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OPERATION GREENHOUSE

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SCIENTIFIC DIRECTOR'S REPORT

ANNEX 1.1 PROMPT-GAMMA-RAY MEASUREMENTS

PART IV INSTALLATION DRAWINGS

NUCLEAR EXPLOSIONS

1951

Naval Research Laboratory
Washington, D. C.

October 1951

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report consists of drawings and tabular data pertinent to the various measurements performed by the NRLH group in Operation Greenhouse. The drawings represent the plans for the cable installations, recorder stations, power and signal lines, and other equipment used in the measurement of prompt gamma rays, alpha, transit time, neutron intensity (Tenex), and thermal radiation. <i>Keywords</i> Symbols used in the drawings are: A+, transit time; B+, prompt gamma; C+, Tenex. <i>include: Nuclear explosion testing, and NATF Nuclear Test Program</i>		

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FOREWORD

This report has had classified material removed in order to make the information available on an unclassified, open publication basis, to any interested parties. This effort to declassify this report has been accomplished specifically to support the Department of Defense Nuclear Test Personnel Review (NTPR) Program. The objective is to facilitate studies of the low levels of radiation received by some individuals during the atmospheric nuclear test program by making as much information as possible available to all interested parties.

The material which has been deleted is all currently classified as Restricted Data or Formerly Restricted Data under the provision of the Atomic Energy Act of 1954, (as amended) or is National Security Information.

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ABSTRACT

This report consists of drawings and tabular data pertinent to the various measurements performed by the NRLH group in Operation Greenhouse. The drawings represent the plans for the cable installations, recorder stations, power and signal lines, and other equipment used in the measurement of prompt gamma rays, alpha, transit time, neutron intensity (Tenex), and thermal radiation.

Symbols used on the drawings are: A+, transit time; B+, prompt gamma; C+, Tenex.

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The drawings shown in this report were the joint work of the Naval Research Laboratory-Hall (NRLH) staff but were the direct responsibility of S. D. Summers and Capt. D. W. McElwee (U. S. Army Signal Corps).

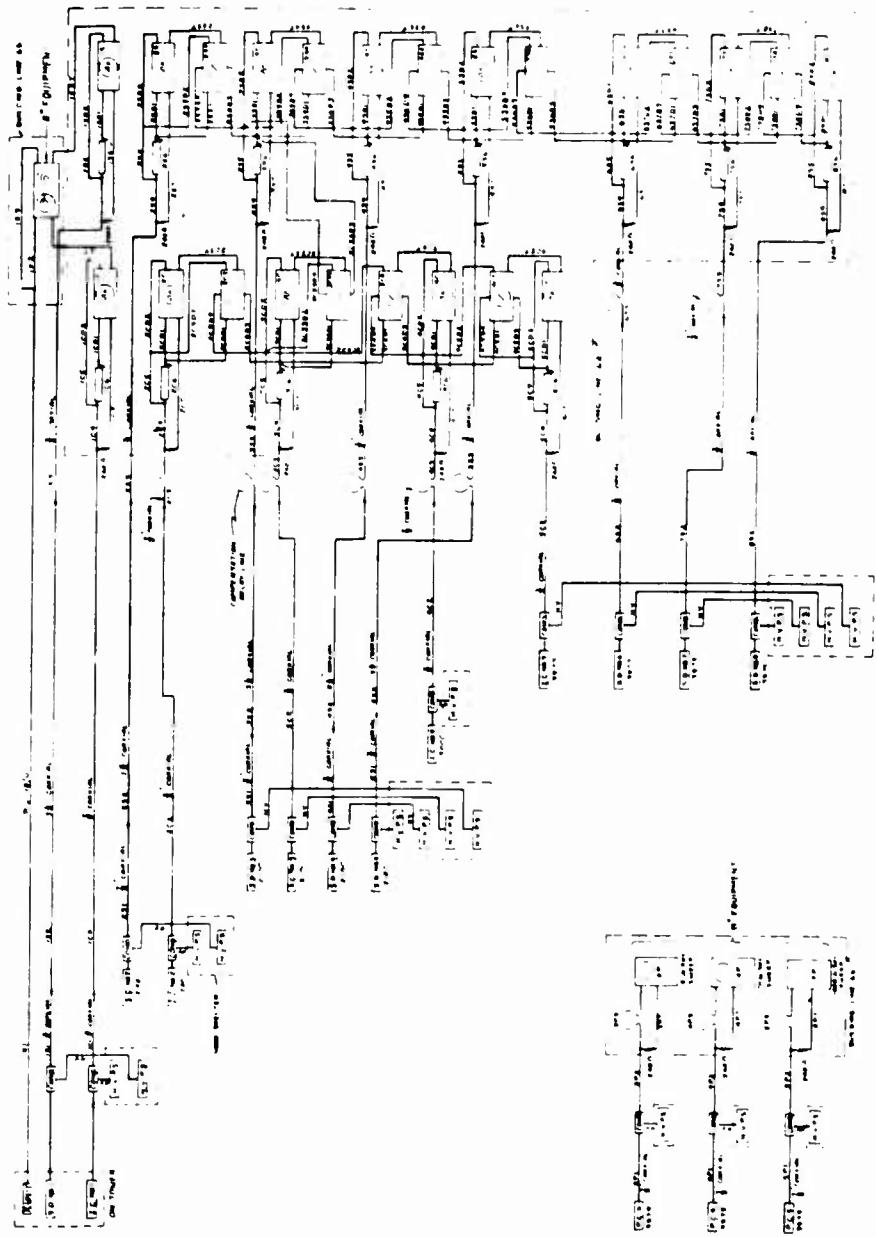
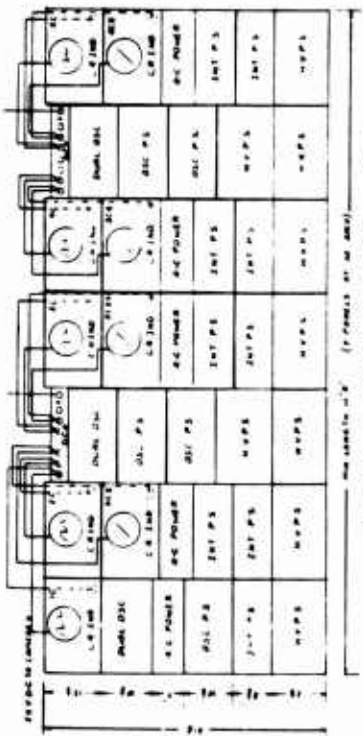
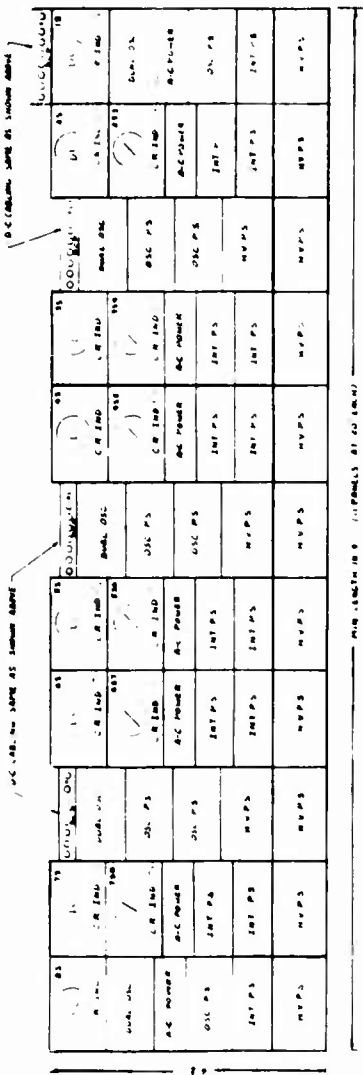


Fig. 1—General cable arrangement at Site C.

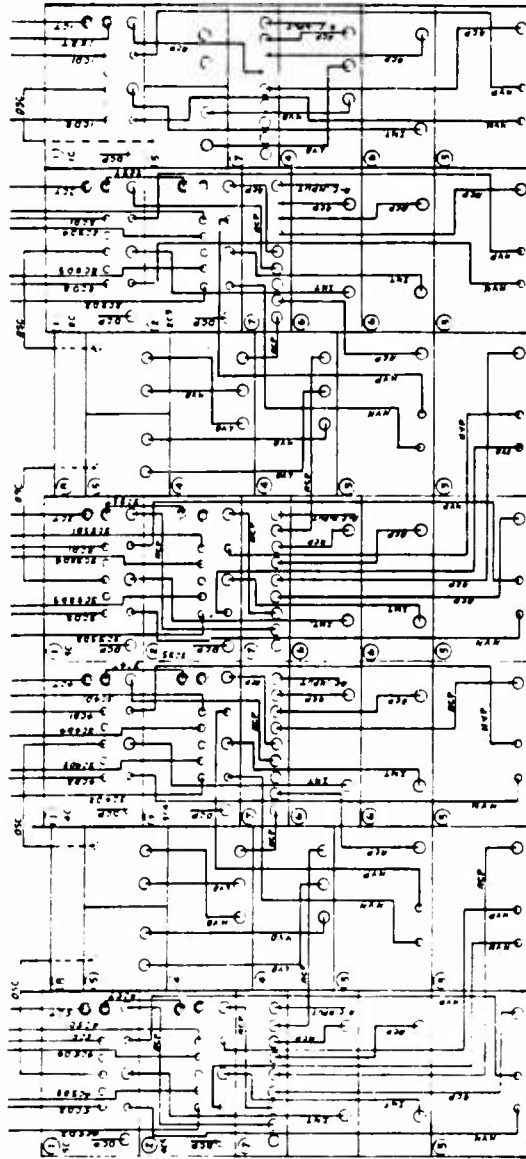


BACK ARRANGEMENT OF IONIZATION CHAMBER RECORDING EQUIPMENT



FRONT ARRANGEMENT OF SCINTILLATION DETECTOR RECORDING EQUIPMENT

Fig. 2—Recording equipment in station 6a at Site C; Front view.

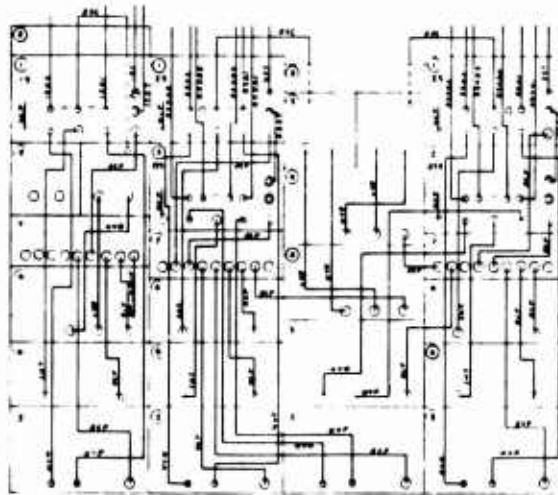


REAR VIEW

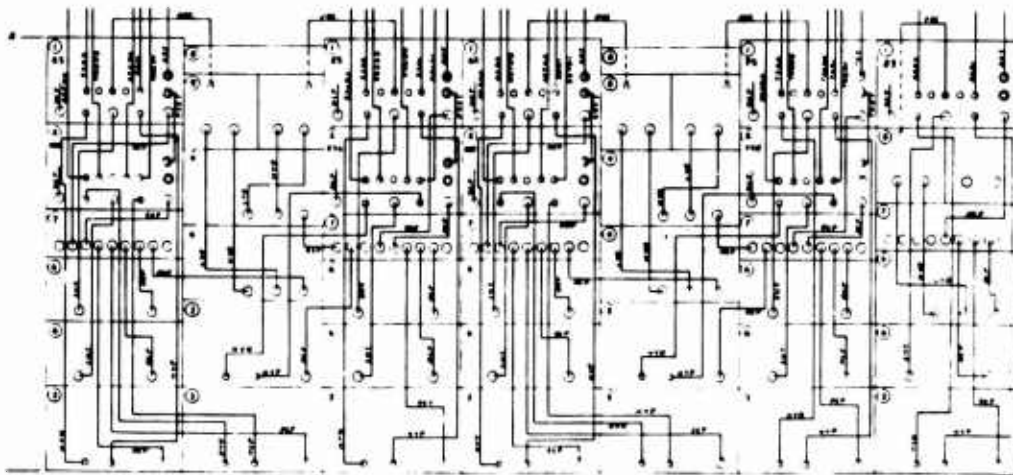
LEGEND

- ① CATHODE-RAY INDICATOR (C.R.I.)
- ② CATHODE-RAY INDICATOR (C.R.I.)
- ③ HIGH-VOLTAGE POWER SUPPLY
- ④ OSCILLATOR POWER SUPPLY
- ⑤ DUAL OSCILLATOR
- ⑥ INTENSIFIER POWER SUPPLY
- ⑦ A.C. DISTRIBUTION PANEL
- ⑧ D.C. DISTRIBUTION PANEL

Fig. 3—Cable arrangement for ionization-chamber recording equipment at Site C.



REAR VIEW



REAR VIEW

LEGEND

- ① CATHODE RAY INDICATOR ALUMINUM
- ② CATHODE RAY INDICATOR (1/4 INCH)
- ③ HIGH VOLTAGE POWER SUPPLY
- ④ OSCILLATOR POWER SUPPLY
- ⑤ DUAL OSCILLATOR
- ⑥ MULTIPLIER POWER SUPPLY
- ⑦ A.C. POWER DISTRIBUTION PANEL
- ⑧ D.C. POWER DISTRIBUTION PANEL

Fig. 4—Cable arrangement for scintillation-detector recording equipment at Site C.

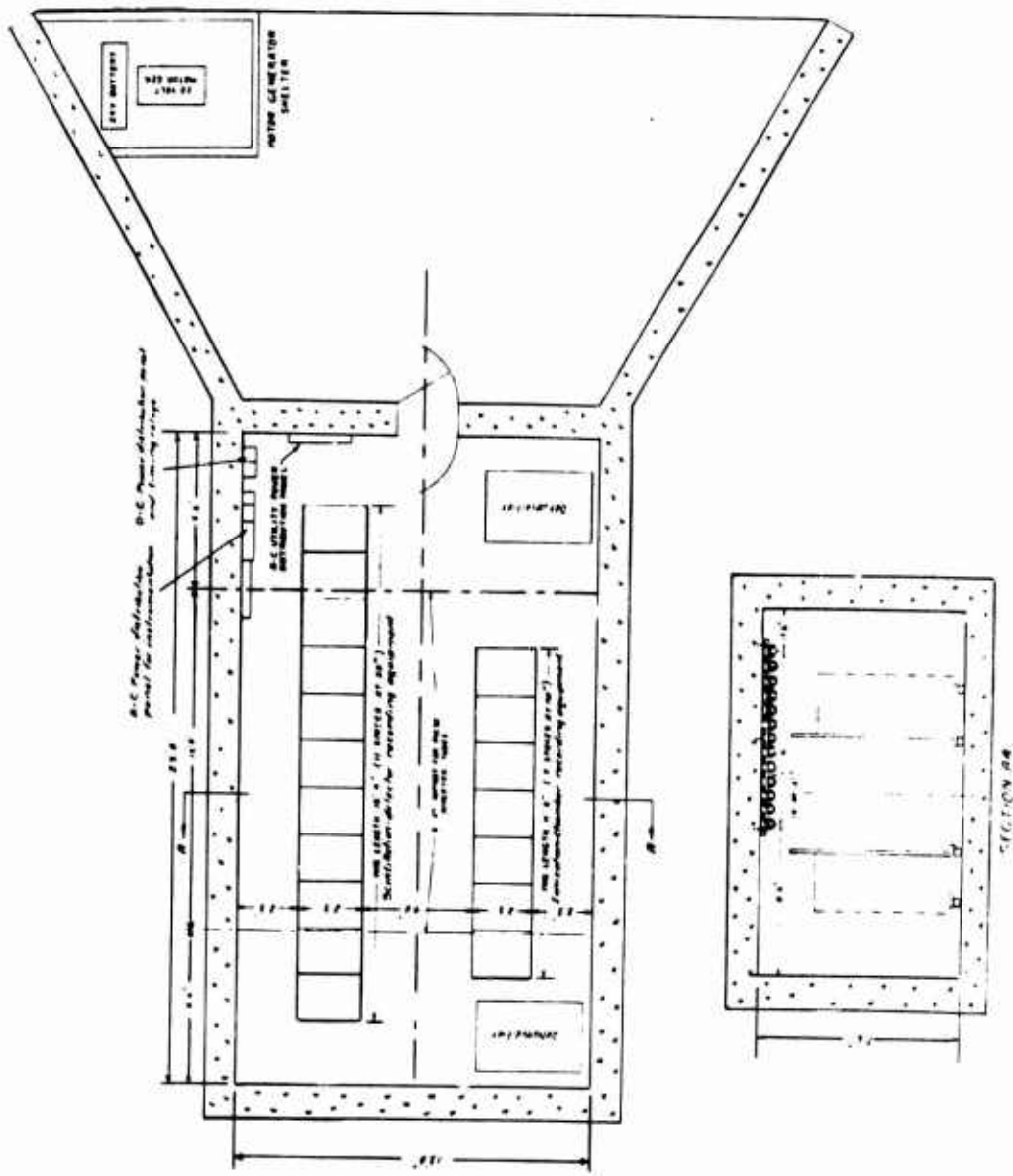


Fig. 5.—Arrangement of equipment in station 6a at Site C.

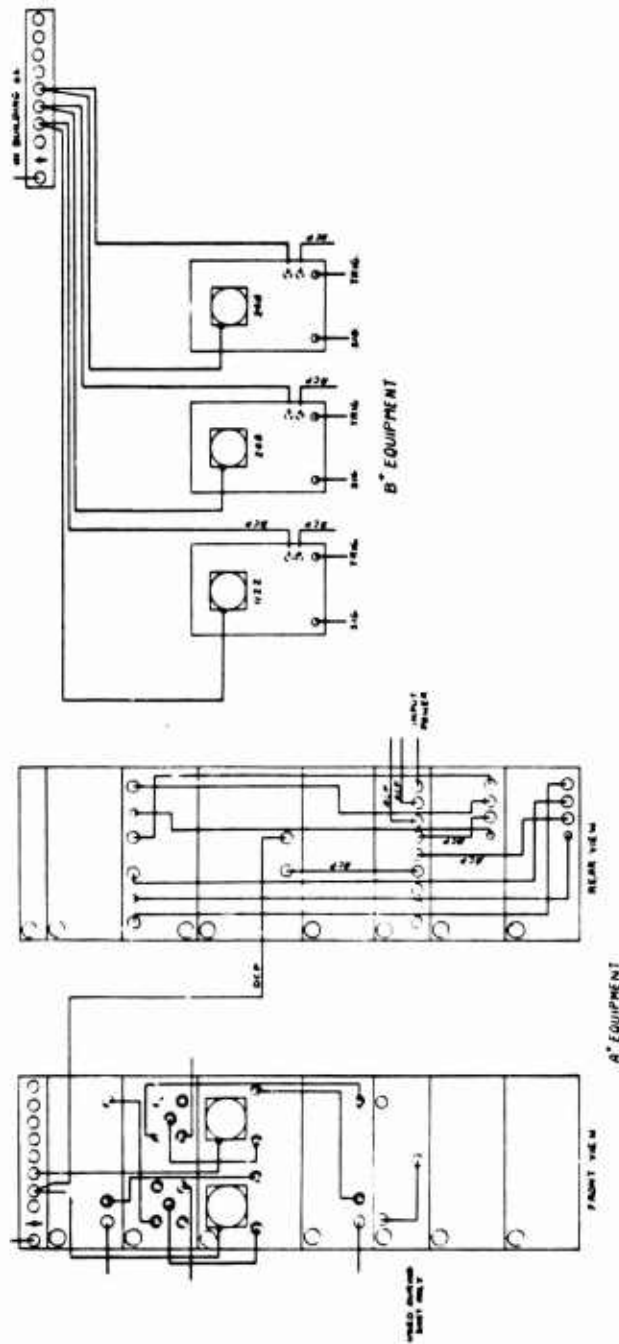


Fig. 6—Cable arrangement for transit-time and prompt-gamma equipment at Site C.

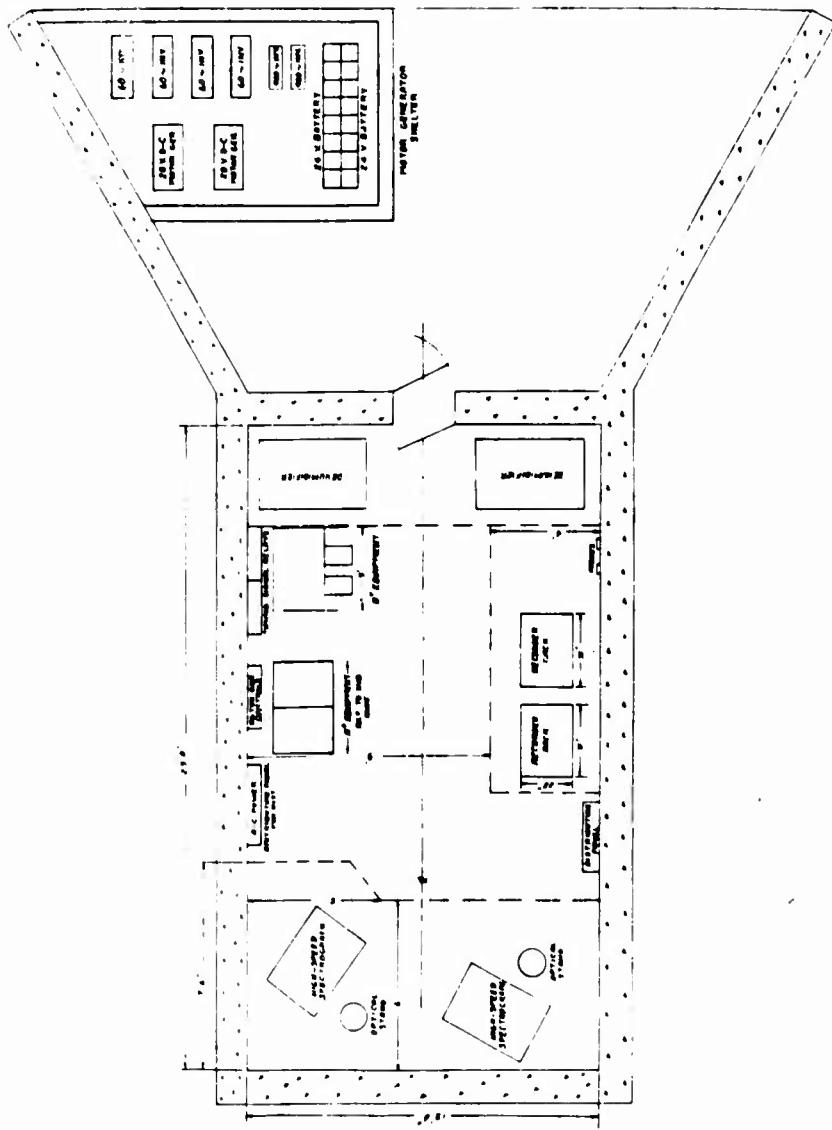


Fig. 7 — Arrangement of equipment in station 6b at Site C.

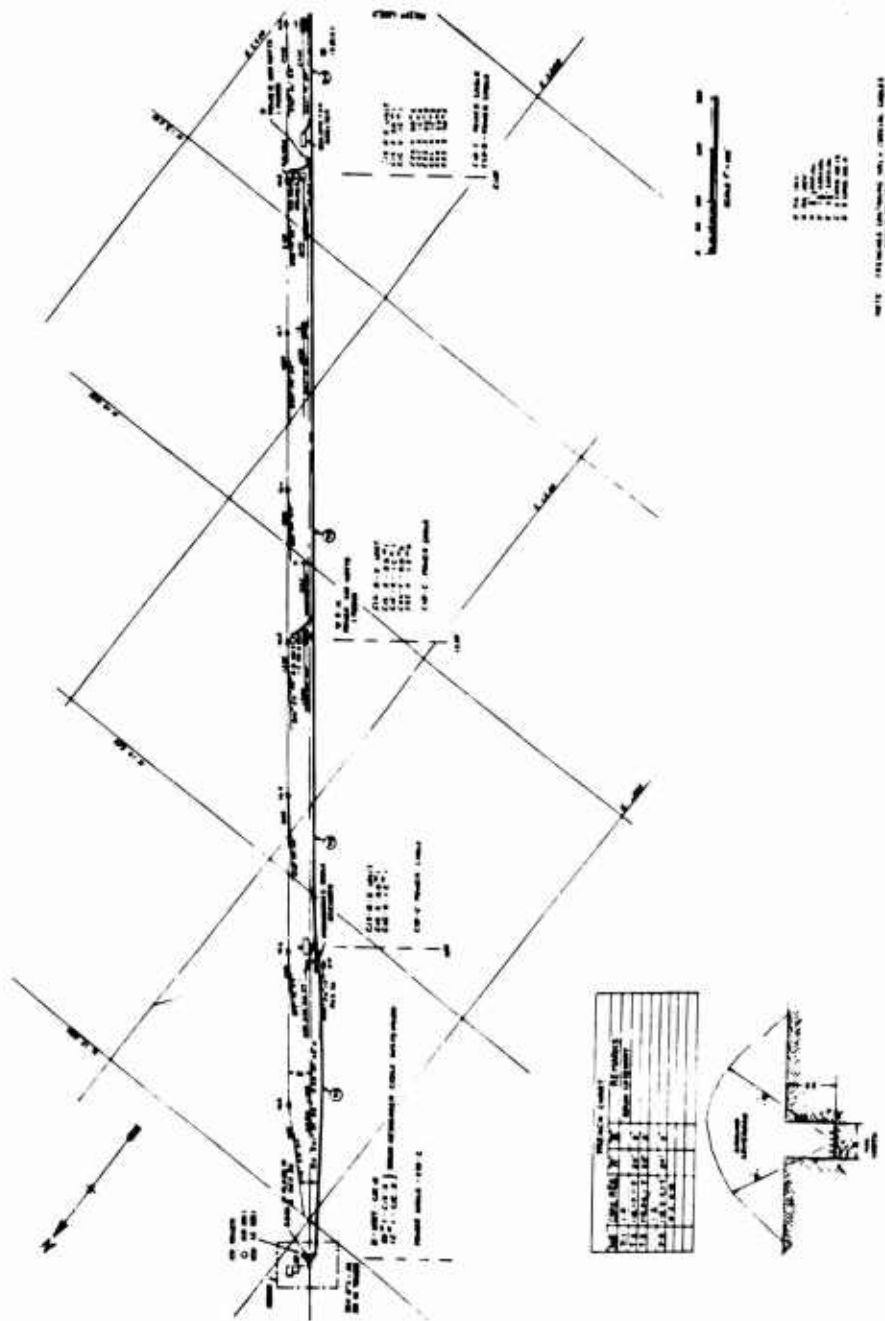


Fig. 8—Layout of cables and external equipment at Site C: Part 1.

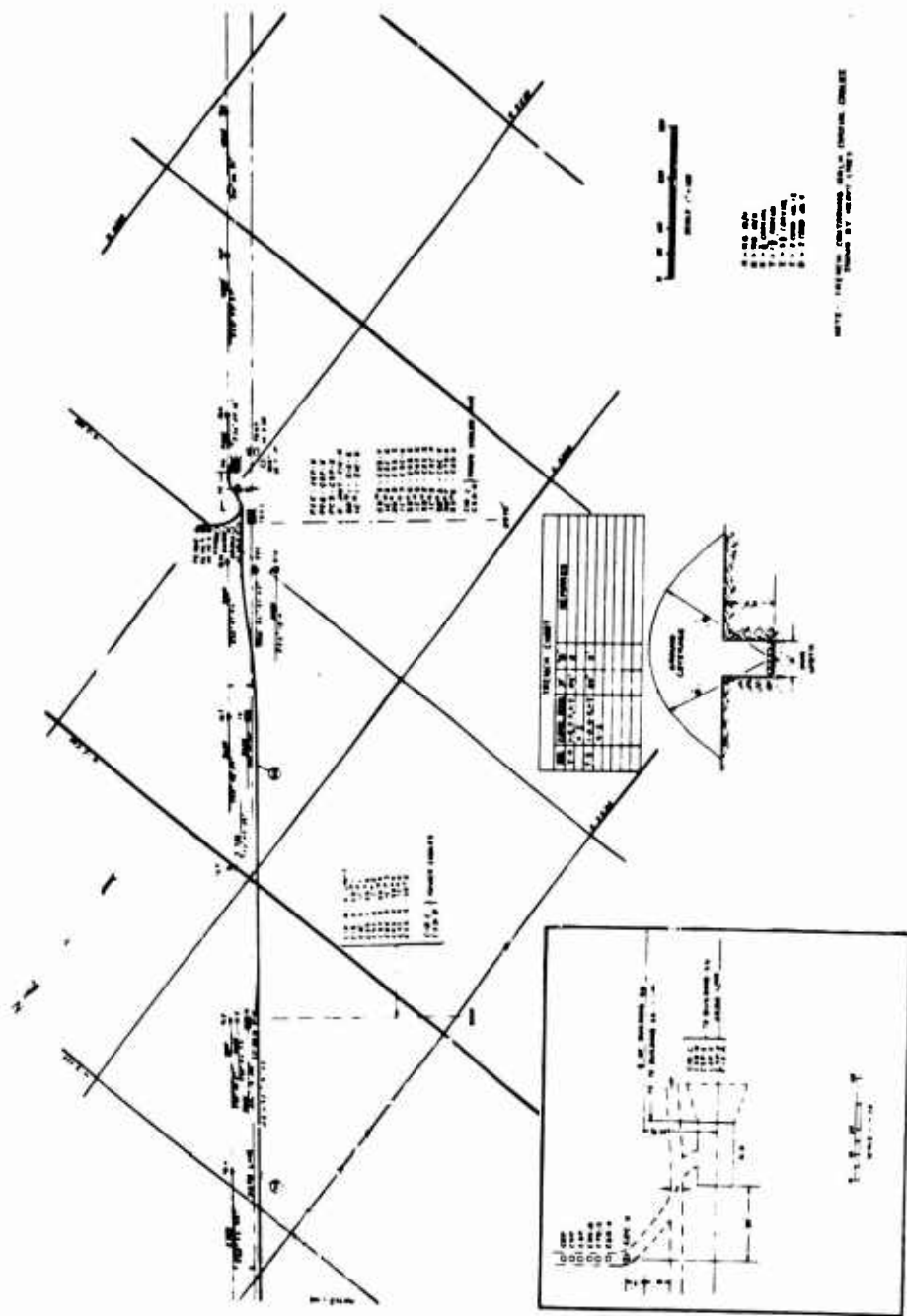


Fig. 9—Layout of cables and external equipment at Site C: Part 2.

TABLE 1

Cables at Site C

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
1X1	RG-18/U	4,200	UG-154/U	Transit time
1X2	RG-63/U	35	UG-59A/U	Transit time
1X3	RG-63/U	35	UG-59A/U	Transit time
1X2T	RG-63/U	175	UG-59A/U	Transit time
1X3T	RG-63/U	175	UG-59A/U	Transit time
1S1	7/8-in. coaxial	625	Flange	Scintillation detector 1S
1S2	3 1/8-in. coaxial	3,287	Flange	Scintillation detector 1S
1S3	7/8-in. coaxial	175	Flange	Scintillation detector 1S
1S4	RG-17/U	50	UG-154/U	Scintillation detector 1S
1S5	RG-8/U	20	UG-59A/U	Scintillation detector 1S
1S6	RG-8/U	20	UG-59A/U	Scintillation detector 1S
1SD1	RG-63/U	35	UG-59A/U	Scintillation detector 1S
1SD2	RG-63/U	35	UG-59A/U	Scintillation detector 1S
1ST	RG-63/U	35	UG-59A/U	Scintillation detector 1S
2S1	7/8-in. coaxial	30	Flange	Scintillation detector 2S
2S2	1 5/8-in. coaxial	2,647	Flange	Scintillation detector 2S
2S3	7/8-in. coaxial	96	Flange	Scintillation detector 2S
2S4	RG-17/U	50	UG-154/U	Scintillation detector 2S
2S5	RG-8/U	20	UG-59A/U	Scintillation detector 2S
2S6	RG-8/U	20	UG-59A/U	Scintillation detector 2S
2SD1	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2SD2	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2ST	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2S3D1	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D2	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D3	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D4	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3T	RG-63/U	5	UG-59A/U	XY timer 2S3
3S1	7/8-in. coaxial	30	Flange	Scintillation detector 3S
3S2	3 1/8-in. coaxial	1,750	Flange	Scintillation detector 3S
3S3	7/8-in. coaxial	113	Flange	Scintillation detector 3S
3S4	RG-17/U	50	UG-154/U	Scintillation detector 3S
3S5	RG-8/U	20	UG-59A/U	Scintillation detector 3S
3S6	RG-8/U	20	UG-59A/U	Scintillation detector 3S

(a) Nominal only; actual physical lengths depended on field contingencies.

TABLE 1 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
3SD1	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3SD2	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3ST	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3S4D1	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D2	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D3	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D4	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4T	RG-63/U	5	UG-59A/U	XY timer 3S4
4S1	7/8-in. coaxial	30	Flange	Scintillation detector 4S
4S2	3 1/8-in. coaxial	1,765	Flange	Scintillation detector 4S
4S3	7/8-in. coaxial	108	Flange	Scintillation detector 4S
4S4	RG-17/U	50	UG-154/U	Scintillation detector 4S
4S5	RG-8/U	20	UG-59A/U	Scintillation detector 4S
4S6	RG-8/U	20	UG-59A/U	Scintillation detector 4S
4SD1	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4SD2	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4ST	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4S5D1	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D2	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D3	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D4	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5T	RG-63/U	5	UG-59A/U	XY timer 4S5
5S1	7/8-in. coaxial	30	Flange	Scintillation detector 5S
5S2	3 1/8-in. coaxial	1,775	Flange	Scintillation detector 5S
5S3	7/8-in. coaxial	105	Flange	Scintillation detector 5S
5S4	RG-17/U	50	UG-154/U	Scintillation detector 5S
5S5	RG-8/U	20	UG-59A/U	Scintillation detector 5S
5S6	RG-8/U	20	UG-59A/U	Scintillation detector 5S
5SD1	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5SD2	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5ST	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5S6D1	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D2	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D3	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D4	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6T	RG-63/U	5	UG-59A/U	XY timer 5S6

TABLE 1 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
6S2	7/8-in. coaxial	72	Flange	Scintillation detector 6S
6S3	7/8-in. coaxial	22	Flange	Scintillation detector 6S
6S4	RG-17/U	50	UG-154/U	Scintillation detector 6S
6S5	RG-8/U	20	UG-59A/U	Scintillation detector 6S
6S6	RG-8/U	20	UG-59A/U	Scintillation detector 6S
6SD1	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6SD2	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6ST	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6S7D1	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D2	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D3	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D4	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7T	RG-63/U	5	UG-59A/U	XY timer 6S7
7S2	7/8-in. coaxial	72	Flange	Scintillation detector 7S
7S3	7/8-in. coaxial	27	Flange	Scintillation detector 7S
7S4	RG-17/U	50	UG-154/U	Scintillation detector 7S
7S5	RG-8/U	20	UG-59A/U	Scintillation detector 7S
7S6	RG-8/U	20	UG-59A/U	Scintillation detector 7S
7SD1	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7SD2	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7ST	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7S8D1	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D2	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D3	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D4	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8T	RG-63/U	5	UG-59A/U	XY timer 7S8
8S2	7/8-in. coaxial	103	Flange	Scintillation detector 8S
8S4	RG-17/U	50	UG-154/U	Scintillation detector 8S
8S5	RG-8/U	20	UG-59A/U	Scintillation detector 8S
8S6	RG-8/U	20	UG-59A/U	Scintillation detector 8S
8SD1	RG-63/U	35	UG-59A/U	Scintillation detector 8S
8SD2	RG-63/U	35	UG-59A/U	Scintillation detector 8S
8ST	RG-63/U	35	UG-59A/U	Scintillation detector 8S
1C1	7/8-in. coaxial	625	Flange	Ion chamber 1C
1C2	7/8-in. coaxial	3,500	Flange	Ion chamber 1C
1C4	RG-17/U	50	UG-154/U	Ion chamber 1C
1C5	RG-8/U	20	UG-59A/U	Ion chamber 1C
1C6	RG-8/U	20	UG-59A/U	Ion chamber 1C
1CD1	RG-63/U	35	UG-59A/U	Ion chamber 1C
1CD2	RG-63/U	35	UG-59A/U	Ion chamber 1C
1CT	RG-63/U	35	UG-59A/U	Ion chamber 1C

TABLE 1 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
2C2	7/8-in. coaxial	2,800	Flange	Ion chamber 2C
2C3	7/8-in. coaxial	30	Flange	Ion chamber 2C
2C4	RG-17/U	50	UG-154/U	Ion chamber 2C
2C5	RG-8/U	20	UG-59A/U	Ion chamber 2C
2C6	RG-8/U	20	UG-59A/U	Ion chamber 2C
2CD1	RG-63/U	35	UG-59A/U	Ion chamber 2C
2CD2	RG-63/U	35	UG-59A/U	Ion chamber 2C
2CT	RG-63/U	35	UG-59A/U	Ion chamber 2C
2C3D1	RG-63/U	35	UG-59A/U	XY timer 2C3
2C3D2	RG-63/U	35	UG-59A/U	XY timer 2C3
2C3D3	RG-63/U	35	UG-59A/U	XY timer 2C3
2C3D4	RG-63/U	35	UG-59A/U	XY timer 2C3
2C3T	RG-63/U	5	UG-59A/U	XY timer 2C3
3C2	7/8-in. coaxial	1,900	Flange	Ion chamber 3C
3C3	7/8-in. coaxial	25	Flange	Ion chamber 3C
3C4	RG-17/U	50	UG-154/U	Ion chamber 3C
3C5	RG-8/U	20	UG-59A/U	Ion chamber 3C
3C6	RG-8/U	20	UG-59A/U	Ion chamber 3C
3CD1	RG-63/U	35	UG-59A/U	Ion chamber 3C
3CD2	RG-63/U	35	UG-59A/U	Ion chamber 3C
3CT	RG-63/U	35	UG-59A/U	Ion chamber 3C
3C4D1	RG-63/U	35	UG-59A/U	XY timer 3C4
3C4D2	RG-63/U	35	UG-59A/U	XY timer 3C4
3C4D3	RG-63/U	35	UG-59A/U	XY timer 3C4
3C4D4	RG-63/U	35	UG-59A/U	XY timer 3C4
3C4T	RG-63/U	5	UG-59A/U	XY timer 3C4
3C3SD1	RG-63/U	35	UG-59A/U	XY timer 3C3S
3C3SD2	RG-63/U	35	UG-59A/U	XY timer 3C3S
3C3SD3	RG-63/U	35	UG-59A/U	XY timer 3C3S
3C3SD4	RG-63/U	35	UG-59A/U	XY timer 3C3S
3C3ST	RG-63/U	5	UG-59A/U	XY timer 3C3S
4C2	7/8-in. coaxial	980	Flange	Ion chamber 4C
4C3	7/8-in. coaxial	24	Flange	Ion chamber 4C
4C4	RG-17/U	50	UG-154/U	Ion chamber 4C
4C5	RG-8/U	20	UG-59A/U	Ion chamber 4C
4C6	RG-8/U	20	UG-59A/U	Ion chamber 4C
4CD1	RG-63/U	35	UG-59A/U	Ion chamber 4C
4CD2	RG-63/U	35	UG-59A/U	Ion chamber 4C
4CT	RG-63/U	35	UG-59A/U	Ion chamber 4C

TABLE 1 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
4C5D1	RG-63/U	35	UG-59A/U	XY timer 4C5
4C5D2	RG-63/U	35	UG-59A/U	XY timer 4C5
4C5D3	RG-63/U	35	UG-59A/U	XY timer 4C5
4C5D4	RG-63/U	35	UG-59A/U	XY timer 4C5
4C5T	RG-63/U	5	UG-59A/U	XY timer 4C5
5C2	7/8-in. coaxial	72	Flange	Ion chamber 5C
5C4	RG-17/U	50	UG-154/U	Ion chamber 5C
5C5	RG-8/U	20	UG-59A/U	Ion chamber 5C
5C6	RG-8/U	20	UG-59A/U	Ion chamber 5C
5CD1	RG-63/U	35	UG-59A/U	Ion chamber 5C
5CD2	RG-63/U	35	UG-59A/U	Ion chamber 5C
5CT	RG-63/U	35	UG-59A/U	Ion chamber 5C
3P1	7/8-in. coaxial	15	Flange	Prompt gamma 3P
3P2	7/8-in. coaxial	185	Flange	Prompt gamma 3P
3P3	RG-8/U	700	UG-59A/U	Prompt gamma 3P
3PT	RG-8/U	10	UG-59A/U	Prompt gamma 3P
4P1	7/8-in. coaxial	15	Flange	Prompt gamma 4P
4P2	7/8-in. coaxial	189	Flange	Prompt gamma 4P
4P3	RG-8/U	1,400	UG-59A/U	Prompt gamma 4P
4PT	RG-8/U	10	UG-59A/U	Prompt gamma 4P
5P1	7/8-in. coaxial	15	Flange	Prompt gamma 5P
5P2	7/8-in. coaxial	196	Flange	Prompt gamma 5P
5P3	RG-8/U	1,400	UG-59A/U	Prompt gamma 5P
5PT	RG-8/U	10	UG-59A/U	Prompt gamma 5P

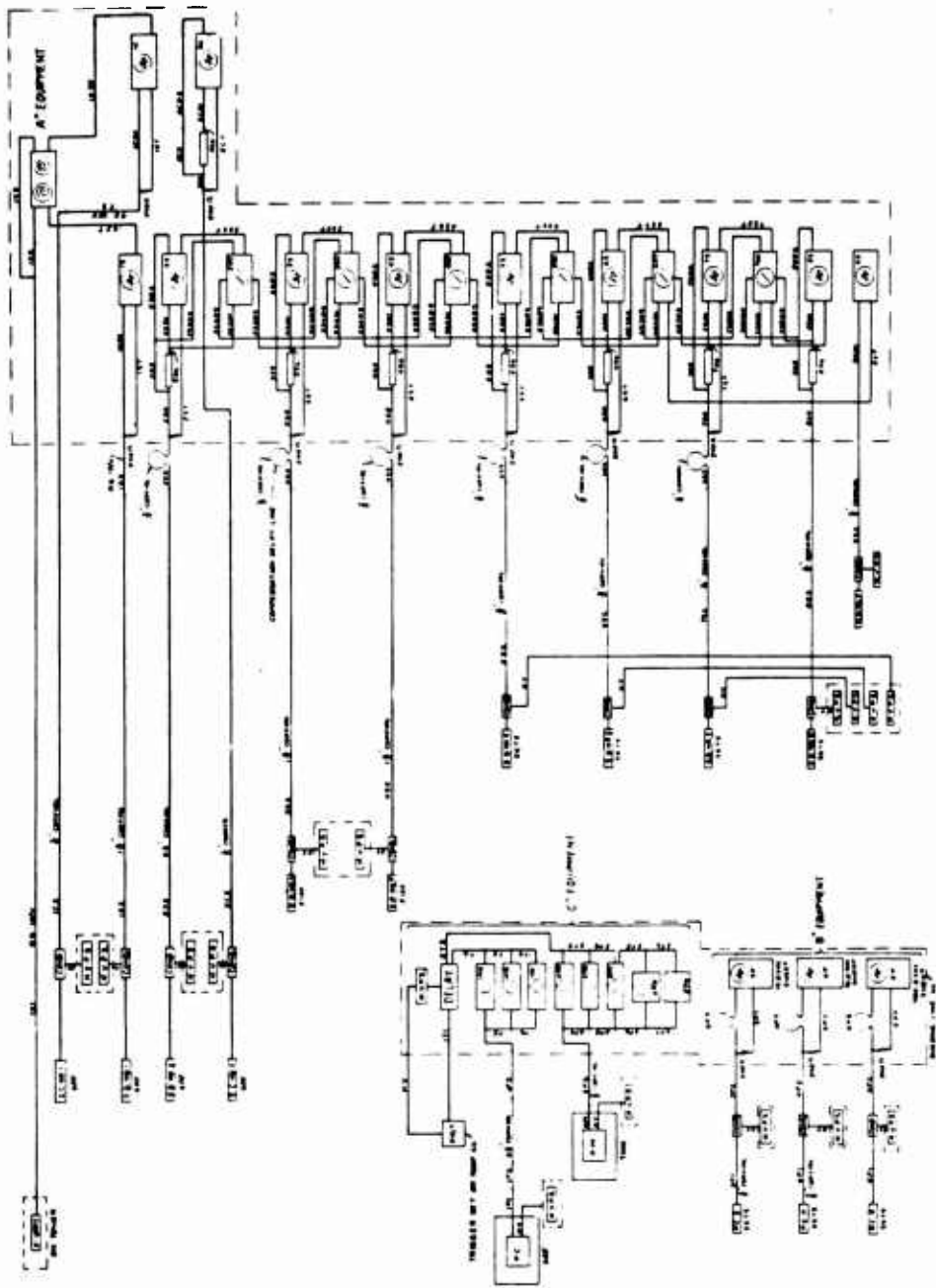


Fig. 10—General cable arrangement at Site E.

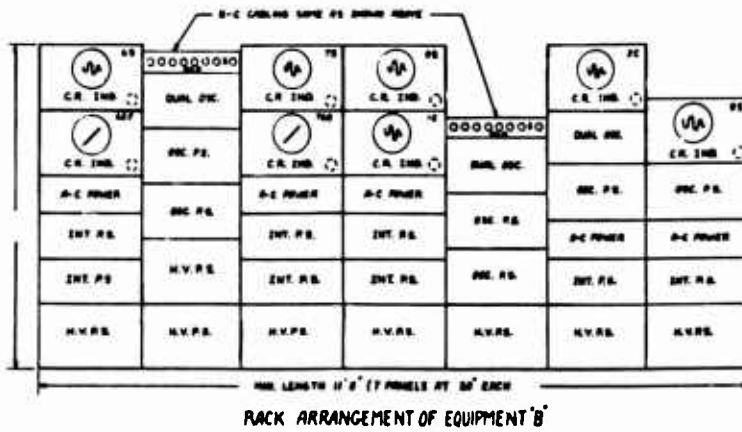
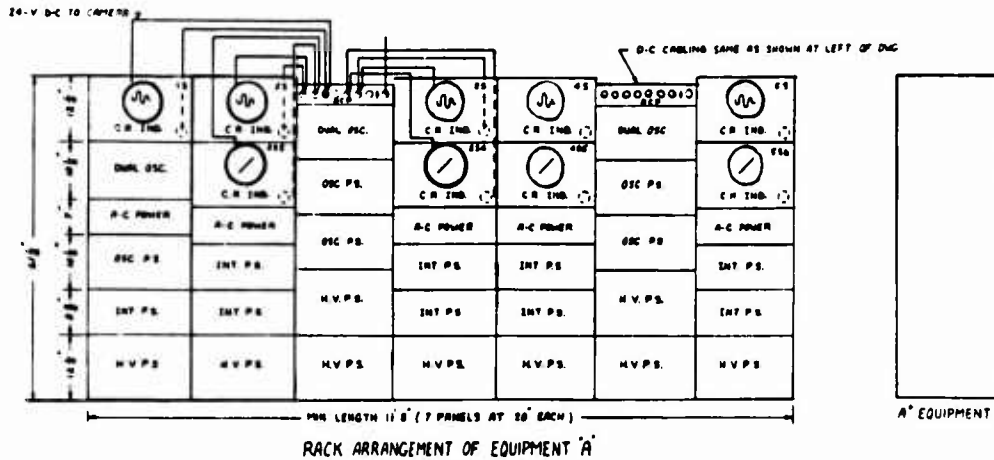
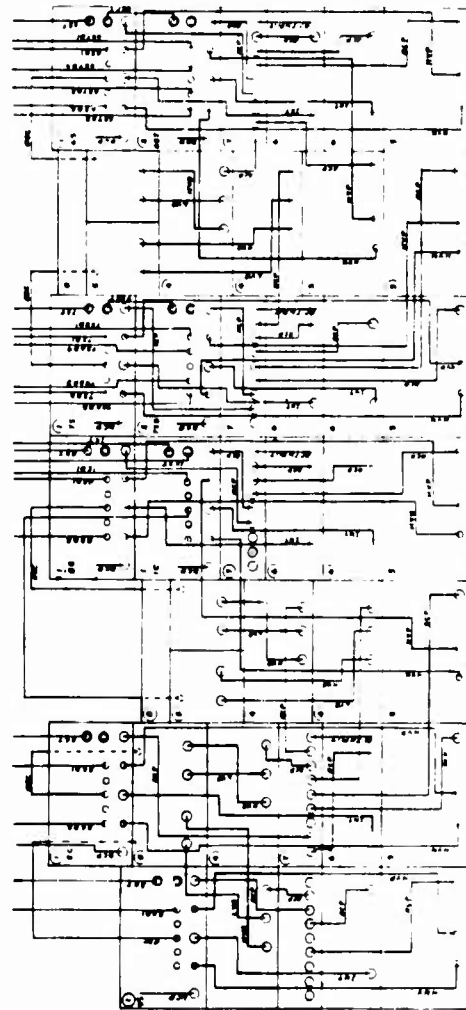
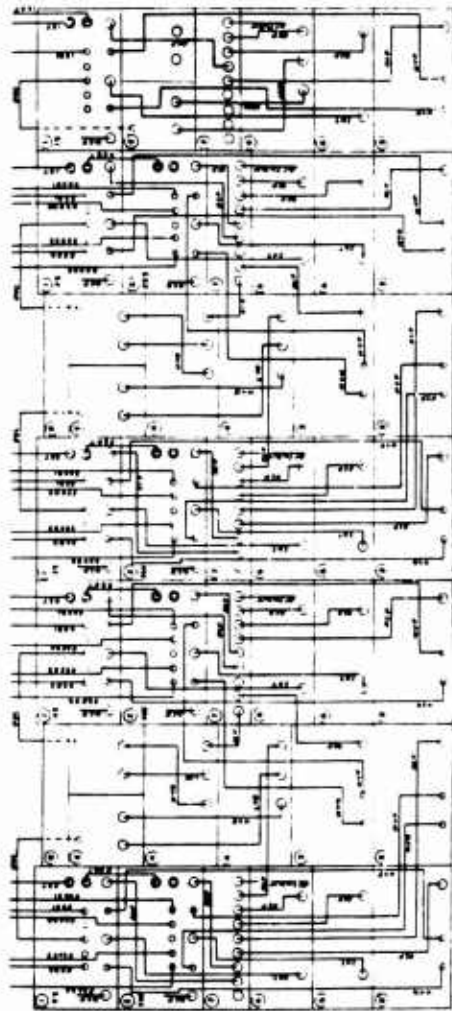


Fig. 11--Recording equipment in station 6a at Site E.



- LEGEND
- (1) EXTENSION AND INDICATION RELAY
 - (2) EXTENSION AND INDICATION IS T. (IND. I.)
 - (3) SIGNAL AND LINE POWER SUPPLY
 - (4) INDICATION POWER SUPPLY
 - (5) BATTERY OPERATOR
 - (6) INTERPHONE POWER SUPPLY
 - (7) A.C. POWER DISTRIBUTION PANEL
 - (8) D.C. POWER DISTRIBUTION PANEL

Fig. 12—Cable arrangement for alpha-recording equipment at Site E.

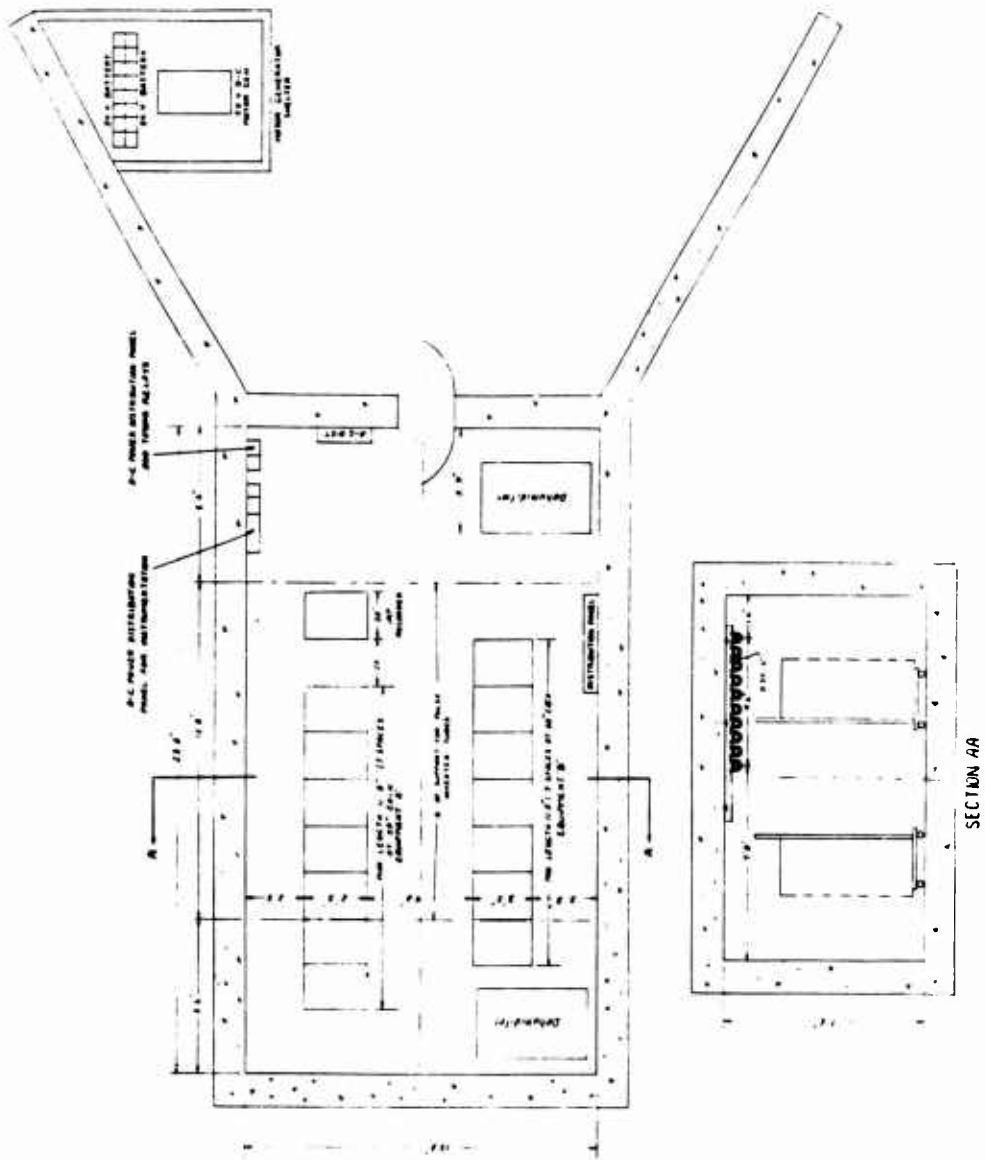


Fig. 13—Arrangement of equipment in station 6a at Site E.

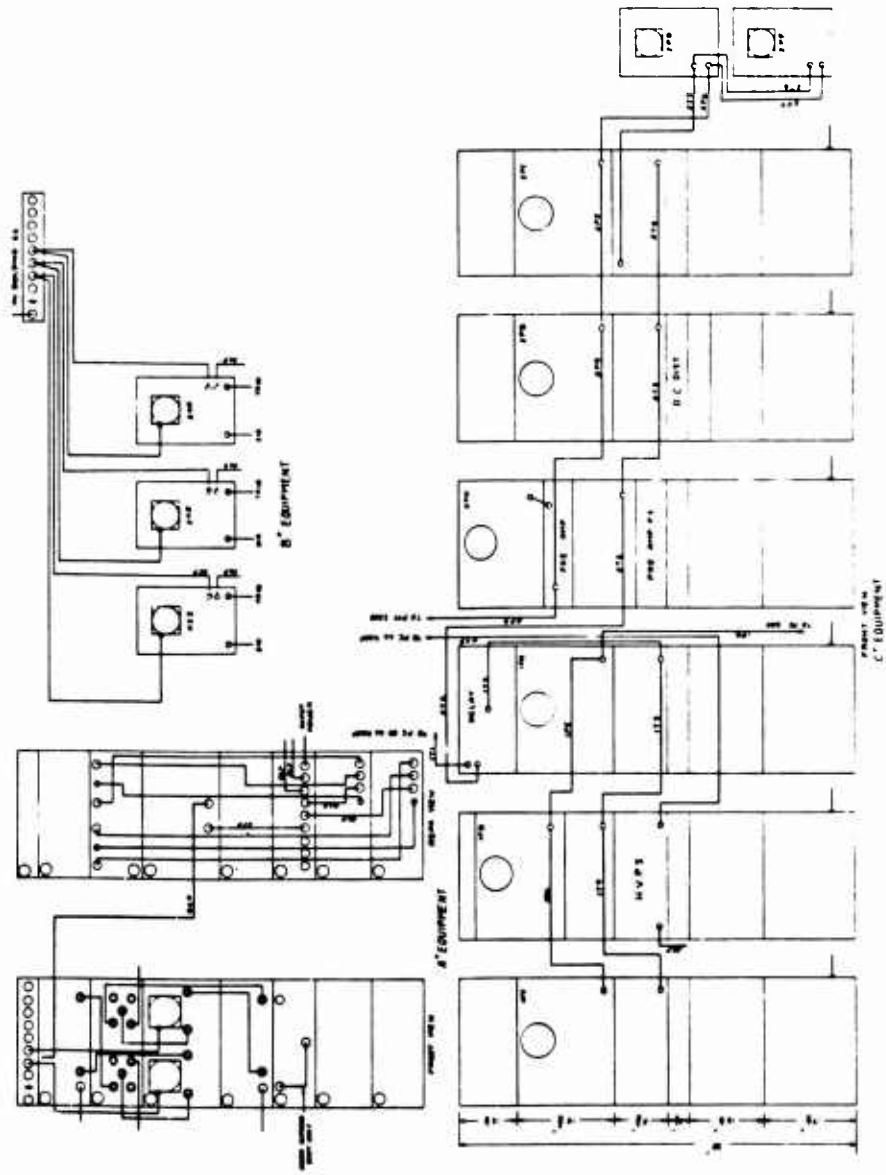


Fig. 14—Cable arrangement for transit-time, prompt-gamma, and tenex equipment at Sites E, V, and E+.

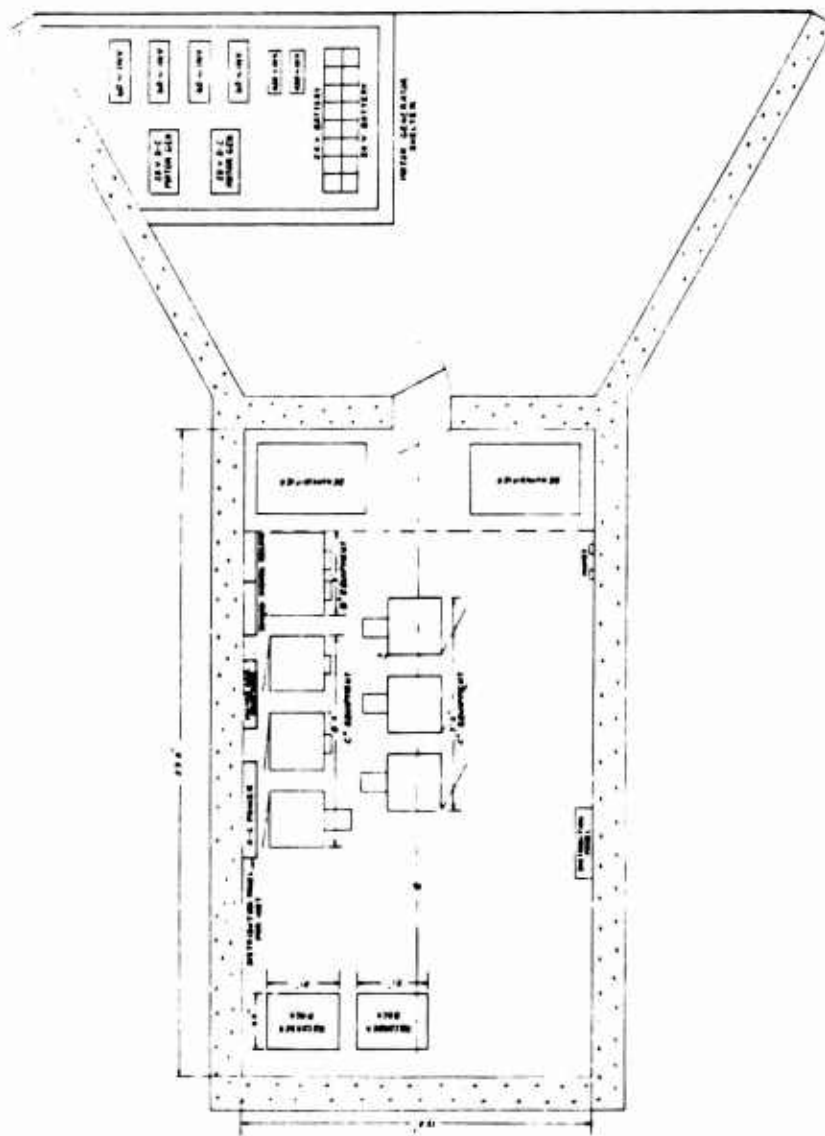


Fig. 15—Arrangement of equipment in station 6b at Sites E. V. and E. V.

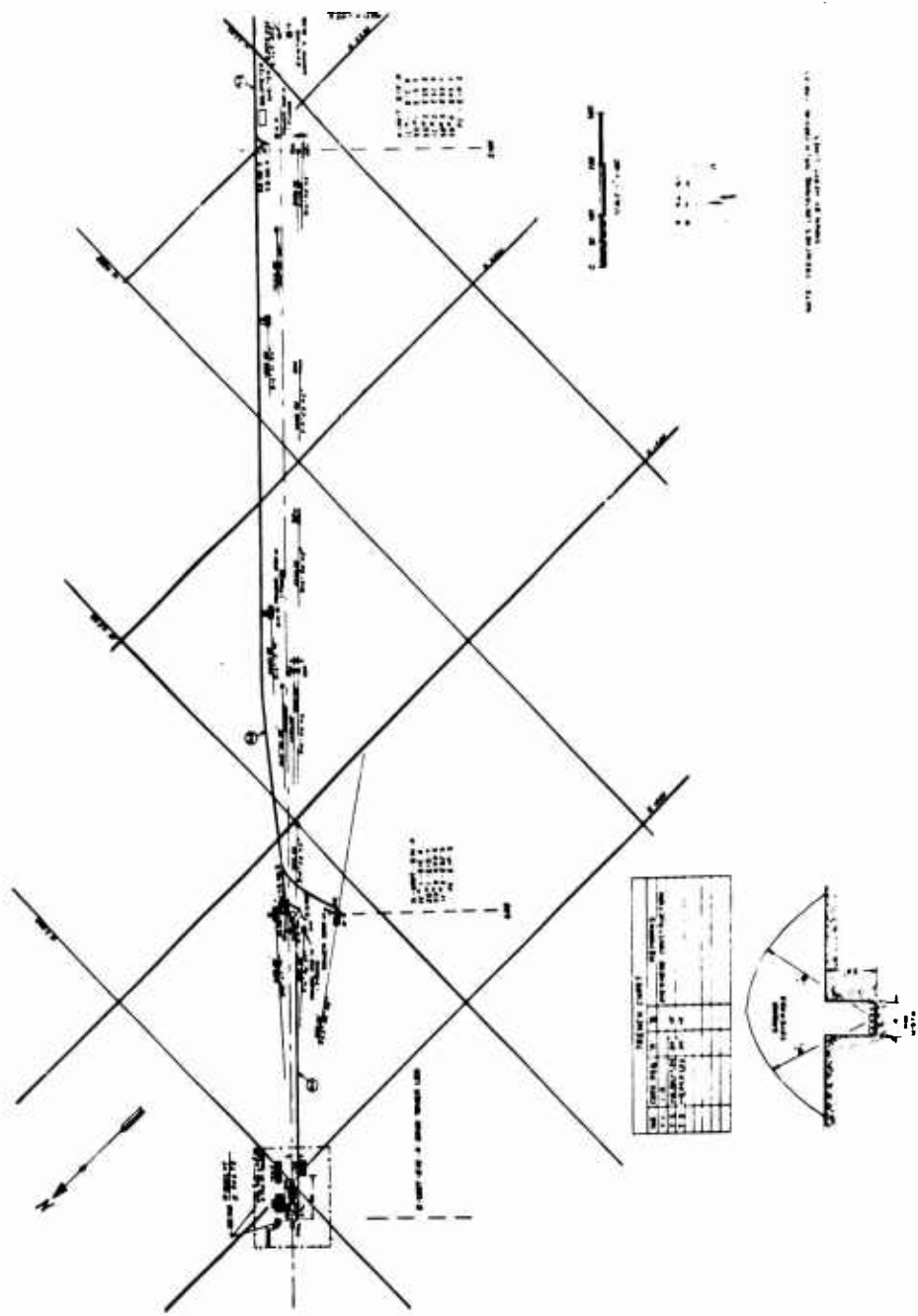


Fig. 16—Layout of cables and external equipment at Site E: Part 1.

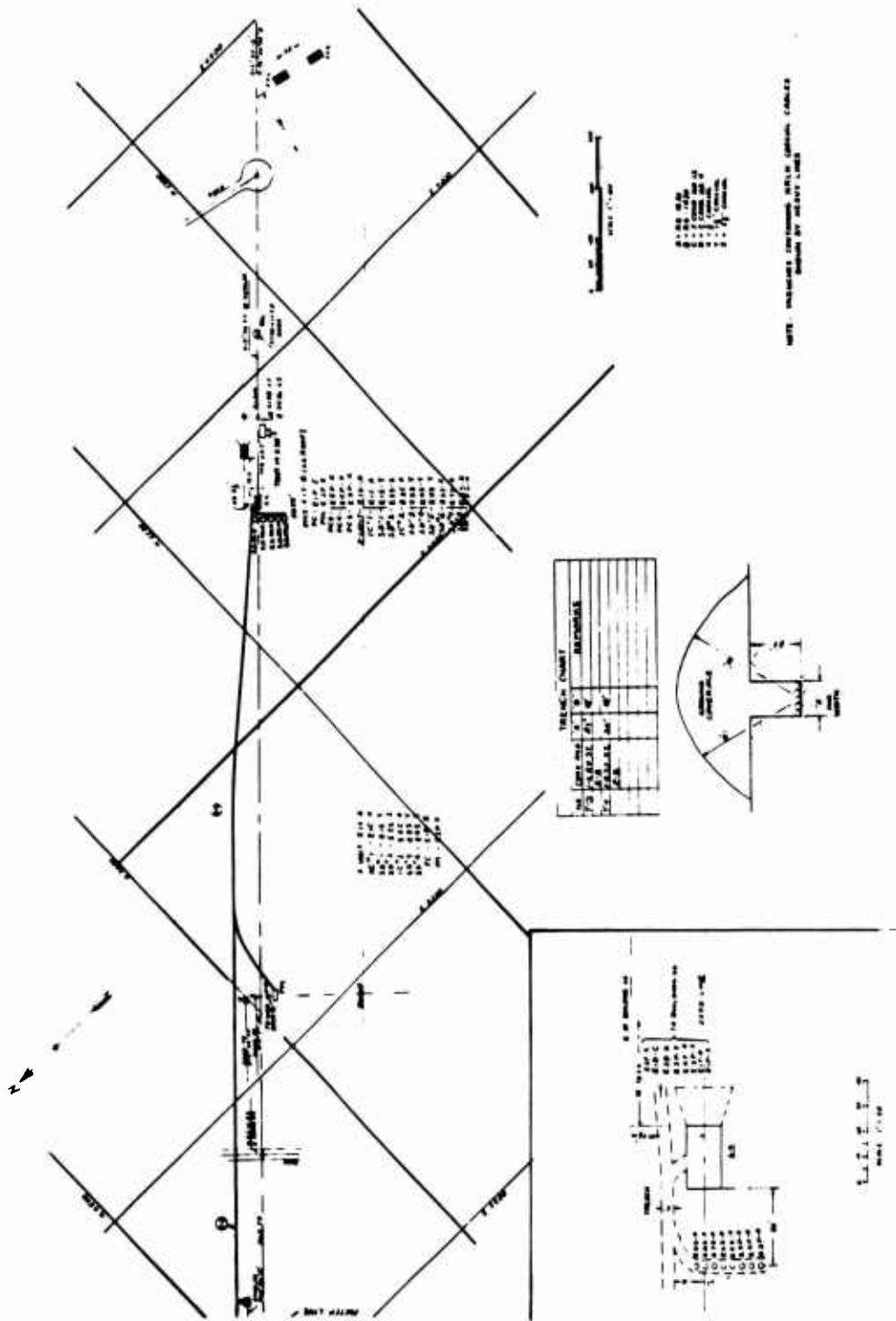


Fig. 17—Layout of cables and external equipment at Site E: Part 2.

TABLE 2

Cables at Site E

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
1X1	RG-18/U	4,500	UG-154/U	Transit time
1X2	RG-63/U	35	UG-59A/U	Transit time
1X3	RG-63/U	35	UG-59A/U	Transit time
1X2T	RG-63/U	35	UG-59A/U	Transit time
1X3T	RG-63/U	35	UG-59A/U	Transit time
1S1	7/8-in. coaxial	47	Flange	Scintillation detector 1S
1S2	1 5/8-in. coaxial	3,410	Flange	Scintillation detector 1S
1S3	RG-18/U	107	UG-154/U	Scintillation detector 1S
1S4	RG-17/U	50	UG-154/U	Scintillation detector 1S
1SD2	RG-8/U	50	UG-59A/U	Scintillation detector 1S
1ST	RG-63/U	35	UG-59A/U	Scintillation detector 1S
2S1	7/8-in. coaxial	14	Flange	Scintillation detector 2S
2S2	3 1/8-in. coaxial	3,289	Flange	Scintillation detector 2S
2S3	7/8-in. coaxial	28	Flange	Scintillation detector 2S
2S4	RG-17/U	50	UG-154/U	Scintillation detector 2S
2S5	RG-8/U	20	UG-59A/U	Scintillation detector 2S
2S6	RG-8/U	20	UG-59A/U	Scintillation detector 2S
2SD1	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2SD2	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2ST	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2S3D1	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D2	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D3	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D4	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3T	RG-63/U	5	UG-59A/U	XY timer 2S3
3S1	7/8-in. coaxial	33	Flange	Scintillation detector 3S
3S2	1 5/8-in. coaxial	1,797	Flange	Scintillation detector 3S
3S3	7/8-in. coaxial	58	Flange	Scintillation detector 3S
3S4	RG-17/U	50	UG-154/U	Scintillation detector 3S
3S5	RG-8/U	20	UG-59A/U	Scintillation detector 3S
3S6	RG-8/U	20	UG-59A/U	Scintillation detector 3S
3SD1	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3SD2	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3ST	RG-63/U	35	UG-59A/U	Scintillation detector 3S

(a) Nominal only; actual physical lengths depended on field contingencies.

TABLE 2 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
3S4D1	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D2	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D3	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D4	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4T	RG-63/U	5	UG-59A/U	XY timer 3S4
4S1	7/8-in. coaxial	30	Flange	Scintillation detector 4S
4S2	1 5/8-in. coaxial	1,789	Flange	Scintillation detector 4S
4S3	7/8-in. coaxial	55	Flange	Scintillation detector 4S
4S4	RG-17/U	50	UG-154/U	Scintillation detector 4S
4S5	RG-8/U	20	UG-59A/U	Scintillation detector 4S
4S6	RG-8/U	20	UG-59A/U	Scintillation detector 4S
4SD1	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4SD2	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4ST	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4S5D1	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D2	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D3	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D4	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5T	RG-63/U	5	UG-59A/U	XY timer 4S5
5S2	7/8-in. coaxial	57	Flange	Scintillation detector 5S
5S3	7/8-in. coaxial	50	Flange	Scintillation detector 5S
5S4	RG-17/U	50	UG-154/U	Scintillation detector 5S
5S5	RG-8/U	20	UG-59A/U	Scintillation detector 5S
5S6	RG-8/U	20	UG-59A/U	Scintillation detector 5S
5SD1	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5SD2	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5ST	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5S6D1	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D2	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D3	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D4	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6T	RG-63/U	5	UG-59A/U	XY timer 5S6
6S2	7/8-in. coaxial	49	Flange	Scintillation detector 6S
6S3	7/8-in. coaxial	50	Flange	Scintillation detector 6S
6S4	RG-17/U	50	UG-154/U	Scintillation detector 6S
6S5	RG-8/U	20	UG-59A/U	Scintillation detector 6S
6S6	RG-8/U	20	UG-59A/U	Scintillation detector 6S
6SD1	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6SD2	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6ST	RG-63/U	35	UG-59A/U	Scintillation detector 6S

TABLE 2 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
6S7D1	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D2	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D3	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D4	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7T	RG-63/U	5	UG-59A/U	XY timer 6S7
7S2	7/8-in. coaxial	41	Flange	Scintillation detector 7S
7S3	7/8-in. coaxial	50	Flange	Scintillation detector 7S
7S4	RG-17/U	50	UG-154/U	Scintillation detector 7S
7S5	RG-8/U	20	UG-59A/U	Scintillation detector 7S
7S6	RG-8/U	20	UG-59A/U	Scintillation detector 7S
7SD1	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7SD2	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7ST	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7S8D1	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D2	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D3	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D4	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8T	RG-63/U	5	UG-59A/U	XY timer 7S8
8S2	7/8-in. coaxial	84	Flange	Scintillation detector 8S
8S4	RG-17/U	50	UG-154/U	Scintillation detector 8S
8S5	RG-8/U	20	UG-59A/U	Scintillation detector 8S
8S6	RG-8/U	20	UG-59A/U	Scintillation detector 8S
8SD1	RG-63/U	35	UG-59A/U	Scintillation detector 8S
8SD2	RG-63/U	35	UG-59A/U	Scintillation detector 8S
8ST	RG-63/U	5	UG-59A/U	Scintillation detector 8S
9S2	7/8-in. coaxial	46	Flange	Scintillation detector 9S
9S4	RG-17/U	50	UG-154/U	Scintillation detector 9S
9SD2	RG-8/U	50	UG-59A/U	Scintillation detector 9S
9ST	RG-63/U	5	UG-59A/U	Scintillation detector 9S
1C2	7/8-in. coaxial	3,460	Flange	Ion chamber 1C
1C3	RG-18/U	107	UG-154/U	Ion chamber 1C
1C4	RG-17/U	50	UG-154/U	Ion chamber 1C
1CD2	RG-8/U	50	UG-59A/U	Ion chamber 1C
1CT	RG-63/U	35	UG-59A/U	Ion chamber 1C

TABLE 2 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
2C2	7/8-in. coaxial	3,430	Flange	Ion chamber 2C
2C4	RG-17/U	50	UG-154/U	Ion chamber 2C
2C5	RG-8/U	20	UG-59A/U	Ion chamber 2C
2C6	RG-8/U	20	UG-59A/U	Ion chamber 2C
2CD1	RG-63/U	35	UG-59A/U	Ion chamber 2C
2CD2	RG-63/U	35	UG-59A/U	Ion chamber 2C
2CT	RG-63/U	35	UG-59A/U	Ion chamber 2C
3P1	7/8-in. coaxial	15	Flange	Prompt gamma 3P
3P2	7/8-in. coaxial	176	Flange	Prompt gamma 3P
3P3	RG-8/U	1,400	UG-59A/U	Prompt gamma 3P
3PT	RG-8/U	10	UG-59A/U	Prompt gamma 3P
4P1	7/8-in. coaxial	15	Flange	Prompt gamma 4P
4P2	7/8-in. coaxial	171	Flange	Prompt gamma 4P
4P3	RG-8/U	700	UG-59A/U	Prompt gamma 4P
4PT	RG-8/U	10	UG-59A/U	Prompt gamma 4P
5P1	7/8-in. coaxial	15	Flange	Prompt gamma 5P
5P2	7/8-in. coaxial	165	Flange	Prompt gamma 5P
5P3	RG-8/U	1,500	UG-59A/U	Prompt gamma 5P
5PT	RG-8/U	10	UG-59A/U	Prompt gamma 5P

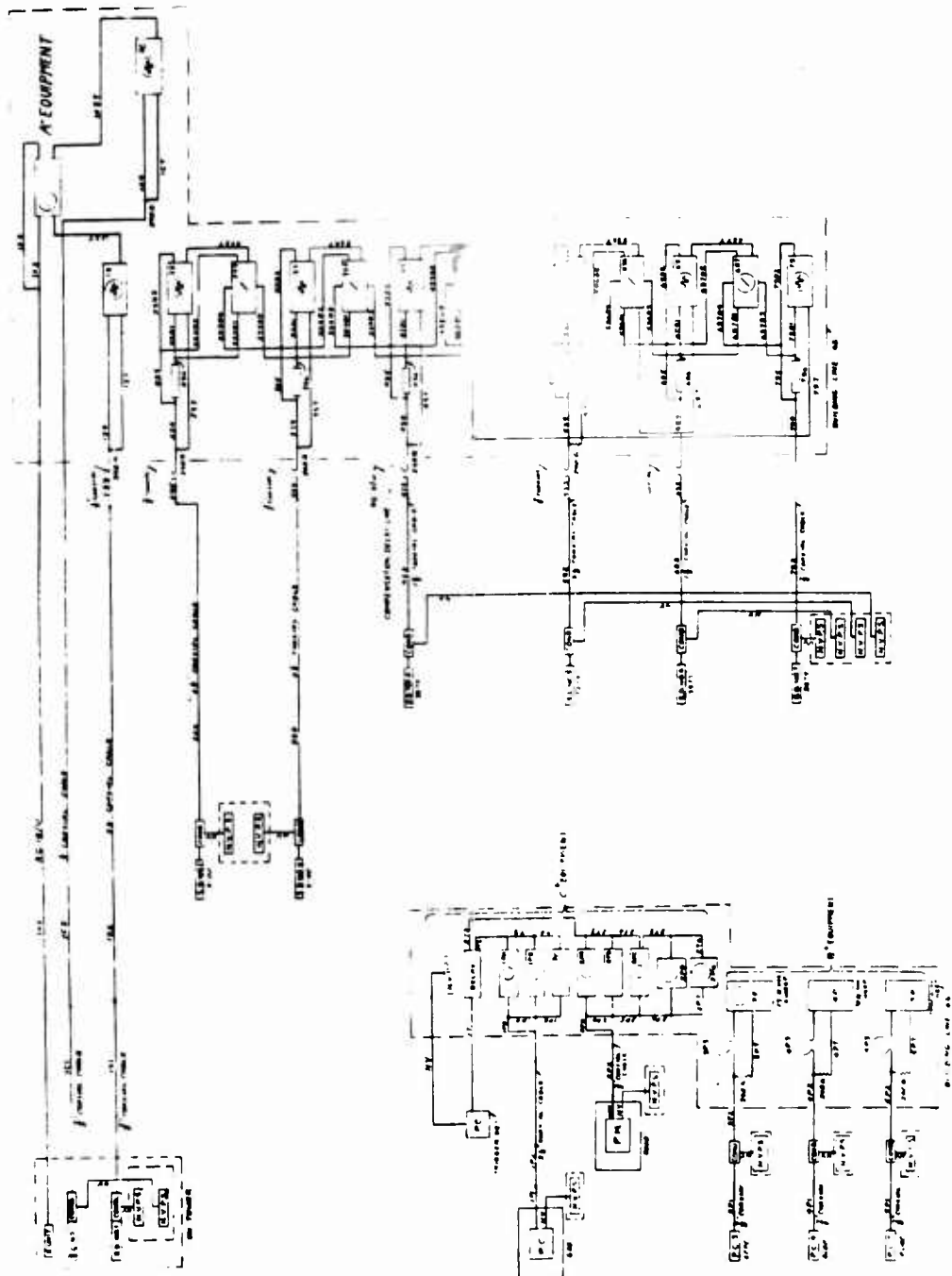


Fig. 18—General cable arrangement at Site V.

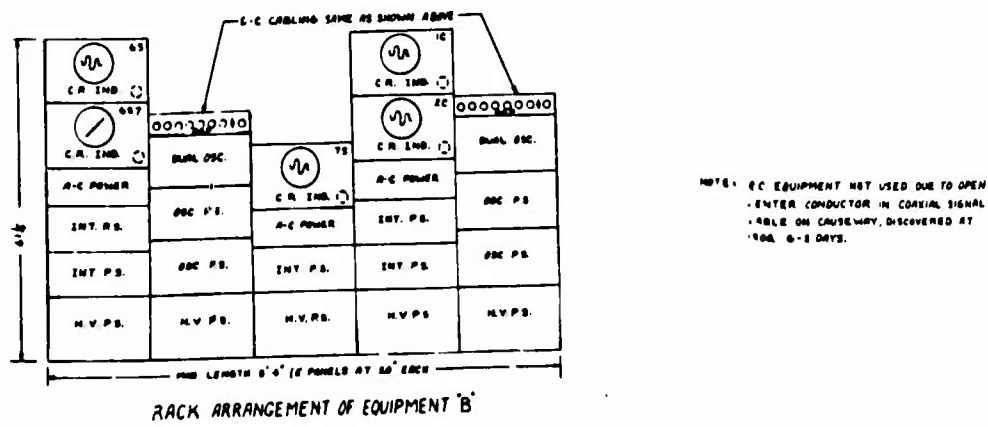
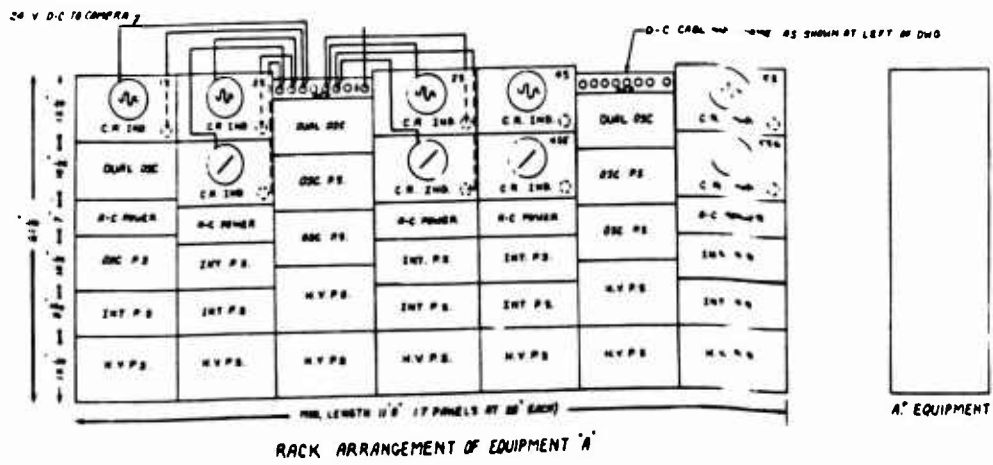
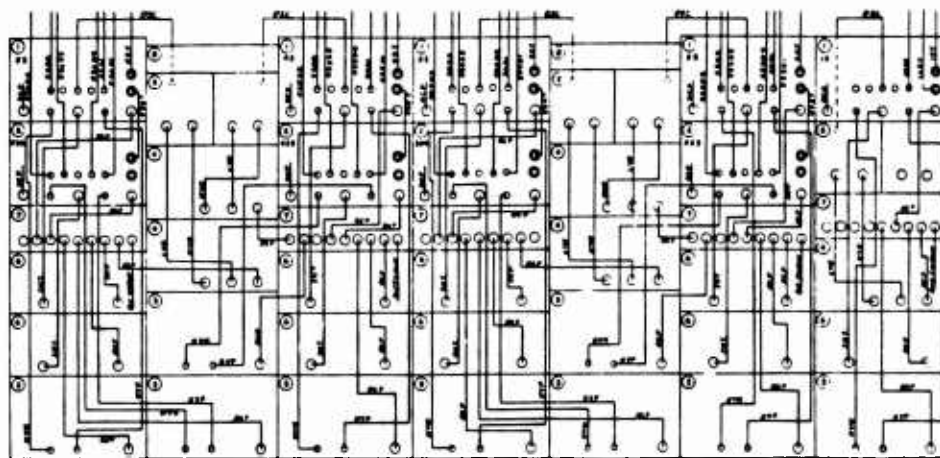
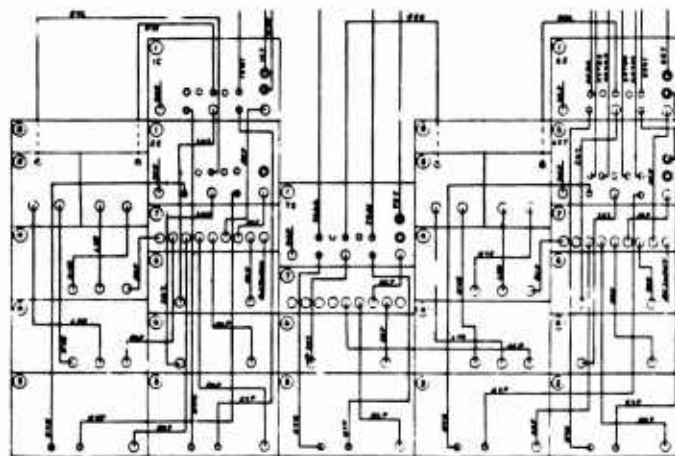


Fig. 19—Recording equipment in station 6a at Site V: Front view.



REAR VIEW, EQUIPMENT A



REAR VIEW EQUIPMENT B

LEGEND

- ① CATHODE-RAY INDICATOR (ALPHA)
- ② CATHODE-RAY INDICATOR (BETA)
- ③ HIGH-VOLTAGE POWER SUPPLY
- ④ OSCILLATOR POWER
- ⑤ DUAL OSCILLATOR
- ⑥ INTENSIFIER POWER SUPPLY
- ⑦ AC POWER DISTRIBUTION PANEL
- ⑧ DC POWER DISTRIBUTION PANEL

Fig. 20—Cable arrangement for alpha-recording equipment at Site V.

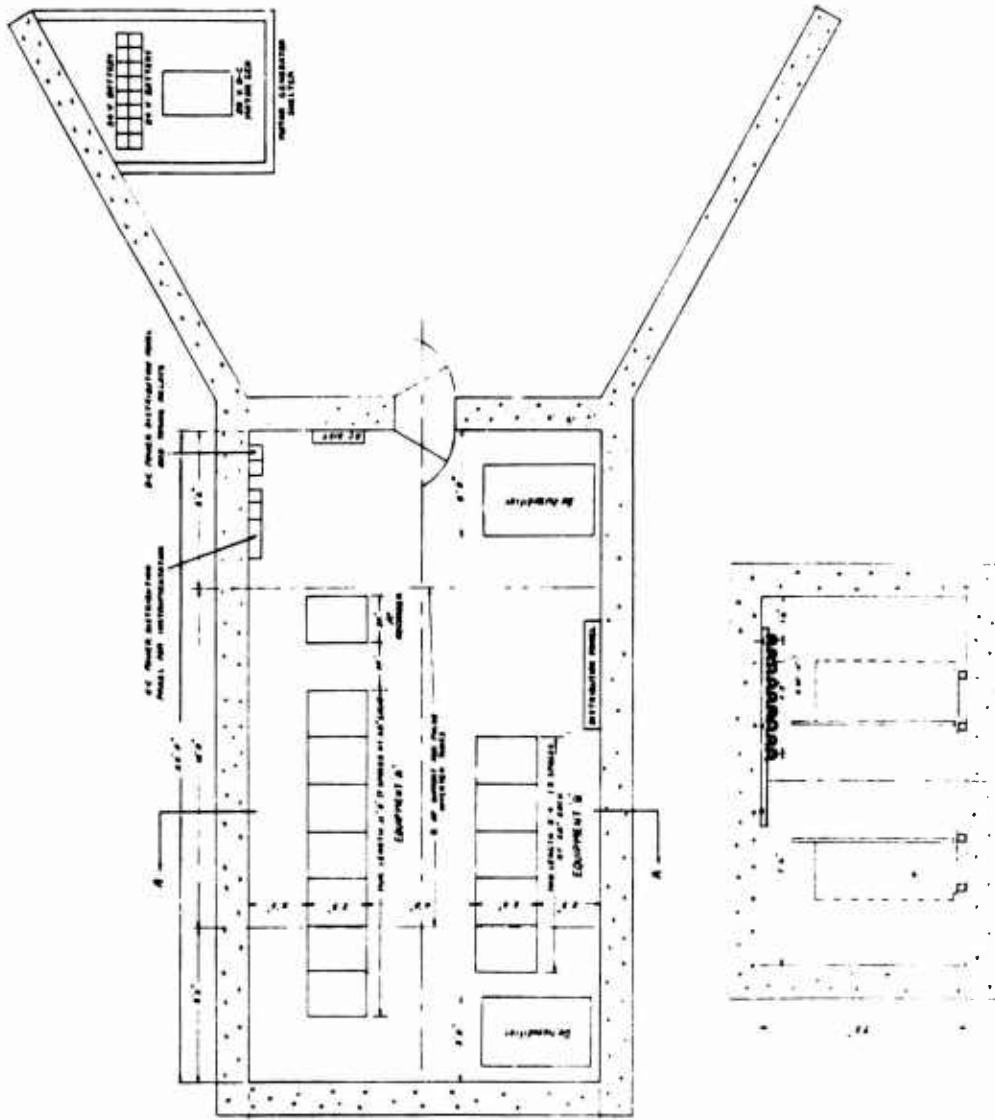


Fig. 21 — Arrangement of equipment in station 6a at Site V.

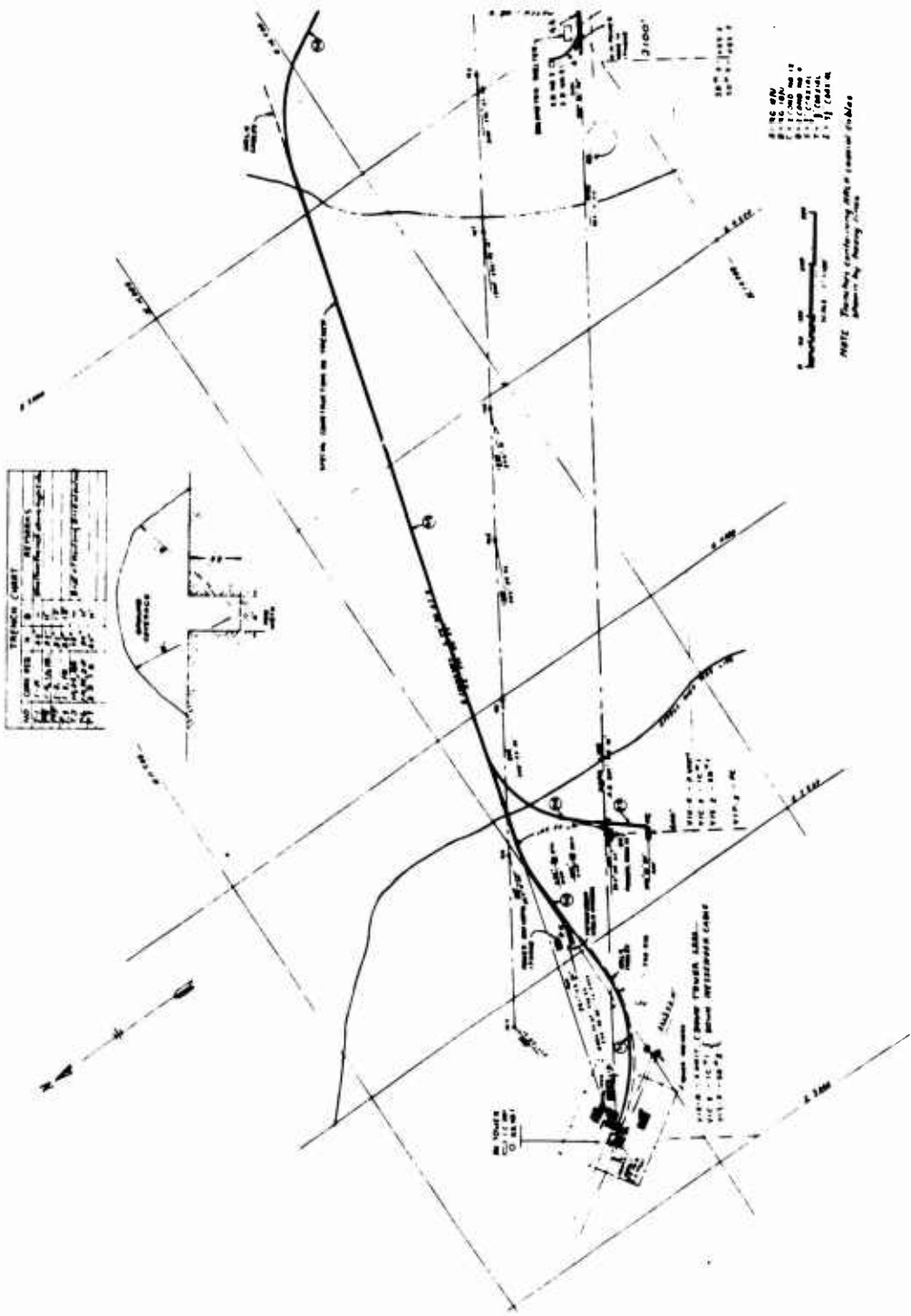


Fig. 22—Layout of cables and external equipment at Site V: Part 1.

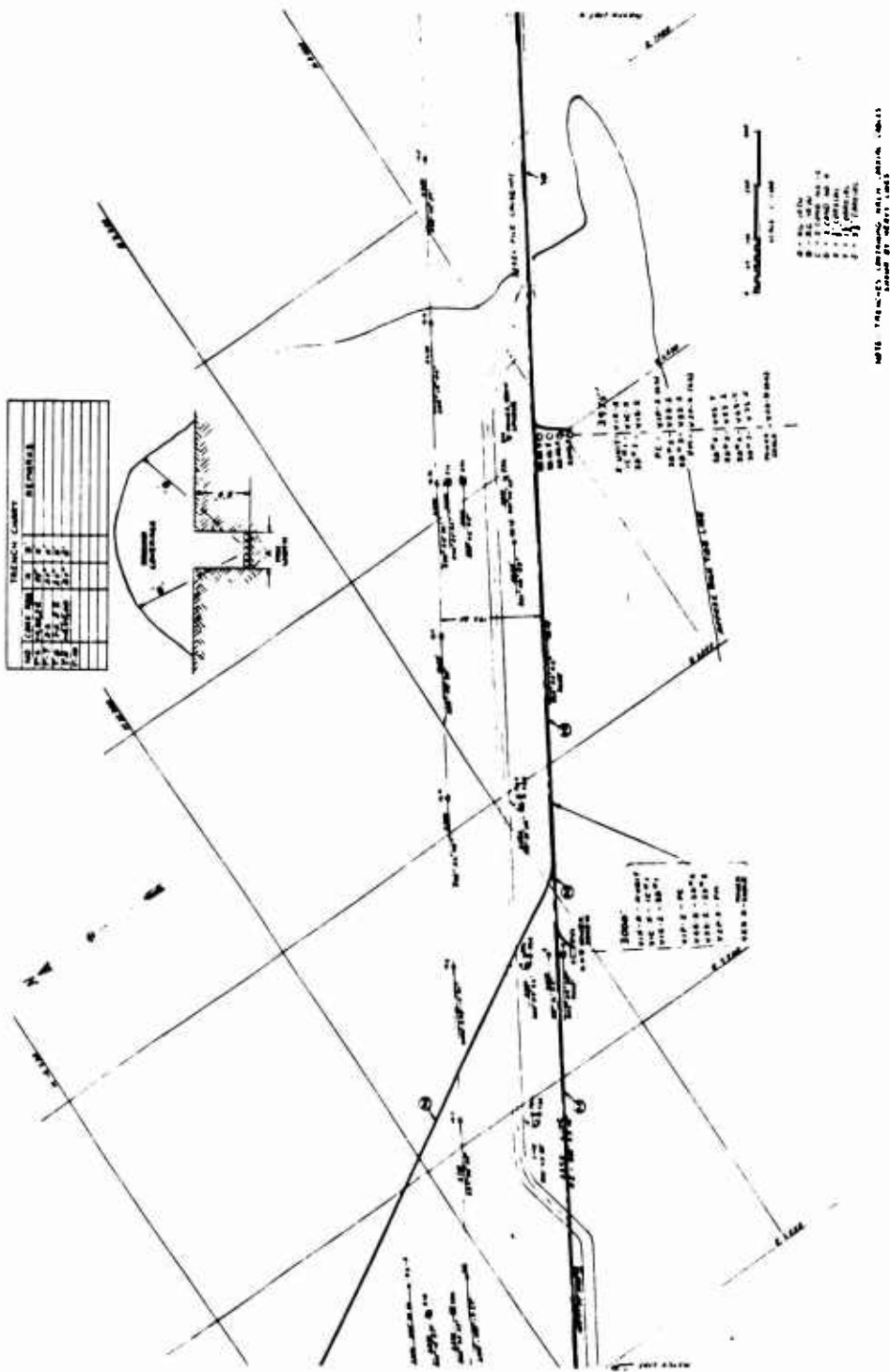


Fig. 23—Layout of cables and external equipment at Site V: Part 2.

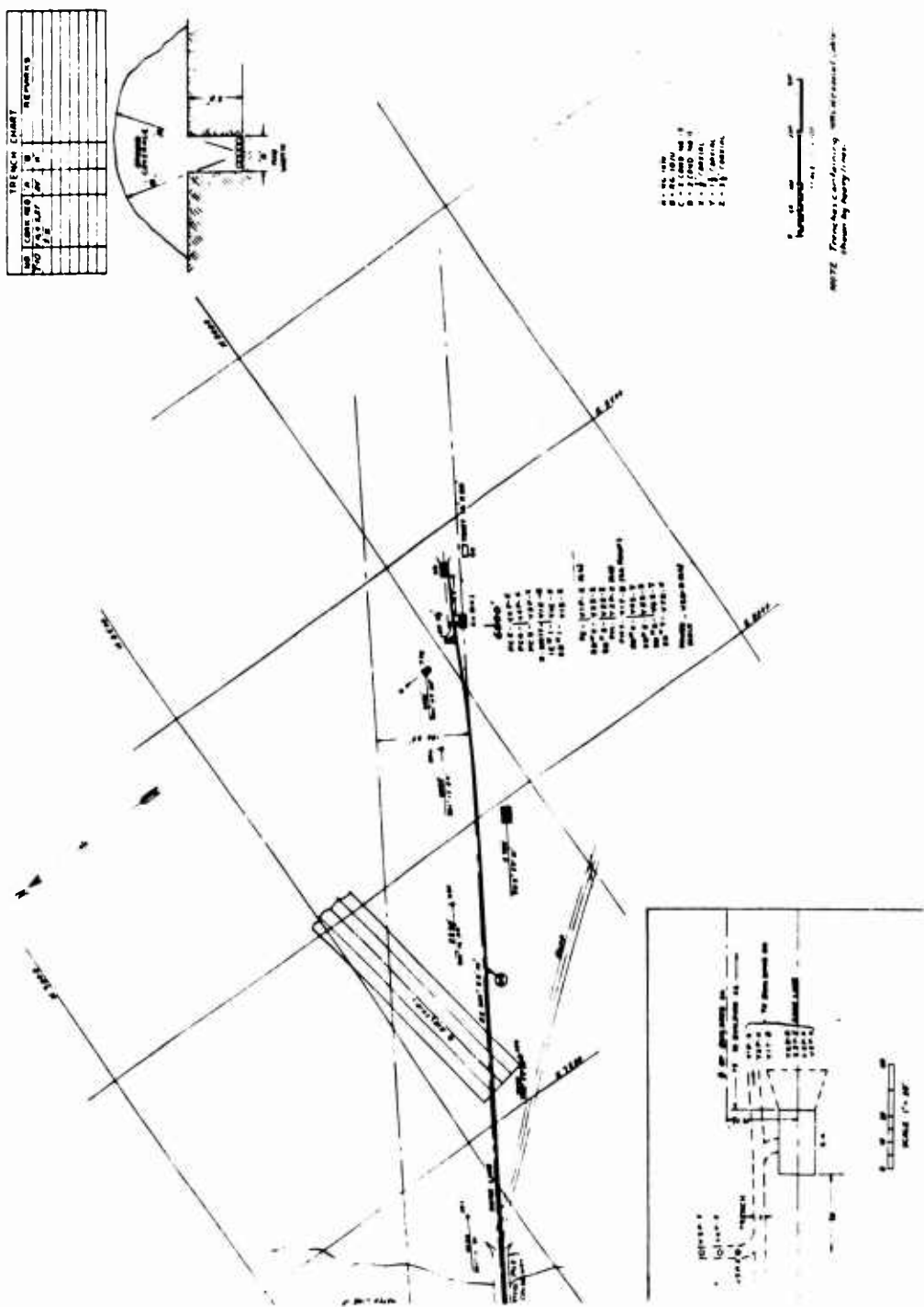


Fig. 24—Layout of cables and external equipment at Site V: Part 3.

TABLE 3

Cables at Site V

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
1X1	RG-18/U	6,482	UG-154/U	Transit time
1X2	RG-63/U	35	UG-59A/U	Transit time
1X3	RG-63/U	35	UG-59A/U	Transit time
1X2T	RG-63/U	35	UG-59A/U	Transit time
1X3T	RG-63/U	35	UG-59A/U	Transit time
1S1	7/8-in. coaxial	465	Flange	Scintillation detector 1S
1S2	3 1/8-in. coaxial	5,857	Flange	Scintillation detector 1S
1S3	7/8-in. coaxial	56	Flange	Scintillation detector 1S
1S4	RG-17/U	50	UG-154/U	Scintillation detector 1S
1S5	RG-8/U	20	UG-59A/U	Scintillation detector 1S
1SD2	RG-63/U	35	UG-59A/U	Scintillation detector 1S
1ST	RG-63/U	35	UG-59A/U	Scintillation detector 1S
2S1	7/8-in. coaxial	40	Flange	Scintillation detector 2S
2S2	3 1/8-in. coaxial	3,932	Flange	Scintillation detector 2S
2S3	7/8-in. coaxial	50	Flange	Scintillation detector 2S
2S4	RG-17/U	50	UG-154/U	Scintillation detector 2S
2S5	RG-8/U	20	UG-59A/U	Scintillation detector 2S
2S6	RG-8/U	20	UG-59A/U	Scintillation detector 2S
2SD1	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2SD2	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2ST	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2S3D1	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D2	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D3	RG-63/U	35	UG-59A/U	XY timer 2S3
2SD4	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3T	RG-63/U	5	UG-59A/U	XY timer 2S3
3S1	7/8-in. coaxial	33	Flange	Scintillation detector 3S
3S2	3 1/8-in. coaxial	3,932	Flange	Scintillation detector 3S
3S3	7/8-in. coaxial	50	Flange	Scintillation detector 3S
3S4	RG-17/U	50	UG-154/U	Scintillation detector 3S
3S5	RG-8/U	20	UG-59A/U	Scintillation detector 3S
3S6	RG-8/U	20	UG-59A/U	Scintillation detector 3S
3SD1	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3SD2	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3ST	RG-63/U	35	UG-59A/U	Scintillation detector 3S

(a) Nominal only; actual physical lengths depended on field contingencies.

TABLE 3 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
3S4D1	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D2	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D3	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D4	RG-63/U	35	UG-59A/U	XY timer 3S4
3ST	RG-63/U	5	UG-59A/U	XY timer 3S4
4S1	7/8-in. coaxial	84	Flange	Scintillation detector 4S
4S2	1 5/8-in. coaxial	2,020	Flange	Scintillation detector 4S
4S3	RG-18/U	127	UG-154/U	Scintillation detector 4S
4S4	RG-17/U	50	UG-154/U	Scintillation detector 4S
4S5	RG-8/U	20	UG-59A/U	Scintillation detector 4S
4S6	RG-8/U	20	UG-59A/U	Scintillation detector 4S
4SD1	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4SD2	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4ST	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4S5D1	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D2	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D3	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D4	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5T	RG-63/U	5	UG-59A/U	XY timer 4S5
5S1	7/8-in. coaxial	96	Flange	Scintillation detector 5S
5S2	3 1/8-in. coaxial	2,020	Flange	Scintillation detector 5S
5S3	7/8-in. coaxial	50	Flange	Scintillation detector 5S
5S4	RG-17/U	50	UG-154/U	Scintillation detector 5S
5S5	RG-8/U	20	UG-59A/U	Scintillation detector 5S
5S6	RG-8/U	20	UG-59A/U	Scintillation detector 5S
5SD1	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5SD2	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5ST	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5S6D1	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D2	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D3	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D4	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6T	RG-63/U	5	UG-59A/U	XY timer 5S6

TABLE 3 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
6S1	7/8-in. coaxial	77	Flange	Scintillation detector 6S
6S2	1 5/8-in. coaxial	2,020	Flange	Scintillation detector 6S
6S3	7/8-in. coaxial	50	Flange	Scintillation detector 6S
6S4	RG-17/U	50	UG-154/U	Scintillation detector 6S
6S5	RG-8/U	20	UG-59A/U	Scintillation detector 6S
6S6	RG-8/U	20	UG-59A/U	Scintillation detector 6S
6SD1	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6SD2	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6ST	RG-63/U	5	UG-59A/U	Scintillation detector 6S
6S7D1	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D2	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D3	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D4	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7T	RG-63/U	5	UG-59A/U	XY timer 6S7
7S2	7/8-in. coaxial	2,159	Flange	Scintillation detector 7S
7S4	RG-17/U	50	UG-154/U	Scintillation detector 7S
7S5	RG-8/U	20	UG-59A/U	Scintillation detector 7S
7S6	RG-8/U	20	UG-59A/U	Scintillation detector 7S
7SD1	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7SD2	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7ST	RG-63/U	5	UG-59A/U	Scintillation detector 7S
1C1	7/8-in. coaxial	465	Flange	Ion chamber 1C
1C2	7/8-in. coaxial	6,100	Flange	Ion chamber 1C
1C4	RG-17/U	50	UG-154/U	Ion chamber 1C
1C5	RG-8/U	20	UG-59A/U	Ion chamber 1C
1CD2	RG-63/U	35	UG-59A/U	Ion chamber 1C
1CT	RG-63/U	35	UG-59A/U	Ion chamber 1C
3P1	7/8-in. coaxial	15	Flange	Prompt gamma 3P
3P2	7/8-in. coaxial	249	Flange	Prompt gamma 3P
3P3	RG-8/U	1,400	UG-59A/U	Prompt gamma 3P
3PT	RG-8/U	10	UG-59A/U	Prompt gamma 3P
4P1	7/8-in. coaxial	15	Flange	Prompt gamma 4P
4P2	7/8-in. coaxial	255	Flange	Prompt gamma 4P
4P3	RG-8/U	700	UG-59A/U	Prompt gamma 4P
4PT	RG-8/U	10	UG-59A/U	Prompt gamma 4P

TABLE 3 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
5P1	7/8-in. coaxial	15	Flange	Prompt gamma 5P
5P2	7/8-in. coaxial	261	Flange	Prompt gamma 5P
5P3	RG-8/U	1,500	UG-59A/U	Prompt gamma 5P
5PT	RG-8/U	10	UG-59A/U	Prompt gamma 5P
1T1	RG-63/U	50	UG-59A/U, PL-259A	Tenex
1T2	RG-63/U	4	PL-259A	Tenex
1T3	RG-63/U	3	PL-259A	Tenex
1T4	RG-63/U	3	PL-259A	Tenex
2T2	RG-63/U	6	PL-259A	Tenex
2T3	RG-63/U	3	PL-259A	Tenex
2T4	RG-63/U	3	PL-259A	Tenex
2T5	RG-63/U	6	PL-259A	Tenex
2T6	RG-63/U	3	PL-259A	Tenex
1P1	RG-8/U	25	UG-59A/U	Tenex
1P2	3 1/8-in. coaxial	6,050	Flange	Tenex
1P3	7/8-in. coaxial	20	Flange	Tenex
1P4	RG-8/U	35	UG-59A/U, PL-259A	Tenex
1P5	RG-8/U	3	PL-259A	Tenex
1P6	RG-8/U	3	PL-259A	Tenex
2P1	RG-8/U	20	UG-59A/U	Tenex
2P2	7/8-in. coaxial	3,280	Flange	Tenex
2P3	RG-8/U	35	UG-59A/U, PL-259A	Tenex
2P4	RG-8/U	6	PL-259A	Tenex
2P5	RG-8/U	3	PL-259A	Tenex
2P6	RG-8/U	6	PL-259A	Tenex
2P7	RG-8/U	3	PL-259A	Tenex

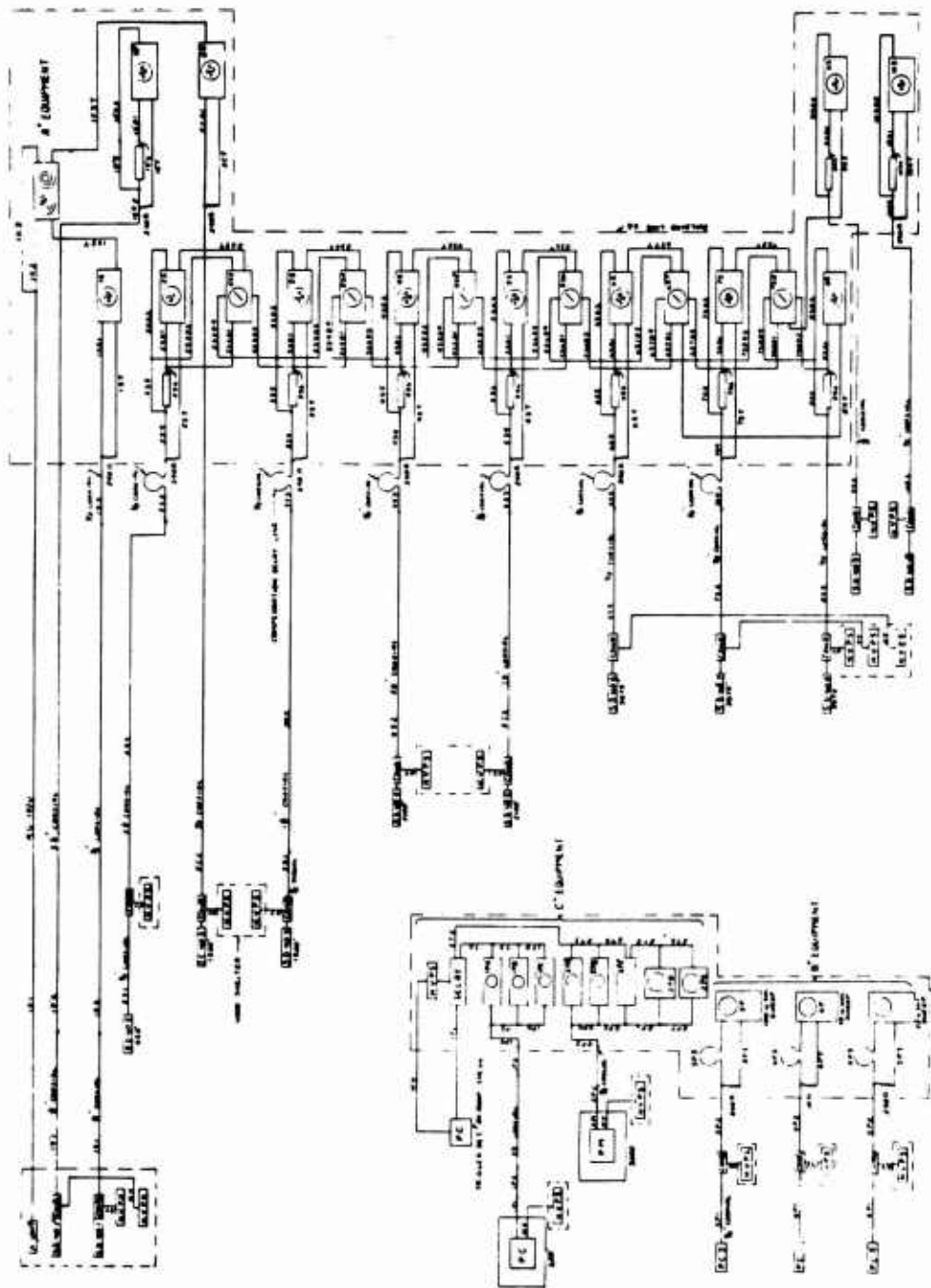


Fig. 25—General cable arrangement at Site E.

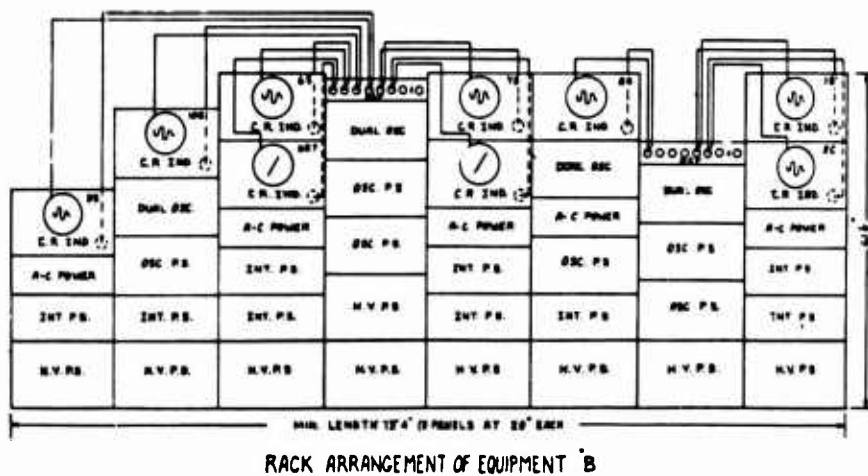
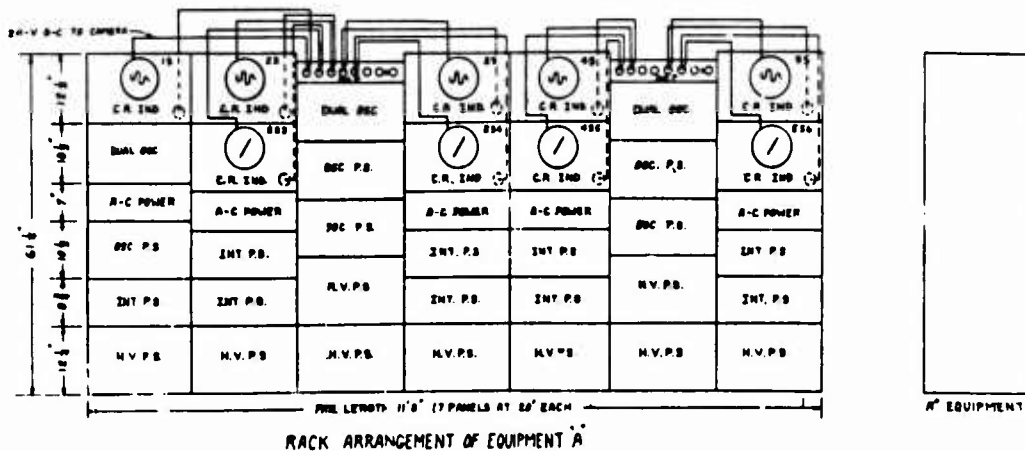


Fig. 26—Recording equipment in station 6a at Site E+. Front view.

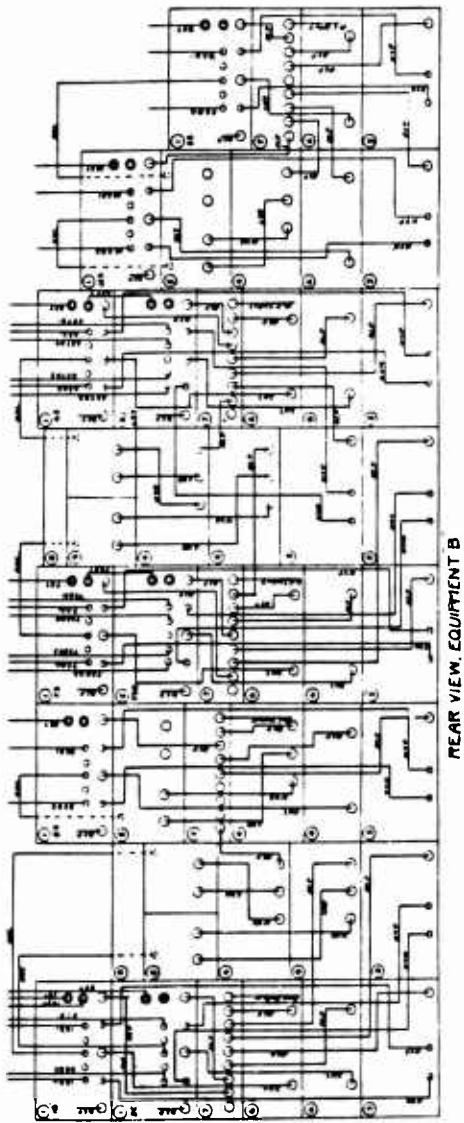
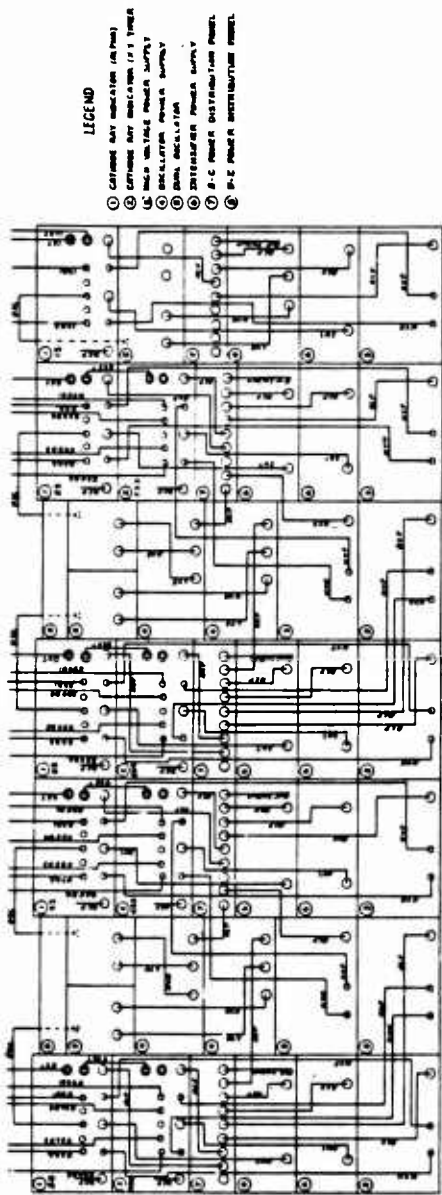


Fig. 27 Cable arrangement for alpha-recording equipment at Site E+.

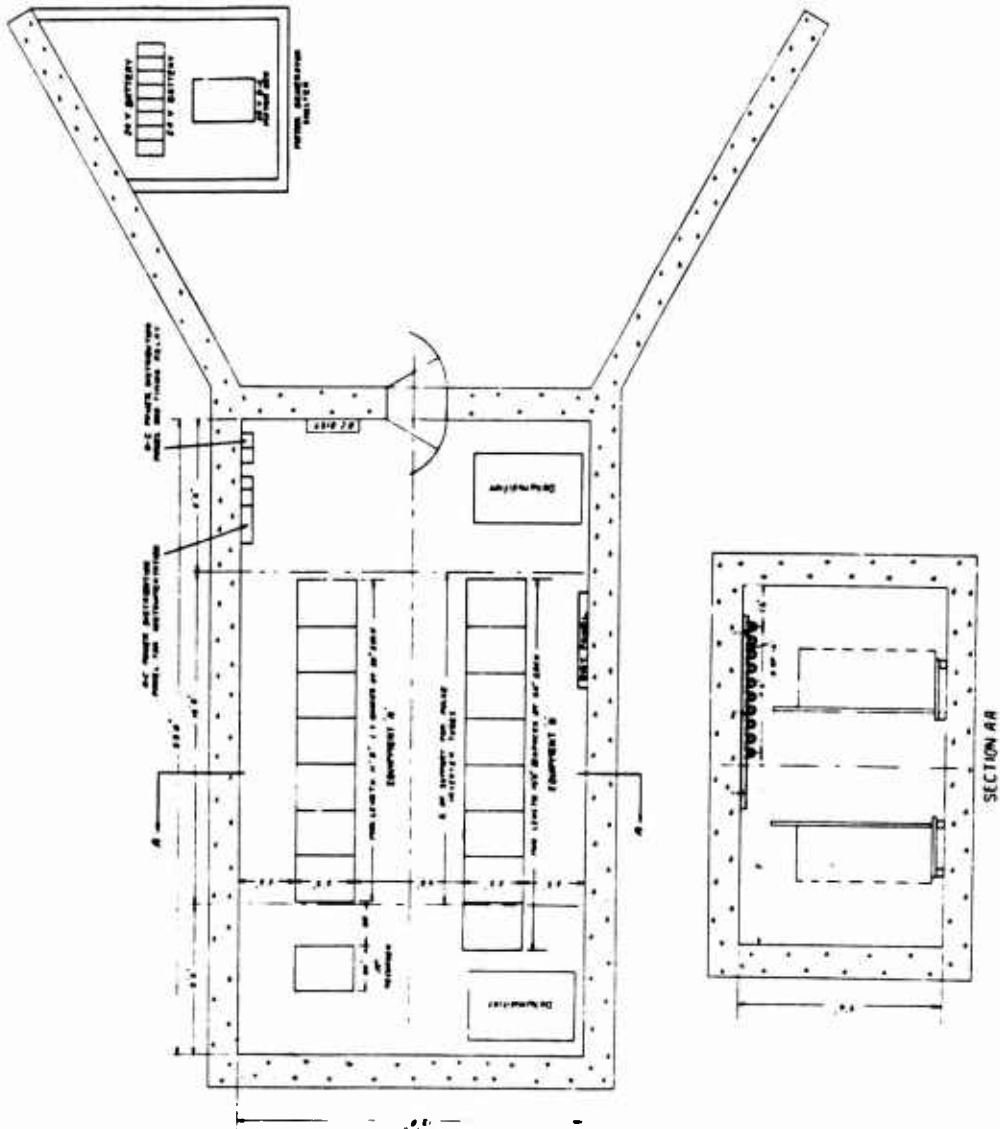


Fig. 28—Arrangement of equipment in station 6a at Site E+.

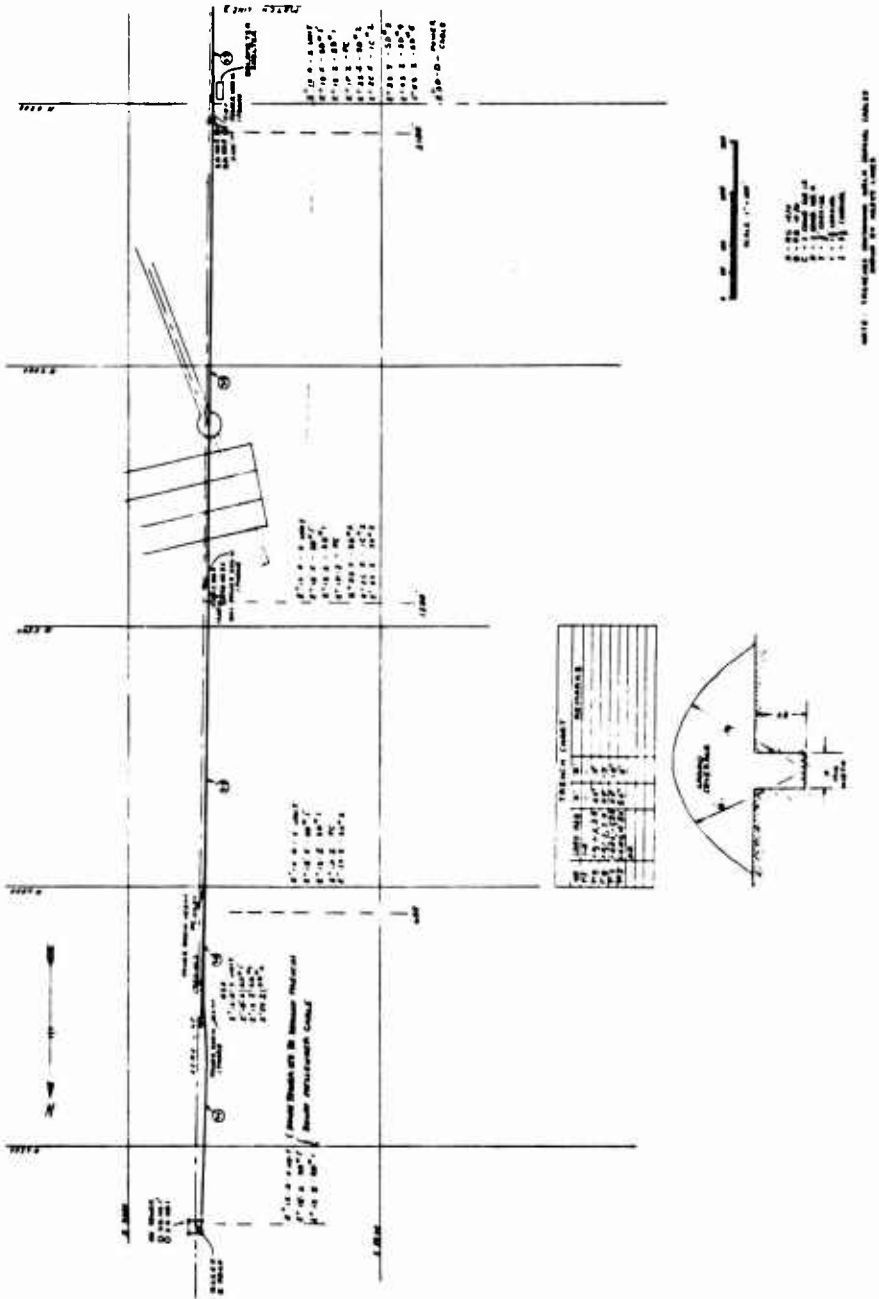


Fig. 29—Layout of cables and external equipment at Site E+: Part 1.

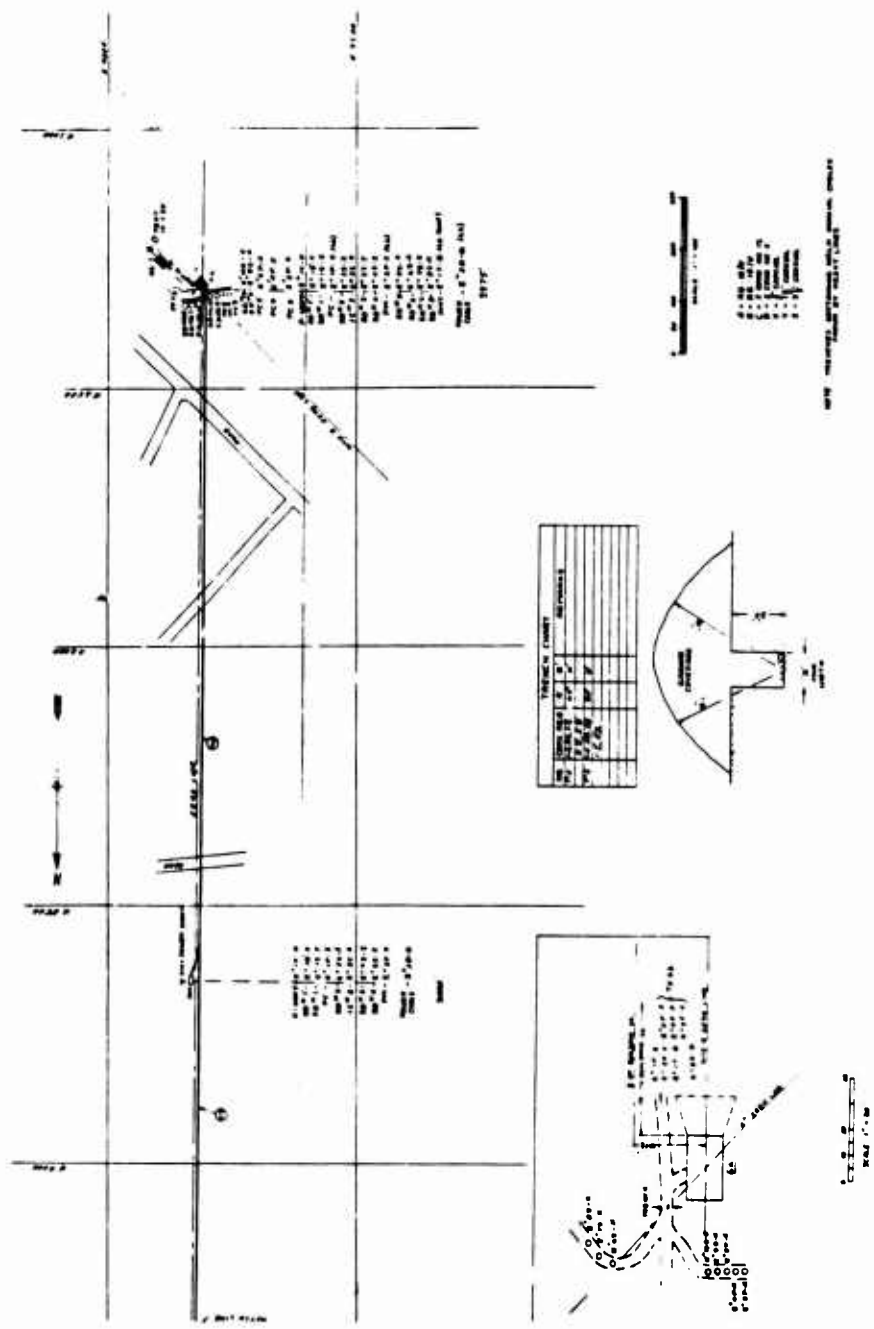


Fig. 30—Layout of cables and external equipment at Site E+: Part 2.

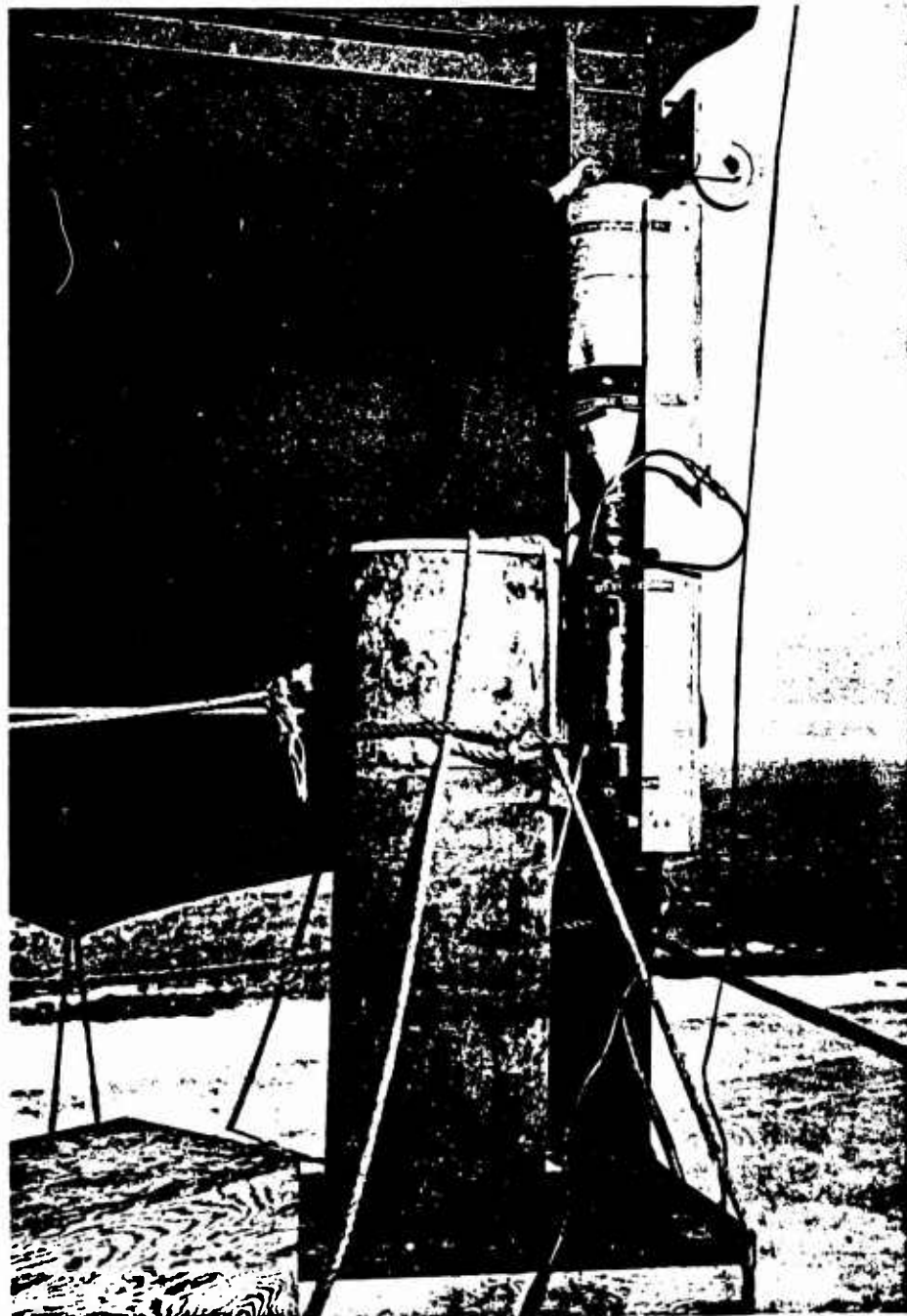


Fig. 31 — Scintillation-detector installation on tower at Site E.

TABLE 4

Cables at Site E+

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
1X1	RG-18/U	4,379	UG-154/U	Transit time
1X2	RG-63/U	35	UG-59A/U	Transit time
1X3	RG-63/U	35	UG-59A/U	Transit time
1X2T	RG-63/U	35	UG-59A/U	Transit time
1X3T	RG-63/U	35	UG-59A/U	Transit time
1S1	7/8-in. coaxial	430	Flange	Scintillation detector 1S
1S2	7/8-in. coaxial	3,904	Flange	Scintillation detector 1S
1S3	7/8-in. coaxial	45	Flange	Scintillation detector 1S
1S4	RG-17/U	50	UG-154/U	Scintillation detector 1S
1S5	RG-8/U	20	UG-59A/U	Scintillation detector 1S
1SD2	RG-63/U	35	UG-59A/U	Scintillation detector 1S
1ST	RG-63/U	35	UG-59A/U	Scintillation detector 1S
1S'1	7/8-in. coaxial	430	Flange	Scintillation detector 1S'
1S'2	3 1/8-in. coaxial	3,888	Flange	Scintillation detector 1S'
1S'3	7/8-in. coaxial	45	Flange	Scintillation detector 1S'
1S'4	RG-17/U	50	UG-154/U	Scintillation detector 1S'
1S'5	RG-8/U	20	UG-59A/U	Scintillation detector 1S'
1S'6	RG-8/U	20	UG-59A/U	Scintillation detector 1S'
1S'D1	RG-63/U	35	UG-59A/U	Scintillation detector 1S'
1S'D2	RG-63/U	35	UG-59A/U	Scintillation detector 1S'
1S'T	RG-63/U	35	UG-59A/U	Scintillation detector 1S'
2S1	7/8-in. coaxial	17	Flange	Scintillation detector 2S
2S2	3 1/8-in. coaxial	3,850	Flange	Scintillation detector 2S
2S3	7/8-in. coaxial	350	Flange	Scintillation detector 2S
2S4	RG-17/U	83	UG-154/U	Scintillation detector 2S
2S5	RG-8/U	20	UG-59A/U	Scintillation detector 2S
2S6	RG-8/U	20	UG-59A/U	Scintillation detector 2S
2SD1	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2SD2	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2ST	RG-63/U	35	UG-59A/U	Scintillation detector 2S
2S3D1	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D2	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D3	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3D4	RG-63/U	35	UG-59A/U	XY timer 2S3
2S3T	RG-63/U	5	UG-59A/U	XY timer 2S3

(a) Nominal only; actual physical lengths depended on field contingencies.

TABLE 4 (Continued)

Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
3S1	7/8-in. coaxial	15	Flange	Scintillation detector 3S
3S2	1 5/8-in. coaxial	3,100	Flange	Scintillation detector 3S
3S3	7/8-in. coaxial	250	Flange	Scintillation detector 3S
3S4	RG-17/U	83	UG-154/U	Scintillation detector 3S
3S5	RG-8/U	20	UG-59A/U	Scintillation detector 3S
3S6	RG-8/U	20	UG-59A/U	Scintillation detector 3S
3SD1	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3SD2	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3ST	RG-63/U	35	UG-59A/U	Scintillation detector 3S
3S4D1	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D2	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D3	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4D4	RG-63/U	35	UG-59A/U	XY timer 3S4
3S4T	RG-63/U	5	UG-59A/U	XY timer 3S4
4S1	7/8-in. coaxial	41	Flange	Scintillation detector 4S
4S2	3 1/8-in. coaxial	2,200	Flange	Scintillation detector 4S
4S3	7/8-in. coaxial	150	Flange	Scintillation detector 4S
4S4	RG-17/U	83	UG-154/U	Scintillation detector 4S
4S5	RG-8/U	20	UG-59A/U	Scintillation detector 4S
4S6	RG-8/U	20	UG-59A/U	Scintillation detector 4S
4SD1	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4SD2	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4ST	RG-63/U	35	UG-59A/U	Scintillation detector 4S
4S5D1	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D2	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D3	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5D4	RG-63/U	35	UG-59A/U	XY timer 4S5
4S5T	RG-63/U	5	UG-59A/U	XY timer 4S5
5S1	7/8-in. coaxial	64	Flange	Scintillation detector 5S
5S2	3 1/8-in. coaxial	2,180	Flange	Scintillation detector 5S
5S3	7/8-in. coaxial	100	Flange	Scintillation detector 5S
5S4	RG-17/U	83	UG-154/U	Scintillation detector 5S
5S5	RG-8/U	20	UG-59A/U	Scintillation detector 5S
5S6	RG-8/U	20	UG-59A/U	Scintillation detector 5S
5SD1	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5SD2	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5ST	RG-63/U	35	UG-59A/U	Scintillation detector 5S
5S6D1	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D2	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6D3	RG-63/U	35	UG-59A/U	XY timer 5S6

TABLE 4 (Continued)

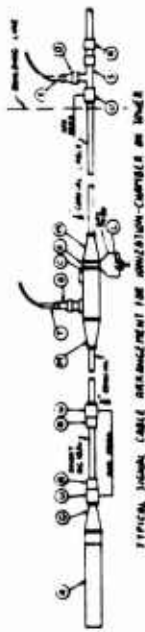
Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
5S6D4	RG-63/U	35	UG-59A/U	XY timer 5S6
5S6T	RG-63/U	5	UG-59A/U	XY timer 5S6
6S2	7/8-in. coaxial	23	Flange	Scintillation detector 6S
6S3	7/8-in. coaxial	67	Flange	Scintillation detector 6S
6S4	RG-17/U	83	UG-154/U	Scintillation detector 6S
6S5	RG-8/U	20	UG-59A/U	Scintillation detector 6S
6S6	RG-8/U	20	UG-59A/U	Scintillation detector 6S
6SD1	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6SD2	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6ST	RG-63/U	35	UG-59A/U	Scintillation detector 6S
6S7D1	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D2	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D3	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7D4	RG-63/U	35	UG-59A/U	XY timer 6S7
6S7T	RG-63/U	5	UG-59A/U	XY timer 6S7
7S2	7/8-in. coaxial	56	Flange	Scintillation detector 7S
7S3	7/8-in. coaxial	16	Flange	Scintillation detector 7S
7S4	RG-17/U	83	UG-154/U	Scintillation detector 7S
7S5	RG-8/U	20	UG-59A/U	Scintillation detector 7S
7S6	RG-8/U	20	UG-59A/U	Scintillation detector 7S
7SD1	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7SD2	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7ST	RG-63/U	35	UG-59A/U	Scintillation detector 7S
7S8D1	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D2	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D3	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8D4	RG-63/U	35	UG-59A/U	XY timer 7S8
7S8T	RG-63/U	5	UG-59A/U	XY timer 7S8
8S2	7/8-in. coaxial	60	Flange	Scintillation detector 8S
8S4	RG-17/U	83	UG-154/U	Scintillation detector 8S
8S5	RG-8/U	20	UG-59A/U	Scintillation detector 8S
8S6	RG-8/U	20	UG-59A/U	Scintillation detector 8S
8SD1	RG-63/U	35	UG-59A/U	Scintillation detector 8S
8SD2	RG-63/U	35	UG-59A/U	Scintillation detector 8S
8ST	RG-63/U	5	UG-59A/U	Scintillation detector 8S

TABLE 4 (Continued)

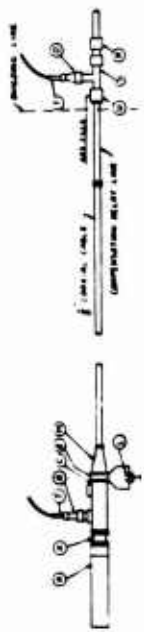
Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
9S2	7/8-in. coaxial	84	Flange	Scintillation detector 9S
9S4	RG-17/U	66	UG-154/U	Scintillation detector 9S
9S5	RG-8/U	20	UG-59A/U	Scintillation detector 9S
9S6	RG-8/U	20	UG-59A/U	Scintillation detector 9S
9SD1	RG-63/U	35	UG-59A/U	Scintillation detector 9S
9SD2	RG-63/U	35	UG-59A/U	Scintillation detector 9S
9ST	RG-63/U	5	UG-59A/U	Scintillation detector 9S
10S2	7/8-in. coaxial	46	Flange	Scintillation detector 10S
10S4	RG-17/U	83	UG-154/U	Scintillation detector 10S
10S5	RG-8/U	20	UG-59A/U	Scintillation detector 10S
10S6	RG-8/U	20	UG-59A/U	Scintillation detector 10S
10SD1	RG-63/U	35	UG-59A/U	Scintillation detector 10S
10SD2	RG-63/U	35	UG-59A/U	Scintillation detector 10S
10ST	RG-63/U	35	UG-59A/U	Scintillation detector 10S
2C2	7/8-in. coaxial	3,180	Flange	Ion chamber 2C
2C4	RG-17/U	50	UG-154/U	Ion chamber 2C
2C5	RG-8/U	20	UG-59A/U	Ion chamber 2C
2CD2	RG-63/U	35	UG-59A/U	Ion chamber 2C
2CT	RG-63/U	35	UG-59A/U	Ion chamber 2C
3P1	7/8-in. coaxial	15	Flange	Prompt gamma 3P
3P2	7/8-in. coaxial	176	Flange	Prompt gamma 3P
3P3	RG-8/U	1,400	UG-59A/U	Prompt gamma 3P
3PT	RG-8/U	10	UG-59A/U	Prompt gamma 3P
4P1	7/8-in. coaxial	15	Flange	Prompt gamma 4P
4P2	7/8-in. coaxial	171	Flange	Prompt gamma 4P
4P3	RG-8/U	700	UG-59A/U	Prompt gamma 4P
4PT	RG-8/U	10	UG-59A/U	Prompt gamma 4P
5P1	7/8-in. coaxial	15	Flange	Prompt gamma 5P
5P2	7/8-in. coaxial	165	Flange	Prompt gamma 5P
5P3	RG-8/U	1,500	UG-59A/U	Prompt gamma 5P
5PT	RG-8/U	10	UG-59A/U	Prompt gamma 5P

TABLE 4 (Continued)

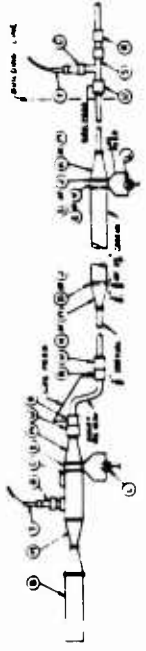
Cable No.	Type	Length ^(a) (ft)	Terminal Connectors	Equipment
1T1	RG-63/U	50	UG-59A/U, PL-259A	Tenex
1T2	RG-63/U	4	PL-259A	Tenex
1T3	RG-63/U	3	PL-259A	Tenex
1T4	RG-63/U	3	PL-259A	Tenex
2T2	RG-63/U	6	PL-259A	Tenex
2T3	RG-63/U	3	PL-259A	Tenex
2T4	RG-63/U	3	PL-259A	Tenex
2T5	RG-63/U	6	PL-259A	Tenex
2T6	RG-63/U	3	PL-259A	Tenex
1P1	RG-8/U	27	UG-59A/U	Tenex
1P2	3 1/8-in. coaxial	3,865	Flange	Tenex
1P3	7/8-in. coaxial	20	Flange	Tenex
1P4	RG-8/U	35	UG-59A/U, PL-259A	Tenex
1P5	RG-8/U	3	PL-259A	Tenex
1P6	RG-8/U	3	PL-259A	Tenex
2P1	RG-8/U	15	UG-59A/U	Tenex
2P2	7/8-in. coaxial	1,535	Flange	Tenex
2P3	RG-8/U	35	UG-59A/U, PL-259A	Tenex
2P4	RG-8/U	6	PL-259A	Tenex
2P5	RG-8/U	3	PL-259A	Tenex
2P6	RG-8/U	6	PL-259A	Tenex
2P7	RG-8/U	3	PL-259A	Tenex



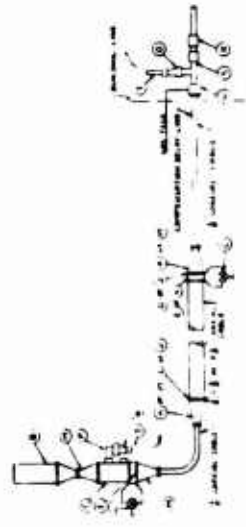
TYPICAL SIGNAL CABLE ARRANGEMENT FOR IONIZATION-CHAMBER ON BOARD



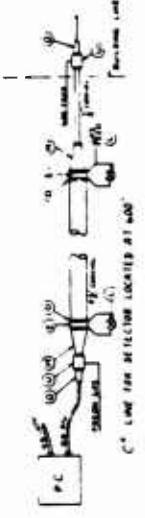
TYPICAL SIGNAL CABLE ARRANGEMENT FOR IONIZATION-CHAMBER ON GROUND



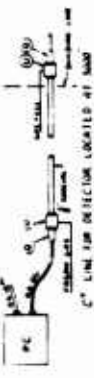
TYPICAL SIGNAL CABLE ARRANGEMENT FOR SCINTILLATION-DETECTOR ON BOARD



TYPICAL SIGNAL CABLE ARRANGEMENT FOR SCINTILLATION-DETECTOR ON GROUND



C* LINE FOR DETECTOR LOCATED AT BOARD

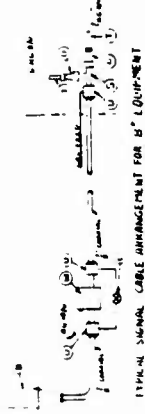


C* LINE FOR DETECTOR LOCATED AT HAND

NRL K

PARTS LIST NRL-K

- (A) IONIZATION-CHAMBER ASSEMBLY
- (B) SCINTILLATION-DETECTOR
- (C) 5% CONDENSER
- (D) 5% FLANGE
- (E) 5% GAS BARRIER
- (F) RESISTOR, IONIZATION-CHAMBER TO CABLE
- (G) 1/2" FLANGE
- (H) 1/2" TO 3/4" RESISTOR
- (I) 3/4" TO 1" RESISTOR
- (J) 1/2" TO 3/4" RESISTOR
- (K) ADAPTER AM UC 282/U
- (L) ADAPTER AM UC 210/U
- (M) ADAPTER AM UC 217/U, 1-C TO 2M
- (N) CONNECTOR AM UC 282/U FOR RG-18/U CABLE
- (O) TEE SPECIAL 1-C WITH 200 OHMS RESISTOR
- (P) CONNECTOR AM UC 282/U FOR RG-18/U CABLE
- (Q) ADAPTER 1/2" CONSOLE CABLE TO 1-C CONNECTOR
- (R) 1/2" GAS BARRIER
- (S) 1/2" TO 3/4" CONDENSER ASSEMBLY
- (T) ADAPTER 3" IONIZATION-CHAMBER TO CONSOLE



TYPICAL SIGNAL CABLE ARRANGEMENT FOR B* EQUIPMENT

Fig. 32—Connection detail for signal cable.

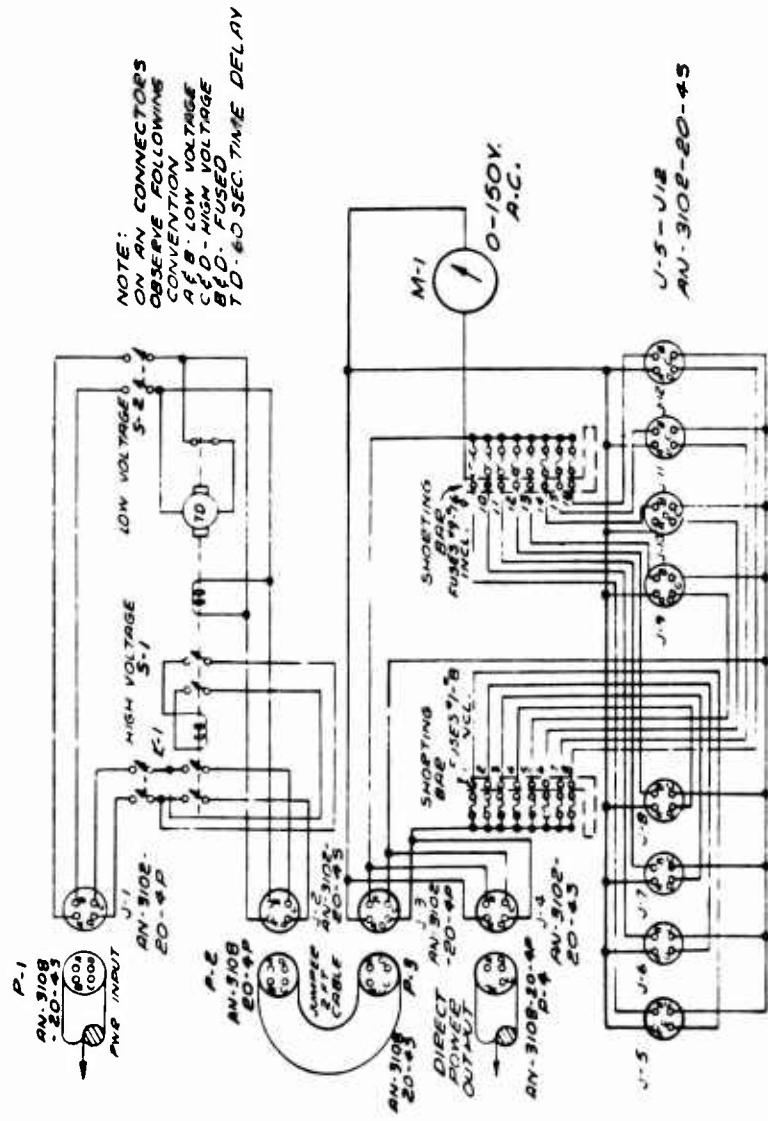


Fig. 33—Power distribution panel: Schematic diagram.

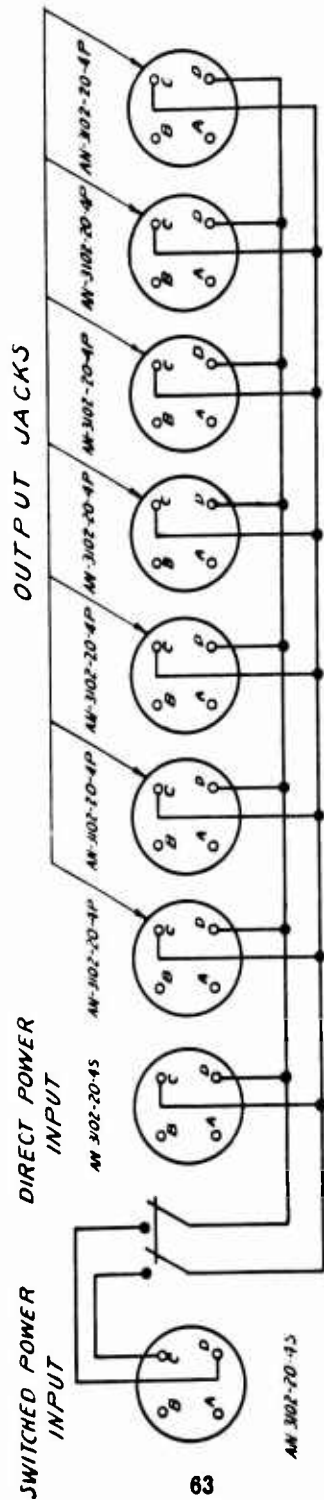


Fig. 34—Twenty-four - volt distribution panel.

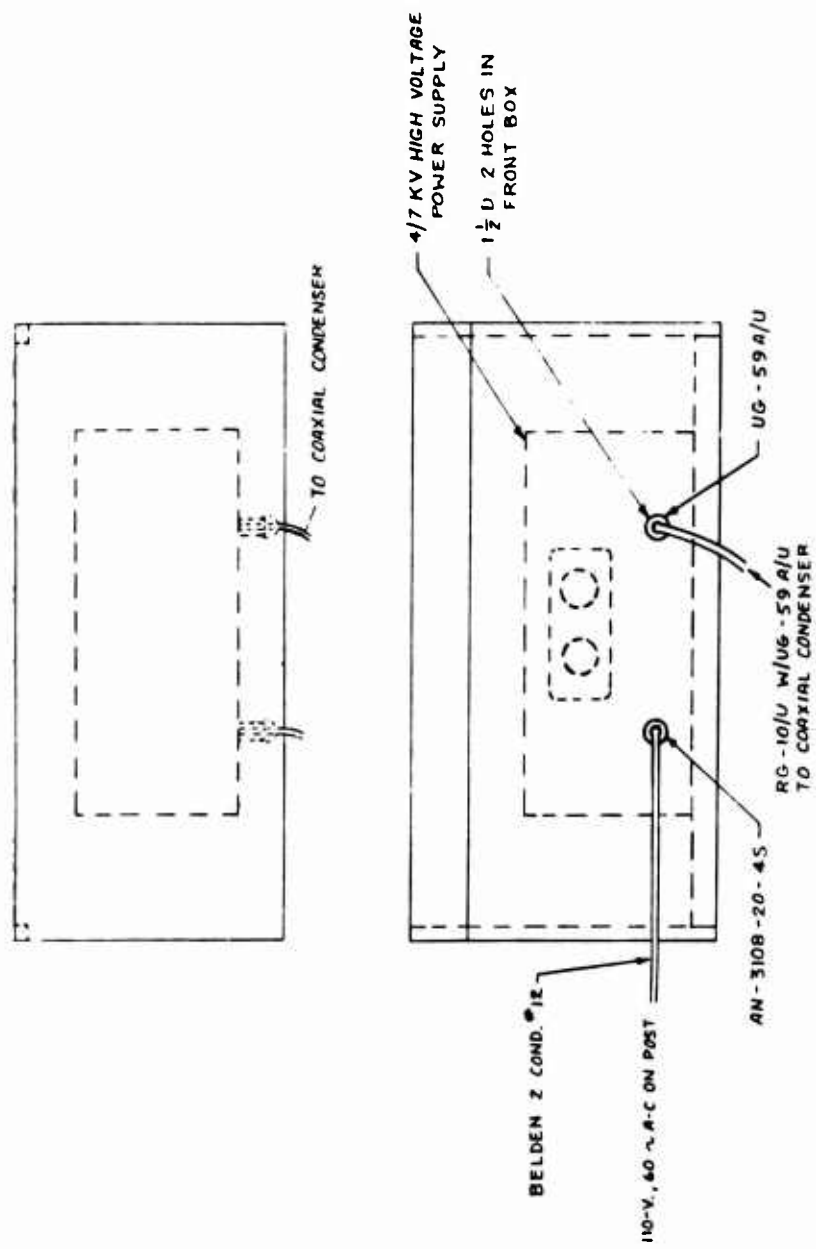


Fig. 35—Housing and connection details for high-voltage power supply.

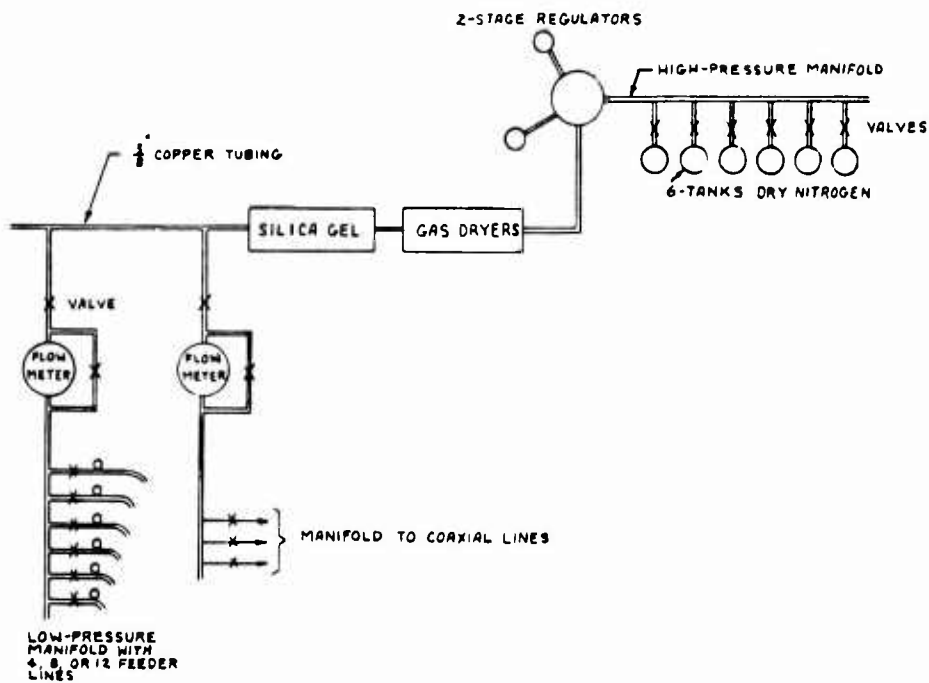


Fig. 36—First method of gas-filling and pressurizing coaxial cables.

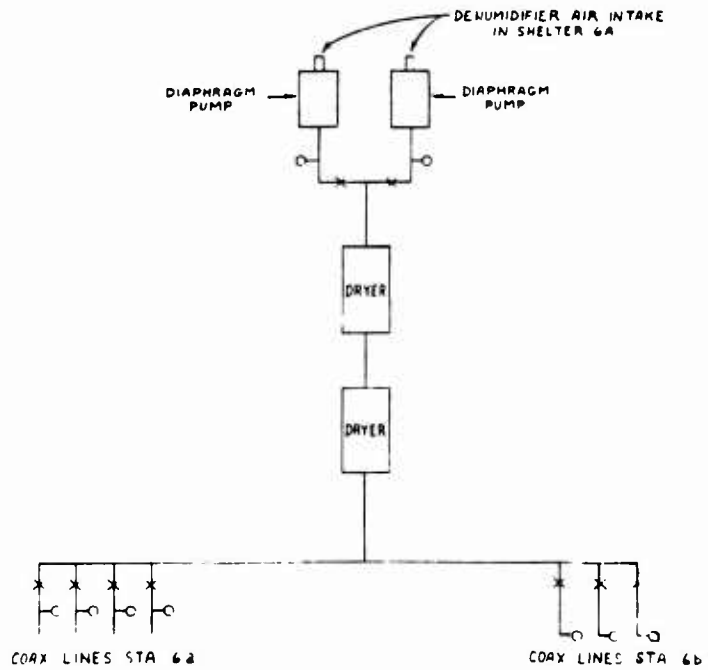


Fig. 37—Preferred method of gas-filling and pressurizing coaxial cables.



Fig. 38—Method of supporting coaxial cable at top of catenary.





Fig. 39—Typical catenary installation.

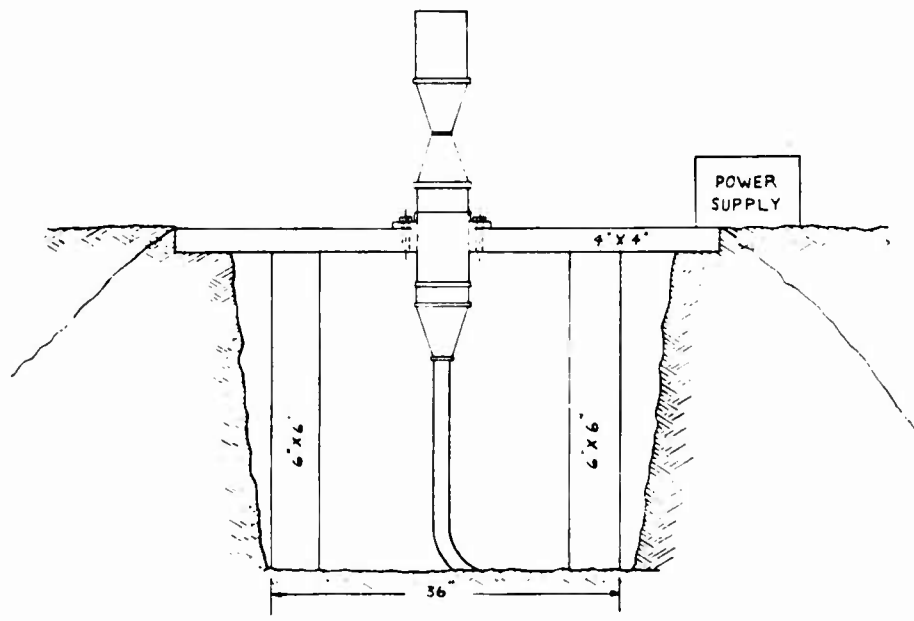
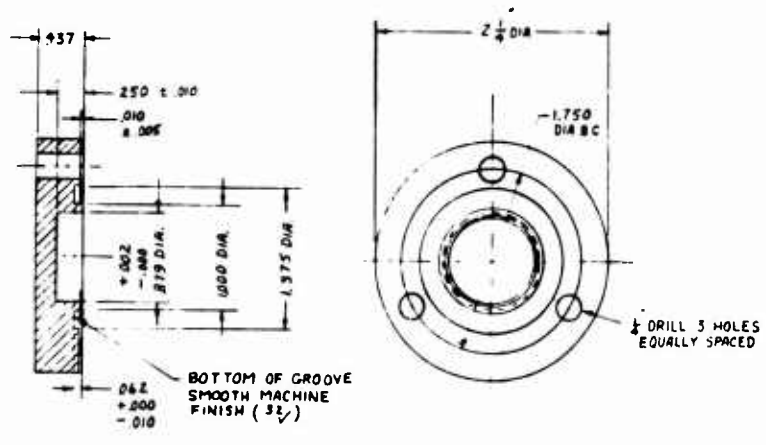


Fig. 40—Method of supporting scintillation-detector and condenser assemblies.



MATERIAL BRASS (NAVAL)
MUST BE PRESSURE TIGHT

NOTE: REMOVE SHARP EDGES

Fig. 42—Special flange for 3/4-in. to 1/2-in. reducer.

Page 40 deleted.

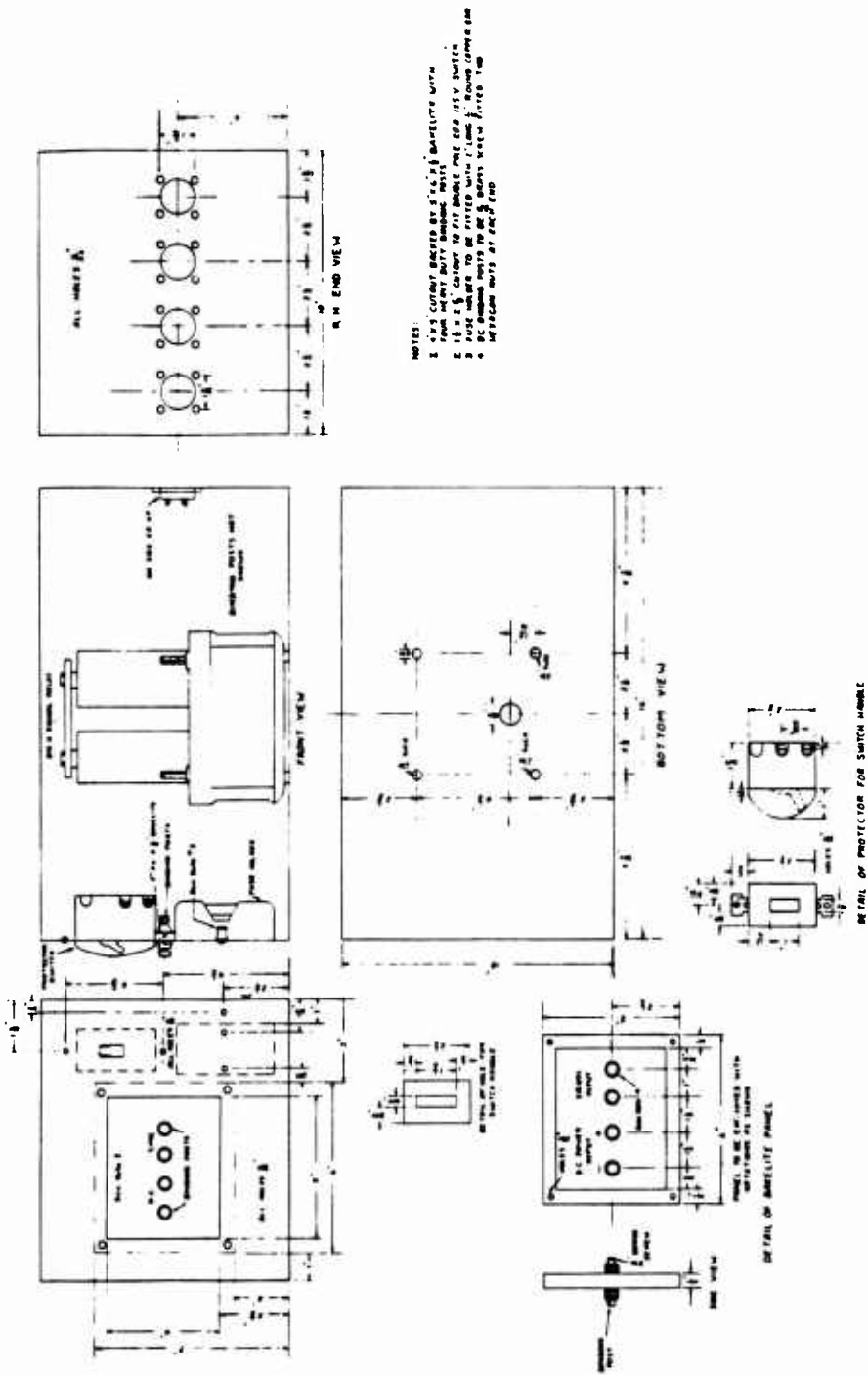


Fig. 43—Relay box.

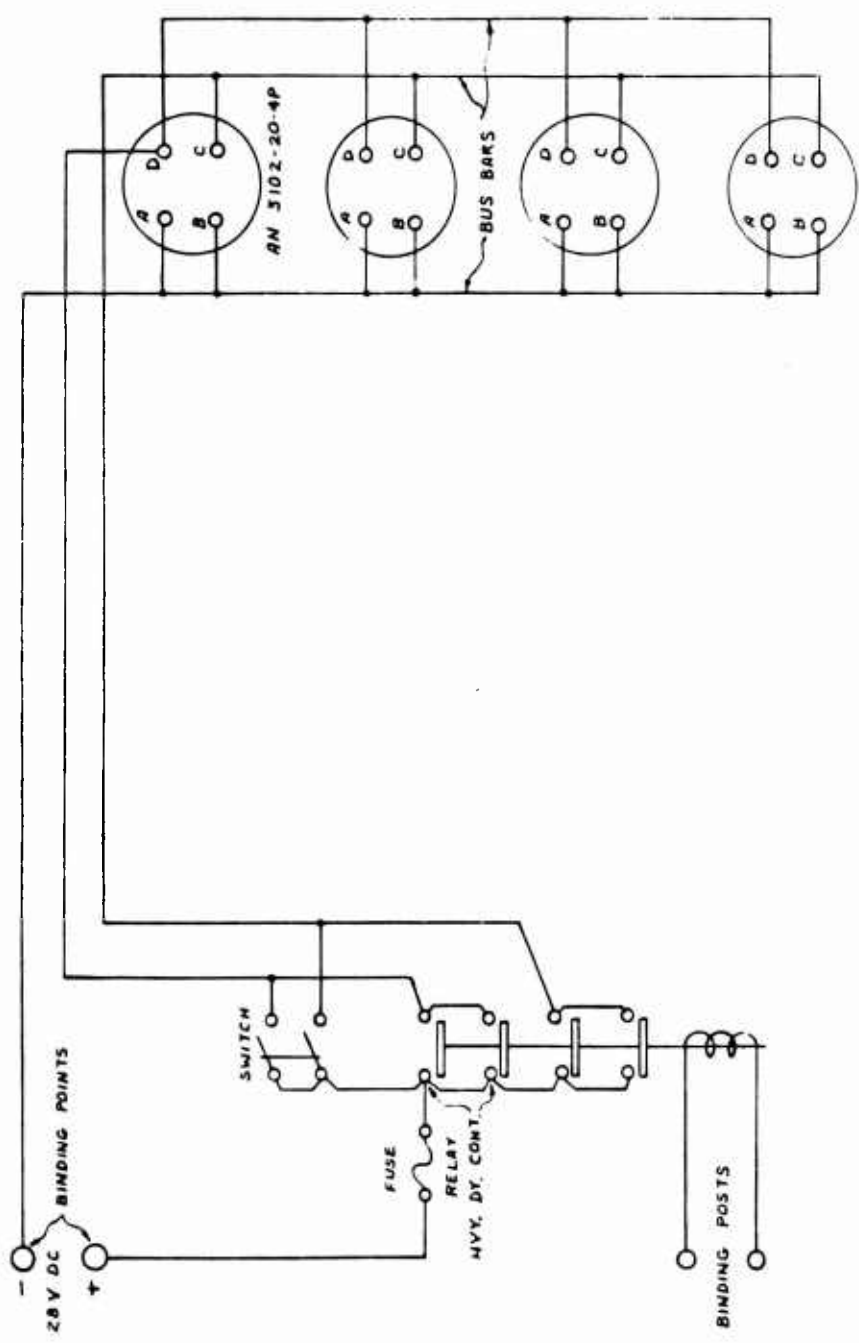


Fig. 14 — Relay-box wiring diagram.

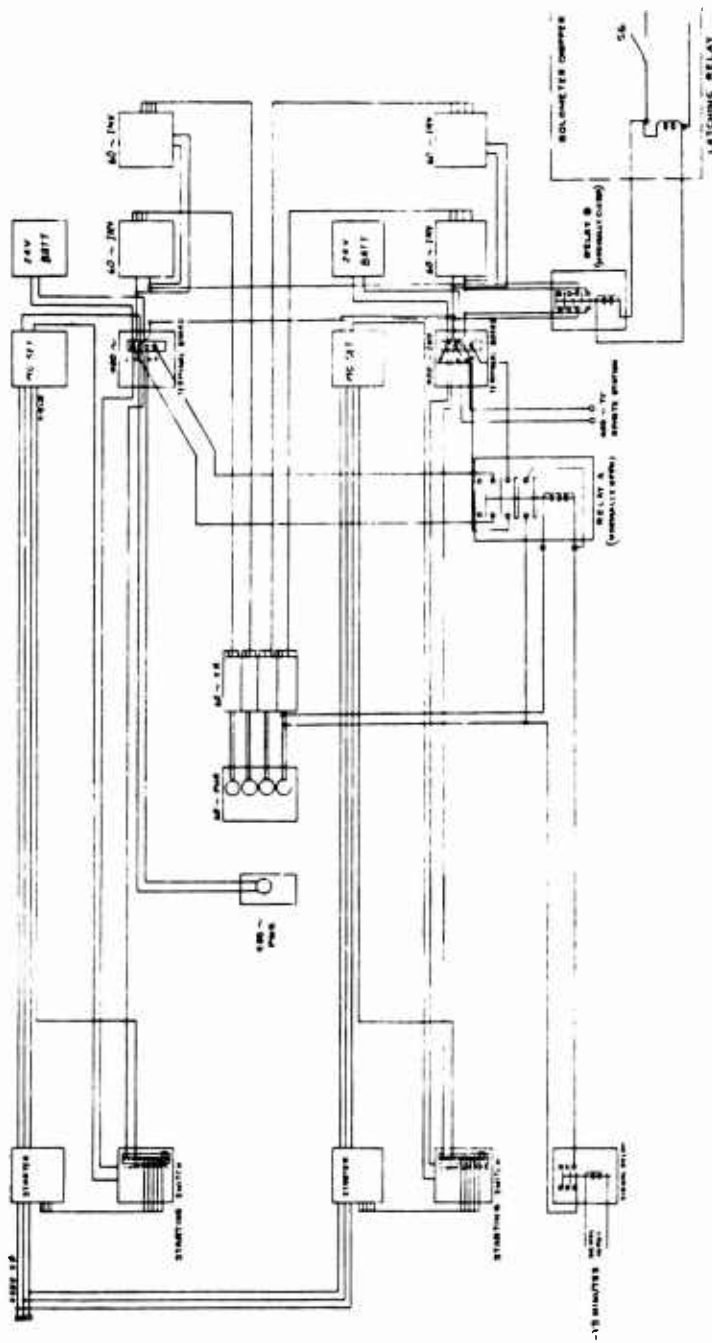


Fig. 45—Power and control for bolometer equipment at Sites C and M: Wiring diagram.

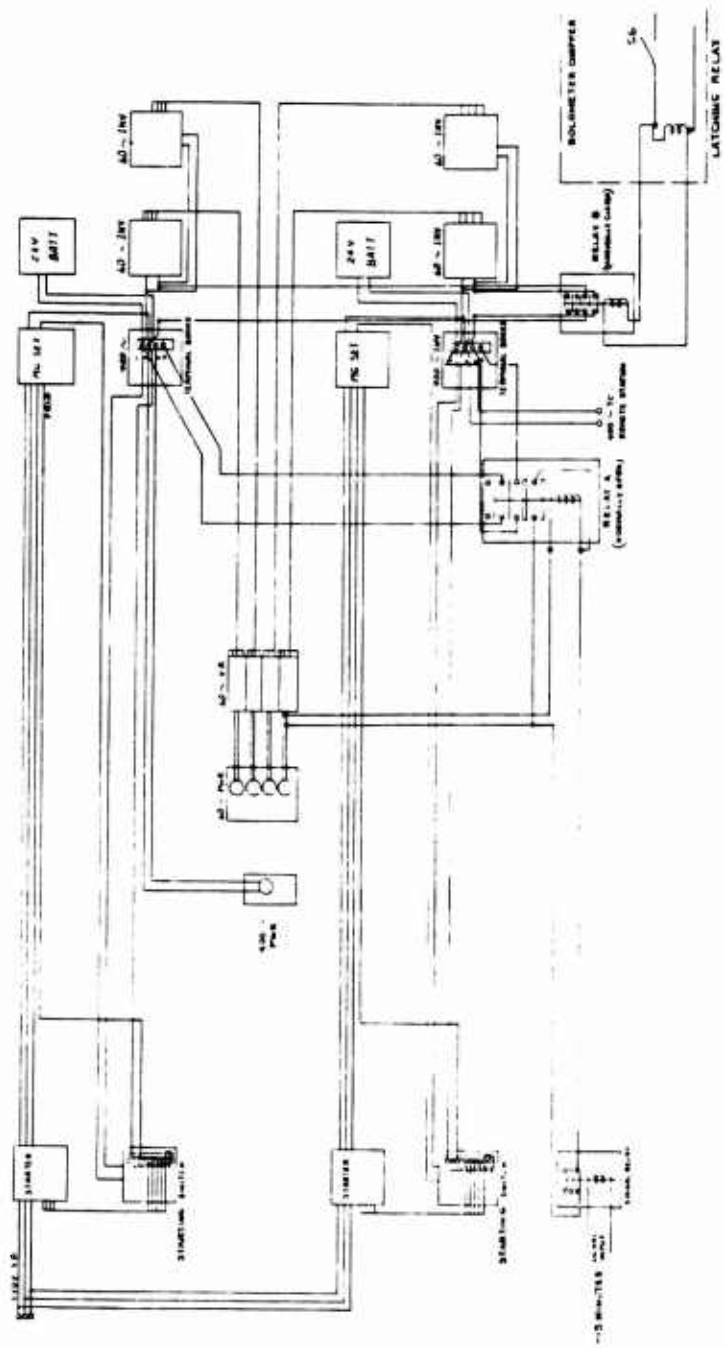


Fig. 46—Power and control for bolometer equipment at Sites E, V, E, N, and P: Wiring diagram.

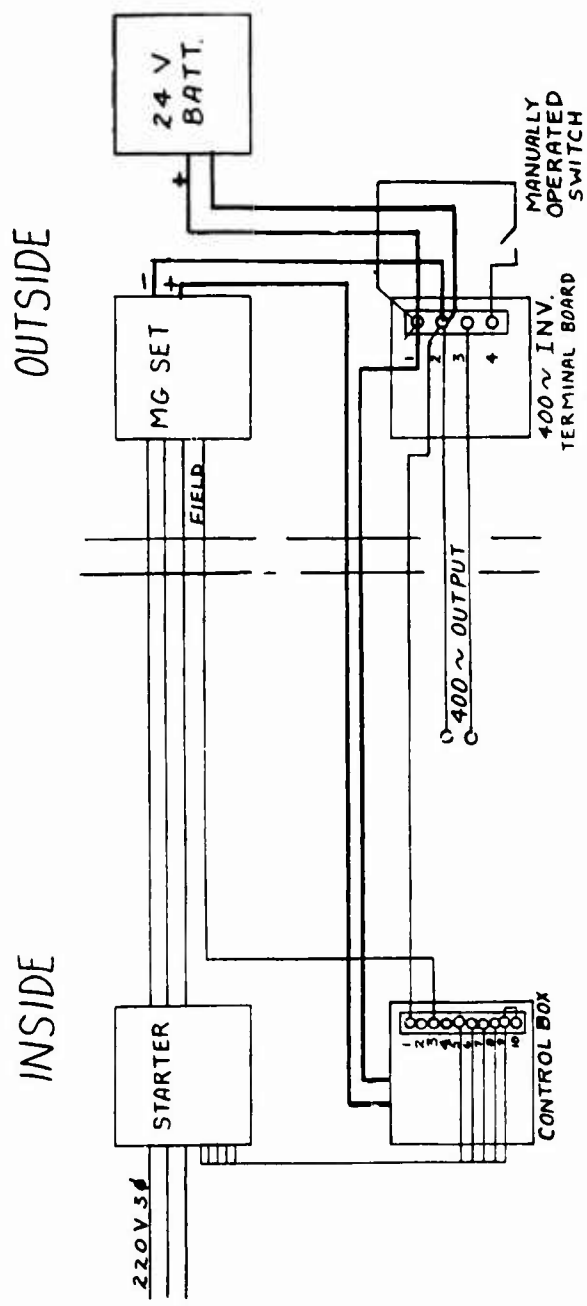


Fig. 47—Motor-generator connection.

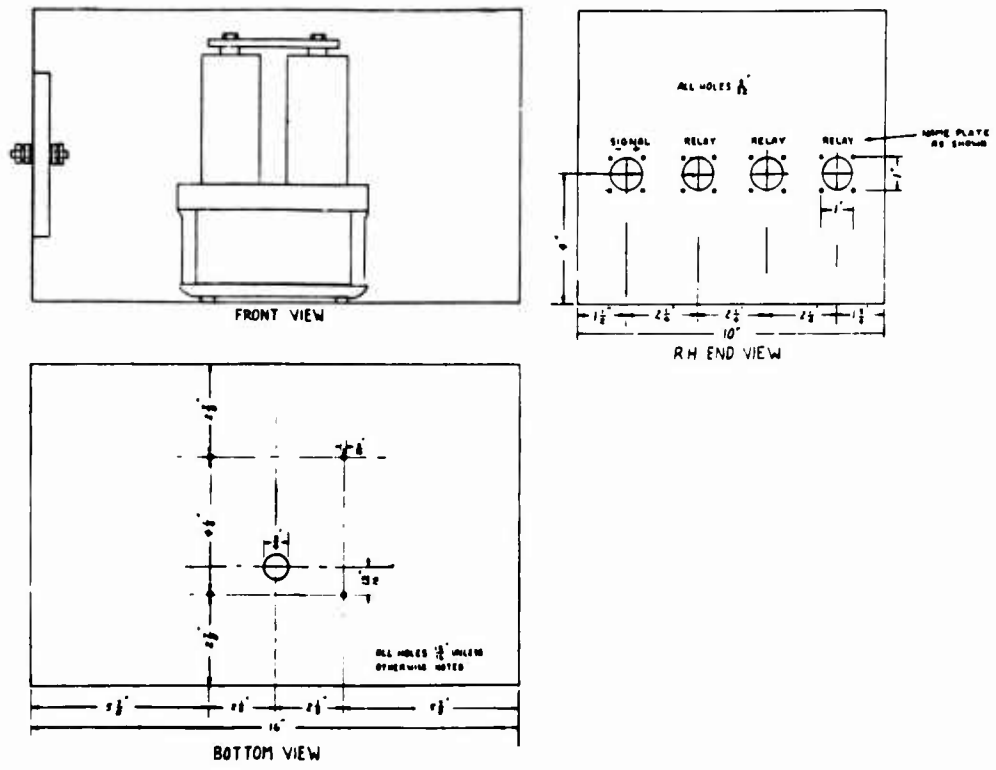


Fig. 48—Signal box.

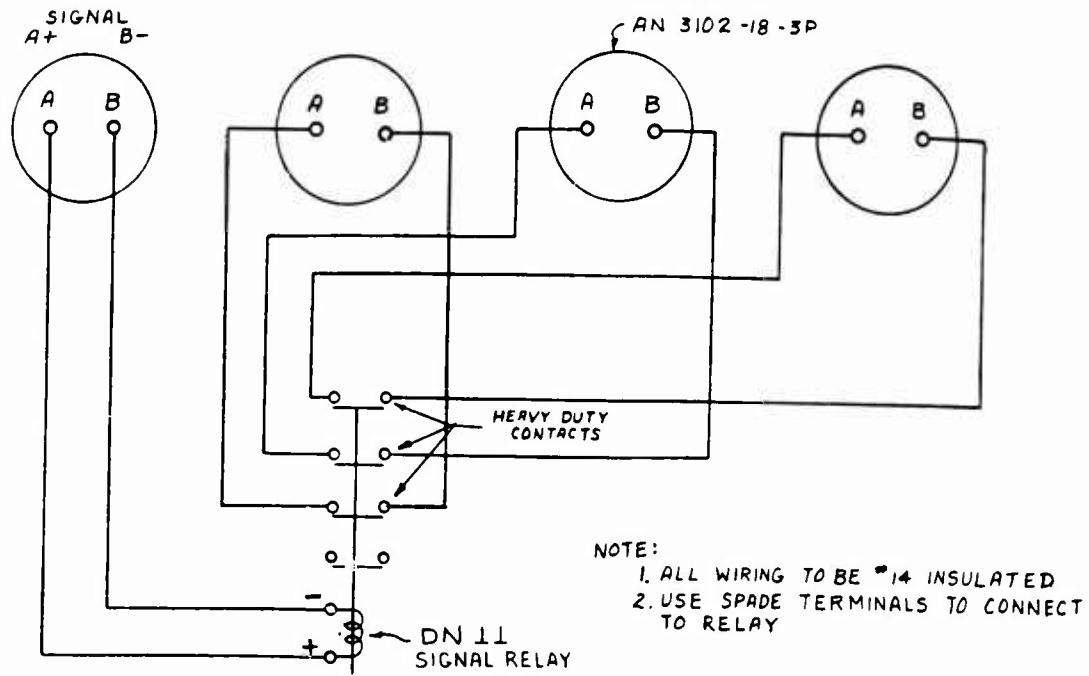


Fig. 49—Signal-box wiring diagram.

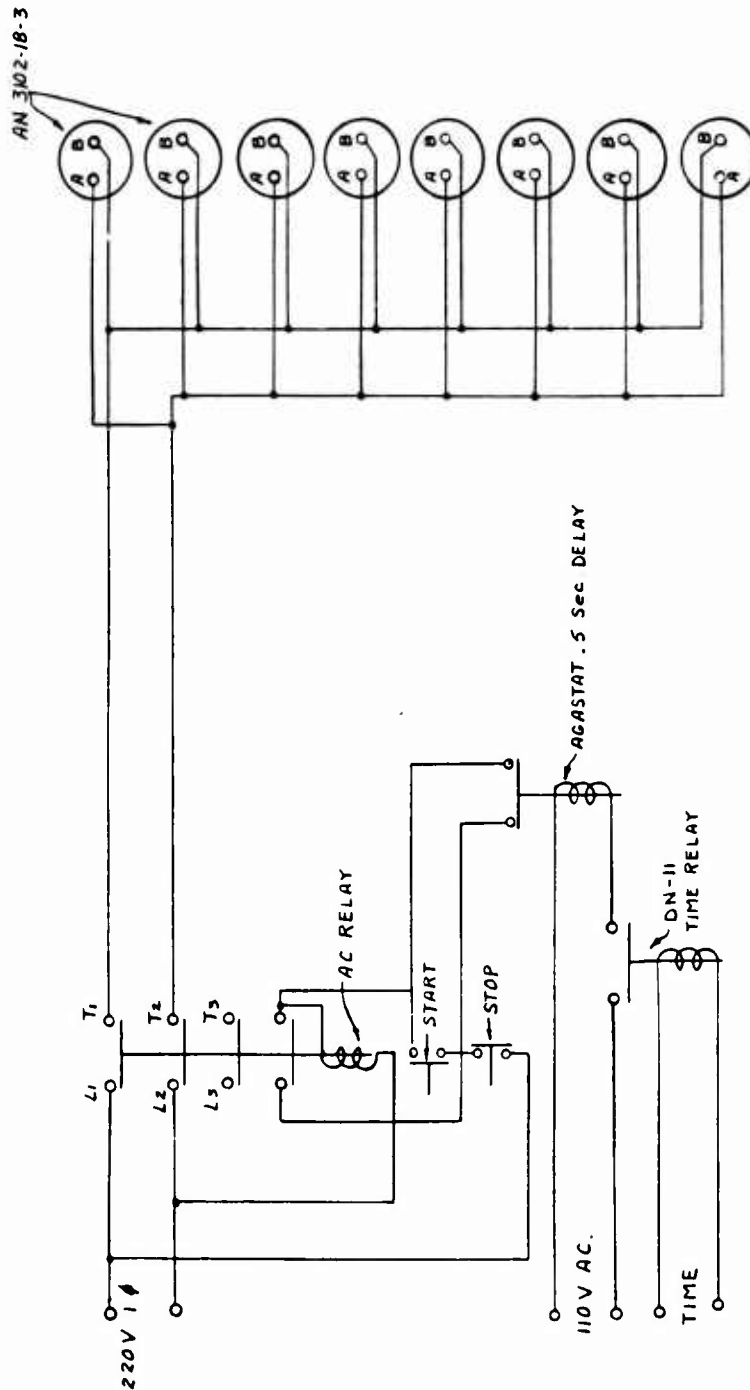


Fig. 50—Camera delay circuit.

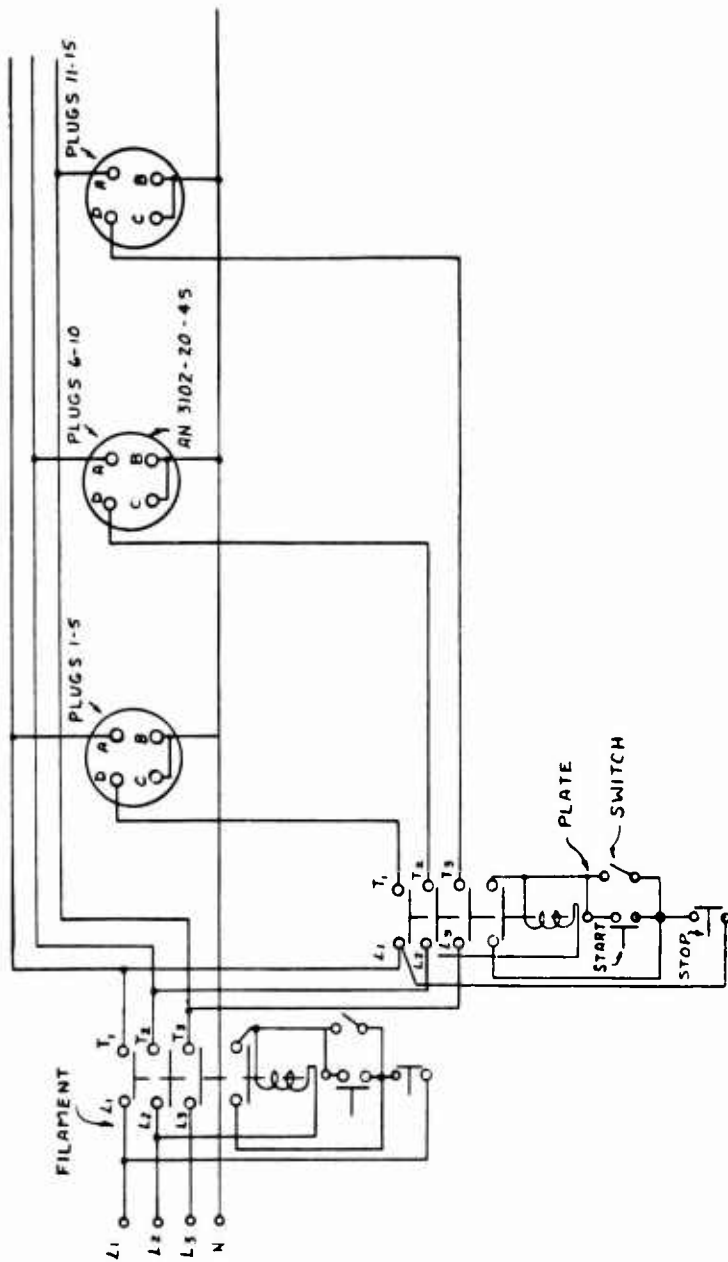


Fig. 51—Alternating-current distribution panel.

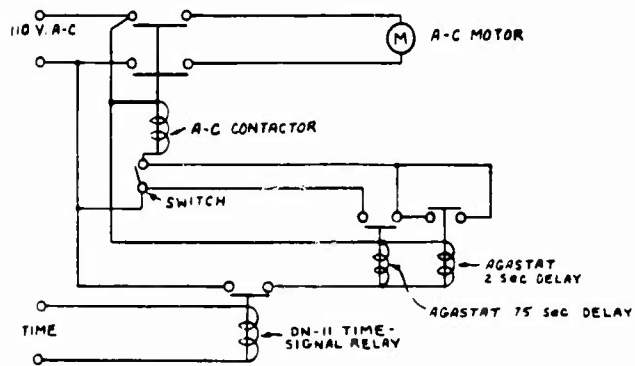
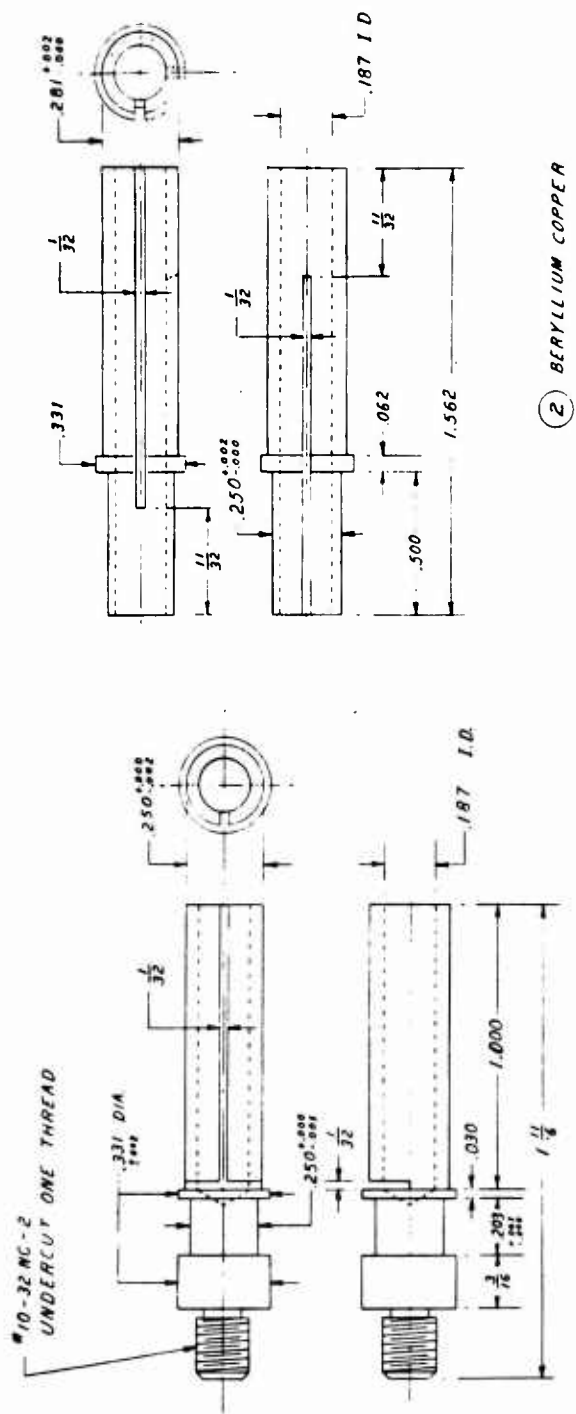


Fig. 52—High-speed spectrograph film drive.



(1) BERYLLIUM COPPER

SCALE $\frac{3}{4}$

Fig. 53—Condenser-Detector bullets.

(2) BERYLLIUM COPPER

SCALE $\frac{3}{4}$

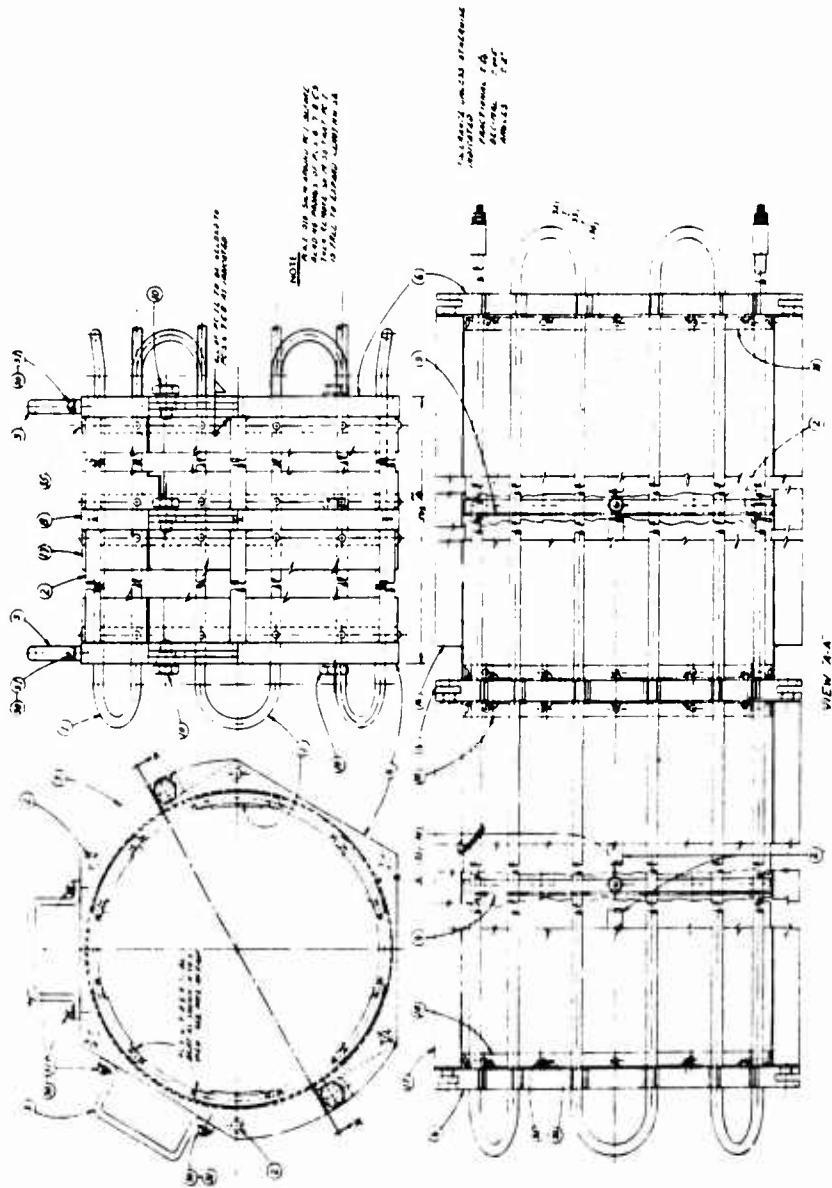


Fig. 54—Electric oven: Assembly.

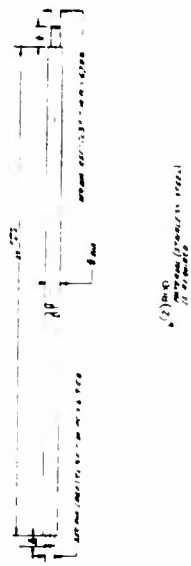
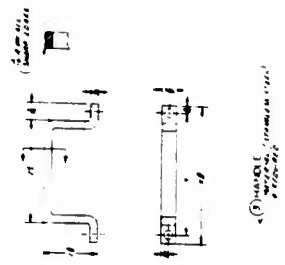


Fig. 55—Electric oven: Details, Part I.

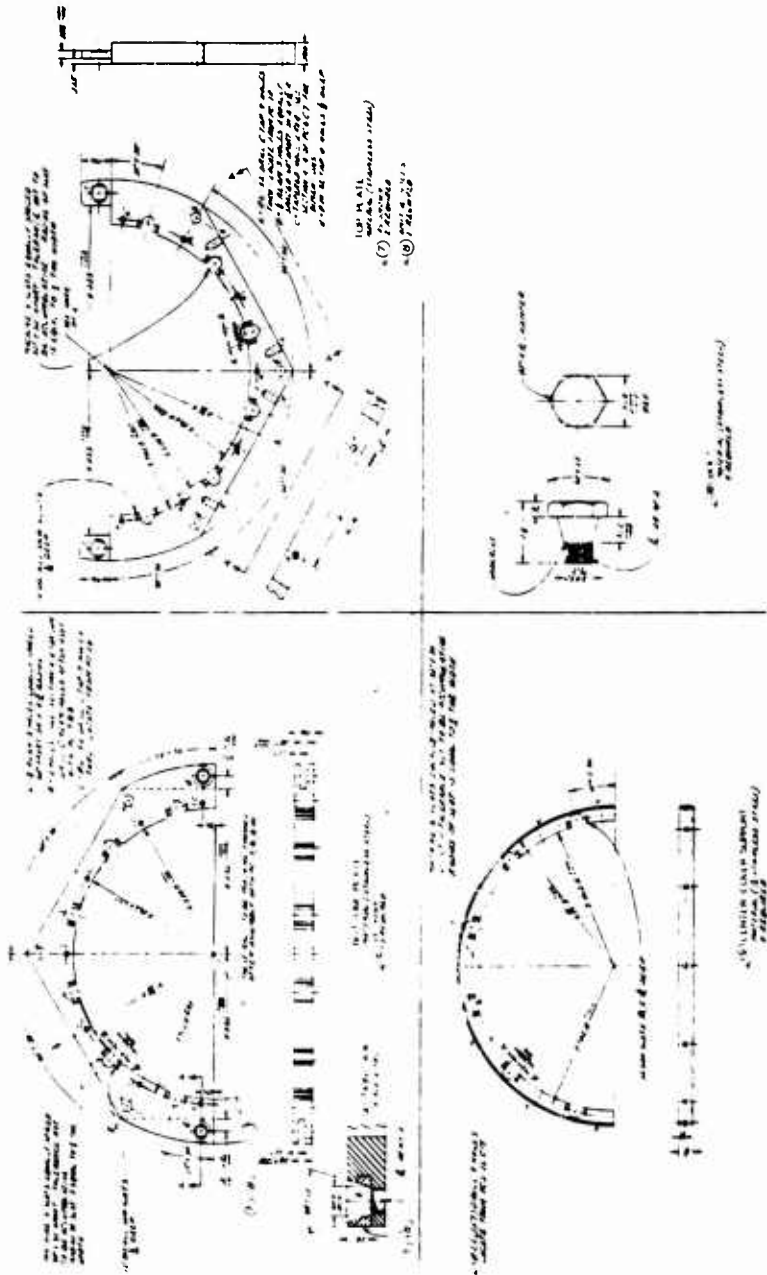


Fig. 56—Electric oven: Details, Part 2.

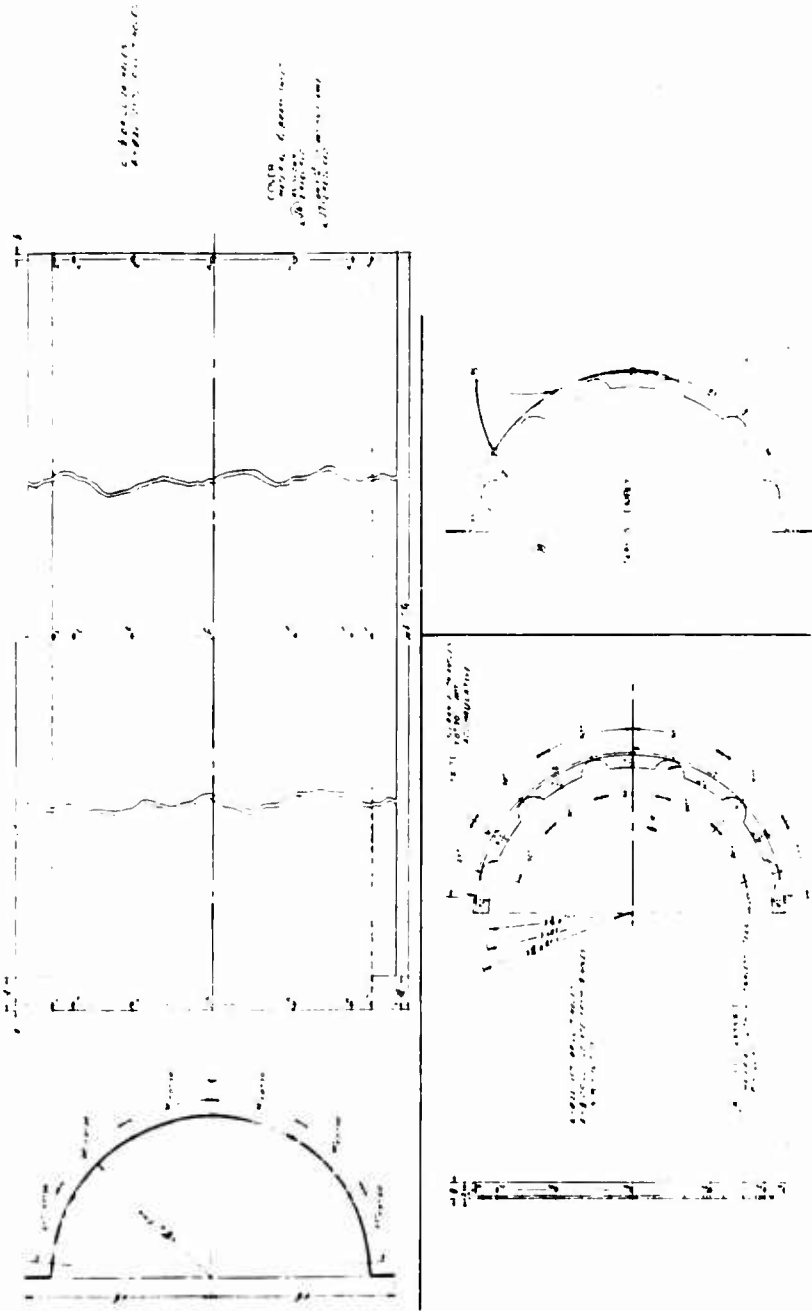
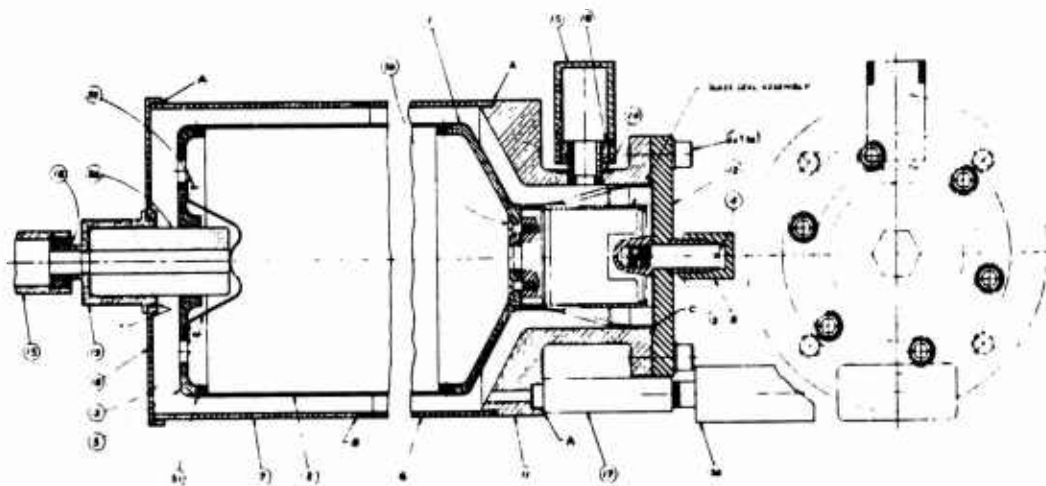


Fig. 57—Electric oven: D-tails, Part 3.



NOTE
 "B" AND "D" JOINTS TO BE MADE
 WITH "EASY FLO" SILVER SOLDER & HARDY HARDEN FL 1.
 ALL PARTS TO BE CLEANED AT H.D.L. AFTER "A"
 INSULATED JOINTS HAVE BEEN MADE
 "B" & "D" JOINTS TO BE MADE AT H.D.L. AT ASSEMBLY
 "C" JOINT TO BE MADE WITH 90/10 CERO SOLDER
 ALL INSULATED JOINTS TO WITH STAND 15 P.S.I.
 INTERNAL PNEUMATIC

Fig. 58— Ionization chamber: Assembly.

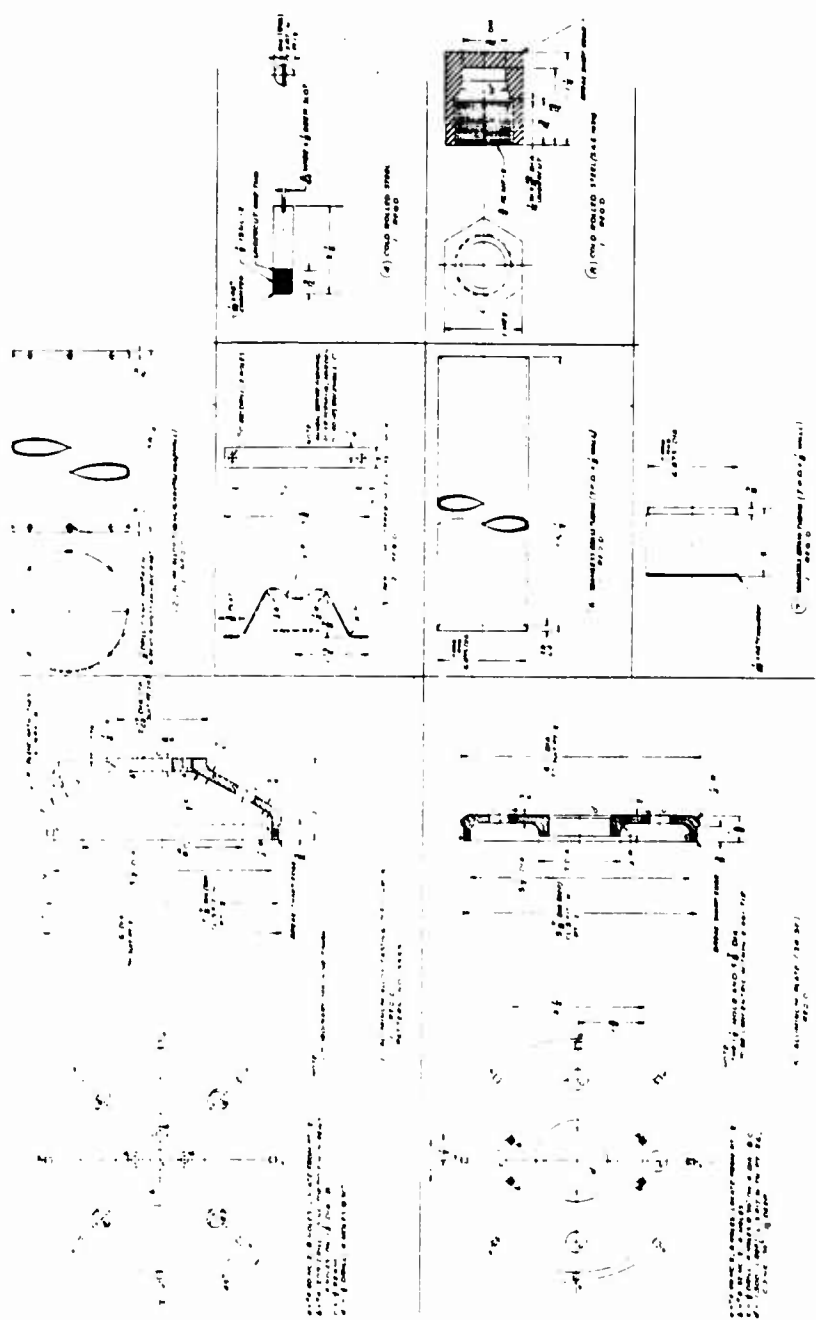


Fig. 59—Ionization chamber: Details, Part 1.

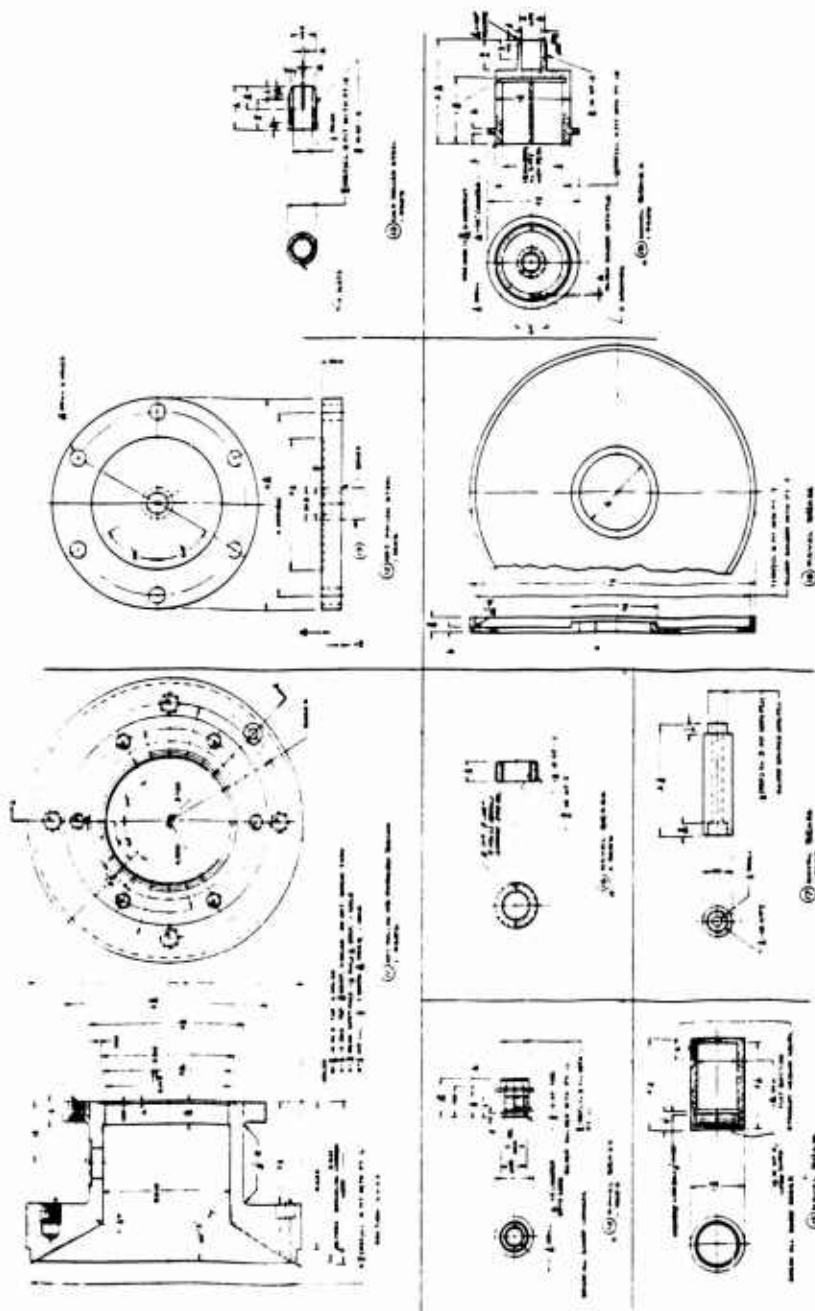


Fig. 60—ionization chamber: Details, Part 2.

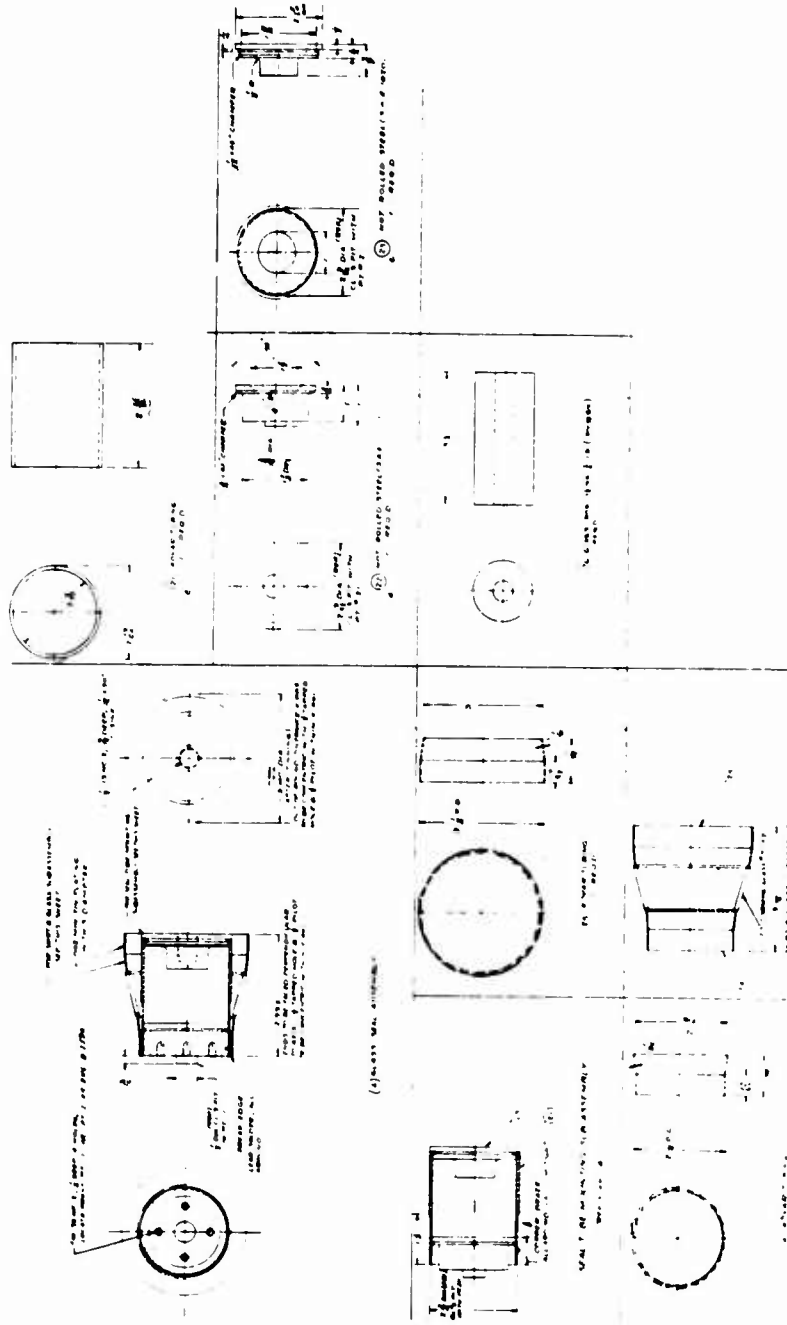
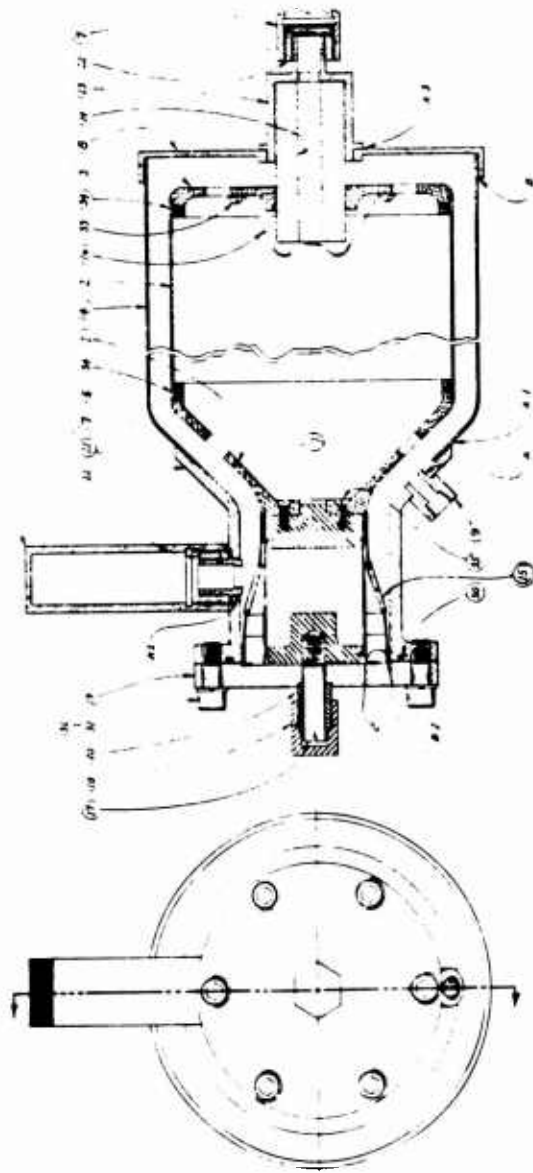


Fig. 1 - Four station chamber: Details, Part 3.



ALL SURFACES TO BE POLISHED TO A FINISH OF 320 GRIT OR BETTER.
 ALL SURFACES TO BE TYP. 303 STAINLESS STEEL UNLESS OTHERWISE SPECIFIED.
 ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
 ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

Fig. 62—Seven-05-m ionization chamber: Assembly.

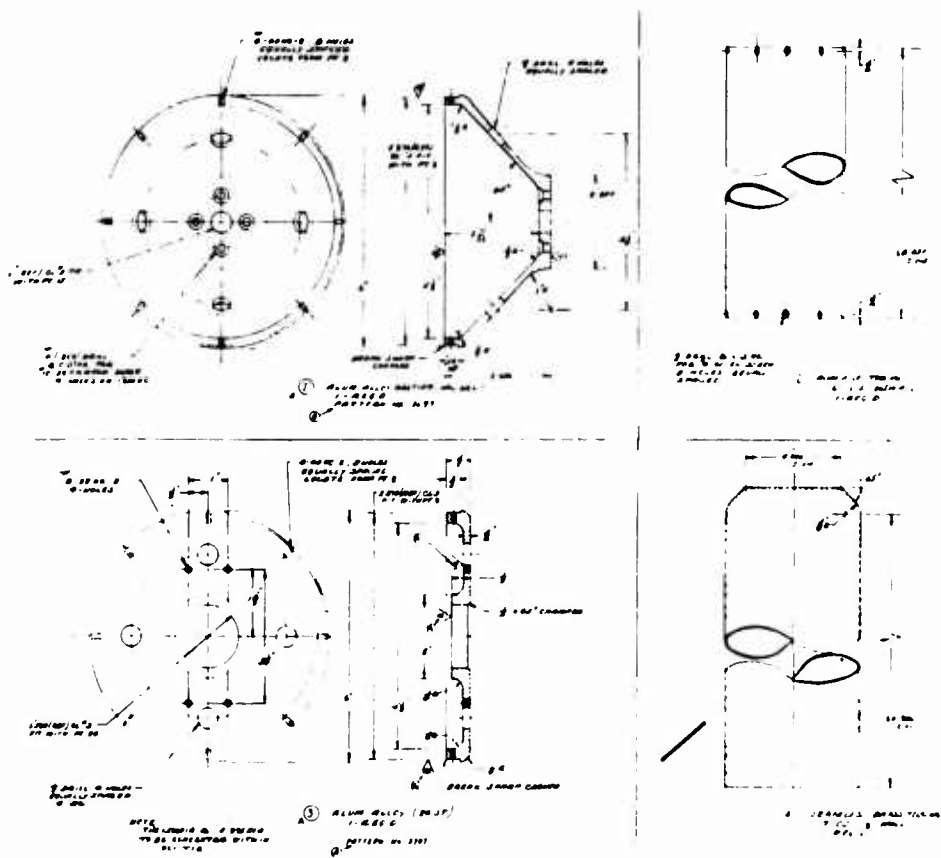


Fig. 63—Seven-ohm ionization chamber: Details, Part 1.

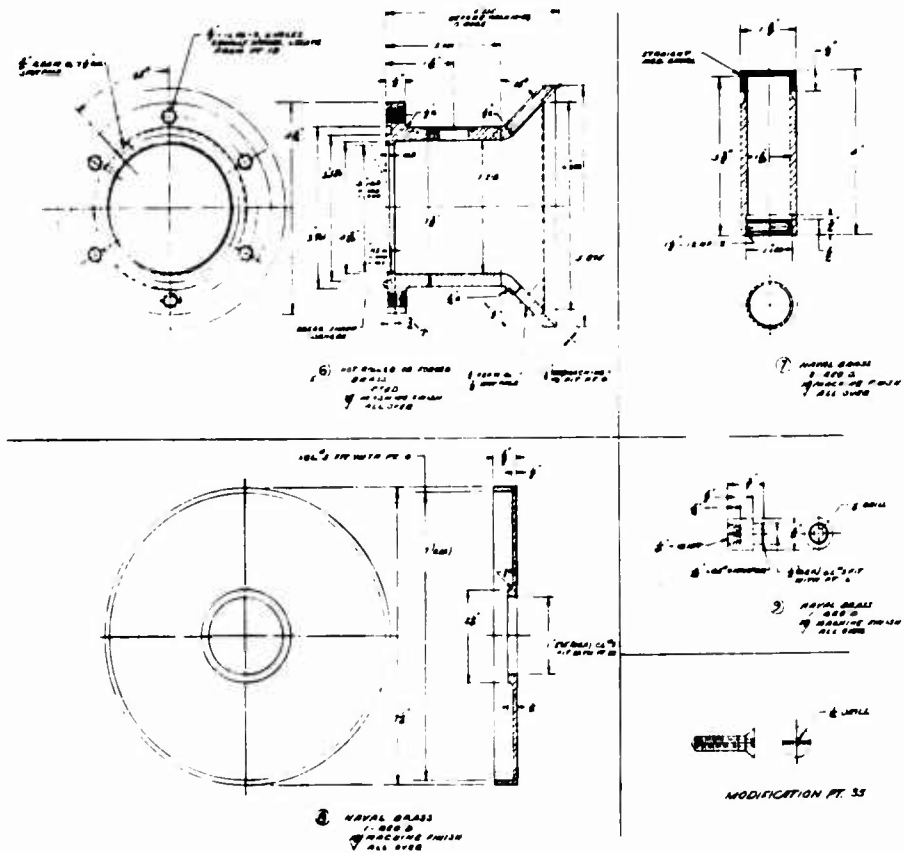
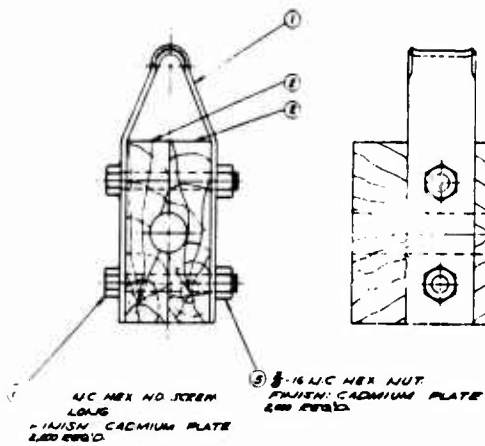


Fig. 64—Seven-ohm ionization chamber: Details, Part 2.



ASSEMBLY
2,000 R.P.M.'S

NOTE:
GRAIN TO RUN
AS SHOWN.

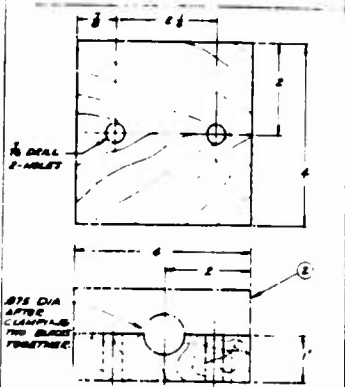
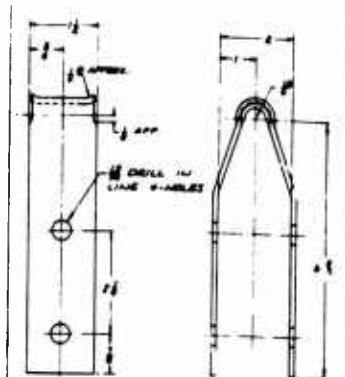


Fig. 65—Cable clamp and support for 1/8-in. line.

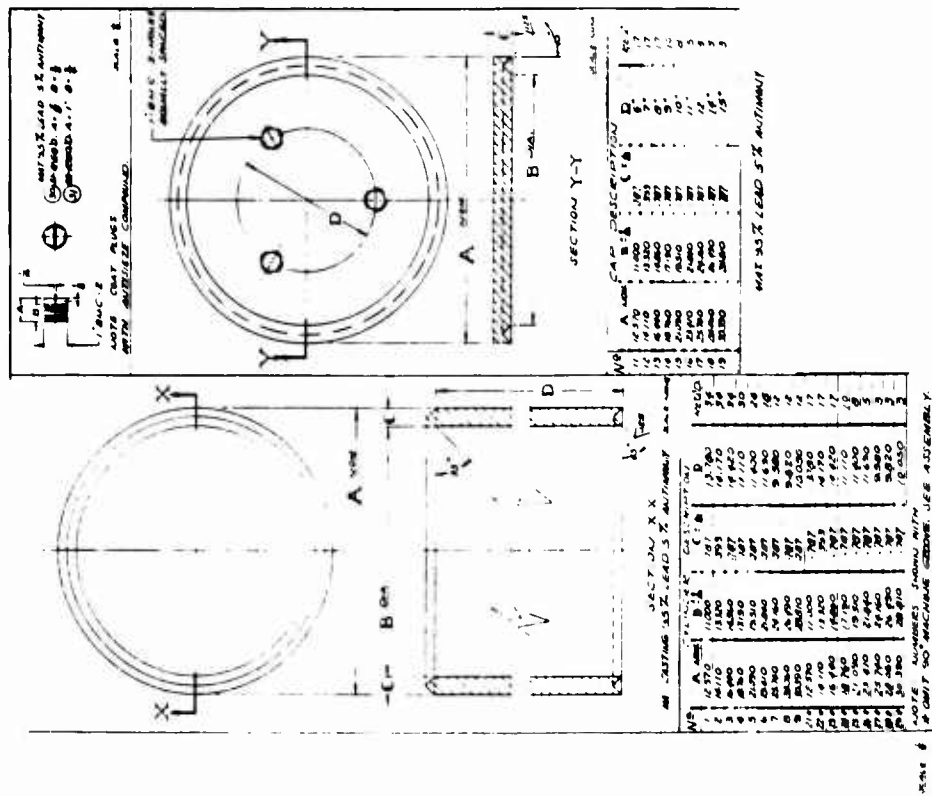


Fig. 66—Lead shield.

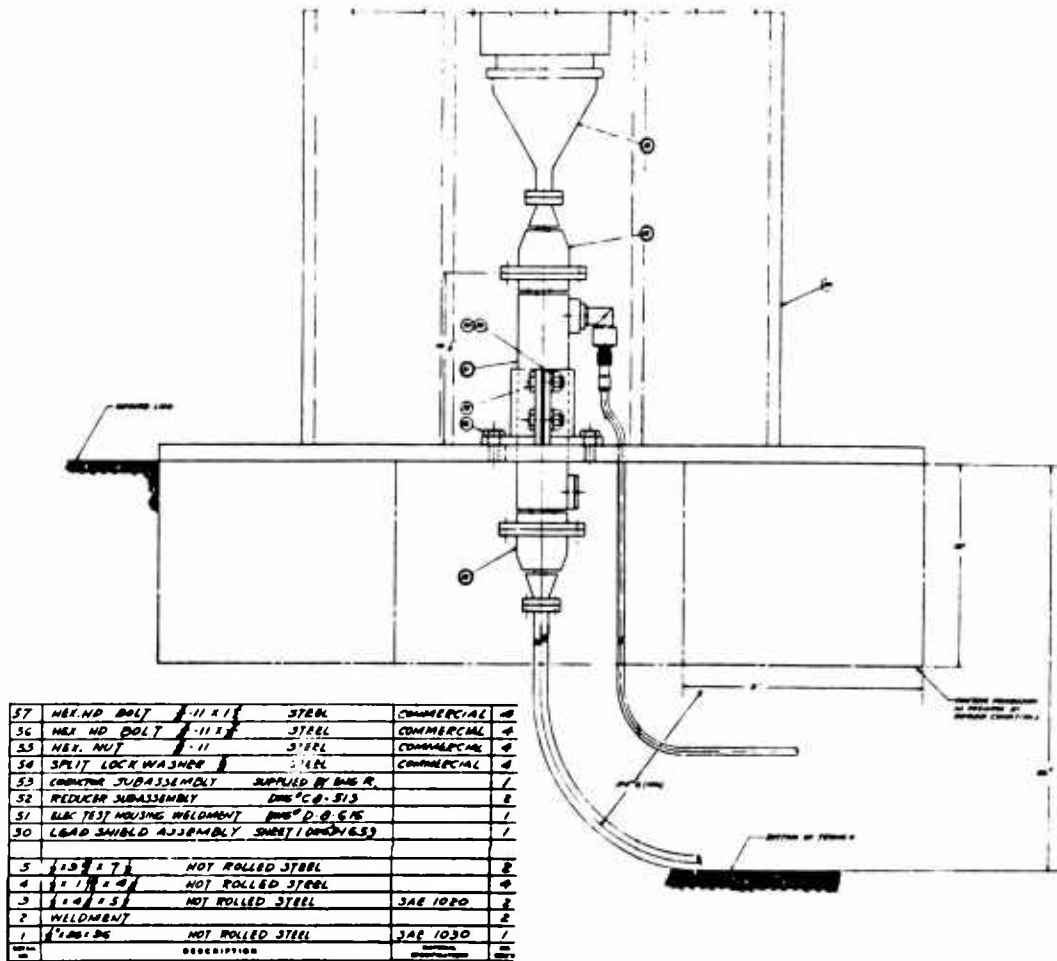
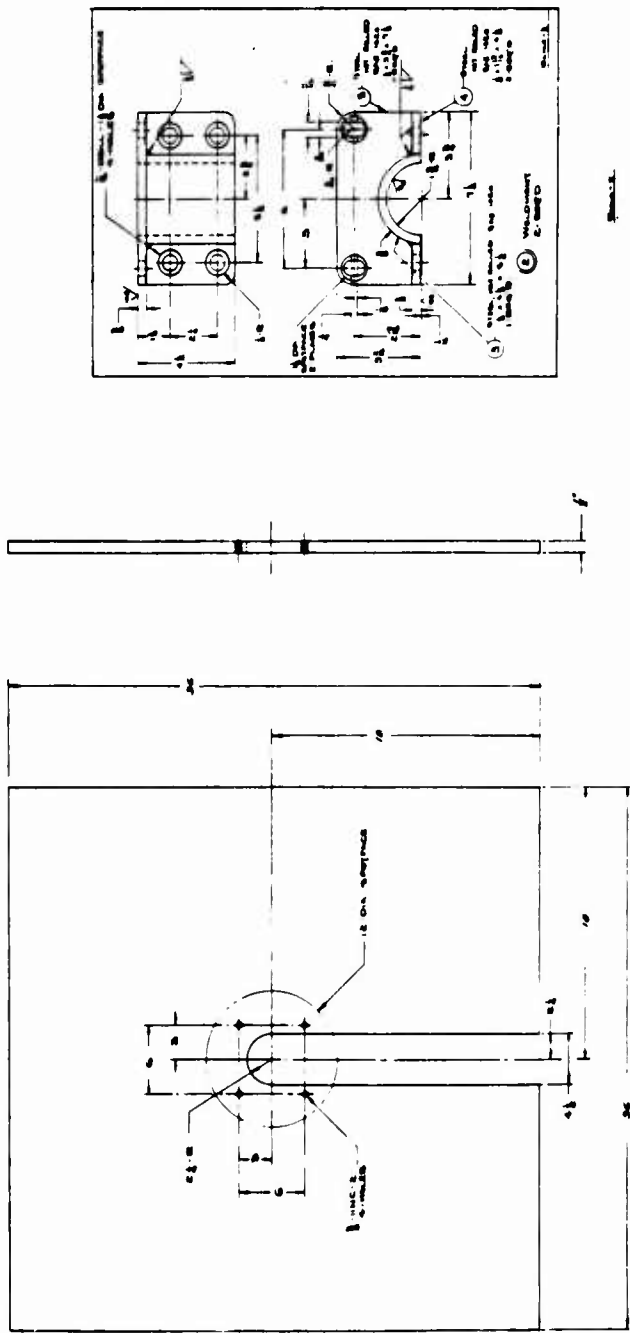


Fig. 67—Scintillation detector and condenser: Mounting assembly.



(1) SEE DRAWING 1030 FOR DIMENSIONS

Fig. 68—Scintillation detector and condenser: Mounting details.

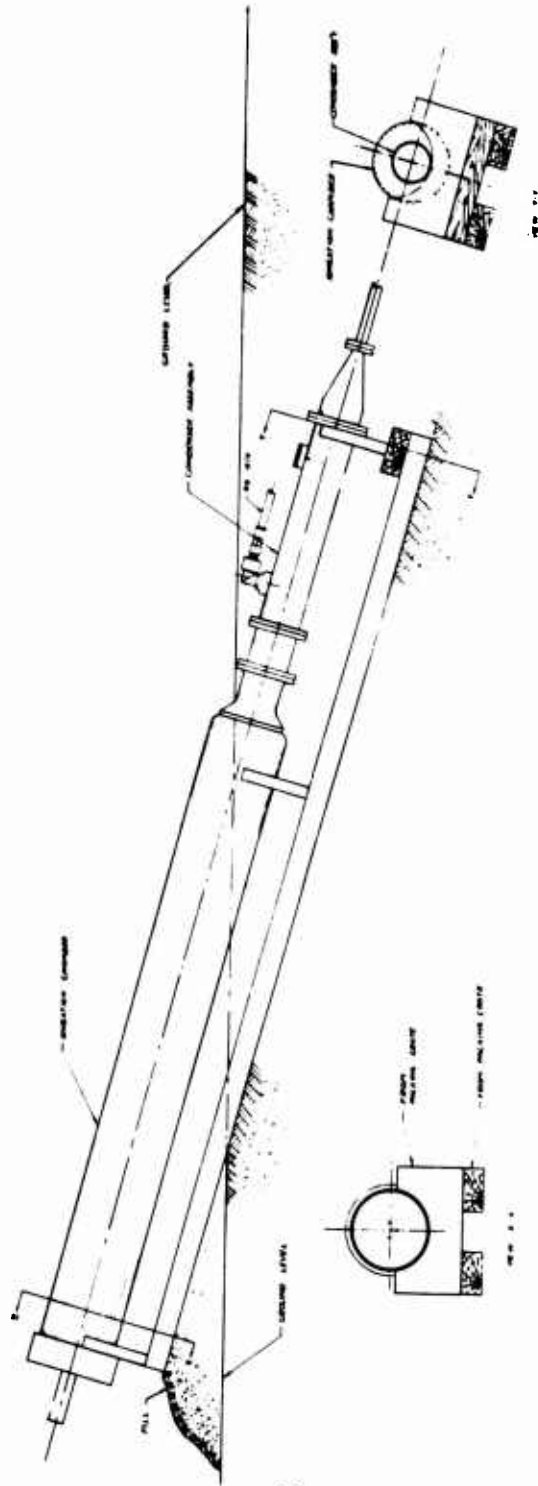
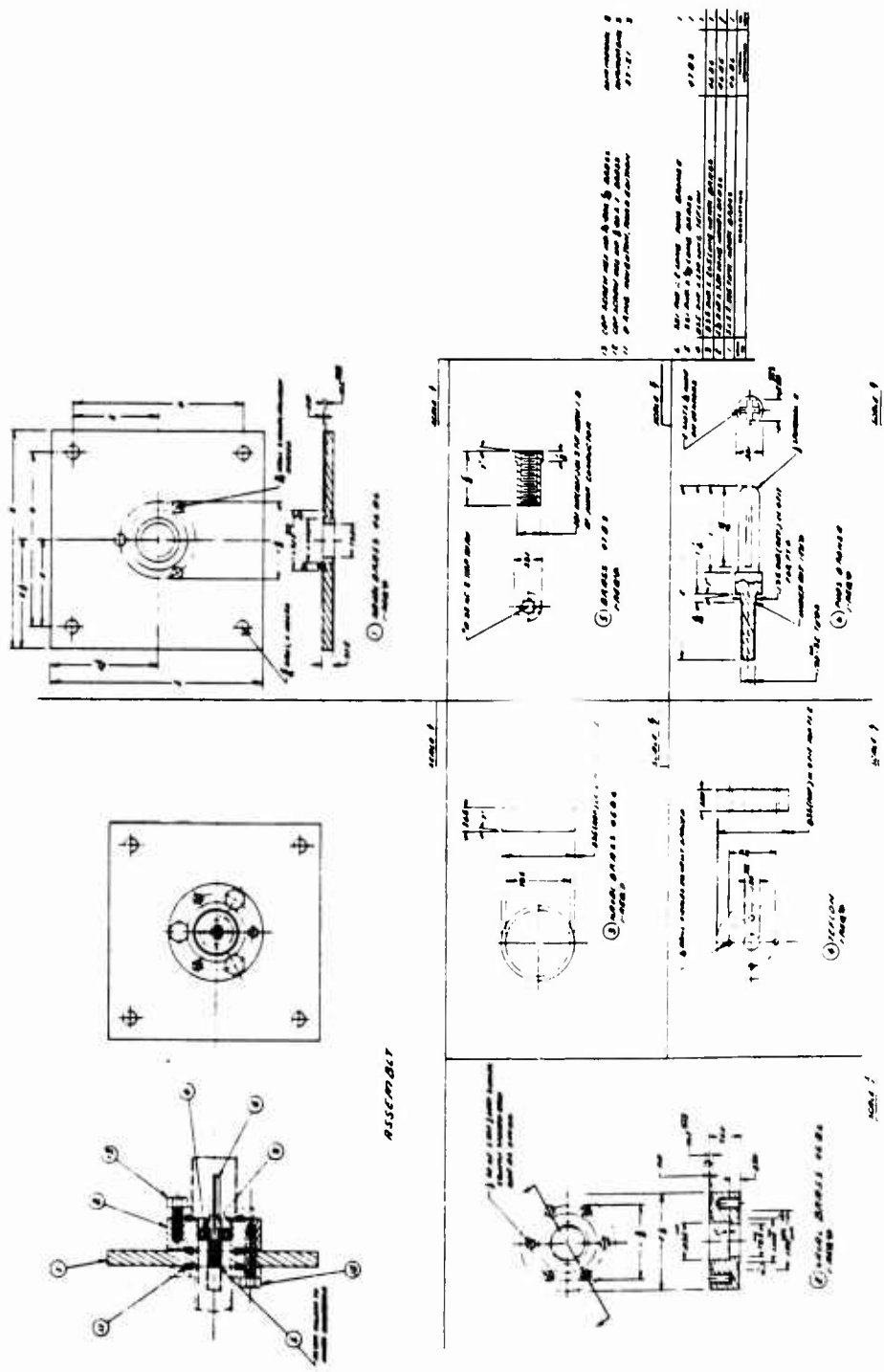
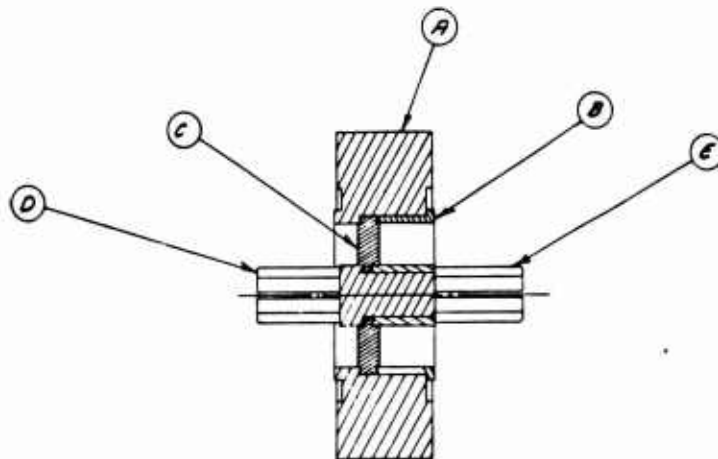


Fig. 69—Ionization chamber and condenser: Mounting assembly.



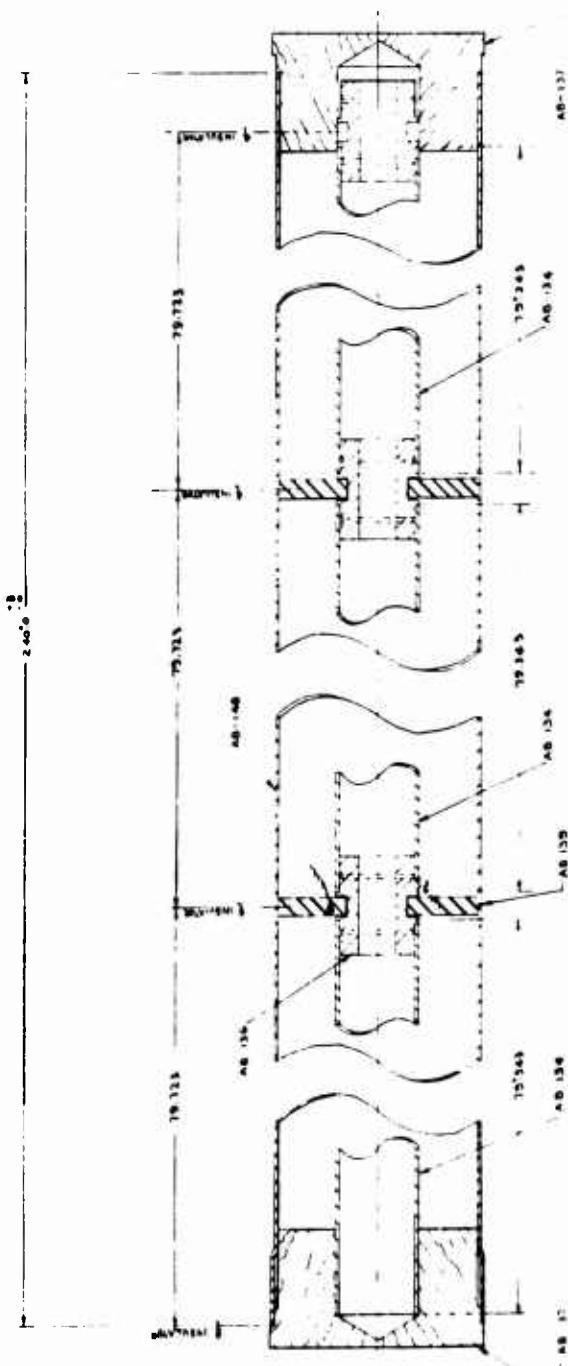
NO.	DESCRIPTION	QTY.	REF. NO.
1	DET. CONN. ASSEMBLY	1	1
2	DET. CONN. ASSEMBLY	1	2
3	DET. CONN. ASSEMBLY	1	3
4	DET. CONN. ASSEMBLY	1	4
5	DET. CONN. ASSEMBLY	1	5
6	DET. CONN. ASSEMBLY	1	6
7	DET. CONN. ASSEMBLY	1	7
8	DET. CONN. ASSEMBLY	1	8
9	DET. CONN. ASSEMBLY	1	9
10	DET. CONN. ASSEMBLY	1	10
11	DET. CONN. ASSEMBLY	1	11
12	DET. CONN. ASSEMBLY	1	12

Fig. 70—Detector connector: Assembly and details.



	A	B	C	D	E
$3/8$	GB-900	BB-901	BB-902	AB-903	AB-904
$1/2$	BB-905	BB-906	AB-907	AB-908	AB-909
$1/8$	BB-910	BB-911	AB-912	AB-911	AB-912

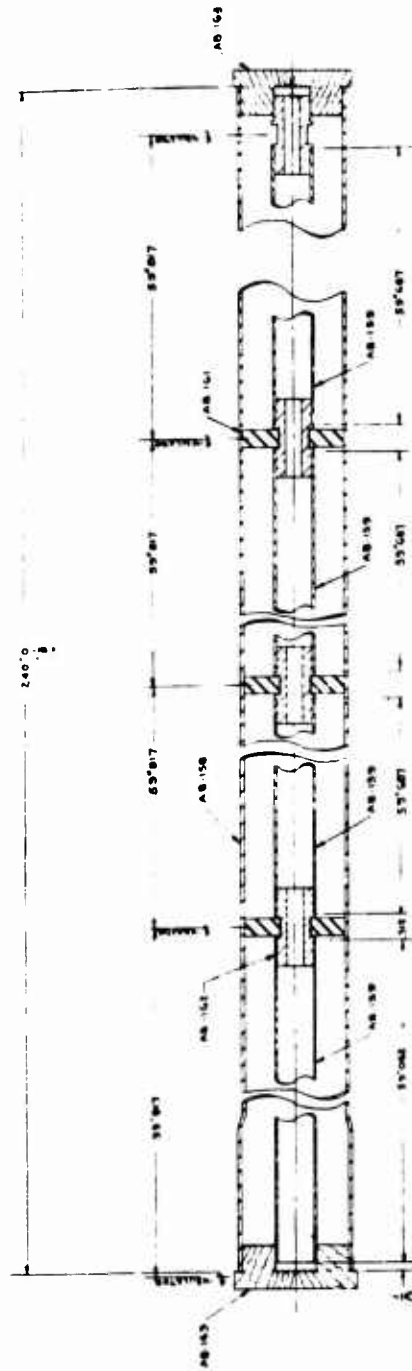
Fig. 71—Gas-barrier assembly.



DIMENSIONS FOR REFERENCE ONLY

- NOTES
- 1. AB 134 TO BE SHIPPED TO P15 AS 134 AS SHOWN THEN CLEAN.
 - 2. AB 135 TO BE ASSEMBLED AFTER JOINTS COMPLETED.
 - 3. AB 136 TO BE ASSEMBLED AFTER JOINTS COMPLETED.
 - 4. ENDS SEAL WITH GELUMSEAL (SUBMIT).
 - 5. BEFORE ASSEMBLING AB-137 INSERT TWO 401 BAGS OF SILICA GEL IN EACH END.
 - 6. ELECTRICAL SURFACES TO BE CLEAN & BRIGHT AT ASSEMBLY.
 - 7. ELECTRICAL SURFACES TO BE TYPED WITH TETRIFLUE CARBIDE & ALCOHOL. (7) DECONTAMINATED.

Fig. 72—Standard 20-ft section of 3 1/8-in. coaxial assembly

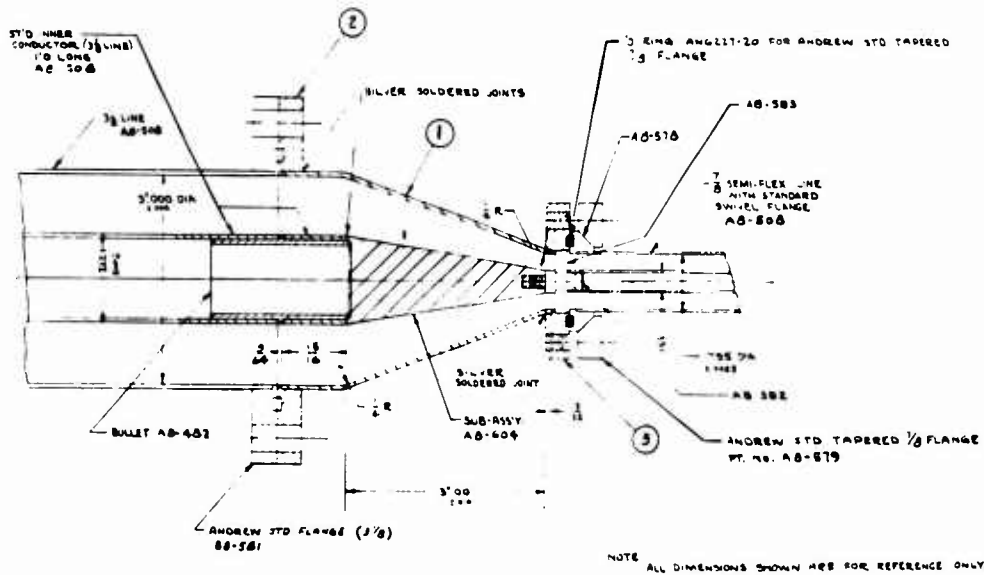


DIMENSIONS FOR REFERENCE ONLY

NOTES

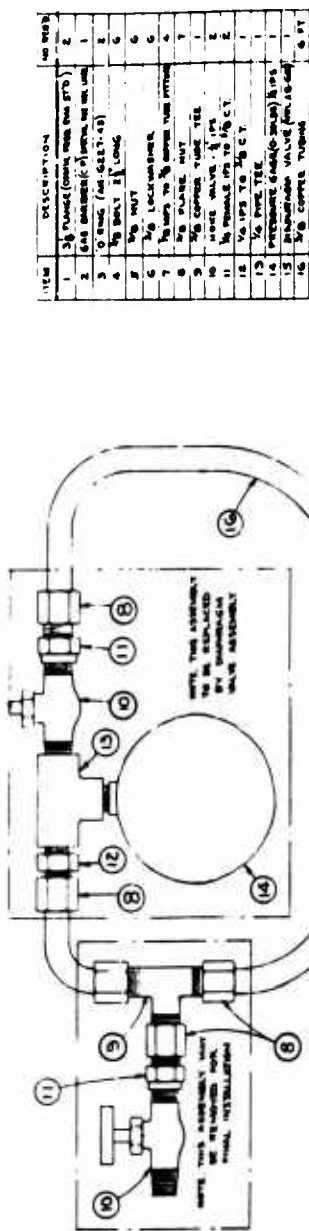
- 1. PT AB 143 TO BE SILVER TONGUED TO PTS AB 159 & 160
- 2. PT AB 161 TO BE ASSEMBLED WITH JOINTS COM.
- 3. ELECTRICAL SURFACES TO BE CLEAN & BRIGHT AT ASSEMBLY
- 4. INNER & OUTER CONDUCTORS TO BE WIPED WITH TRIETHYLENE CHLORIDE
- 5. INSERT ONE 402 BAG OF SILICA GEL IN EACH END OF TUBE
- 6. TUBES TO BE STORED IN A DRY PLACE
- 7. CELLULOSE ACETATE BUTTERFLY LINED OVER ENDS FOR SEALING PURPOSES

Fig. 73—Standard 20-ft section of 1 1/4-in. coaxial assembly.



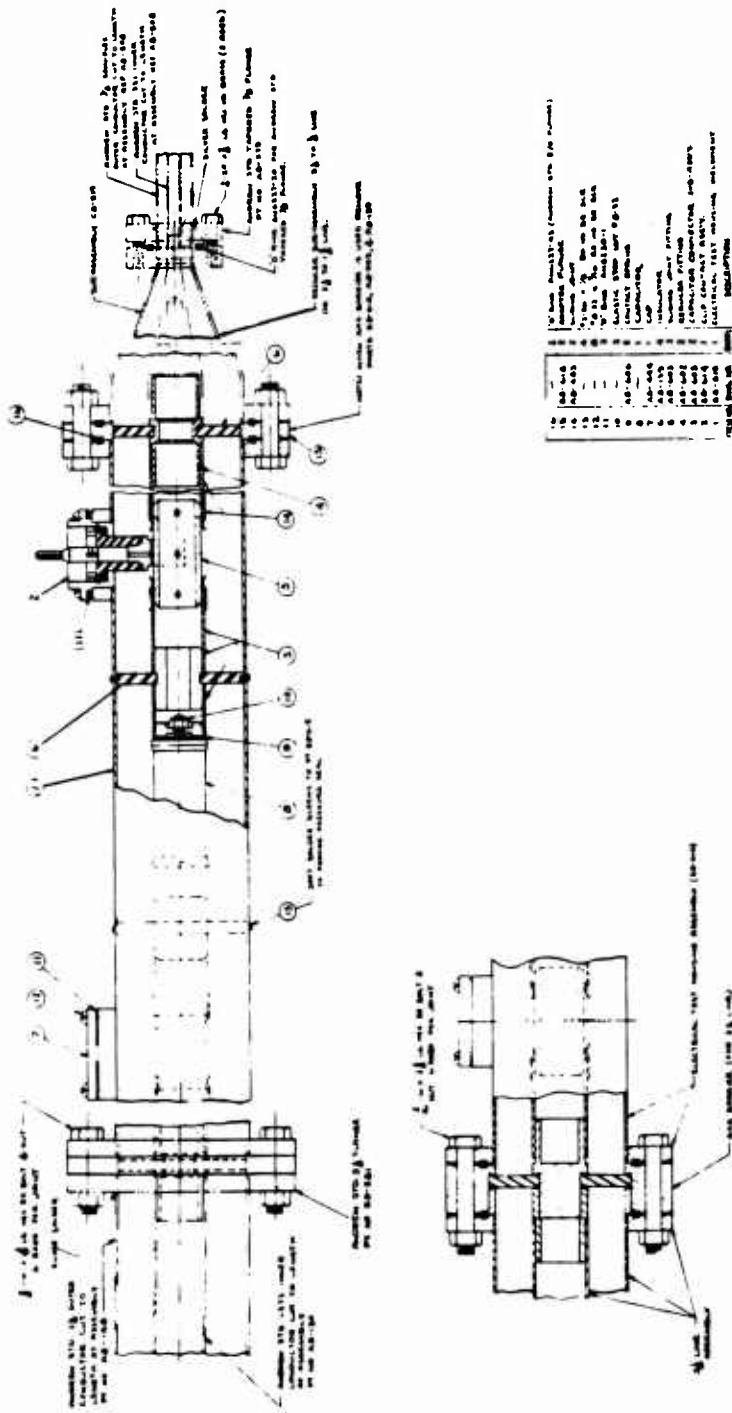
3	AB-576	1	SPECIAL FLANGE FOR 3/8 TO 1/2 REDUCER
2	88-581	1	FLANGE FOR 3/8 LINE
1	88-521	1	OUTER CONDUCTOR FOR 3/8 TO 1/2 REDUCER
ITEM NO. DWG. NO.		QTY	DESCRIPTION

Fig. 74—Coaxial reducer from 3¹/₈- to 1/2-in.



ITEM	DESCRIPTION	QUANTITY
1	3/8 PLUGS (MORSE TYPE 370)	2
2	6/8 BALL BEARING (3/8) (MORSE TYPE 370)	1
3	O RING (MORSE TYPE 370)	2
4	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
5	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
6	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
7	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
8	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
9	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
10	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
11	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
12	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
13	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
14	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
15	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2
16	3/8 BALL BEARING (3/8) (MORSE TYPE 370)	2

Fig. 75 — Gas-barrier bypass.



1	1/2" dia. hole in top cover & nut
2	Top cover
3	1/2" dia. hole in top cover
4	1/2" dia. hole in top cover
5	1/2" dia. hole in top cover
6	1/2" dia. hole in top cover
7	1/2" dia. hole in top cover
8	1/2" dia. hole in top cover
9	1/2" dia. hole in top cover
10	1/2" dia. hole in top cover
11	1/2" dia. hole in top cover
12	1/2" dia. hole in top cover
13	1/2" dia. hole in top cover
14	1/2" dia. hole in top cover
15	1/2" dia. hole in top cover
16	1/2" dia. hole in top cover
17	1/2" dia. hole in top cover

Fig. 76—Electrical-test assembly in detector-condenser housing.