.386
1.65	10.761
1.60	10.130
1.55	9.4860
1.50	8.8229
1.45	8.1309
1.40	7.4012
1.35	6.6249
H21=7.000	
2.84	713.70
2.82	409.29
2.80	286.91
2.78	221.10
2.76	180.00
2.74	151.67
2.72	131.13
2.70	115.43
2.68	103.03
2.66	93.044
2.64	84.786
2.62	77.818
2.60	71.908
2.58	66.812
2.56	62.381
2.54	58.512
2.52	55.095
2.50	52.072
2.48	49.393
2.46	47.018
2.44	44.886
2.42	42.996
2.40	41.291
2.38	39.765
2.36	38.384
2.34	37.131
32	35.996
2.30	34.952
2.28	33.988
2.26	33.097
2.24	32.270
2.22	31.490
2.20	30.764
2.18	30.071
2.15	29.100
2.10	27.614
2.05	26.255
2.00	24.984
1.95	23.786
1.90	22.633
1.85	21.508
1.80	20.407
1.75	19.311
1.70	18.212
1.65	17.094
1.60	15.943
1.55	14.739
1.50	13.450
1.45	12.028
1.40	10.396
1.35	8.4705
H21=10.000	
2.84	1004.5
2.82	576.52
2.80	404.27
2.78	311.27
2.76	253.36
2.74	213.61
2.72	184.49
2.70	162.47
2.68	145.06
2.66	130.93
2.64	119.25
2.62	109.48
2.60	101.09
2.58	93.899
2.56	87.633
2.54	82.150
2.52	77.313
2.50	73.047
2.48	69.257
2.46	65.895

(to be continued)

Table 26. (continued)

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
2.44	62.893	2.26	46.261	2.00	34.839	1.60	21.902
2.42	60.221			1.95	33.141	1.55	20.120
2.40	57.808	2.24	45.100	1.90	31.508	1.50	18.171
2.38	55.657	2.22	44.008			1.45	15.936
2.36	53.715	2.20	42.979	1.85	29.917	1.40	13.165
		2.18	42.008	1.80	28.349		
2.34	51.937	2.15	40.634	1.75	26.779	1.35	9.5118
2.32	50.336			1.70	25.200		
2.30	48.861	2.10	38.545	1.65	23.583		
2.28	47.511	2.05	36.627				

Table 27.

RO21=2.500 V21=1.333 V2S1=0.7697
RO31=3.400 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.84	139.67	2.84	466.74	2.84	792.85	2.84	1119.9
2.82	81.577	2.82	273.90	2.82	466.23	2.82	659.90
2.80	58.669	2.80	197.57	2.80	336.95	2.80	476.06
2.78	46.522	2.78	157.12	2.78	268.42	2.78	379.59
2.76	39.061	2.76	132.26	2.76	226.11	2.76	320.34
2.74	34.042	2.74	115.55	2.74	197.85	2.74	280.35
2.72	30.449	2.72	103.58	2.72	177.61	2.72	251.87
2.70	27.755	2.70	94.687	2.70	162.60	2.70	230.61
2.68	25.665	2.68	87.734	2.68	150.87	2.68	213.93
2.66	23.992	2.66	82.202	2.66	141.47	2.66	200.86
2.64	22.624	2.64	77.691	2.64	133.92	2.64	190.13
2.62	21.483	2.62	73.928	2.62	127.51	2.62	181.14
2.60	20.514	2.60	70.719	2.60	122.17	2.60	173.70
2.58	19.678	2.58	67.955	2.58	117.52	2.58	167.13
2.55	18.615	2.55	64.461	2.55	111.55	2.56	161.30
2.50	17.206	2.50	59.784	2.50	103.67	2.55	158.79
2.45	16.100	2.45	56.084	2.45	97.426	2.50	147.64
2.40	15.192	2.40	52.989	2.40	92.151	2.45	138.78
2.35	14.423	2.35	50.313	2.35	87.609	2.40	131.36
2.30	13.754	2.30	47.922	2.30	83.493	2.35	124.88
2.25	13.159	2.25	45.722	2.25	79.707	2.30	119.10
2.20	12.622	2.20	43.679	2.20	76.178	2.25	113.75
2.15	12.130	2.15	41.747	2.15	72.849	2.20	108.72
2.10	11.673	2.10	39.878	2.10	69.617	2.15	103.98
2.05	11.245	2.05	38.080	2.05	66.494	2.10	99.382
2.00	10.840	2.00	36.321	2.00	63.439	2.05	94.896
1.95	10.453	1.95	34.591	1.95	60.424	2.00	90.543
1.90	10.080	1.90	32.877	1.90	57.436	1.95	86.246
1.85	9.7199	1.85	31.172	1.85	54.451	1.90	82.003
1.80	9.3686	1.80	29.473	1.80	51.480	1.85	77.743
1.75	9.0252	1.75	27.776	1.75	48.492	1.80	73.498
1.70	8.6877	1.70	26.093	1.70	45.496	1.75	69.242
1.65	8.3551	1.65	24.464	1.65	42.508	1.70	64.924
1.60	8.0261	1.60	23.056	1.60	39.643	1.65	60.629
1.55	7.7000	1.55	21.977	1.55	37.251	1.60	56.429
1.50	7.3762	1.50	21.063	1.50	35.480	1.55	52.720
1.45	7.0537	1.45	20.212	1.45	33.970	1.50	49.992
1.40	6.7323	1.40	19.383	1.40	32.551	1.45	47.787
1.35	6.4115	1.35	18.565	1.35	31.160	1.40	45.754
						1.35	43.792

Table 28.

RO21=2.500 V21=1.333 V2S1=0.7697
RO31=3.000 V31=5.400 V3S1=3.118

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.84	157.99	2.84	527.59	2.84	899.23	2.84	1265.3
2.82	91.967	2.82	308.14	2.82	525.65	2.82	742.10
2.80	65.858	2.80	221.44	2.80	377.25	2.80	534.16
2.78	51.967	2.78	175.22	2.78	299.12	2.78	423.01
2.76	43.392	2.76	146.64	2.76	250.69	2.76	354.78
2.74	37.612	2.74	127.36	2.74	217.95	2.74	308.58
2.72	33.461	2.72	113.56	2.72	194.53	2.72	275.49
2.70	30.339	2.70	103.21	2.70	176.95	2.70	250.84
2.68	27.916	2.68	95.170	2.68	163.40	2.68	231.73
2.66	25.977	2.66	88.732	2.66	152.54	2.66	216.41
2.64	24.389	2.64	83.466	2.64	143.60	2.64	203.81
2.62	23.066	2.62	79.080	2.62	136.17	2.62	193.33
2.60	21.941	2.60	75.344	2.60	129.94	2.60	184.55
2.58	20.973	2.58	72.162	2.58	124.54	2.58	176.99
2.55	19.746	2.55	68.093	2.55	117.62	2.56	170.32
2.50	18.127	2.50	62.722	2.50	108.57	2.55	167.29
2.45	16.864	2.45	58.501	2.45	101.45	2.50	154.44
2.40	15.836	2.40	55.020	2.40	95.545	2.45	144.45
2.35	14.970	2.35	52.030	2.35	90.441	2.40	136.14
2.30	14.222	2.30	49.393	2.30	85.947	2.35	128.94
2.25	13.562	2.25	47.011	2.25	81.878	2.30	122.55
2.20	12.970	2.20	44.811	2.20	78.063	2.25	116.77
2.15	12.431	2.15	42.739	2.15	74.519	2.20	111.35
2.10	11.934	2.10	40.768	2.10	71.094	2.15	106.28
2.05	11.471	2.05	38.867	2.05	67.826	2.10	101.45
2.00	11.036	2.00	37.027	2.00	64.611	2.05	96.752
1.95	10.624	1.95	35.228	1.95	61.475	2.00	92.204
1.90	10.230	1.90	33.452	1.90	58.395	1.95	87.776
1.85	9.8516	1.85	31.696	1.85	55.322	1.90	83.363
1.80	9.4849	1.80	29.956	1.80	52.266	1.85	78.983
1.75	9.1280	1.75	28.227	1.75	49.227	1.80	74.623
1.70	8.7790	1.70	26.514	1.70	46.175	1.75	70.255
1.65	8.4362	1.65	24.867	1.65	43.141	1.70	65.881
1.60	8.0985	1.60	23.415	1.60	40.258	1.65	61.522
1.55	7.7648	1.55	22.255	1.55	37.780	1.60	57.272
1.50	7.4342	1.50	21.283	1.50	35.884	1.55	53.501
1.45	7.1057	1.45	20.393	1.45	34.293	1.50	50.590
1.40	6.7791	1.40	19.538	1.40	32.816	1.45	48.252
1.35	6.4533	1.35	18.700	1.35	31.388	1.40	46.135
						1.35	44.111

Table 29.

RO21=3.000 V21=4.667 V2S1=2.694
RO31=3.400 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.72	65.717	2.72	96.672	2.72	127.85	2.72	159.63
2.70	36.825	2.70	56.963	2.70	78.674	2.70	100.74
2.68	27.836	2.68	44.844	2.68	62.866	2.68	81.099
2.66	23.498	2.66	38.345	2.66	54.022	2.66	69.859
2.64	20.819	2.64	33.996	2.64	47.952	2.64	62.029
2.62	18.942	2.62	30.748	2.62	43.309	2.62	55.996
2.60	17.522	2.60	28.140	2.60	39.515	2.60	51.009
2.58	16.395	2.58	25.949	2.58	36.258	2.58	46.694
2.56	15.470	2.56	24.039	2.56	33.362	2.56	42.803
2.54	14.690	2.54	22.331	2.54	30.704	2.54	39.186
2.52	14.023	2.52	20.775	2.52	28.199	2.52	35.718
2.50	13.443	2.50	19.335	2.50	25.786	2.50	32.280
2.48	12.933	2.48	17.993	2.48	23.415	2.48	28.770
2.45	12.272	2.45	16.146	2.45	19.892	2.45	23.154
2.40	11.379	2.40	13.590	2.40	14.811	2.40	15.207
2.35	10.669	2.35	11.823	2.35	12.100	2.35	12.132
2.30	10.082	2.30	10.689	2.30	10.760		
2.25	9.5812	2.25	9.9137	2.25	9.9363		
2.20	9.1405	2.20	9.3298	2.20	9.3379		
2.15	8.7418	2.15	8.8535				
2.10	8.3748	2.10	8.4420				
2.05	8.0300	2.05	8.0711				
2.00	7.7022	2.00	7.7274				
1.95	7.3876	1.95	7.4029				
1.90	7.0820	1.90	7.0917				
1.85	6.7838	1.85	6.7892				
1.80	6.4902	1.80	6.4936				
1.75	6.2004	1.75	6.2023				
1.70	5.9122	1.70	5.9135				
1.65	5.6249						
1.60	5.3368						
1.55	5.0471						
1.50	4.7543						
1.45	4.4567						
1.40	4.1526						
1.35	3.8399						

Table 30.

RO21=3.000 V21=4.620 V2S1=2.662
RO31=3.400 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.72	75.264	2.72	116.65	2.72	156.95	2.72	197.21
2.70	41.054	2.70	63.924	2.70	88.258	2.70	113.00
2.68	30.048	2.68	48.803	2.68	68.552	2.68	88.531
2.66	24.981	2.66	41.243	2.66	58.311	2.66	75.543
2.64	21.953	2.64	36.384	2.64	51.561	2.64	66.864
2.62	19.871	2.62	32.843	2.62	46.532	2.62	60.345
2.60	18.316	2.60	30.052	2.60	42.498	2.60	55.069
2.58	17.090	2.58	27.734	2.58	39.108	2.58	50.594
2.56	16.088	2.56	25.742	2.56	36.133	2.56	46.648
2.54	15.246	2.54	23.974	2.54	33.448	2.54	43.040
2.52	14.524	2.52	22.374	2.52	30.954	2.52	39.654
2.50	13.896	2.50	20.897	2.50	28.592	2.50	36.387
2.48	13.342	2.48	19.519	2.48	26.300	2.48	33.150
2.45	12.625	2.45	17.595	2.45	22.906	2.45	28.134
2.40	11.652	2.40	14.762	2.40	17.293	2.40	18.934
2.35	10.880	2.35	12.575	2.35	13.218	2.35	13.341
2.30	10.246	2.30	11.124	2.30	11.272	2.30	11.283
2.25	9.7093	2.25	10.175	2.25	10.216		
2.20	9.2411	2.20	9.4996	2.20	9.5130		
2.15	8.8223	2.15	8.9708				
2.10	8.4393	2.10	8.5271				
2.05	8.0828	2.05	8.1354				
2.00	7.7461	2.00	7.7779				
1.95	7.4239	1.95	7.4432				
1.90	7.1126	1.90	7.1242				
1.85	6.8096	1.85	6.8167				
1.80	6.5124	1.80	6.5165				
1.75	6.2192	1.75	6.2217				
1.70	5.9286	1.70	5.9301				
1.65	5.6391						
1.60	5.3492						
1.55	5.0579						
1.50	4.7638						
1.45	4.4650						
1.40	4.1600						
1.35	3.8466						

Table 31.

RO21=3.000 V21=4.000 V2S1=2.310
RO31=3.400 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.72	182.14	2.72	340.69	2.72	499.34	2.72	658.88
2.70	111.53	2.70	206.22	2.70	300.79	2.70	395.69
2.68	76.911	2.68	140.31	2.68	203.57	2.68	266.91
2.66	56.948	2.66	102.57	2.66	148.32	2.66	193.91
2.64	44.704	2.64	80.040	2.64	115.58	2.64	151.19
2.62	36.977	2.62	66.214	2.62	95.787	2.62	125.42
2.60	31.898	2.60	57.290	2.60	83.014	2.60	108.84
2.58	28.384	2.58	51.112	2.58	74.184	2.58	97.352
2.56	25.810	2.56	46.557	2.56	67.666	2.56	88.824
2.54	23.838	2.54	43.022	2.54	62.563	2.54	82.171
2.52	22.258	2.52	40.166	2.52	58.446	2.52	76.773
2.50	20.958	2.50	37.778	2.50	54.974	2.50	72.235
2.45	18.473	2.45	33.116	2.45	48.154	2.45	63.257
2.40	16.639	2.40	29.546	2.40	42.890	2.40	56.284
2.35	15.175	2.35	26.583	2.35	38.455	2.35	50.398
2.30	13.944	2.30	23.959	2.30	34.482	2.30	45.084
2.25	12.871	2.25	21.525	2.25	30.717	2.25	39.984
2.20	11.914	2.20	19.158	2.20	26.933	2.20	34.776
2.15	11.050	2.15	16.766	2.15	22.857	2.15	28.957
2.10	10.269	2.10	14.285	2.10	18.056	2.10	21.346
2.05	9.5653	2.05	11.869	2.05	12.928		
2.00	8.9356	2.00	10.033	2.00	10.190		
1.95	8.3750	1.95	8.8786				
1.90	7.8745	1.90	8.1128				
1.85	7.4237	1.85	7.5396				
1.80	7.0115	1.80	7.0691				
1.75	6.6290	1.75	6.6576				
1.70	6.2681	1.70	6.2822				
1.65	5.9229						
1.60	5.5888						
1.55	5.2616						
1.50	4.9381						
1.45	4.6151						
1.40	4.2901						
1.35	3.9595						

Table 32.

RO21=2.800 V21=4.000 V2S1=2.309
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	60.150	2.72	162.91	2.72	265.59	2.72	368.18
2.70	39.215	2.70	101.35	2.70	163.59	2.70	225.75
2.68	29.181	2.68	71.192	2.68	113.50	2.68	155.81
2.66	23.449	2.66	53.550	2.66	84.369	2.66	115.24
2.64	19.857	2.64	42.372	2.64	66.101	2.64	89.979
2.62	17.470	2.62	34.981	2.62	54.295	2.62	73.877
2.60	15.814	2.60	29.960	2.60	46.416	2.60	63.199
2.58	14.619	2.58	26.422	2.58	40.913	2.58	55.792
2.56	13.725	2.56	23.831	2.56	36.891	2.56	50.362
2.54	13.034	2.54	21.858	2.54	33.806	2.54	46.181
2.52	12.482	2.52	20.301	2.52	31.352	2.52	42.838
2.50	12.028	2.50	19.037	2.50	29.335	2.50	40.080
2.48	11.645	2.48	17.984	2.48	27.628	2.48	37.741
2.45	11.168	2.45	16.684	2.45	25.487	2.45	34.778
2.40	10.536	2.40	15.014	2.40	22.647	2.40	30.811
2.35	10.030	2.35	13.730	2.35	20.368	2.35	27.576
2.30	9.5981	2.30	12.686	2.30	18.422	2.30	24.756
2.25	9.2135	2.25	11.805	2.25	16.687	2.25	22.171
2.20	8.8610	2.20	11.040	2.20	15.090	2.20	19.696
2.15	8.5309	2.15	10.364	2.15	13.586	2.15	17.227
2.10	8.2160	2.10	9.7570	2.10	12.171	2.10	14.700
2.05	7.9135	2.05	9.2072	2.05	10.879	2.05	12.237
2.00	7.6191	2.00	8.7037	2.00	9.7736	2.00	10.309
1.95	7.3310	1.95	8.2390	1.95	8.8882	1.95	9.0747
1.90	7.0472	1.90	7.8069	1.90	8.1914	1.90	8.2578
1.85	6.7666	1.85	7.4015	1.85	7.6275	1.85	7.6519
1.80	6.4878	1.80	7.0183	1.80	7.1506	1.80	7.1602
1.75	6.2102	1.75	6.6525	1.75	6.7295	1.75	6.7332
1.70	5.9322	1.70	6.3005	1.70	6.3450	1.70	6.3465
1.65	5.6534	1.65	5.9594	1.65	5.9844		
1.60	5.3727	1.60	5.6260	1.60	5.6398		
1.55	5.0889	1.55	5.2976	1.55	5.3047		
1.50	4.8013	1.50	4.9719	1.50	4.9756		
1.45	4.5081	1.45	4.6463	1.45	4.6482		
1.40	4.2080	1.40	4.3184				
1.35	3.8987	1.35	3.9851				

Table 33.

RO21=2.800 V21=3.667 V2S1=2.117
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	69.688	2.72	203.77	2.72	338.01	2.72	471.87
2.70	45.525	2.70	129.74	2.70	214.25	2.70	298.70
2.68	33.819	2.68	93.348	2.68	153.46	2.68	213.51
2.66	27.001	2.66	71.728	2.66	117.19	2.66	162.72
2.64	22.622	2.64	57.474	2.64	93.307	2.64	129.16
2.62	19.633	2.62	47.490	2.62	76.622	2.62	105.86
2.60	17.512	2.60	40.264	2.60	64.608	2.60	89.119
2.58	15.962	2.58	34.912	2.58	55.807	2.58	76.897
2.56	13.796	2.56	30.892	2.56	49.240	2.56	67.837
2.54	13.899	2.54	27.813	2.54	44.275	2.54	60.997
2.52	13.190	2.52	25.415	2.52	40.408	2.52	55.698
2.50	12.617	2.50	23.508	2.50	37.344	2.50	51.492
2.48	12.143	2.48	21.957	2.48	34.847	2.48	48.060
2.45	11.564	2.45	20.104	2.45	31.845	2.45	43.924
2.40	10.824	2.40	17.828	2.40	28.118	2.40	38.773
2.35	10.252	2.35	16.154	2.35	25.323	2.35	34.884
2.30	9.7778	2.30	14.838	2.30	23.072	2.30	31.723
2.25	9.3642	2.25	13.745	2.25	21.159	2.25	29.008
2.20	8.9913	2.20	12.804	2.20	19.463	2.20	26.576
2.15	8.6455	2.15	11.970	2.15	17.904	2.15	24.316
2.10	8.3197	2.10	11.214	2.10	16.433	2.10	22.139
2.05	8.0076	2.05	10.519	2.05	15.010	2.05	19.971
2.00	7.7059	2.00	9.8720	2.00	13.605	2.00	17.739
1.95	7.4114	1.95	9.2666	1.95	12.201	1.95	15.345
1.90	7.1228	1.90	8.6972	1.90	10.814	1.90	12.744
1.85	6.8380	1.85	8.1625	1.85	9.5205	1.85	10.299
1.80	6.5555	1.80	7.6597	1.80	8.4416	1.80	8.6662
1.75	6.2744	1.75	7.1878	1.75	7.6102	1.75	7.6723
1.70	5.9937	1.70	6.7441	1.70	6.9661	1.70	6.9842
1.65	5.7124	1.65	6.3254	1.65	6.4404		
1.60	5.4296	1.60	5.9276	1.60	5.9861		
1.55	5.1439	1.55	5.5469	1.55	5.5758		
1.50	4.8546	1.50	5.1786	1.50	5.1923		
1.45	4.5601	1.45	4.8186	1.45	4.8251		
1.40	4.2588	1.40	4.4628				
1.35	3.9486	1.35	4.1070				

Table 34.

RO21=3.000 V21=3.333 V2S1=1.924
RO31=3.400 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.72	276.91	2.72	532.83	2.72	787.03	2.72	1043.6
2.70	178.42	2.70	342.60	2.70	507.01	2.70	670.21
2.68	130.02	2.68	249.23	2.68	368.18	2.68	486.87
2.66	101.16	2.66	193.39	2.66	285.57	2.66	377.58
2.64	81.998	2.64	156.26	2.64	230.48	2.64	304.86
2.62	68.388	2.62	129.90	2.62	191.49	2.62	253.21
2.60	58.287	2.60	110.35	2.60	162.54	2.60	214.79
2.58	50.570	2.58	95.488	2.58	140.45	2.58	185.52
2.56	44.574	2.56	83.923	2.56	123.43	2.56	162.91
2.54	39.856	2.54	74.910	2.54	110.10	2.54	145.30
2.52	36.108	2.52	67.794	2.52	99.590	2.52	131.45
2.50	33.107	2.50	62.110	2.50	91.262	2.50	120.42
2.48	30.675	2.48	57.505	2.48	84.519	2.48	111.56
2.45	27.800	2.45	52.105	2.45	76.595	2.45	101.10
2.40	24.366	2.40	45.651	2.40	67.119	2.40	88.647
2.35	21.938	2.35	41.054	2.35	60.379	2.35	79.747
2.30	20.080	2.30	37.516	2.30	55.152	2.30	72.832
2.25	18.572	2.25	34.614	2.25	50.870	2.25	67.161
2.20	17.289	2.20	32.115	2.20	47.163	2.20	62.260
2.15	16.158	2.15	29.881	2.15	43.840	2.15	57.839
2.10	15.128	2.10	27.821	2.10	40.768	2.10	53.733
2.05	14.171	2.05	25.873	2.05	37.829	2.05	49.814
2.00	13.262	2.00	23.977	2.00	34.956	2.00	45.977
1.95	12.386	1.95	22.089	1.95	32.074	1.95	42.096
1.90	11.528	1.90	20.163	1.90	29.084	1.90	38.039
1.85	10.681	1.85	18.130	1.85	25.848	1.85	33.594
1.80	9.8364	1.80	15.892	1.80	22.099	1.80	28.276
1.75	8.9966	1.75	13.296	1.75	17.177	1.75	20.572
1.70	8.1755	1.70	10.364	1.70	11.049	1.70	11.136
1.65	7.4022	1.65	8.1554				
1.60	6.7084	1.60	6.9474				
1.55	6.1060	1.55	6.1830				
1.50	5.5828						
1.45	5.1169						
1.40	4.6885						
1.35	4.2818						

Table 35.

RO21=2.800 V21=3.333 V2S1=1.924
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	78.573	2.72	241.11	2.72	403.51	2.72	566.62
2.70	51.530	2.70	155.86	2.70	260.59	2.70	365.36
2.68	38.349	2.68	113.99	2.68	190.05	2.68	266.25
2.66	30.607	2.66	88.990	2.66	148.01	2.66	207.21
2.64	25.558	2.64	72.394	2.64	120.12	2.64	167.88
2.62	22.049	2.62	60.584	2.62	100.17	2.62	139.81
2.60	19.503	2.60	51.785	2.60	85.326	2.60	118.98
2.58	17.604	2.58	45.037	2.58	73.954	2.58	102.96
2.56	16.154	2.56	39.742	2.56	65.039	2.56	90.473
2.54	15.024	2.54	35.531	2.54	57.979	2.54	80.596
2.52	14.129	2.52	32.151	2.52	52.341	2.52	72.688
2.50	13.406	2.50	29.411	2.50	47.787	2.50	66.337
2.48	12.813	2.48	27.170	2.48	44.079	2.48	61.180
2.45	12.098	2.45	24.512	2.45	39.687	2.45	55.085
2.40	11.210	2.40	21.331	2.40	34.454	2.40	47.836
2.35	10.548	2.35	19.103	2.35	30.779	2.35	42.722
2.30	10.016	2.30	17.424	2.30	27.986	2.30	38.829
2.25	9.5641	2.25	16.085	2.25	25.732	2.25	35.673
2.20	9.1634	2.20	14.963	2.20	23.821	2.20	32.991
2.15	8.7973	2.15	13.989	2.15	22.140	2.15	30.615
2.10	8.4558	2.10	13.119	2.10	20.612	2.10	28.441
2.05	8.1319	2.05	12.324	2.05	19.188	2.05	26.395
2.00	7.8202	2.00	11.581	2.00	17.828	2.00	24.429
1.95	7.5181	1.95	10.880	1.95	16.501	1.95	22.481
1.90	7.2229	1.90	10.208	1.90	15.181	1.90	20.507
1.85	6.9323	1.85	9.5585	1.85	13.838	1.85	18.438
1.80	6.6452	1.80	8.9284	1.80	12.444	1.80	16.184
1.75	6.3602	1.75	8.3152	1.75	10.982	1.75	13.603
1.70	6.0759	1.70	7.7204	1.70	9.4815	1.70	10.699
1.65	5.7916	1.65	7.1486	1.65	8.1131	1.65	8.4078
1.60	5.5058	1.60	6.6048	1.60	7.0621	1.60	7.1190
1.55	5.2180	1.55	6.0933	1.55	6.2960	1.55	6.3071
1.50	4.9267	1.50	5.6148	1.50	5.7014		
1.45	4.6305	1.45	5.1662	1.45	5.2015		
1.40	4.3279	1.40	4.7407	1.40	4.7546		
1.35	4.0168	1.35	4.3311				

Table 36.

RO21=2.500 V21=3.333 V2S1=1.924
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H31=4.000		H21=7.000		H21=10.000	
2.72	72.516	2.72	216.52	2.72	360.75	2.72	505.22
2.70	47.575	2.70	139.54	2.70	231.86	2.70	324.46
2.68	35.458	2.68	101.67	2.68	168.54	2.68	235.29
2.66	28.376	2.66	79.139	2.66	130.77	2.66	182.37
2.64	23.791	2.64	64.221	2.64	105.62	2.64	147.15
2.62	20.634	2.62	53.630	2.62	87.860	2.62	122.20
2.60	18.367	2.60	45.811	2.60	74.740	2.60	103.73
2.58	16.691	2.58	39.878	2.58	64.774	2.58	89.810
2.56	15.421	2.56	35.294	2.56	57.122	2.56	79.124
2.54	14.437	2.54	31.707	2.54	51.173	2.54	70.828
2.52	13.659	2.52	28.875	2.52	46.507	2.52	64.356
2.50	13.030	2.50	26.612	2.50	42.799	2.50	59.228
2.48	12.511	2.48	24.775	2.48	39.801	2.48	55.083
2.45	11.879	2.45	22.607	2.45	36.276	2.45	50.218
2.40	11.081	2.40	20.012	2.40	32.039	2.40	44.354
2.35	10.473	2.35	18.163	2.35	29.008	2.35	40.152
2.30	9.9742	2.30	16.746	2.30	26.655	2.30	36.879
2.25	9.5437	2.25	15.591	2.25	24.716	2.25	34.165
2.20	9.1577	2.20	14.607	2.20	23.043	2.20	31.810
2.15	8.8021	2.15	13.740	2.15	21.544	2.15	29.693
2.10	8.4682	2.10	12.955	2.10	20.165	2.10	27.726
2.05	8.1492	2.05	12.227	2.05	18.864	2.05	25.860
2.00	7.8419	2.00	11.542	2.00	17.609	2.00	24.038
1.95	7.5424	1.95	10.890	1.95	16.378	1.95	22.226
1.90	7.2496	1.90	10.259	1.90	15.145	1.90	20.377
1.85	6.9608	1.85	9.6462	1.85	13.889	1.85	18.435
1.80	6.6747	1.80	9.0459	1.80	12.586	1.80	16.322
1.75	6.3905	1.75	8.4573	1.75	11.215	1.75	13.924
1.70	6.1070	1.70	7.8800	1.70	9.7974	1.70	11.211
1.65	5.8230	1.65	7.3167	1.65	8.4493	1.65	8.8613
1.60	5.5379	1.60	6.7725	1.60	7.3472	1.60	7.4345
1.55	5.2503	1.55	6.2524	1.55	6.5190		
1.50	4.9592	1.50	5.7598				
1.45	4.6634	1.45	5.2944				
1.40	4.3610	1.40	4.8524				
1.35	4.0503	1.35	4.4277				

Table 37.

RO21=2.000 V21=3.333 V2S1=1.924
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	62.463	2.72	175.43	2.72	288.84	2.72	402.00
2.70	41.078	2.70	112.29	2.70	184.09	2.70	255.93
2.68	30.785	2.68	81.314	2.68	132.59	2.68	184.01
2.66	24.845	2.66	62.930	2.66	101.98	2.66	141.19
2.64	21.068	2.64	50.851	2.64	81.904	2.64	113.03
2.62	18.520	2.62	42.469	2.62	67.955	2.62	93.572
2.60	16.724	2.60	36.446	2.60	57.987	2.60	79.742
2.58	15.415	2.58	32.039	2.58	50.785	2.58	69.768
2.56	14.429	2.56	28.762	2.56	45.481	2.56	62.481
2.54	13.665	2.54	26.289	2.54	41.515	2.54	57.039
2.52	13.057	2.52	24.375	2.52	38.466	2.52	52.883
2.50	12.559	2.50	22.862	2.50	36.063	2.50	49.599
2.48	12.142	2.48	21.634	2.48	34.115	2.48	46.934
2.45	11.623	2.45	20.170	2.45	31.779	2.45	43.745
2.40	10.946	2.40	18.365	2.40	28.880	2.40	39.760
2.35	10.408	2.35	17.022	2.35	26.699	2.35	36.740
2.30	9.9545	2.30	15.949	2.30	24.928	2.30	34.278
2.25	9.5531	2.25	15.039	2.25	23.412	2.25	32.157
2.20	9.1864	2.20	14.240	2.20	22.060	2.20	30.255
2.15	8.8449	2.15	13.516	2.15	20.818	2.15	28.494
2.10	8.5203	2.10	12.846	2.10	19.646	2.10	26.819
2.05	8.2089	2.05	12.214	2.05	18.521	2.05	25.200
2.00	7.9063	2.00	11.609	2.00	17.424	2.00	23.601
1.95	7.6108	1.95	11.024	1.95	16.334	1.95	21.989
1.90	7.3205	1.90	10.453	1.90	15.237	1.90	20.334
1.85	7.0337	1.85	9.8908	1.85	14.114	1.85	18.595
1.80	6.7489	1.80	9.3346	1.80	12.950	1.80	16.713
1.75	6.4657	1.75	8.7826	1.75	11.729	1.75	14.611
1.70	6.1828	1.70	8.2324	1.70	10.453	1.70	12.238
2.65	5.8994	1.65	7.6853	1.65	9.1712	1.65	9.8972
1.60	5.6144	1.60	7.1440	1.60	8.0067	1.60	8.2035
1.55	5.3269	1.55	6.6121	1.55	7.0571	1.55	7.1022
1.50	5.0359	1.50	6.0952	1.50	6.3066	1.50	6.3169
1.45	4.7403	1.45	5.5972	1.45	5.6907		
1.40	4.4383	1.40	5.1201	1.40	5.1581		
1.35	4.1280	1.35	4.6612				

Table 38.

RO21=2.500 V21=2.667 V2S1=1.540
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	86.461	2.72	274.43	2.72	462.71	2.72	650.88
2.70	57.160	2.70	180.68	2.70	304.64	2.70	428.93
2.68	42.880	2.68	134.59	2.68	226.83	2.68	319.38
2.66	34.447	2.66	107.18	2.66	180.68	2.66	254.11
2.64	28.917	2.64	89.009	2.64	149.92	2.64	210.98
2.62	25.028	2.62	76.052	2.62	128.04	2.62	180.07
2.60	22.166	2.60	66.347	2.60	111.61	2.60	156.95
2.58	19.988	2.58	58.790	2.58	98.832	2.58	138.99
2.56	18.286	2.56	52.753	2.56	88.604	2.56	124.51
2.54	16.930	2.54	47.819	2.54	80.204	2.54	112.70
2.52	15.832	2.52	43.711	2.52	73.234	2.52	102.84
2.50	14.931	2.50	40.245	2.50	67.336	2.50	94.520
2.48	14.182	2.48	37.295	2.48	62.300	2.48	87.412
2.45	13.273	2.45	33.615	2.45	56.026	2.45	78.540
2.40	12.146	2.40	28.974	2.40	48.094	2.40	67.343
2.35	11.325	2.35	25.629	2.35	42.385	2.35	59.288
2.30	10.682	2.30	23.162	2.30	38.193	2.30	53.394
2.25	10.152	2.25	21.276	2.25	35.005	2.25	48.905
2.20	9.6941	2.20	19.779	2.20	32.485	2.20	45.367
2.15	9.2851	2.15	18.545	2.15	30.409	2.15	42.457
2.10	8.9094	2.10	17.487	2.10	28.634	2.10	39.958
2.05	8.5579	2.05	16.556	2.05	27.063	2.05	37.754
2.00	8.2238	2.00	15.712	2.00	25.640	2.00	35.748
1.95	7.9024	1.95	14.932	1.95	24.318	1.95	33.881
1.90	7.5912	1.90	14.197	1.90	23.069	1.90	32.115
1.85	7.2867	1.85	13.498	1.85	21.871	1.85	30.415
1.80	6.9871	1.80	12.822	1.80	20.708	1.80	28.762
1.75	6.6913	1.75	12.163	1.75	19.560	1.75	27.122
1.70	6.3976	1.70	11.513	1.70	18.415	1.70	25.481
1.65	6.1049	1.65	10.865	1.65	17.261	1.65	23.810
1.60	5.8121	1.60	10.214	1.60	16.078	1.60	22.084
1.55	5.5183	1.55	9.5536	1.55	14.843	1.55	20.262
1.50	5.2221	1.50	8.8750	1.50	13.529	1.50	18.275
1.45	4.9222	1.45	8.1701	1.45	12.084	1.45	16.007
1.40	4.6175	1.40	7.4282	1.40	10.430	1.40	13.201
1.35	4.3059	1.35	6.6416	1.35	8.4830	1.35	9.5186

Table 39.

RO21=2.000 V21=2.667 V2S1=1.540
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	73.865	2.72	223.99	2.72	374.61	2.72	525.01
2.70	48.976	2.70	147.40	2.70	246.51	2.70	345.36
2.68	36.897	2.68	109.85	2.68	183.54	2.68	257.31
2.66	29.828	2.66	87.609	2.66	146.29	2.66	205.23
2.64	25.230	2.64	72.861	2.64	121.68	2.64	170.55
2.62	22.037	2.62	62.417	2.62	104.11	2.62	145.90
2.60	19.718	2.60	54.606	2.60	90.972	2.60	127.47
2.58	17.974	2.58	48.577	2.58	80.809	2.58	113.17
2.56	16.630	2.56	43.773	2.56	72.713	2.56	101.76
2.54	15.569	2.54	39.878	2.54	66.132	2.54	92.482
2.52	14.718	2.52	36.664	2.52	60.678	2.52	84.819
2.50	14.022	2.50	33.988	2.50	56.128	2.50	78.415
2.48	13.442	2.48	31.728	2.48	52.290	2.48	73.010
2.45	12.733	2.45	28.964	2.45	47.584	2.45	66.390
2.40	11.836	2.40	25.551	2.40	41.789	2.40	58.219
2.35	11.156	2.35	23.137	2.35	37.717	2.35	52.496
2.30	10.605	2.30	21.348	2.30	34.715	2.30	48.290
2.25	10.134	2.25	19.951	2.25	32.382	2.25	45.020
2.20	9.7163	2.20	18.808	2.20	30.477	2.20	42.360
2.15	9.3346	2.15	17.831	2.15	28.850	2.15	40.084
2.10	8.9786	2.10	16.968	2.10	27.412	2.10	38.068
2.05	8.6407	2.05	16.185	2.05	26.105	2.05	36.235
2.00	8.3168	2.00	15.458	2.00	24.888	2.00	34.524
1.95	8.0028	1.95	14.773	1.95	23.736	1.95	32.900
1.90	7.6967	1.90	14.118	1.90	22.630	1.90	31.334
1.85	7.3959	1.85	13.485	1.85	21.551	1.85	29.806
1.80	7.0993	1.80	12.866	1.80	20.491	1.80	28.298
1.75	6.8053	1.75	12.257	1.75	19.439	1.75	26.793
1.70	6.5129	1.70	11.651	1.70	18.380	1.70	25.275
1.65	6.2210	1.65	11.046	1.65	17.307	1.65	23.719
1.60	5.9289	1.60	10.436	1.60	16.203	1.60	22.105
1.55	5.6354	1.55	9.8148	1.55	15.052	1.55	20.400
1.50	5.3396	1.50	9.1775	1.50	13.831	1.50	18.549
1.45	5.0402	1.45	8.5161	1.45	12.502	1.45	16.460
1.40	4.7361	1.40	7.8228	1.40	11.010	1.40	13.958
1.35	4.4255	1.35	7.0875	1.35	9.2874	1.35	10.775

Table 40.

RO21=2.500 V21=1.333 V2S1=0.7697
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	105.88	2.72	354.20	2.72	603.28	2.72	852.75
2.70	71.180	2.70	238.83	2.70	406.96	2.70	574.98
2.68	54.357	2.68	182.91	2.68	311.95	2.68	440.83
2.66	44.477	2.66	150.08	2.66	256.23	2.66	362.27
2.64	38.023	2.64	128.54	2.64	219.85	2.64	311.05
2.62	33.489	2.62	113.47	2.62	194.26	2.62	275.31
2.60	30.141	2.60	102.35	2.60	175.43	2.60	248.66
2.58	27.570	2.58	93.817	2.58	160.89	2.58	228.16
2.56	25.530	2.56	87.022	2.56	149.51	2.56	212.03
2.54	23.877	2.54	81.546	2.54	140.17	2.54	198.95
2.52	22.508	2.52	76.994	2.52	132.51	2.52	188.05
2.50	21.351	2.50	73.147	2.50	126.01	2.50	179.02
2.45	19.108	2.45	65.695	2.45	113.43	2.45	161.33
2.40	17.469	2.40	60.209	2.40	104.21	2.40	148.18
2.35	16.197	2.35	55.928	2.35	96.897	2.35	137.95
2.30	15.166	2.30	52.385	2.30	90.924	2.30	129.56
2.25	14.302	2.25	49.371	2.25	85.772	2.25	122.23
2.20	13.558	2.20	46.711	2.20	81.224	2.20	115.76
2.15	12.902	2.15	44.287	2.15	77.088	2.15	109.87
2.10	12.316	2.10	42.047	2.10	73.228	2.10	104.41
2.05	11.783	2.05	39.947	2.05	69.604	2.05	99.290
2.00	11.292	2.00	37.945	2.00	66.134	2.00	94.368
1.95	10.836	1.95	36.012	1.95	62.783	1.95	89.560
1.90	10.406	1.90	34.130	1.90	59.519	1.90	84.903
1.85	9.9986	1.85	32.293	1.85	56.300	1.85	80.344
1.80	9.6089	1.80	30.478	1.80	53.129	1.80	75.819
1.75	9.2331	1.75	28.692	1.75	49.984	1.75	71.299
1.70	8.8688	1.70	26.941	1.70	46.861	1.70	66.840
1.65	8.5135	1.65	25.259	1.65	43.769	1.65	62.393
1.60	8.1653	1.60	23.750	1.60	40.830	1.60	58.079
1.55	7.8228	1.55	22.511	1.55	38.270	1.55	54.195
1.50	7.4848	1.50	21.480	1.50	36.248	1.50	51.120
1.45	7.1500	1.45	20.548	1.45	34.569	1.45	48.654
1.40	6.8177	1.40	19.666	1.40	33.039	1.40	46.455
1.35	6.4873	1.35	18.808	1.35	31.572	1.35	44.372

Table 41.

RO21=2.000 V21=1.333 V2S1=0.7697
RO21=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	89.979	2.72	290.41	2.72	491.33	2.72	692.94
2.70	60.893	2.70	197.30	2.70	334.58	2.70	471.35
2.68	46.873	2.68	152.48	2.68	258.86	2.68	365.05
2.66	38.712	2.66	126.31	2.66	214.90	2.66	303.35
2.64	33.409	2.64	109.28	2.64	186.25	2.64	263.31
2.62	29.709	2.62	97.440	2.62	166.25	2.62	235.16
2.60	26.985	2.60	88.714	2.60	151.62	2.60	214.57
2.58	24.903	2.58	82.014	2.58	140.45	2.58	198.95
2.56	23.257	2.56	76.746	2.56	131.61	2.56	186.57
2.54	21.922	2.54	72.455	2.54	124.47	2.54	176.52
2.52	20.817	2.52	68.905	2.52	118.52	2.52	168.18
2.50	19.884	2.50	65.888	2.50	113.47	2.50	161.11
2.48	19.083	2.48	63.311	2.48	109.17	2.48	155.08
2.45	18.070	2.45	60.030	2.45	103.67	2.45	147.37
2.40	16.735	2.40	55.657	2.40	96.317	2.40	137.13
2.35	15.692	2.35	52.165	2.35	90.492	2.35	128.83
2.30	14.839	2.30	49.250	2.30	85.513	2.30	121.86
2.25	14.116	2.25	46.698	2.25	81.217	2.25	115.76
2.20	13.485	2.20	44.397	2.20	77.294	2.20	110.25
2.15	12.923	2.15	42.290	2.15	73.666	2.15	105.10
2.10	12.411	2.10	40.293	2.10	70.240	2.10	100.22
2.05	11.938	2.05	38.393	2.05	66.951	2.05	95.545
2.00	11.494	2.00	36.565	2.00	63.779	2.00	91.030
1.95	11.075	1.95	34.782	1.95	60.686	1.95	86.595
1.90	10.673	1.90	33.029	1.90	57.632	1.90	82.276
1.85	10.286	1.85	31.303	1.85	54.609	1.85	77.950
1.80	9.9116	1.80	29.584	1.80	51.604	1.80	73.649
1.75	9.5458	1.75	27.884	1.75	48.588	1.75	69.347
1.70	9.1876	1.70	26.223	1.70	45.579	1.70	65.042
1.65	8.8353	1.65	24.683	1.65	42.615	1.65	60.732
1.60	8.4880	1.60	23.427	1.60	39.824	1.60	56.558
1.55	8.1444	1.55	22.423	1.55	37.595	1.55	53.007
1.50	7.8036	1.50	21.521	1.50	35.896	1.50	50.376
1.45	7.4650	1.45	20.660	1.45	34.395	1.45	48.195
1.40	7.1278	1.40	19.816	1.40	32.963	1.40	46.155
1.35	6.7915	1.35	18.987	1.35	31.567	1.35	44.183

Table 42.

RO21=2.500 V21=1.200 V2S1=0.6928
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	107.31	2.72	360.14	2.72	613.64	2.72	866.53
2.70	72.357	2.70	243.71	2.70	415.63	2.70	587.58
2.68	55.453	2.68	187.39	2.68	319.86	2.68	451.98
2.66	45.554	2.66	154.40	2.66	264.12	2.66	373.63
2.64	39.097	2.64	133.00	2.64	227.55	2.64	322.26
2.62	34.575	2.62	118.03	2.62	202.33	2.62	286.72
2.60	31.238	2.60	106.99	2.60	183.54	2.60	260.27
2.58	28.676	2.58	98.560	2.58	169.27	2.58	240.22
2.56	26.650	2.56	91.868	2.56	158.10	2.56	224.27
2.54	25.005	2.54	86.478	2.54	148.93	2.54	211.64
2.52	23.639	2.52	82.029	2.52	141.42	2.52	200.96
2.50	22.488	2.50	78.272	2.50	135.14	2.50	192.04
2.48	21.497	2.48	75.054	2.48	129.70	2.48	184.38
2.45	20.246	2.45	70.984	2.45	122.88	2.45	174.84
2.40	18.596	2.40	65.628	2.40	113.80	2.40	162.07
2.35	17.306	2.35	61.440	2.35	106.73	2.35	152.03
2.30	16.250	2.30	57.953	2.30	100.81	2.30	143.68
2.25	15.357	2.25	54.973	2.25	95.687	2.25	136.54
2.20	14.578	2.20	52.317	2.20	91.159	2.20	130.08
2.15	13.887	2.15	49.907	2.15	87.019	2.15	124.11
2.10	13.262	2.10	47.652	2.10	83.140	2.10	118.66
2.05	12.690	2.05	45.528	2.05	79.469	2.05	113.43
2.00	12.161	2.00	43.490	2.00	75.951	2.00	108.43
1.95	11.667	1.95	41.531	1.95	72.526	1.95	103.57
1.90	11.203	1.90	39.613	1.90	69.211	1.90	98.832
1.85	10.764	1.85	37.732	1.85	65.930	1.85	94.119
1.80	10.346	1.80	35.876	1.80	62.697	1.80	89.535
1.75	9.9453	1.75	34.035	1.75	59.486	1.75	84.926
1.70	9.5582	1.70	32.192	1.70	56.271	1.70	80.365
1.65	9.1824	1.65	30.355	1.65	53.051	1.65	75.730
1.60	8.8156	1.60	28.502	1.60	49.806	1.60	71.125
1.55	8.4562	1.55	26.648	1.55	46.529	1.55	66.439
1.50	8.1021	1.50	24.821	1.50	43.233	1.50	61.687
1.45	7.7526	1.45	23.187	1.45	40.012	1.45	56.998
1.40	7.4063	1.40	21.973	1.40	37.298	1.40	52.815
1.35	7.0625	1.35	20.979	1.35	35.359	1.35	49.814

Table 43.

RO21=2.000 V21=1.200 V2S1=0.6928
RO31=3.000 V31=5.200 V3S1=3.000

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.72	91.282	2.72	295.61	2.72	500.50	2.72	706.64
2.70	62.002	2.70	201.76	2.70	342.60	2.70	483.03
2.68	47.952	2.68	156.83	2.68	266.58	2.68	376.59
2.66	39.797	2.66	130.77	2.66	222.71	2.66	314.47
2.64	34.516	2.64	113.87	2.64	194.35	2.64	274.78
2.62	30.832	2.62	102.13	2.62	174.65	2.62	247.31
2.60	28.125	2.60	93.551	2.60	160.23	2.60	227.09
2.58	26.053	2.58	87.004	2.58	149.25	2.58	211.76
2.56	24.417	2.56	81.842	2.56	140.68	2.56	199.54
2.54	23.086	2.54	77.649	2.54	133.71	2.54	189.86
2.52	21.980	2.52	74.197	2.52	127.92	2.52	181.81
2.50	21.045	2.50	71.275	2.50	123.03	2.50	174.99
2.48	20.239	2.48	68.750	2.48	118.85	2.48	169.08
2.45	19.217	2.46	66.555	2.46	115.21	2.46	163.86
2.40	17.859	2.44	64.622	2.44	111.96	2.44	159.34
2.35	16.785	2.42	62.871	2.42	109.02	2.42	155.23
2.30	15.900	2.40	61.297	2.40	106.36	2.40	151.50
2.25	15.141	2.38	59.840	2.38	103.95	2.38	148.11
2.20	14.476	2.35	57.880	2.35	100.59	2.35	143.36
2.15	13.878	2.30	54.982	2.30	95.715	2.30	136.49
2.10	13.334	2.25	52.445	2.25	91.392	2.25	130.35
2.05	12.829	2.20	50.148	2.20	87.433	2.20	124.74
2.00	12.357	2.15	48.000	2.15	83.762	2.15	119.59
1.95	11.910	2.10	45.990	2.10	80.287	2.10	114.61
1.90	11.484	2.05	44.056	2.05	76.950	2.05	109.87
1.85	11.074	2.00	42.190	2.00	73.710	2.00	105.23
1.80	10.677	1.95	40.364	1.95	70.538	1.95	100.72
1.75	10.291	1.90	38.570	1.90	67.416	1.90	96.288
1.70	9.9131	1.85	36.795	1.85	64.316	1.85	91.862
1.65	9.5426	1.80	35.032	1.80	61.241	1.80	87.490
1.60	9.1775	1.75	33.270	1.75	58.173	1.75	83.083
1.55	8.8165	1.70	31.502	1.70	55.076	1.70	78.674
1.50	8.4595	1.65	29.726	1.65	51.971	1.65	74.242
1.45	8.1049	1.60	27.933	1.60	48.824	1.60	69.736
1.40	7.7526	1.55	26.125	1.55	45.631	1.55	65.162
1.35	7.4014	1.50	24.373	1.50	42.401	1.50	60.527
		1.45	23.044	1.45	39.260	1.45	55.909
		1.40	22.065	1.40	36.922	1.40	51.996
		1.35	21.151	1.35	35.266	1.35	49.447

Table 44.

RO21=2.800 V21=4.667 V2S1=2.694
RO31=3.000 V31=5.000 V3S1=2.887

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.60	24.243	2.60	30.440	2.60	38.744	2.60	48.461
2.58	18.919	2.58	23.138	2.58	30.249	2.58	38.352
2.56	16.172	2.56	19.526	2.56	25.597	2.56	32.478
2.54	14.537	2.54	17.318	2.54	22.497	2.54	28.384
2.52	13.458	2.52	15.802	2.52	20.209	2.52	25.230
2.50	12.689	2.50	14.684	2.50	18.415	2.50	22.656
2.48	12.106	2.48	13.821	2.48	16.956	2.48	20.471
2.46	11.643	2.46	13.128	2.46	15.741	2.46	18.577
2.44	11.262	2.44	12.557	2.44	14.716	2.44	16.928
2.42	10.938	2.42	12.076	2.42	13.847	2.42	15.507
2.40	10.656	2.40	11.662	2.40	13.108	2.40	14.311
2.38	10.406	2.38	11.301	2.38	12.477	2.38	13.326
2.35	10.075	2.35	10.833	2.35	11.696	2.35	12.188
2.30	9.6021	2.30	10.192	2.30	10.712	2.30	10.915
2.25	9.1940	2.25	9.6635	2.25	9.9863	2.25	10.075
2.20	8.8265	2.20	9.2080	2.20	9.4133	2.20	9.4548
2.15	8.4868	2.15	8.8011	2.15	8.9346	2.15	8.9550
2.10	8.1660	2.10	8.4283	2.10	8.5162	2.10	8.5270
2.05	7.8586	2.05	8.0792	2.05	8.1381	2.05	8.1435
2.00	7.5614	2.00	7.7482	2.00	7.7876	2.00	7.7906
1.95	7.2714	1.95	7.4302	1.95	7.4568	1.95	7.4581
1.90	6.9866	1.90	7.1218	1.90	7.1398	1.90	7.1405
1.85	6.7051	1.85	6.8209	1.85	6.8325	1.85	6.8330
1.80	6.4259	1.80	6.5249	1.80	6.5326		
1.75	6.1480	1.75	6.2323	1.75	6.2374		
1.70	5.8699	1.70	5.9419	1.70	5.9450		
1.65	5.5911	1.65	5.6522	1.65	5.6540		
1.60	5.3106	1.60	5.3621	1.60	5.3632		
1.55	5.0270	1.55	5.0703	1.55	5.0708		
1.50	4.7394	1.50	4.7753	1.50	4.7758		
1.45	4.4466	1.45	4.4760				
1.40	4.1465	1.40	4.1703				
1.35	3.8373	1.35	3.8560				

Table 45.

RO21=2.800 V21=4.333 V2S1=2.502
RO31=3.000 V31=5.000 V3S1=2.887

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.60	66.613	2.60	109.96	2.60	153.14	2.60	196.38
2.58	43.933	2.58	72.009	2.58	100.77	2.58	129.65
2.56	33.473	2.56	55.675	2.56	78.571	2.56	101.62
2.54	27.823	2.54	46.759	2.54	66.330	2.54	86.016
2.52	24.276	2.52	40.971	2.52	58.246	2.52	75.616
2.50	21.801	2.50	36.771	2.50	52.298	2.50	67.941
2.48	19.942	2.48	33.499	2.48	47.619	2.48	61.828
2.46	18.475	2.46	30.825	2.46	43.739	2.46	56.750
2.44	17.273	2.44	28.546	2.44	40.392	2.44	52.335
2.42	16.261	2.42	26.551	2.42	37.423	2.42	48.385
2.40	15.390	2.40	24.759	2.40	34.710	2.40	44.754
2.38	14.629	2.38	23.121	2.38	32.186	2.38	41.336
2.35	13.645	2.35	20.870	2.35	28.610	2.35	36.414
2.30	12.319	2.30	17.484	2.30	22.810	2.30	27.994
2.25	11.273	2.25	14.478	2.25	16.911	2.25	18.372
2.20	10.429	2.20	12.102	2.20	12.638	2.20	12.721
2.15	9.7339	2.15	10.544	2.15	10.649		
2.10	9.1484	2.10	9.5500	2.10	9.5749	H21=25.000	
2.05	8.6427	2.05	8.8502	2.05	8.8569		
2.00	8.1950	2.00	8.3063	2.00	8.3082	2.60	239.52
1.95	7.7894	1.95	7.8053	1.95	7.8517	2.58	158.67
1.90	7.4142	1.90	7.4477			2.56	124.72
1.85	7.0613	1.85	7.0801			2.54	105.74
1.80	6.7247	1.80	6.7353			2.52	93.027
1.75	6.4001	1.75	6.4059			2.50	83.612
1.70	6.0841	1.70	6.0872			2.48	76.086
1.65	5.7734	1.65	5.7750			2.46	69.783
1.60	5.4661	1.60	5.4671			2.44	64.300
1.55	5.1601					2.42	59.368
1.50	4.8534					2.40	54.821
1.45	4.5441					2.38	50.502
1.40	4.2299					2.35	44.216
1.35	3.9085					2.30	33.018
1.30	3.5763					2.25	19.040
1.25	3.2294						

Table 46.

RO21=2.800 V21=4.000 V2S1=2.309
RO31=3.000 V31=5.000 V3S1=2.887

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.60	37.432	2.60	91.088	2.60	144.47	2.60	197.76
2.58	27.317	2.58	61.593	2.58	95.915	2.58	130.22
2.56	21.774	2.56	45.308	2.56	69.530	2.56	93.879
2.54	18.408	2.54	35.620	2.54	54.309	2.54	73.297
2.52	16.225	2.52	29.584	2.52	45.089	2.52	60.989
2.50	14.733	2.50	25.617	2.50	39.093	2.50	52.994
2.48	13.665	2.48	22.848	2.48	34.887	2.48	47.370
2.46	12.868	2.46	20.806	2.46	31.749	2.46	43.143
2.44	12.249	2.44	19.229	2.44	29.285	2.44	39.808
2.42	11.751	2.42	17.965	2.42	27.275	2.42	37.060
2.40	11.339	2.40	16.921	2.40	25.585	2.40	34.740
2.38	10.990	2.38	16.037	2.38	24.127	2.38	32.718
2.35	10.548	2.35	14.931	2.35	22.251	2.35	30.093
2.30	9.9563	2.30	13.479	2.30	19.679	2.30	26.436
2.25	9.4740	2.25	12.340	2.25	17.537	2.25	23.305
2.20	9.0576	2.20	11.406	2.20	15.657	2.20	20.442
2.15	8.6833	2.15	10.613	2.15	13.948	2.15	17.685
2.10	8.3374	2.10	9.9262	2.10	12.382	2.10	14.933
2.05	8.0112	2.05	9.3203	2.05	10.985	2.05	12.315
2.00	7.6993	2.00	8.7783	2.00	9.8184	2.00	10.325
1.95	7.3971	1.95	8.2874	1.95	8.9054	1.95	9.0778
1.90	7.1026	1.90	7.8381	1.90	8.1980	1.90	8.2578
1.85	6.8131	1.85	7.4213	1.85	7.6301	1.85	7.6522
1.80	6.5273	1.80	7.0303	1.80	7.1516	1.80	7.1602
1.75	6.2434	1.75	6.6599	1.75	6.7298	1.75	6.7332
1.70	5.9606	1.70	6.3050	1.70	6.3453	1.70	6.3465
1.65	5.6773	1.65	5.9620	1.65	5.9844	1.65	5.9851
1.60	5.3928	1.60	5.6274	1.60	5.6396		
1.55	5.1060	1.55	5.2984	1.55	5.3049		
1.50	4.8155	1.50	4.9722	1.50	4.9755		
1.45	4.5200	1.45	4.6466				
1.40	4.2177	1.40	4.3184				
1.35	3.9066	1.35	3.9853				

Table 47.

RO21=2.800 V21=3.667 V2S1=2.117
RO31=3.000 V31=5.000 V3S1=2.887

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.60	44.380	2.60	122.66	2.60	201.09	2.60	279.43
2.58	32.260	2.58	85.615	2.58	139.26	2.58	193.04
2.56	25.448	2.56	64.317	2.56	103.78	2.56	143.31
2.54	21.184	2.54	50.701	2.54	81.114	2.54	111.58
2.52	18.336	2.52	41.463	2.52	65.878	2.52	90.435
2.50	16.353	2.50	35.009	2.50	55.389	2.50	75.944
2.48	14.922	2.48	30.401	2.48	47.984	2.48	65.817
2.46	13.858	2.46	27.028	2.46	42.620	2.46	58.501
2.44	13.043	2.44	24.487	2.44	38.597	2.44	53.013
2.42	12.399	2.42	22.514	2.42	35.472	2.42	48.753
2.40	11.878	2.40	20.941	2.40	32.967	2.40	45.327
2.38	11.444	2.38	19.651	2.38	30.894	2.38	42.485
2.35	10.911	2.35	18.087	2.35	28.364	2.35	39.003
2.30	10.221	2.30	16.124	2.30	25.119	2.30	34.499
2.25	9.6804	2.25	14.640	2.25	22.598	2.25	30.962
2.20	9.2254	2.20	13.445	2.20	20.497	2.20	27.986
2.15	8.8248	2.15	12.435	2.15	18.660	2.15	25.339
2.10	8.4602	2.10	11.554	2.10	16.984	2.10	22.882
2.05	8.1200	2.05	10.766	2.05	15.404	2.05	20.498
2.00	7.7974	2.00	10.050	2.00	13.877	2.00	18.092
1.95	7.4870	1.95	9.3910	1.95	12.373	1.95	15.555
1.90	7.1854	1.90	8.7826	1.90	10.907	1.90	12.833
1.85	6.8904	1.85	8.2188	1.85	9.5613	1.85	10.317
1.80	6.5996	1.80	7.6952	1.80	8.4553	1.80	8.6681
1.75	6.3118	1.75	7.2094	1.75	7.6145	1.75	7.6723
1.70	6.0256	1.70	6.7568	1.70	6.9673	1.70	6.9842
1.65	5.7393	1.65	6.3324	1.65	6.4407	1.65	6.4456
1.60	5.4524	1.60	5.9316	1.60	5.9863		
1.55	5.1632	1.55	5.5490	1.55	5.5760		
1.50	4.8709	1.50	5.1794	1.50	5.1925		
1.45	4.5738	1.45	4.8190				
1·40	4.2700	1.40	4.4632				
1.35	3.9577	1.35	4.1070				

Table 48.

RO21=2.800 V21=3.333 V2S1=1.924
RO31=3.000 V31=5.000 V3S1=2.887

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=1.000		H21=4.000		H21=7.000		H21=10.000	
2.60	51.045	2.60	151.73	2.60	252.76	2.60	353.61
2.58	37.163	2.58	108.10	2.58	179.47	2.58	250.84
2.56	29.273	2.56	82.885	2.56	137.17	2.56	191.40
2.54	24.236	2.54	66.480	2.54	109.53	2.54	152.64
2.52	20.797	2.52	54.998	2.52	90.207	2.52	125.53
2.50	18.341	2.50	46.583	2.50	76.079	2.50	105.65
2.48	16.532	2.48	40.249	2.48	65.476	2.48	90.818
2.46	15.166	2.46	35.390	2.46	57.375	2.46	79.491
2.44	14.113	2.44	31.611	2.44	51.118	2.44	70.793
2.42	13.283	2.42	28.641	2.42	46.231	2.42	64.020
2.40	12.615	2.40	26.271	2.40	42.355	2.40	58.653
2.38	12.068	2.38	24.355	2.38	39.229	2.38	54.336
2.35	11.407	2.35	22.089	2.35	35.539	2.35	49.235
2.30	10.580	2.30	19.367	2.30	31.091	2.30	43.083
2.25	9.9566	2.25	17.423	2.25	27.882	2.25	38.619
2.20	9.4492	2.20	15.925	2.20	25.373	2.20	35.116
2.15	9.0132	2.15	14.700	2.15	23.295	2.15	32.189
2.10	8.6230	2.10	13.656	2.10	21.485	2.10	29.636
2.05	8.2644	2.05	12.734	2.05	19.856	2.05	27.309
2.00	7.9273	2.00	11.896	2.00	18.340	2.00	25.127
1.95	7.6055	1.95	11.121	1.95	16.892	1.95	23.011
1.90	7.2953	1.90	10.390	1.90	15.474	1.90	20.902
1.85	6.9926	1.85	9.6950	1.85	14.050	1.85	18.721
1.80	6.6958	1.80	9.0271	1.80	12.589	1.80	16.369
1.75	6.4030	1.75	8.3837	1.75	11.068	1.75	13.700
1.70	6.1121	1.70	7.7655	1.70	9.5203	1.70	10.724
1.65	5.8222	1.65	7.1760	1.65	8.1245	1.65	8.4096
1.60	5.5321	1.60	6.6203	1.60	7.0649	1.60	7.1183
1.55	5.2403	1.55	6.1013	1.55	6.2965	1.55	6.3071
1.50	4.9455	1.50	5.6187	1.50	5.7010		
1.45	4.6463	1.45	5.1679	1.45	5.2013		
1.40	4.3411	1.40	4.7415				
1.35	4.0277	1.35	4.3315				

Table 49.

RO21=2.800 V21=2.667 V2S1=1.5395
RO31=3.000 V31=5.000 V3S1=2.887

V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1	V/V_1	L/H_1
H21=5.000		H21=10.000		H21=15.000		H21=20.000	
2.60	248.06	2.60	479.70	2.60	711.92	2.60	944.44
2.58	180.73	2.58	349.67	2.58	518.87	2.58	688.13
2.56	141.91	2.56	274.52	2.56	406.89	2.56	540.10
2.54	116.56	2.54	225.36	2.54	334.23	2.54	442.96
2.52	98.662	2.52	190.71	2.52	282.66	2.52	374.89
2.50	85.388	2.50	164.87	2.50	244.41	2.50	323.72
2.48	75.087	2.48	144.87	2.48	214.73	2.48	284.53
2.46	66.899	2.46	128.94	2.46	191.06	2.46	253.06
2.44	60.222	2.44	115.95	2.44	171.74	2.44	227.65
2.42	54.676	2.42	105.17	2.42	155.69	2.42	206.22
2.40	50.016	2.40	96.083	2.40	142.23	2.40	188.33
2.38	46.047	2.38	88.349	2.38	130.71	2.38	173.07
2.35	41.128	2.35	78.763	2.35	116.48	2.35	154.15
2.30	34.974	2.30	66.769	2.30	98.662	2.30	130.54
2.25	30.592	2.25	58.272	2.25	86.059	2.25	113.90
2.20	27.392	2.20	52.102	2.20	76.927	2.20	101.74
2.15	24.966	2.15	47.426	2.15	70.001	2.15	92.625
2.10	23.043	2.10	43.735	2.10	64.542	2.10	85.374
2.05	21.458	2.05	40.686	2.05	60.025	2.05	79.395
2.00	20.099	2.00	38.062	2.00	56.149	2.00	74.242
1.95	18.896	1.95	35.732	1.95	52.689	1.95	69.660
1.90	17.804	1.90	33.604	1.90	49.526	1.90	65.461
1.85	16.789	1.85	31.619	1.85	46.568	1.85	61.532
1.80	15.828	1.80	29.727	1.80	43.743	1.80	57.775
1.75	14.905	1.75	27.890	1.75	40.997	1.75	54.118
1.70	14.004	1.70	26.082	1.70	38.272	1.70	50.487
1.65	13.113	1.65	24.264	1.65	35.530	1.65	46.814
1.60	12.219	1.60	22.405	1.60	32.703	1.60	43.011
1.55	11.307	1.55	20.457	1.55	29.703	1.55	38.961
1.50	10.362	1.50	18.344	1.50	26.389	1.50	34.432
1.45	9.3618	1.45	15.930	1.45	22.450	1.45	28.915
1.40	8.2796	1.40	12.908	1.40	16.930	1.40	20.439
1.35	7.0993	1.35	8.9245				
1.30	5.8882						
1.25	4.8411						

Tables 1L.—48L.

The values of phase velocity in km/sec and the dimensionless values of wave length (L/H_1). H_1 is the thickness of the upper layer. VS1 and RO1 represent the shear velocity (km/sec) and the density (g/cm^3) of the upper layer respectively.

Table 1L.

VS1=3.984 RO1=2.670
VS2=4.677 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	27.926	4.62	9.4717	4.57	6.6612	4.35	3.0129
4.66	17.809	4.61	8.6749	4.55	6.0160	4.30	2.5965
4.65	14.042	4.60	8.0336	4.50	4.8752	4.25	2.2246
4.64	11.917	4.59	7.5020	4.45	4.0935	4.20	1.8801
4.63	10.503	4.58	7.0509	4.40	3.4984	4.15	1.5491

Table 2L.

VS1=3.176 RO1=2.670
VS2=4.677 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	55.070	4.57	14.000	4.10	5.3293	3.60	2.7037
4.66	35.329	4.55	12.824	4.05	4.9971	3.55	2.4788
4.65	28.024	4.50	10.792	4.00	4.6901	3.50	2.2524
4.64	23.929	4.45	9.4511	3.95	4.4032	3.45	2.0218
4.63	21.221	4.40	8.4709	3.90	4.1326	3.40	1.7835
4.62	19.259	4.35	7.7061	3.85	3.8752	3.35	1.5321
4.61	17.752	4.30	7.0816	3.80	3.6282		
4.60	16.547	4.25	6.5543	3.75	3.3896		
4.59	15.555	4.20	6.0974	3.70	3.1572		
4.58	14.718	4.15	5.6931	3.65	2.9291		

Table 7L.

VS1=3.464 RO1=2.800
VS2=4.590 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.58	38.134	4.45	9.7554	4.10	4.2864	3.70	1.8935
4.57	26.887	4.40	8.2040	4.05	3.9210	3.65	1.6206
4.56	21.888			4.00	3.5864		
4.55	18.898	4.35	7.1358	3.95	3.2751	3.60	1.3338
4.54	16.850	4.30	6.3311	3.90	2.9814	3.55	1.0172
		4.25	5.6883			3.50	0.6252
4.53	15.333	4.20	5.1528	3.85	2.7006		
4.52	14.149	4.15	4.6924	3.80	2.4285		
4.50	12.393			3.75	2.1609		

Table 9L.

VS1=2.887 RO1=2.800
VS2=4.590 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.58	53.708	4.35	10.825	3.85	5.3736	3.35	2.9283
4.57	37.985	4.30	9.7781	3.80	5.0841	3.30	2.7079
4.56	31.018	4.25	8.9537	3.75	4.8103	3.25	2.4858
4.55	26.864	4.20	8.2771	3.70	4.5495	3.20	2.2598
4.54	24.027	4.15	7.7042	3.65	4.2993	3.15	2.0272
4.53	21.932	4.10	7.2073	3.60	4.0579	3.10	1.7843
4.52	20.301	4.05	6.7679	3.55	3.8236	3.05	1.5249
4.50	17.895	4.00	6.3730	3.50	3.5949	3.00	1.2380
4.45	14.312	3.95	6.0133	3.45	3.3703	2.95	0.8979
4.40	12.235	3.90	5.6819	3.40	3.1486		

Table 11L.

VS1=2.309 RO1=2.800
VS2=4.590 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.58	66.588	4.15	10.655	3.50	6.0828	2.85	3.3522
4.57	47.242			3.45	5.8499	2.80	3.1479
4.56	38.697	4.10	10.086	3.40	5.6235	2.75	2.9405
4.55	33.616	4.05	9.5848			2.70	2.7287
4.54	30.155	4.00	9.1366	3.35	5.4029	2.65	2.5109
		3.95	8.7304	3.30	5.1871		
4.53	27.606	3.90	8.3581	3.25	4.9755	2.60	2.2847
4.52	25.628			3.20	4.7673	2.55	2.0471
4.50	22.718	3.85	8.0136	3.15	4.5619	2.50	1.7931
4.45	18.416	3.80	7.6922			2.45	1.5143
4.40	15.947	3.75	7.3902	3.10	4.3586	2.40	1.1936
		3.70	7.1045	3.05	4.1568		
4.35	14.284	3.65	6.8327	3.00	3.9560	2.35	0.7831
4.30	13.058			2.95	3.7554		
4.25	12.098	3.60	6.5729	2.90	3.5544		
4.20	11.315	3.55	6.3234				

Table 16L.

VS1=2.887 RO1=3.000
VS2=4.792 RO2=3.400

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.78	50.003	4.50	10.270	3.95	5.4084	3.40	3.0175
4.77	36.986	4.45	9.4590	3.90	5.1565	3.35	2.8167
4.76	30.712	4.40	8.7943	3.85	4.9157		
4.75	26.843	4.35	8.2321			3.30	2.6139
4.74	24.155			3.80	4.6842	3.25	2.4076
		4.30	7.7450	3.75	4.4606	3.20	2.1961
4.73	22.147	4.25	7.3148	3.70	4.2434	3.15	1.9766
4.72	20.574	4.20	6.9287	3.65	4.0317	3.10	1.7456
4.70	18.236	4.15	6.5775	3.60	3.8242		
4.65	14.729	4.10	6.2545			3.05	1.4969
4.60	12.687			3.55	3.6200	3.00	1.2198
		4.05	5.9546	3.50	3.4181	2.95	0.8884
4.55	11.300	4.00	5.6736	3.45	3.2176		

Table 18L.

VS1=2.887 RO1=2.800
VS2=4.792 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.78	52.841	4.50	10.676	3.95	5.5285	3.40	3.0530
4.77	39.055	4.45	9.8123	3.90	5.2652	3.35	2.8475
4.76	32.404	4.40	9.1051	3.85	5.0141		
4.75	28.302	4.35	8.5078			3.30	2.6403
4.74	25.449			3.80	4.7732	3.25	2.4299
		4.30	7.9910	3.75	4.5409	3.20	2.2145
4.73	23.317	4.25	7.5353	3.70	4.3158	3.15	1.9915
4.72	21.646	4.20	7.1270	3.65	4.0967	3.10	1.7571
4.70	19.160	4.15	6.7564	3.60	3.8824		
4.65	15.428	4.10	6.4162			3.05	1.5054
4.60	13.252			3.55	3.6719	3.00	1.2253
		4.05	6.1009	3.50	3.4642	2.95	0.8913
4.55	11.773	4.00	5.8061	3.45	3.2582		

Table 19L.

VS1=4.0410 RO1=2.800
VS2=4.6765 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	28.034	4.60	7.7025	4.35	2.7120	4.10	0.8119
4.66	17.457	4.55	5.7069	4.30	2.2897		
4.65	13.664	4.50	4.5751	4.25	1.9084		
4.64	11.547	4.45	3.7964	4.20	1.5492		
4.63	10.145	4.40	3.2007	4.15	1.1935		

Table 20L.

VS1=3.4640 RO1=2.800
VS2=4.6765 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	50.122	4.50	9.1417	4.15	4.4180	3.80	2.3743
4.66	31.383	4.45	7.9174			3.75	2.1194
4.65	24.702	4.40	7.0166	4.10	4.0693	3.70	1.8626
4.64	20.994			4.05	3.7481	3.65	1.5986
4.63	18.552	4.35	6.3091	4.00	3.4482		
		4.30	5.7277	3.95	3.1647	3.60	1.3193
4.60	14.344	4.25	5.2336	3.90	2.8935	3.55	1.0090
4.55	10.985	4.20	4.8024	3.85	2.6312	3.50	0.6222

Table 21L.

VS1=2.8870 RO1=2.500
VS2=4.6765 RO2=3.400

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	54.397	4.50	11.013	3.90	5.0117	3.35	2.7628
4.66	34.298	4.45	9.8008			3.30	2.5671
4.65	27.181	4.40	8.9184	3.85	4.7787	3.25	2.3677
4.64	23.257			3.80	4.5556	3.20	2.1626
4.63	20.686	4.35	8.2315	3.75	4.3406	3.15	1.9493
		4.30	7.6710	3.70	4.1323		
4.62	18.837	4.25	7.1975	3.65	3.9293	3.10	1.7242
4.61	17.425	4.20	6.7867			3.05	1.4811
4.60	16.302	4.15	6.4226	3.60	3.7304	3.00	1.2092
4.59	15.381			2.55	3.5347	2.95	0.8827
4.58	14.607	4.10	6.0944	3.50	3.3411		
		4.05	5.7943	3.45	3.1486		
4.57	13.945	4.00	5.5165	3.40	2.9562		
4.55	12.865	3.95	5.2568				

Table 22L.

VS1=2.8870 RO1=2.800
VS2=4.6765 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	68.861	4.45	11.606	3.90	5.4810	3.35	2.8910
4.66	43.241	4.40	10.449	3.85	5.2013	3.30	2.6768
4.65	34.134	4.35	9.5517	3.80	4.9360		
4.64	29.094	4.30	8.8237			3.25	2.4601
4.63	25.783			3.75	4.6826	3.20	2.2390
		4.25	8.2130	3.70	4.4392	3.15	2.0109
4.62	23.395	4.20	7.6873	3.65	4.2040	3.10	1.7719
4.61	21.567	4.15	7.2253	3.60	3.9757	3.05	1.5160
4.60	20.109	4.10	6.8125	3.55	3.7528		
4.59	18.910	4.05	6.4385			3.00	1.2322
4.55	15.626			3.50	3.5340	2.95	0.8949
		4.00	6.0956	3.45	3.3183		
4.50	13.198	3.95	5.7779	3.40	3.1044		

Table 23L.

VS1=2.8870 RO1=2.500
VS2=4.6765 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	61.552	4.35	8.8741	3.85	4.9839	3.35	2.8253
4.66	38.718	4.30	8.2316	3.80	4.7403	3.30	2.6206
4.65	30.614	4.25	7.6910	3.75	4.5067	3.25	2.4128
4.64	26.136	4.20	7.2241	3.70	4.2814	3.20	2.2000
4.63	23.198	4.15	6.8124	3.65	4.0628	3.15	1.9795
4.60	18.174	4.10	6.4430	3.60	3.8497	3.10	1.7475
4.55	14.218	4.05	6.1070	3.55	3.6408	3.05	1.4982
4.50	12.081	4.00	5.7976	3.50	3.4350	3.00	1.2205
4.45	10.682	3.95	5.5097	3.45	3.2313	2.95	0.8887
4.40	9.6643	3.90	5.2395	3.40	3.0284		

Table 24L.

VS1=2.3090 RO1=2.500
VS2=4.6765 RO2=3.400

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	66.654	4.30	10.400	3.55	5.8251	2.80	3.0384
4.66	42.202	4.25	9.8600	3.50	5.6265	2.75	2.8455
4.65	33.580	4.20	9.3938	3.45	5.4320	2.70	2.6473
4.64	28.842	4.15	8.9824	3.40	5.2411	2.65	2.4423
4.63	25.749	4.10	8.6130	3.35	5.0532	2.60	2.2282
4.62	23.532	4.05	8.2767	3.30	4.8676	2.55	2.0019
4.61	21.844	4.00	7.9669	3.25	4.6840	2.50	1.7586
4.60	20.504	3.95	7.6787	3.20	4.5019	2.45	1.4897
4.59	19.409	3.90	7.4083	3.15	4.3208	2.40	1.1784
4.58	18.491	3.85	7.1527	3.10	4.1401	2.35	0.7765
4.55	16.432	3.80	6.9095	3.05	3.9596		
4.50	14.261	3.75	6.6770	3.00	3.7786		
4.45	12.851	3.70	6.4535	2.95	3.5966		
4.40	11.831	3.65	6.2377	2.90	3.4131		
4.35	11.041	3.60	6.0285	2.85	3.2273		

Table 25L.

VS1=2.3090 RO1=2.800
VS2=4.6765 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	84.314	4.35	12.689	3.60	6.4363	2.85	3.3279
4.66	53.110	4.30	11.852	3.55	6.2012	2.80	3.1268
4.65	42.053	4.25	11.153	3.50	5.9734	2.75	2.9224
4.64	35.952	4.20	10.554	3.45	5·7518	2.70	2.7134
4.63	31.955	4.15	10.030	3.40	5.5355	2.65	2.4981
4.62	29.079	4.10	9.5632	3.35	5.3239	2.60	2.2743
4.61	26.883	4.05	9.1422	3.30	5.1163	2.55	2.0389
4.60	25.136	4.00	8.7578	3.25	4.9120	2.50	1.7869
4.59	23.703	3.95	8.4033	3.20	4.7104	2.45	1.5099
4.58	22.501	3.90	8.0735	3.15	4.5109	2.40	1.1909
4.57	21.473	3.85	7.7644	3.10	4.3131	2.35	0.7819
4.55	19.796	3.80	7.4729	3.05	4.1164		
4.50	16.932	3.75	7.1962	3.00	3.9201		
4.45	15.070	3.70	6.9324	2.95	3.7237		
4.40	13.725	3.65	6.6796	2.90	3.5265		

Table 26L.

VS1=2.3090 RO1=2.500
VS2=4.6765 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.67	75.389	4.10	9.0742	3.35	5.1850	2.60	2.2509
4.66	47.590	4.05	8.6968	3.30	4.9888	2.55	2.0201
4.65	37.761	4.00	8.3508	3.25	4.7951	2.50	1.7725
4.64	32.346	3.95	8.0304	3.20	4.6036	2.45	1.4997
4.63	28.805	3.90	7.7312	3.15	4.4136	2.40	1.1846
4.60	22.779	3.85	7.4497	3.10	4.2246	2.35	0.7792
4.55	18.079	3.80	7.1831	3.05	4.0362		
4.50	15.566	3.75	6.9292	3.00	3.8477		
4.45	13.932	3.70	6.6862	2.95	3.6587		
4.40	12.753	3.65	6.4525	2.90	3.4686		
4.35	11.842	3.60	6.2268	2.85	3.2765		
4.30	11.105	3.55	6.0080	2.80	3.0817		
4.25	10.488	3.50	5.7952	2.75	2.8832		
4.20	9.9571	3.45	5.5876	2.70	2.6797		
4.15	9.4908	3.40	5.3845	2.65	2.4697		

Table 28L.

VS1=1.1547 RO1=2.500
VS2=4.6765 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.65	49.783	4.40	21.656	3.20	11.661	1.95	5.7198
4.64	43.463	4.39	21.437	3.15	11.407	1.90	5.4799
4.63	39.387	4.35	20.652	3.10	11.155	1.85	5.2375
4.62	36.494	4.30	19.828	3.05	10.907	1.80	4.9922
4.61	34.310	4.25	19.127	3.00	10.661	1.75	4.7434
4.60	32.589	4.20	18.514	2.95	10.417	1.70	4.4903
4.59	31.190	4.15	17.967	2.90	10.175	1.65	4.2321
4.58	30.023	4.10	17.470	2.85	9.9343	1.60	3.9675
4.57	29.032	4.05	17.013	2.80	9.6956	1.55	3.6953
4.56	28.176	4.00	16.587	2.75	9.4584	1.50	3.4132
4.55	27.426	3.95	16.188	2.70	9.2224	1.45	3.1186
4.54	26.762	3.90	15.810	2.65	8.9874	1.40	2.8075
4.53	26.169	3.85	15.451	2.60	8.7534	1.35	2.4734
4.52	25.635	3.80	15.107	2.55	8.5202	1.30	2.1055
4.51	25.150	3.75	14.776	2.50	8.2875	1.25	1.6817
4.50	24.706	3.70	14.457	2.45	8.0554	1.20	1.1422
4.49	24.298	3.65	14.148	2.40	7.8235		
4.48	23.921	3.60	13.847	2.35	7.5918		
4.47	23.571	3.55	13.554	2.30	7.3600		
4.46	23.245	3.50	13.268	2.25	7.1280		
4.45	22.940	3.45	12.988	2.20	6.8956		
4.44	22.653	3.40	12.714	2.15	6.6626		
4.43	22.383	3.35	12.445	2.10	6.4288		
4.42	22.128	3.30	12.179	2.05	6.1939		
4.41	21.886	3.25	11.918	2.00	5.9577		

Table 29L.

VS1=4.041 RO1=3.000
VS2=4.504 RO2=3.400

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	13.516	4.44	5.9694	4.30	2.6704		
4.48	10.213	4.43	5.4817	4.25	2.1302		
4.47	8.4859	4.42	5.0783	4.20	1.6751		
4.46	7.3746	4.40	4.4403	4.15	1.2590		
4.45	6.5786	4.35	3.3760	4.10	0.8389		

Table 30L.

VS1=4.001 RO1=3.000
VS2=4.504 RO2=3.400

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	14.637	4.44	6.5040	4.30	2.9943	4.05	0.7439
4.48	11.072	4.43	5.9811	4.25	2.4332		
4.47	9.2105	4.42	5.5491	4.20	1.9688		
4.46	8.0141	4.40	4.8674	4.15	1.5559		
4.45	7.1581	4.35	3.7366	4.10	1.1616		

Table 31L.

VS1=3.464 RO1=3.000
VS2=4.504 RO2=3.400

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	28.622	4.42	11.447	4.10	4.4349	3.80	2.4480
4.48	21.803	4.40	10.218			3.75	2.1742
4.47	18.268	4.35	8.2406	4.05	4.0274	3.70	1.9022
4.46	16.013			4.00	3.6629	3.65	1.6260
4.45	14.412	4.30	7.0080	3.95	3.3302	3.60	1.3369
		4.25	6.1302	3.90	3.0209		
4.44	13.198	4.20	5.4530	3.85	2.7286	3.55	1.0187
4.43	12.235	4.15	4.9017			3.50	0.6257

Table 32L.

VS1=3.464 RO1=2.800
VS2=4.503 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	31.369	4.42	12.097	4.10	4.5793	3.75	2.2107
4.48	23.502	4.40	10.770	4.05	4.1483		
4.47	19.552	4.35	8.6437	4.00	3.7641	3.70	1.9302
4.46	17.066	4.30	7.3223			3.65	1.6464
4.45	15.315	4.25	6.3835	3.95	3.4146	3.60	1.3507
				3.90	3.0907	3.55	1.0267
4.44	13.994	4.20	5.6611	3.85	2.7858	3.50	0.6287
4.43	12.950	4.15	5.0745	3.80	2.4942		

Table 33L.

VS1=3.175 RO1=2.800
VS2=4.503 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	38.731	4.30	9.3916	3.80	3.9213	3.30	1.2902
4.48	29.072	4.25	8.2831	3.75	3.6363	3.25	0.9639
4.47	24.230	4.20	7.4388	3.70	3.3644	3.20	0.5309
4.46	21.189	4.15	6.7606	3.65	3.1024		
4.45	19.051	4.10	6.1943	3.60	2.8475		
4.44	17.440	4.05	5.7076	3.55	2.5971		
4.43	16.170	4.00	5.2794	3.50	2.3484		
4.42	15.134	3.95	4.8955	3.45	2.0983		
4.40	13.527	3.90	4.5458	3.40	1.8430		
4.35	10.967	3.85	4.2230	3.35	1.5767		

Table 34L.

VS1=2.887 RO1=3.000
VS2=4.504 RO2=3.400

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	41.471	4.30	10.847	3.80	5.1375	3.30	2.7095
4.48	31.696	4.25	9.6726	3.75	4.8513	3.25	2.4865
4.47	26.646	4.20	8.7817	3.70	4.5807	3.20	2.2599
4.46	23.435	4.15	8.0693	3.65	4.3229	3.15	2.0270
4.45	21.163	4.10	7.4771	3.60	4.0756	3.10	1.7838
4.44	19.445	4.05	6.9703	3.55	3.8366	3.05	1.5244
4.43	18.088	4.00	6.5265	3.50	3.6043	3.00	1.2376
4.42	16.980	3.95	6.1306	3.45	3.3769	2.95	0.8976
4.40	15.261	3.90	5.7720	3.40	3.1530		
4.35	12.525	3.85	5.4429	3.35	2.9311		

Table 35L.

VS1=2.887 RO1=2.800
VS2=4.503 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	45.452	4.30	11.343	3.80	5.2638	3.30	2.7433
4.48	34.168	4.25	10.084	3.75	4.9636	3.25	2.5148
4.47	28.520	4.20	9.1312	3.70	4.6806	3.20	2.2831
4.46	24.978	4.15	8.3704	3.65	4.4116	3.15	2.0456
4.45	22.491	4.10	7.7393	3.60	4.1541	3.10	1.7982
4.44	20.621	4.05	7.2003	3.55	3.9059	3.05	1.5348
4.43	19.148	4.00	6.7294	3.50	3.6652	3.00	1.2444
4.42	17.948	3.95	6.3103	3.45	3.4301	2.95	0.9012
4.40	16.091	3.90	5.9316	3.40	3.1992		
4.35	13.145	3.85	5.5848	3.35	2.9708		

Table 36L.

VS1=2.887 RO1=2.500
VS2=4.504 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	39.218	4.34	11.602	4.19	8.3171	3.45	3.3273
4.48	30.001	4.33	11.264	4.15	7.7929	3.40	3.1099
4.47	25.243	4.32	10.953	4.10	7.2359	3.35	2.8940
4.46	22.220	4.31	10.666	4.05	6.7583	3.30	2.6779
4.45	20.082	4.30	10.399	4.00	6.3392	3.25	2.4600
4.44	18.467	4.29	10.150	3.95	5.9646	3.20	2.2381
4.43	17.192	4.28	9.9169	3.90	5.6244	3.15	2.0095
4.42	16.151	4.27	9.6982	3.85	5.3115	3.10	1.7704
4.41	15.280	4.26	9.4922	3.80	5.0204	3.05	1.5146
4.40	14.537	4.25	9.2976	3.75	4.7470	3.00	1.2311
4.39	13.893	4.24	9.1134	3.70	4.4879	2.95	0.8942
4.38	13.328	4.23	8.9385	3.65	4.2405		
4.37	12.826	4.22	8.7721	3.60	4.0025		
4.36	12.377	4.21	8.6135	3.55	3.7721		
4.35	11.971	4.20	8.4620	3.50	3.5475		

Table 37L.

VS1=2.887 RO1=2.000
VS2=4.504 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	31.586	4.30	8.9214	3.80	4.6396	3.30	2.5741
4.48	24.273	4.25	8.0673	3.75	4.4076	3.25	2.3727
4.47	20.513	4.20	7.4159	3.70	4.1857	3.20	2.1662
4.46	18.132	4.15	6.8905	3.65	3.9718	3.15	1.9518
4.45	16.453	4.10	6.4495	3.60	3.7641	3.10	1.7257
4.44	15.189	4.05	6.0679	3.55	3.5613	3.05	1.4820
4.43	14.192	4.00	5.7298	3.50	3.3619	3.00	1.2097
4.42	13.381	3.95	5.4244	3.45	3.1648	2.95	0.8829
4.40	12.126	3.90	5.1444	3.40	2.9686		
4.35	10.138	3.85	4.8841	3.35	2.7722		

Table 38L.

VS1=2.310 RO1=2.500
VS2=4.504 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	49.309	4.05	9.5669	3.35	5.1145	2.55	2.0300
4.48	37.853	4.00	9.0856	3.25	4.9073	2.50	1.7784
4.47	31.959	3.95	8.6579	3.20	4.7035	2.45	1.5016
4.46	28.227	3.90	8.2719	3.15	4.5024	2.40	1.1823
4.45	25.595	3.85	7.9191	3.10	4.3034	2.35	0.7712
4.44	23.613	3.80	7.5932	3.05	4.1058		
4.43	22.051	3.75	7.2894	3.00	3.9089		
4.42	20.780	3.70	7.0039	2.95	3.7123		
4.40	18.817	3.65	6.7336	2.90	3.5151		
4.35	15.718	3.60	6.4764	2.85	3.3165		
4.30	13.838	3.55	6.2301	2.80	3.1157		
4.25	12.532	3.50	5.9932	2.75	2.9117		
4.20	11.549	3.45	5.7642	2.70	2.7031		
4.15	10.766	3.40	5.5422	2.65	2.4883		
4.10	10.119	3.35	5.3259	2.60	2.2650		

Table 39L.

VS1=2.310 RO1=2.000
VS2=4.504 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.49	39.775	4.05	8.6395	3.30	4.8793	2.55	1.9961
4.48	30.703	4.00	8.2535	3.25	4.6924	2.50	1.7525
4.47	26.058	3.95	7.9072	3.20	4.5075	2.45	1.4832
4.46	23.128	3.90	7.5918	3.15	4.3241	2.40	1.1709
4.45	21.070	3.85	7.3008	3.10	4.1415		
4.44	19.524	3.80	7.0295	3.05	3.9594		
4.43	18.310	3.75	6.7743	3.00	3.7772		
4.42	17.324	3.70	6.5325	2.95	3.5942		
4.40	15.805	3.65	6.3017	2.90	3.4098		
4.35	13.417	3.60	6.0803	2.85	3.2233		
4.30	11.970	3.55	5.8667	2.80	3.0340		
4.25	10.962	3.50	5.6597	2.75	2.8407		
4.20	10.199	3.45	5.4583	2.70	2.6422		
4.15	9.5878	3.40	5.2616	2.65	2.4369		
4.10	9.0780	3.35	5.0688	2.60	2.2226		

Table 40L.

VS1=1.155 RO1=2.500
VS2=4.504 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.45	36.074	4.20	20.283	3.00	10.786	1.75	4.7579
4.44	33.786	4.19	20.091	2.95	10.533	1.70	4.5029
4.43	31.999	4.15	19.398	2.90	10.283	1.65	4.2429
4.42	30.556	4.10	18.655	2.85	10.035	1.60	3.9767
4.41	29.359	4.05	18.012	2.80	9.7888	1.55	3.7028
4.40	28.346	4.00	17.443	2.75	9.5449	1.50	3.4193
4.39	27.474	3.95	16.930	2.70	9.3028	1.45	3.1232
4.38	26.713	3.90	16.459	2.65	9.0621	1.40	2.8107
4.37	26.041	3.85	16.024	2.60	8.8227	1.35	2.4752
4.36	25.441	3.80	15.616	2.55	8.5845	1.30	2.1059
4.35	24.902	3.75	15.232	2.50	8.3471	1.25	1.6806
4.34	24.413	3.70	14.867	2.45	8.1105	1.20	1.1390
4.33	23.966	3.65	14.518	2.40	7.8745		
4.32	23.556	3.60	14.183	2.35	7.6389		
4.31	23.178	3.55	13.860	2.30	7.4034		
4.30	22.827	3.50	13.547	2.25	7.1680		
4.29	22.500	3.45	13.244	2.20	6.9324		
4.28	22.194	3.40	12.949	2.15	6.6963		
4.27	21.907	3.35	12.660	2.10	6.4596		
4.26	21.637	3.30	12.378	2.05	6.2220		
4.25	21.381	3.25	12.102	2.00	5.9832		
4.24	21.139	3.20	11.831	1.95	5.7428		
4.23	20.910	3.15	11.564	1.90	5.5006		
4.22	20.691	3.10	11.301	1.85	5.2560		
4.21	20.482	3.05	11.042	1.80	5.0087		

Table 41L.

VS1=1.155 RO1=2.000
VS2=4.504 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.45	30.846	4.20	18.784	3.00	10.527	1.75	4.7156
4.44	29.106	4.19	18.632	2.95	10.288	1.70	4.4652
4.43	27.750	4.15	18.077	2.90	10.052	1.65	4.2095
4.42	26.656	4.10	17.476	2.85	9.8172	1.60	3.9475
4.41	25.749	4.05	16.948	2.88	9.5839	1.55	3.6776
4.40	24.981	4.00	16.475	2.75	9.3518	1.50	3.3978
4.39	24.320	3.95	16.044	2.70	9.1209	1.45	3.1054
4.38	23.742	3.90	15.644	2.65	8.8910	1.40	2.7963
4.37	23.232	3.85	15.270	2.60	8.6619	1.35	2.4641
4.36	22.775	3.80	14.917	2.55	8.4334	1.30	2.0979
4.35	22.364	3.75	14.582	2.50	8.2053	1.25	1.6755
4.34	21.991	3.70	14.260	2.45	7.9776	1.20	1.1367
4.33	21.649	3.65	13.951	2.40	7.7501		
4.32	21.334	3.60	13.652	2.35	7.5226		
4.31	21.043	3.55	13.362	2.30	7.2949		
4.30	20.773	3.50	13.080	2.25	7.0669		
4.29	20.520	3.45	12.804	2.20	6.8384		
4.28	20.283	3.40	12.535	2.15	6.6091		
4.27	20.060	3.35	12.271	2.10	6.3789		
4.26	19.849	3.30	12.011	2.05	6.1476		
4.25	19.650	3.25	11.756	2.00	5.9147		
4.24	19.460	3.20	11.504	1.95	5.6801		
4.23	19.280	3.15	11.256	1.90	5.4433		
4.22	19.107	3.10	11.010	1.85	5.2039		
4.21	18.942	3.05	10.767	1.80	4.9616		

Table 42L.

VS1=1.0393 RO1=2.500
VS2=4.504 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.45	37.577	4.20	21.919	3.00	12.057	1.75	5.6533
4.44	35.308	4.19	21.726	2.95	11.787	1.70	5.3903
4.43	33.538	4.15	21.028	2.90	11.520	1.65	5.1239
4.42	32.110	4.10	20.277	2.85	11.255	1.60	4.8535
4.41	30.926	4.05	19.623	2.80	10.992	1.55	4.5781
4.40	29.924	4.00	19.042	2.75	10.731	1.50	4.2967
4.39	29.062	3.95	18.515	2.70	10.472	1.45	4.0078
4.38	28.309	3.90	18.031	2.65	10.214	1.40	3.7096
4.37	27.644	3.85	17.581	2.60	9.9584	1.35	3.3995
4.36	27.051	3.80	17.158	2.55	9.7036	1.30	3.0737
4.35	26.517	3.75	16.757	2.50	9.4499	1.25	2.7266
4.34	26.032	3.70	16.376	2.45	9.1971	1.20	2.3485
4.33	25.590	3.65	16.011	2.40	8.9451	1.15	1.9213
4.32	25.183	3.60	15.660	2.35	8.6936	1.10	1.4011
4.31	24.808	3.55	15.320	2.30	8.4425		
4.30	24.459	3.50	14.991	2.25	8.1917		
4.29	24.134	3.45	14.670	2.20	7.9410		
4.28	23.829	3.40	14.358	2.15	7.6902		
4.27	23.543	3.35	14.052	2.10	7.4391		
4.26	23.274	3.30	13.753	2.05	7.1876		
4.25	23.019	3.25	13.460	2.00	6.9353		
4.24	22.777	3.20	13.171	1.95	6.6820		
4.23	22.547	3.15	12.887	1.90	6.4275		
4.22	22.328	3.10	12.607	1.85	6.1715		
4.21	22.119	3.05	12.330	1.80	5.9136		

Table 43L.

VS1=1.0393 RO1=2.000
VS2=4.504 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.45	32.406	4.00	18.084	2.75	10.532	1.50	4.2692
4.44	30.686	3.95	17.637	2.70	10.285	1.45	3.9840
4.43	29.347	3.90	17.222	2.65	10.038	1.40	3.6893
4.42	28.267	3.85	16.832	2.60	9.7919	1.35	3.3825
4.41	27.371	3.80	16.462	2.55	9.5468	1.30	3.0599
4.40	26.613	3.75	16.110	2.50	9.3023	1.25	2.7157
4.39	25.960	3.70	15.771	2.45	9.0583	1.20	2.3405
4.38	25.389	3.65	15.445	2.40	8.8147	1.15	1.9159
4.37	24.883	3.60	15.129	2.35	8.5713	1.10	1.3982
4.36	24.431	3.55	14.821	2.30	8.3280		
4.35	24.023	3.50	14.522	2.25	8.0846		
4.34	23.652	3.45	14.229	2.20	7.8410		
4.33	23.313	3.40	13.942	2.15	7.5970		
4.32	23.000	3.35	13.660	2.10	7.3524		
4.31	22.710	3.30	13.383	2.05	7.1070		
4.30	22.440	3.25	13.110	2.00	6.8607		
4.29	22.187	3.20	12.841	1.95	6.6131		
4.28	21.950	3.15	12.575	1.90	6.3641		
4.27	21.727	3.10	12.312	1.85	6.1133		
4.26	21.516	3.05	12.051	1.80	5.8604		
4.25	21.315	3.00	11.793	1.75	5.6049		
4.20	20.443	2.95	11.538	1.70	5.3465		
4.15	19.726	2.90	11.284	1.65	5.0845		
4.10	19.113	2.85	11.032	1.60	4.8182		
4.05	18.572	2.80	10.781	1.55	4.5468		

Table 44L.

VS1=4.041 RO1=2.800
VS2=4.330 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.325	15.591	4.300	6.0411	4.275	4.2101	4.18	1.8855
4.320	10.915	4.295	5.5312	4.26	3.5925	4.16	1.6182
4.315	8.8211	4.290	5.1156	4.24	2.9979	4.14	1.3755
4.310	7.5599	4.285	4.7674	4.22	2.5504	4.12	1.1482
4.305	6.6901	4.280	4.4695	4.20	2.1900	4.10	0.9276

Table 46L.

VS1=3.464 RO1=2.800
VS2=4.330 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.32	30.920	4.05	4.9168	3.55	1.0505		
4.31	21.760	4.00	4.3317	3.50	0.6373		
4.30	17.681	3.95	3.8400				
4.29	15.236	3.90	3.4119				
4.28	13.559	3.85	3.0284				
4.27	12.313	3.80	2.6763				
4.25	10.550	3.75	2.3455				
4.20	8.0393	3.70	2.0274				
4.15	6.6152	3.65	1.7137				
4.10	5.6460	3.60	1.3938				

Table 47L.

VS1=3.175 RO1=2.800
VS2=4.330 RO2=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.32	39.800	4.05	6.8407	3.55	2.7147		
4.31	28.075	4.00	6.1470	3.50	2.4406		
4.30	22.866	3.95	5.5737	3.45	2.1692		
4.29	19.751	3.90	5.0837	3.40	1.8956		
4.28	17.619	3.85	4.6539	3.35	1.6139		
4.27	16.039	3.80	4.2688	3.30	1.3143		
4.25	13.811	3.75	3.9176	3.25	0.9769		
4.20	10.664	3.70	3.5921	3.20	0.5348		
4.15	8.9018	3.65	3.2853				
4.10	7.7184	3.60	2.9953				

Table 48L.

VS1=2.887 RO1=2.800
VS2=4.330 RO1=3.000

V	L/H_1	V	L/H_1	V	L/H_1	V	L/H_1
4.31	33.846	4.00	7.8542	3.50	3.8421	3.05	1.5580
4.30	27.613	3.95	7.2145	3.45	3.5790	3.00	1.2592
4.29	23.894	3.90	6.6642	3.40	3.3239	2.95	0.9088
4.28	21.351	3.85	6.1851	3.35	3.0746		
		3.80	5.7622	3.30	2.8288		
4.25	16.825	3.75	5.3798	3.25	2.5844		
4.20	13.108	3.70	5.0299	3.20	2.3388		
4.15	11.044	3.65	4.7059	3.15	2.0890		
4.10	9.6686	3.60	4.4025	3.10	1.8308		
4.05	8.6571	3.55	4.1157				

26. 表面波と層構造 (2)

海洋構造を伝わる表面波の理論的分散曲線

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1. 長周期地震計が世界各地に設備され，海洋構造を伝わる表面波についても，次第にその観測記録について論議されるようになってきた．然しながら，その観測から地殻構造を求めるに必要な理論的分散曲線が未だに充分計算されていない．その要求に答えて，電子計算機の使用に不自由な我国ではあるが，IBM 704 を使用する機会を得たので，計算結果をできるだけ使用に便利な様に図示した．

2. 計算した構造については Table A に一括して並べ，第 1 図から第 49 図まで各構造について，Rayleigh 波の群速度についての分散曲線を図示した．位相速度に関しては第 1 表から第 49 表まで同順序で整理されている．夫々の図から海水層と中間層の厚さの割合に応じて変化する様子が明瞭に分る．

又それらの図の組合せで，いろいろな比較が出来るわけであるが，ここでは簡単に海水層の変化に着目した第 50 図，Mantle の速度の変化に応じたものが第 51 図に，Crust の速度を変えて比較したのが第 52 図に表わされている．又第 53 図には密度の多少の変化では，それ程影響を受けないことが図示されている．

3. 実際の観測から，それに合致する様な構造を容易に探せる様，第 54 図から第 58 図までを用意した．その分類の方法としては周期 30 秒での群速度に着目した．そのことは又今迄の観測から特別な場合を除き，大体海の深さに於ても整理できる可能性があるからである．

それらの図からも分る如く，単に観測された分散曲線から一義的に構造を決めることは現在の観測精度だけを考慮しても難しい，然し大凡の見当をつけることは，充分可能であるし，真の構造を見つける為には有力な手懸りになることには異論はないであろう．

4. 最後に海水層を無視して，夫々の構造に対応した Love 波の分散曲線を求めた．群速度に関しては第 1L 図から第 48L 図まで，又位相速度については第 1L 表から第 48L 表までに示した．全部に亘ることは出来なかったが，Rayleigh 波のものとともに使用して，或程度役立ち得るものと思う．