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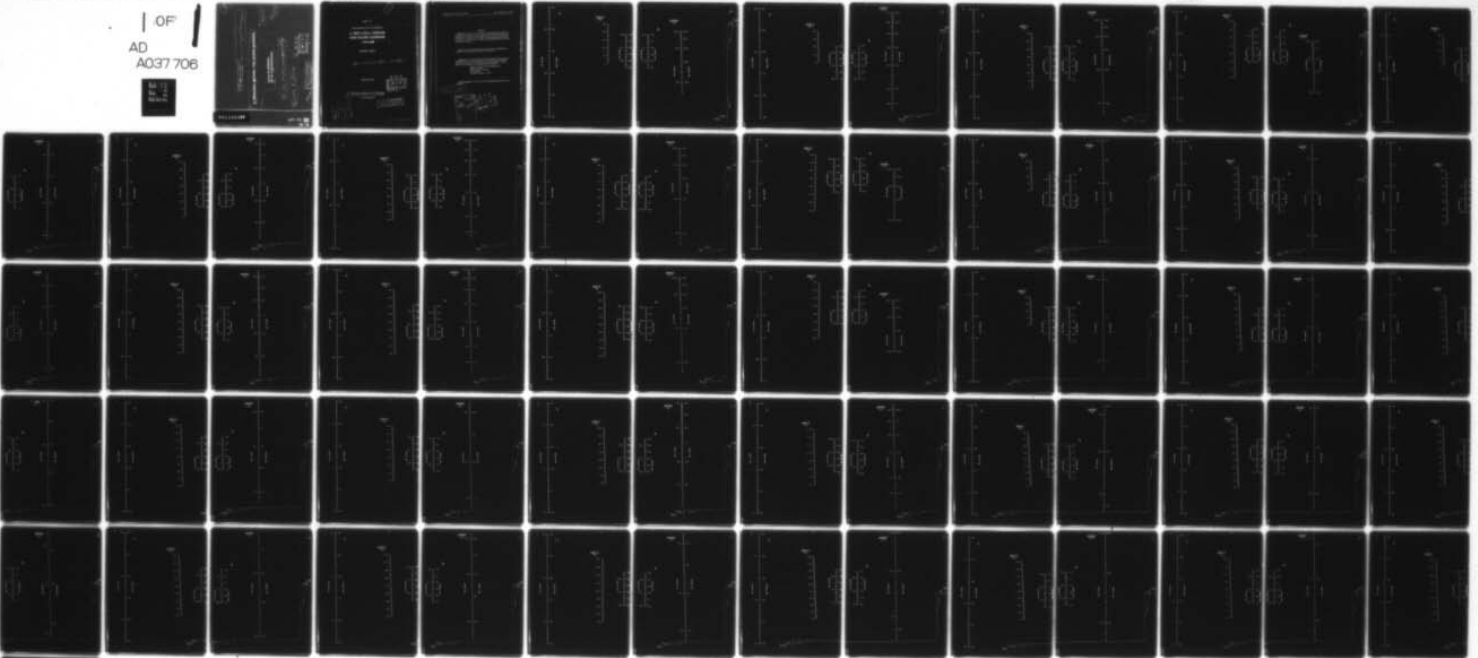
MICHIGAN UNIV ANN ARBOR INST OF SCIENCE AND TECHNOLOGY F/G 17/1
A TRINAURAL METHOD FOR SOUND RANGING. VOLUME II. APPENDIX. SET --ETC(U)
FEB 65 A R HERCZ DA-28-043-AMC-00013(E)

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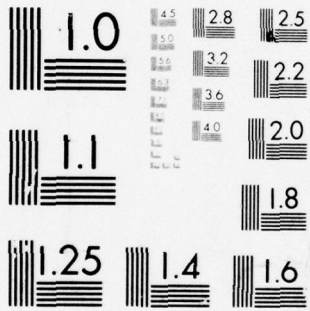
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9 Memo. of Project Michigan

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6 A TRINAURAL METHOD FOR SOUND RANGING.
Volume II, APPENDIX,
SET OF 33 NOMOGRAMS.

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10 Arthur R. Hercz

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Memorandum of Project MICHIGAN

A TRINAURAL METHOD FOR SOUND RANGING

Volume II

ARTHUR R. HERCZ

DA-28-043-AMRC-0013(E)

February 1965

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THE UNIVERSITY OF MICHIGAN
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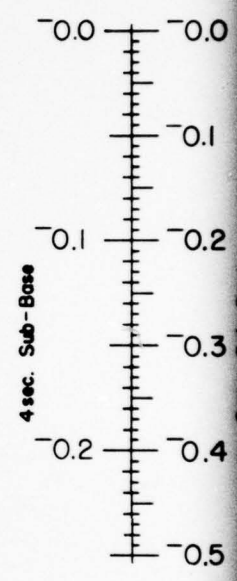
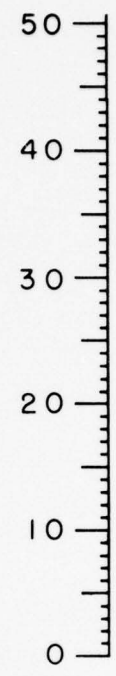
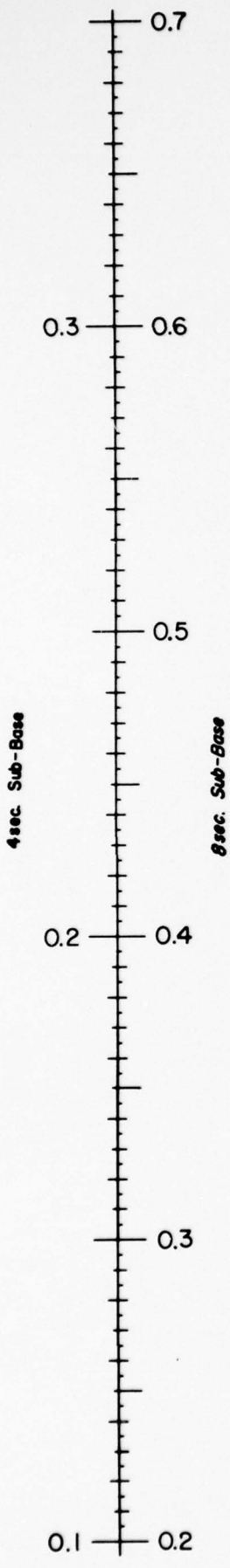
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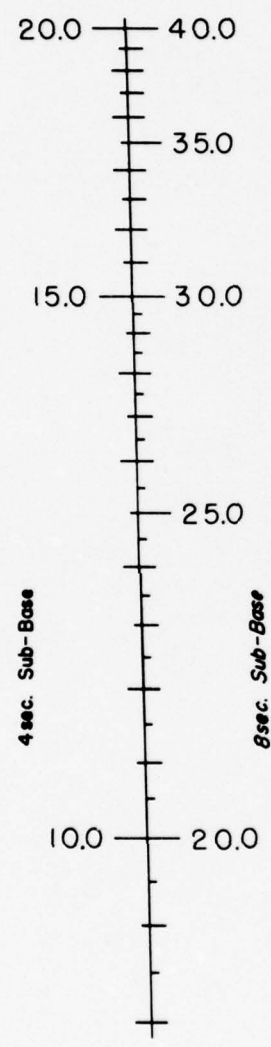
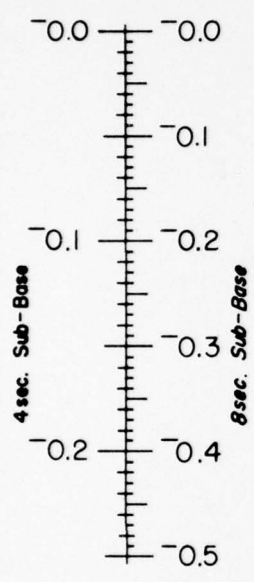
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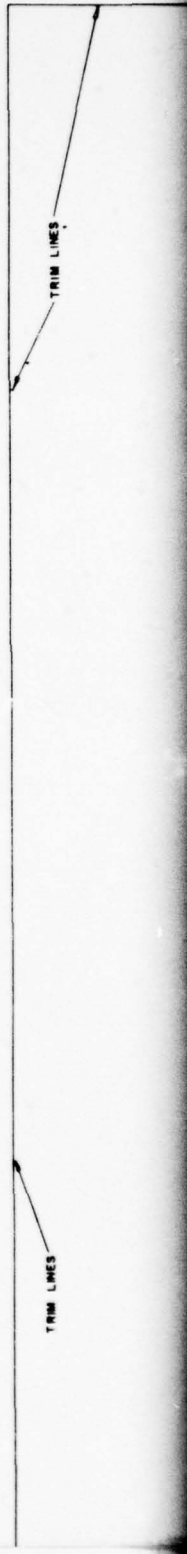
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(Kilometers)

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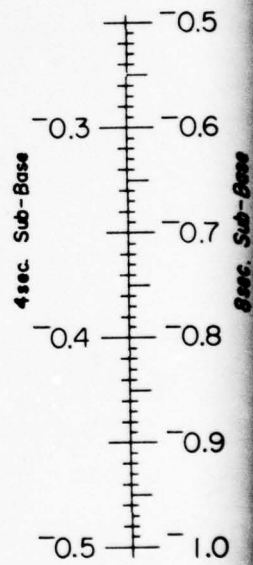
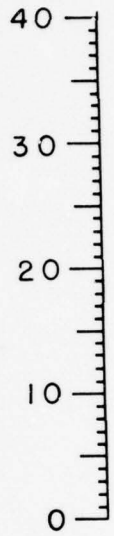


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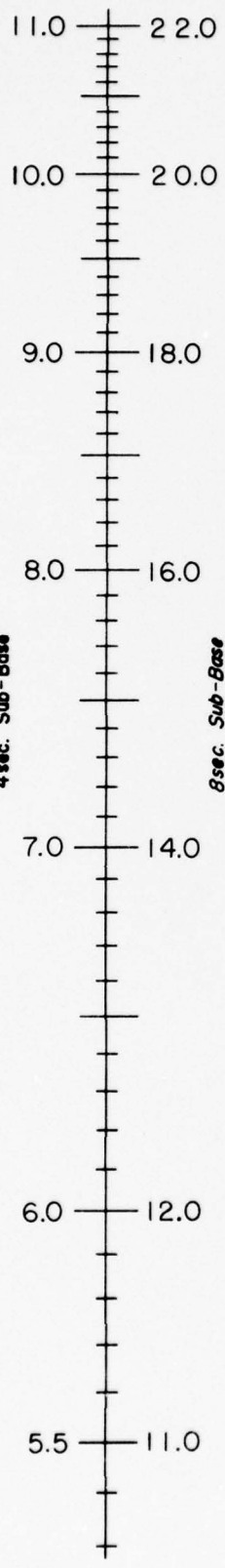
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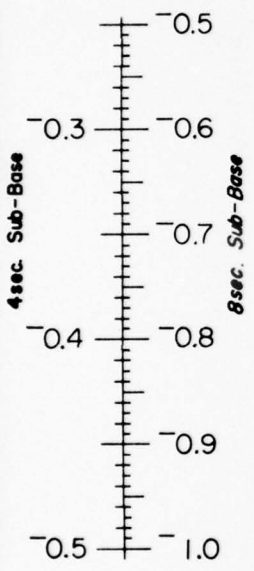


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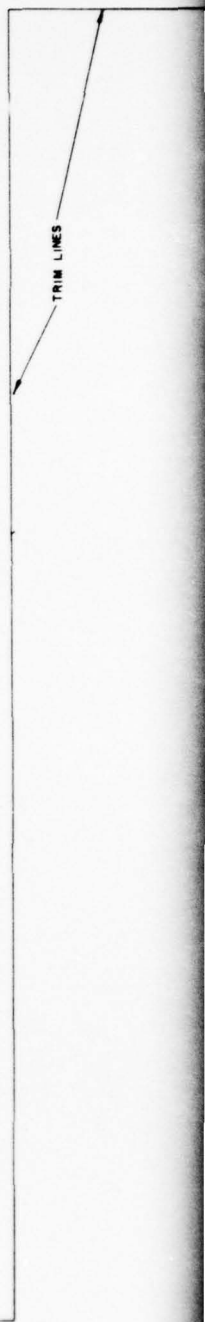
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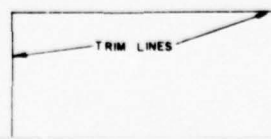
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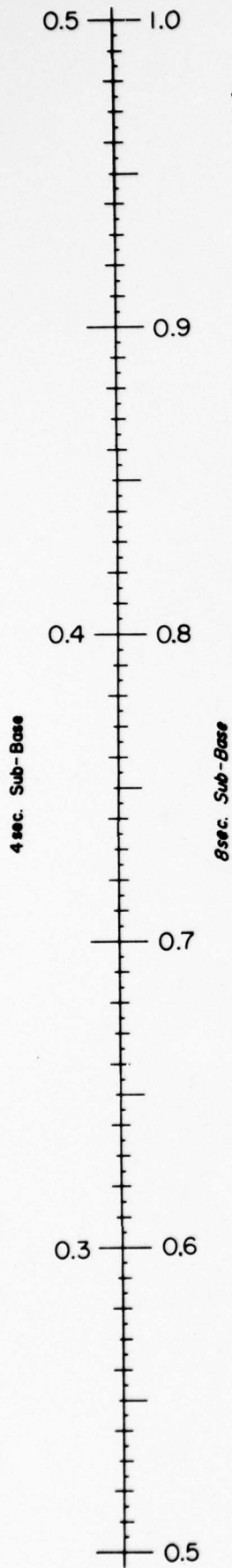
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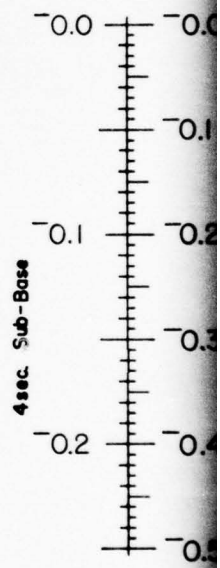
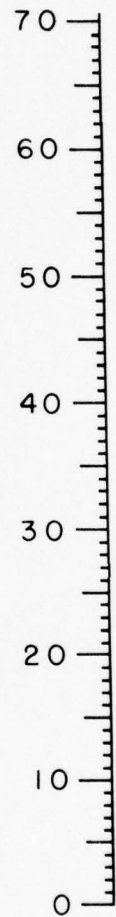
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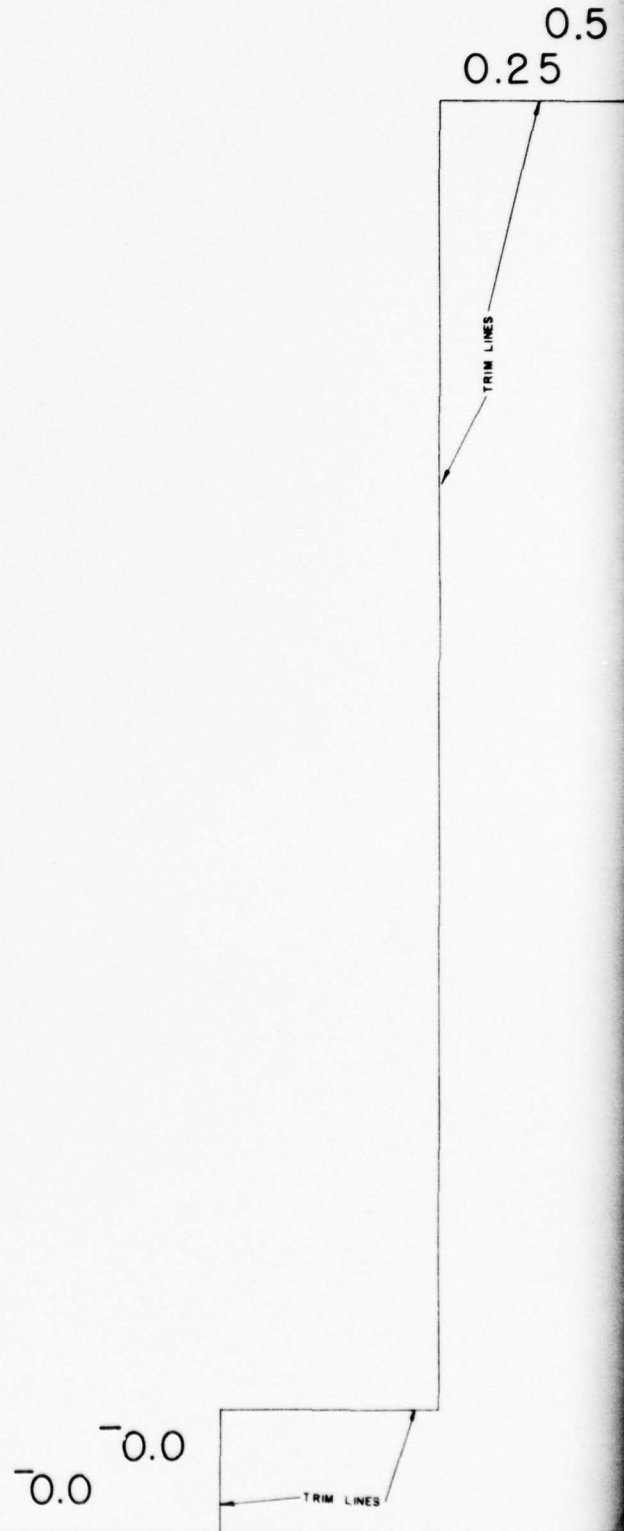
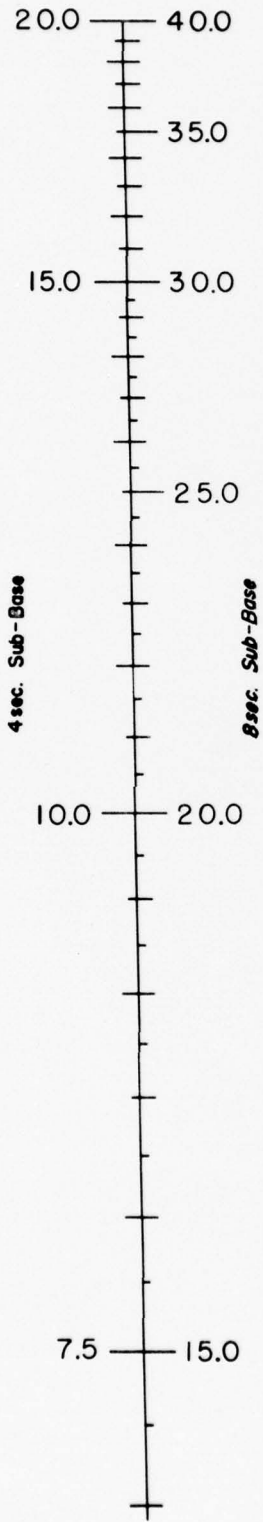
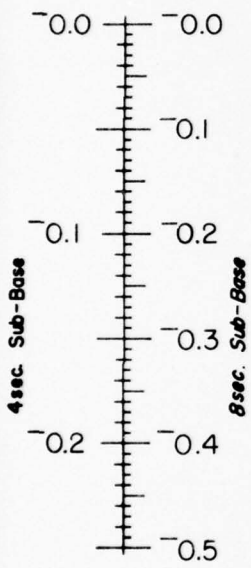
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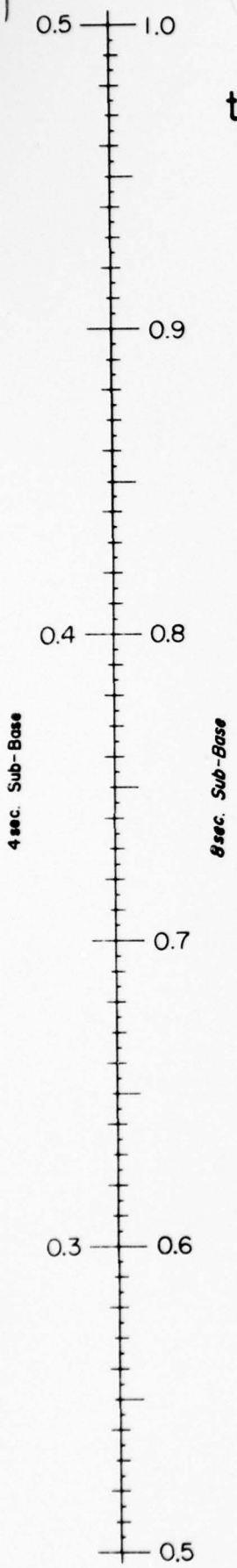


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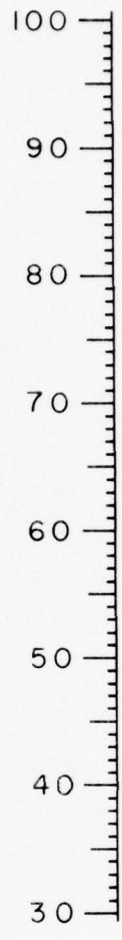
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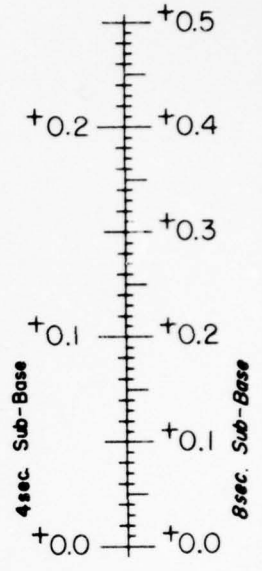


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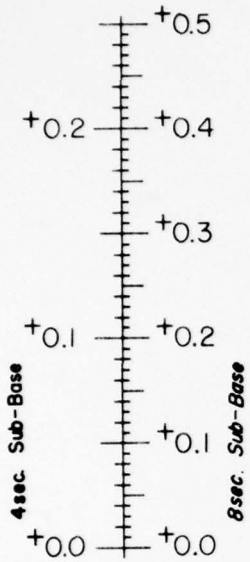
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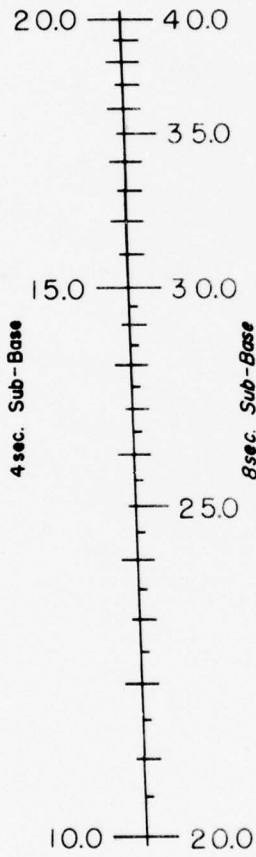
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t_s



RANGE
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+0.0

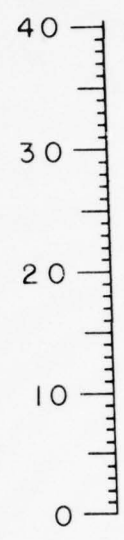
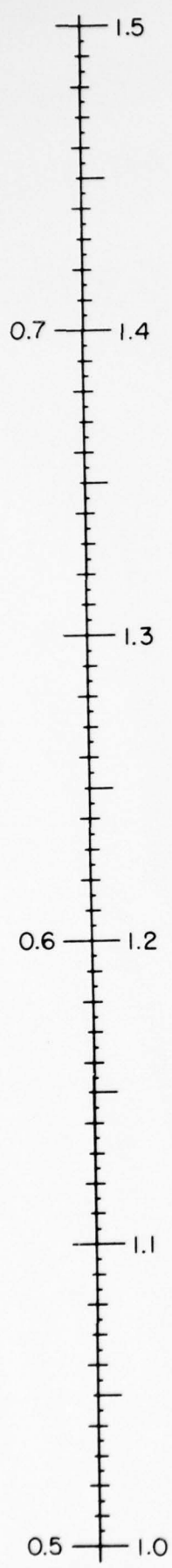
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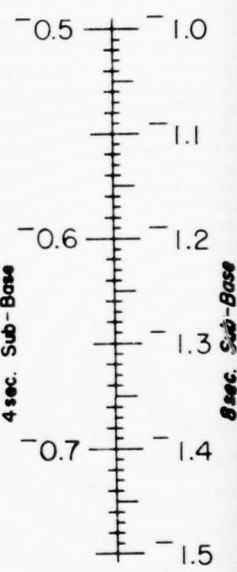
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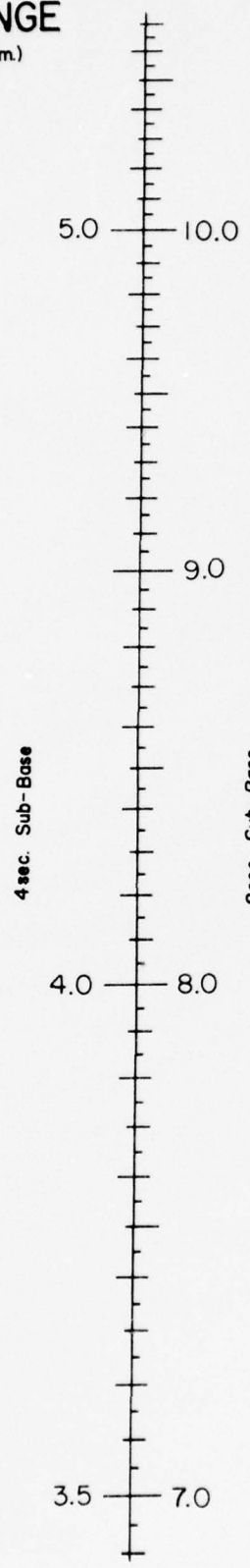
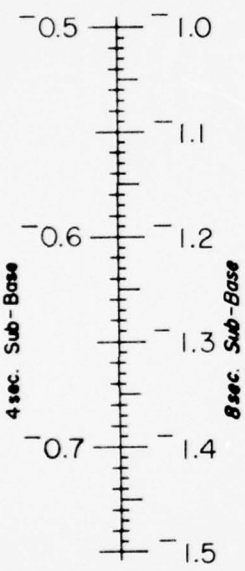
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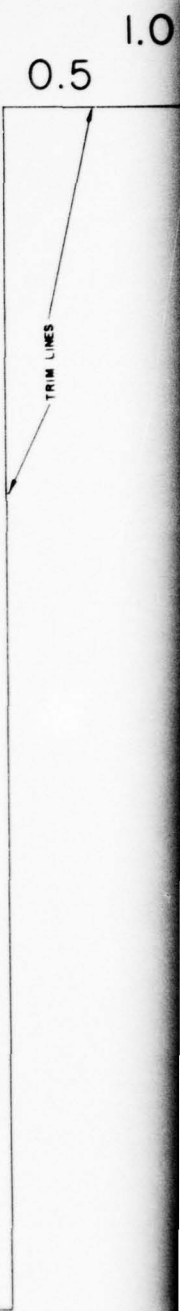
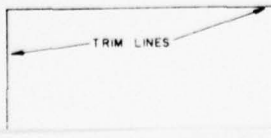
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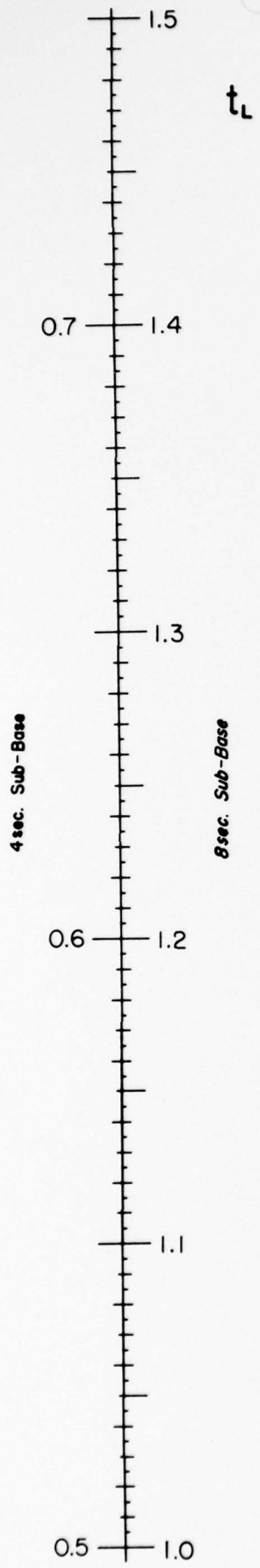
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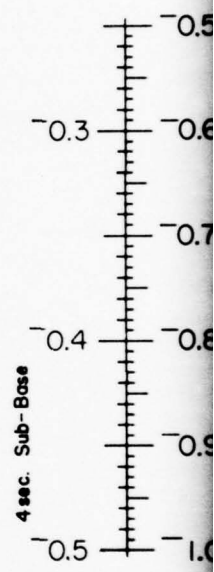
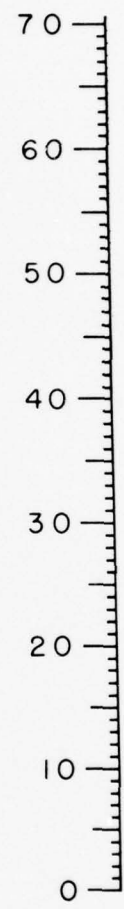
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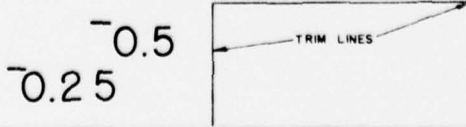
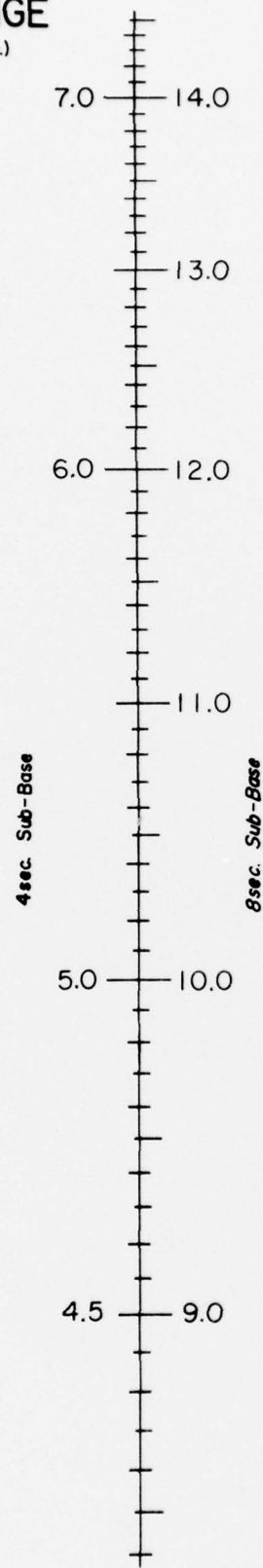
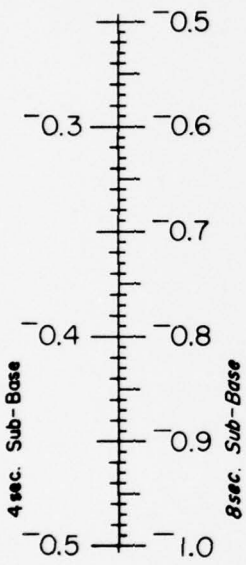
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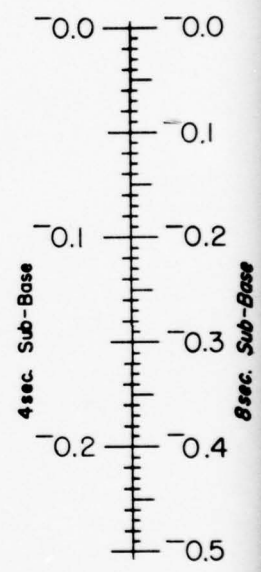
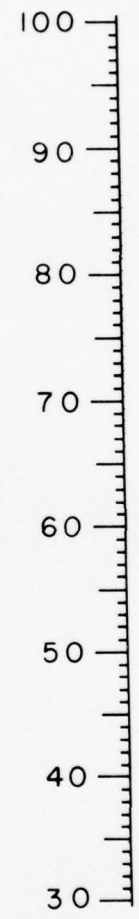


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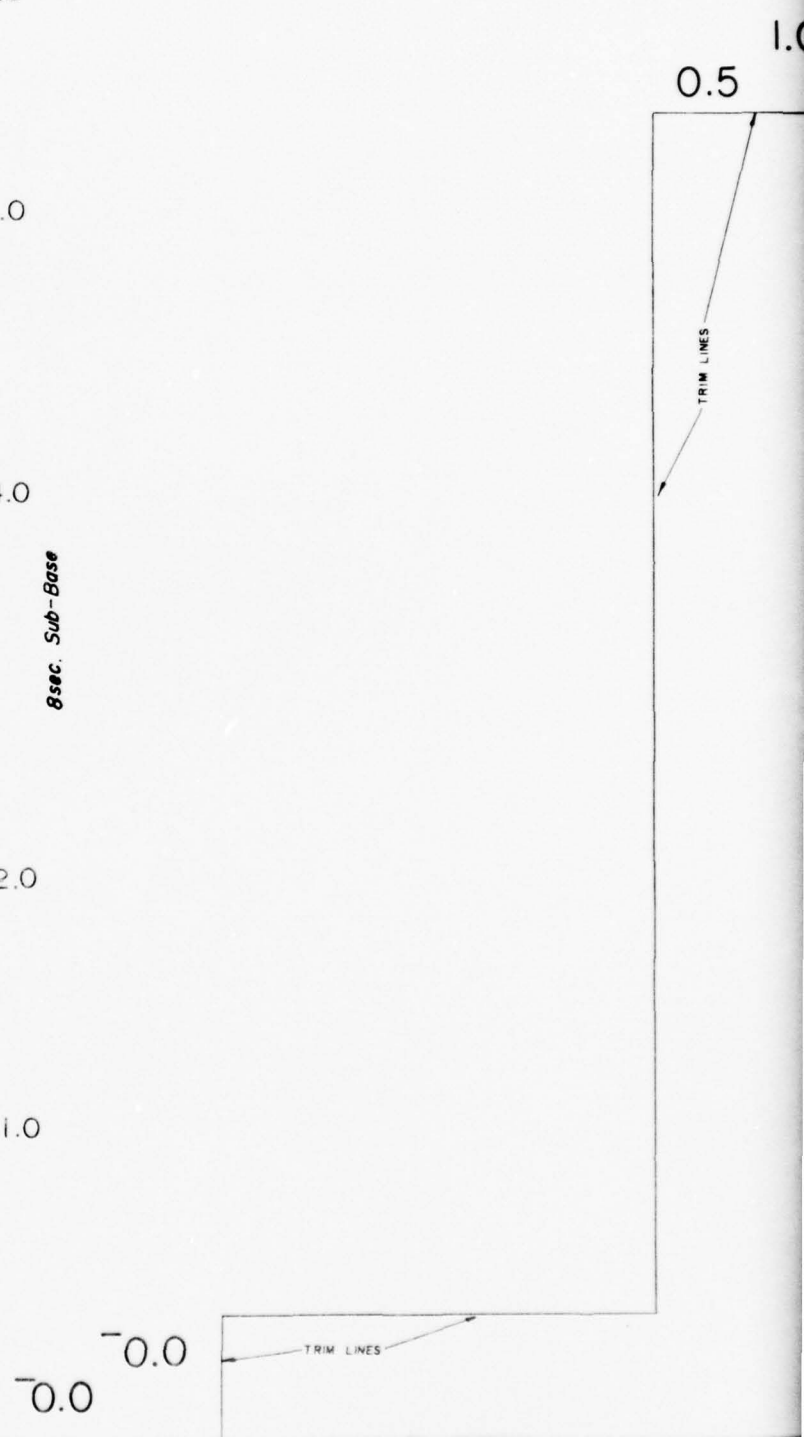
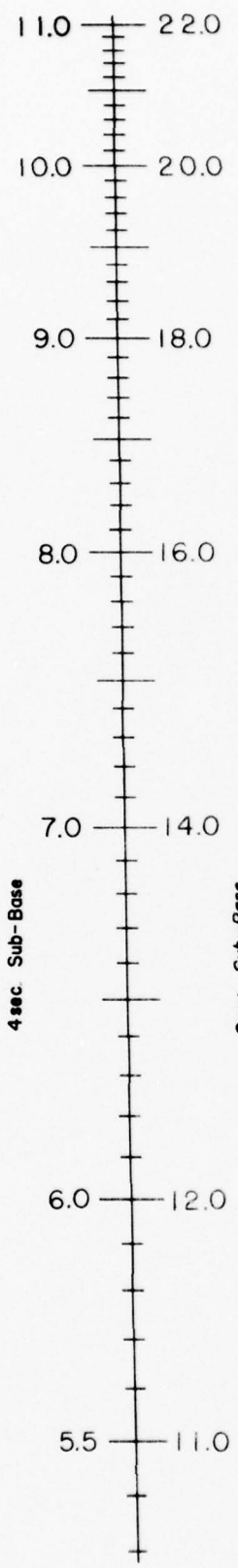
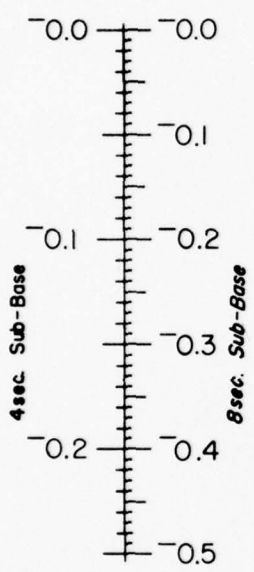
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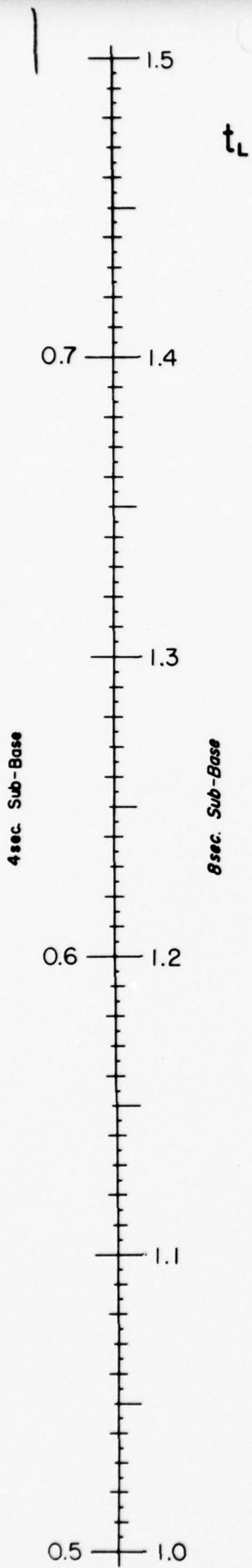
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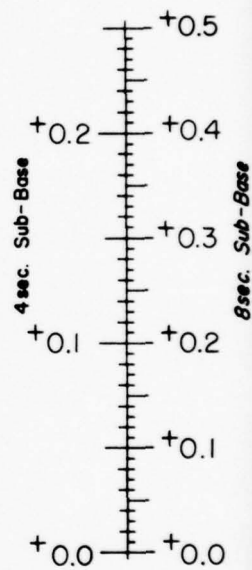
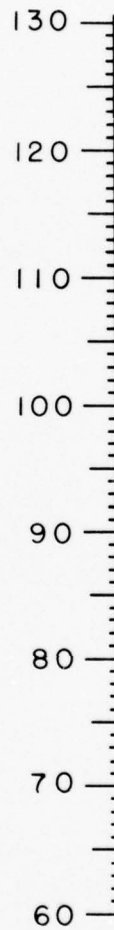
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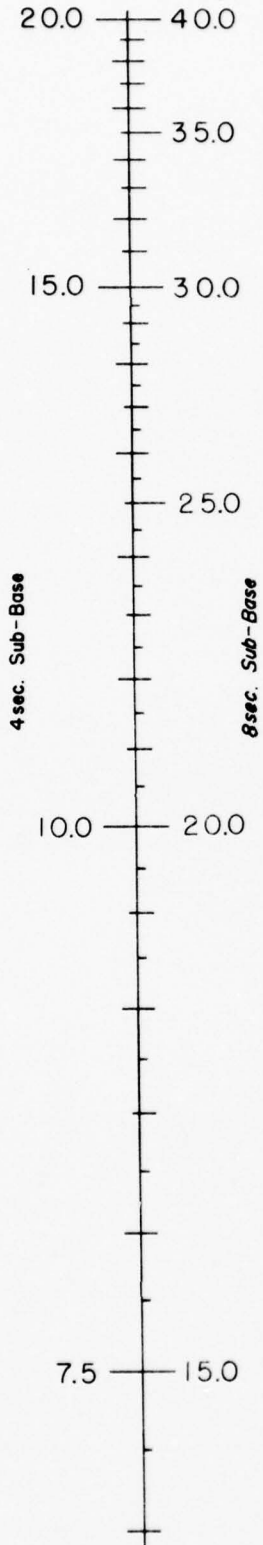
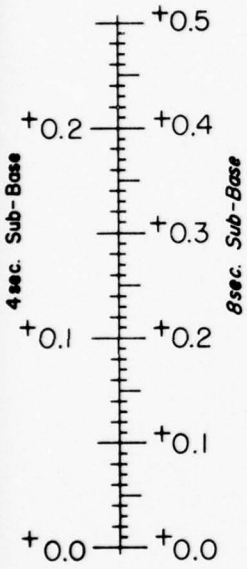


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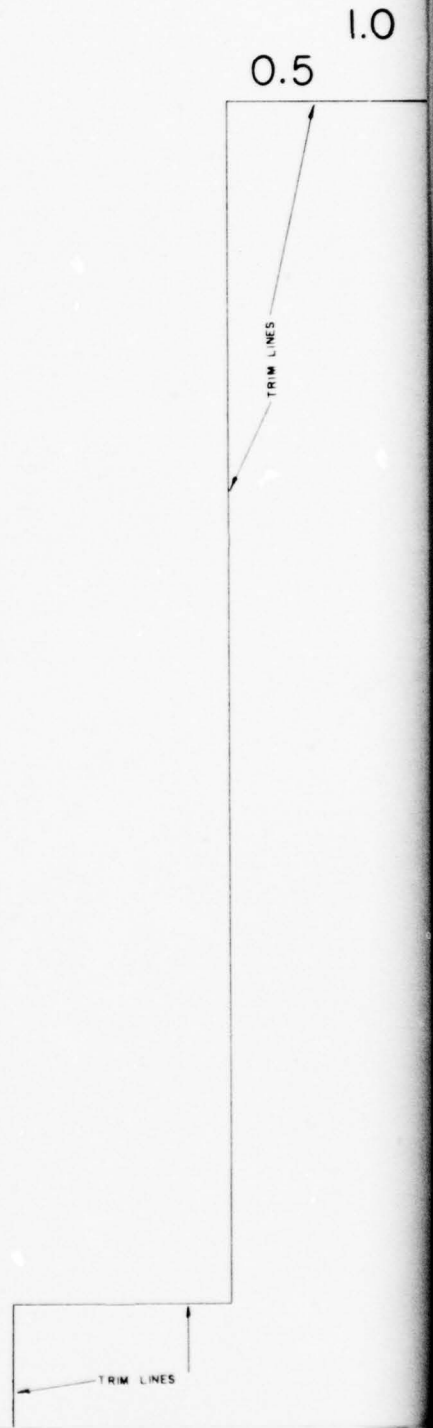


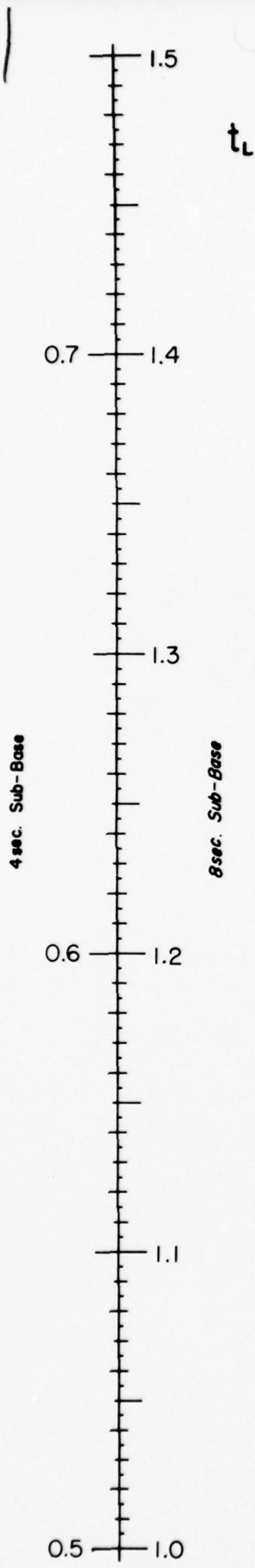
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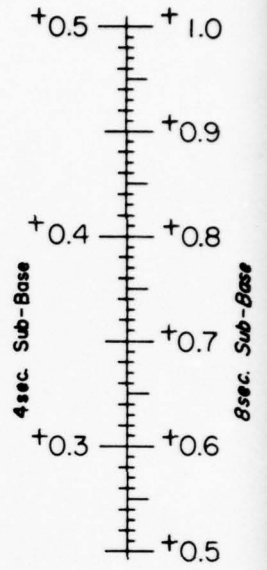
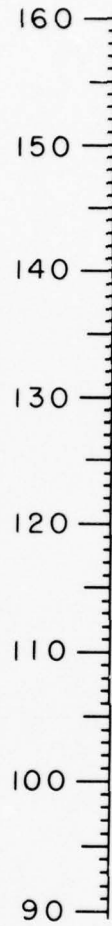


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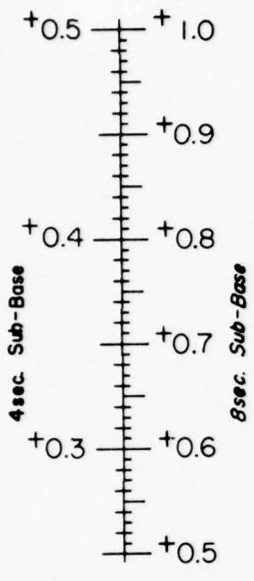




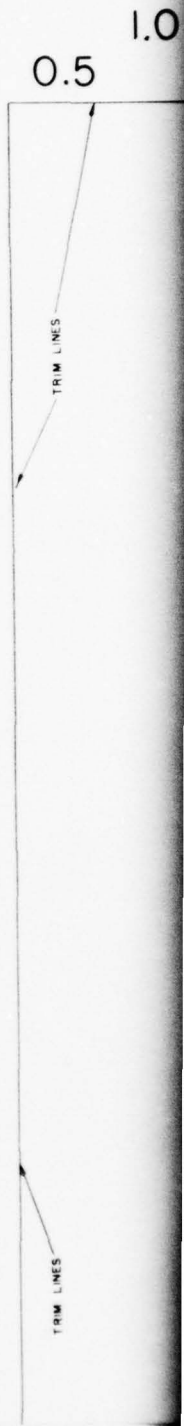
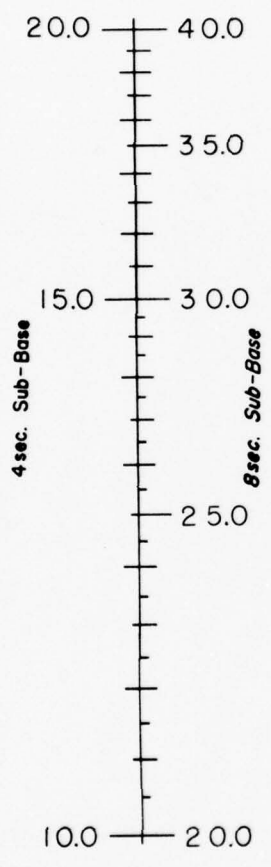
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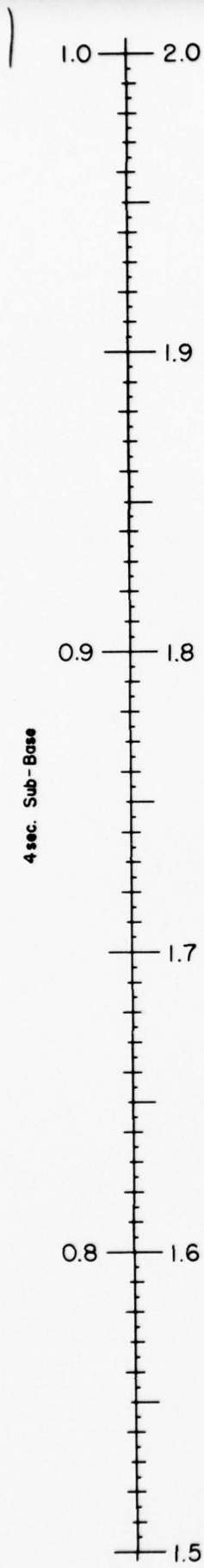


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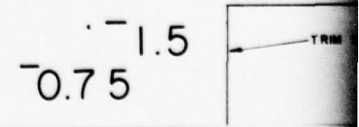
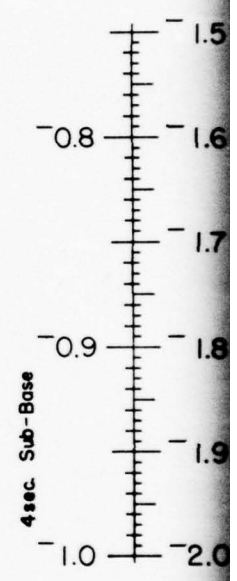
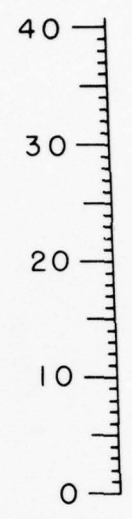
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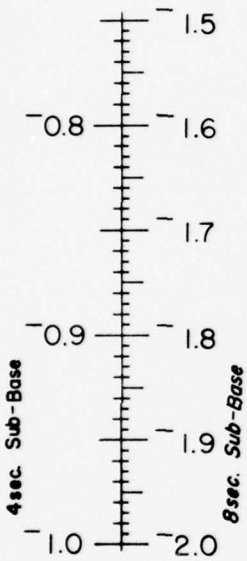
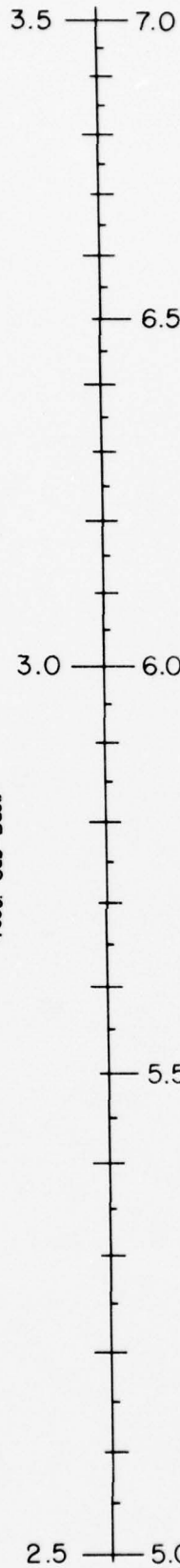
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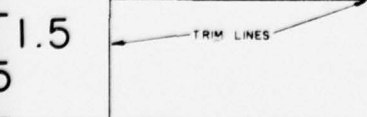
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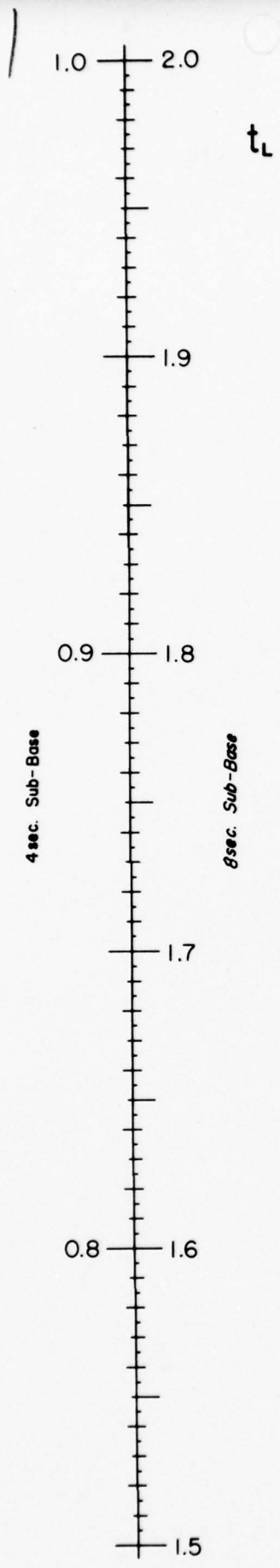


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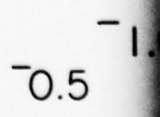
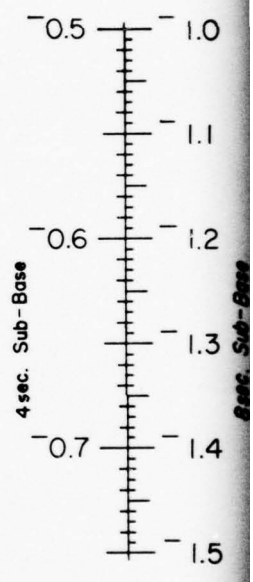
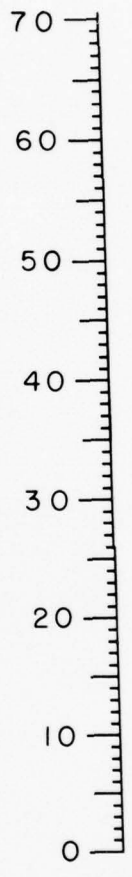
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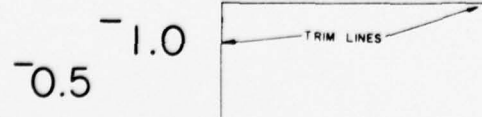
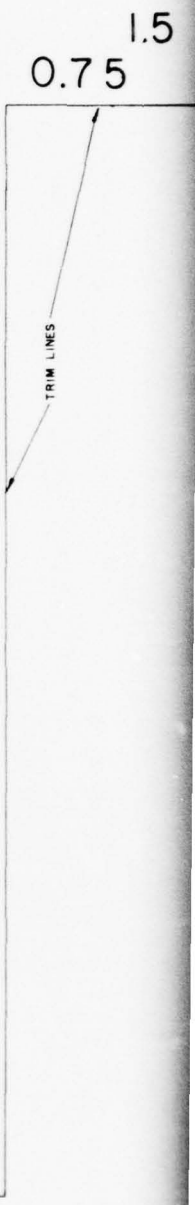
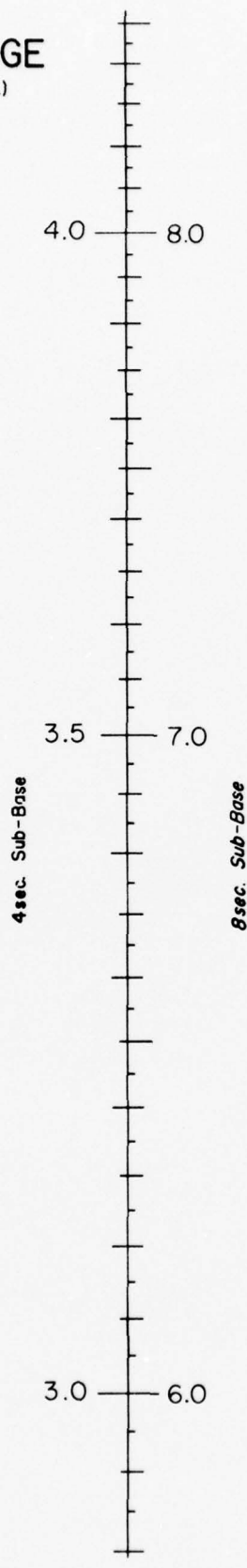
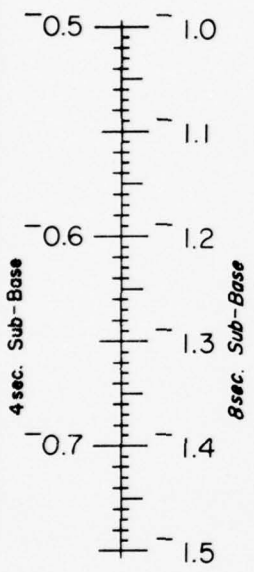


ANGLE
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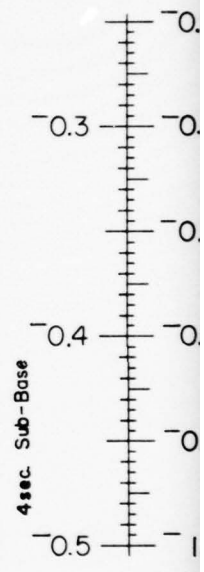
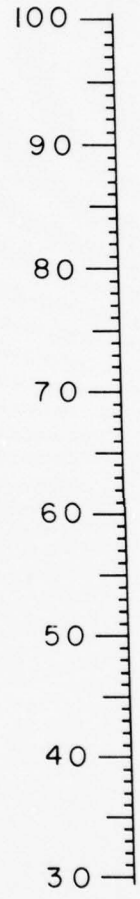
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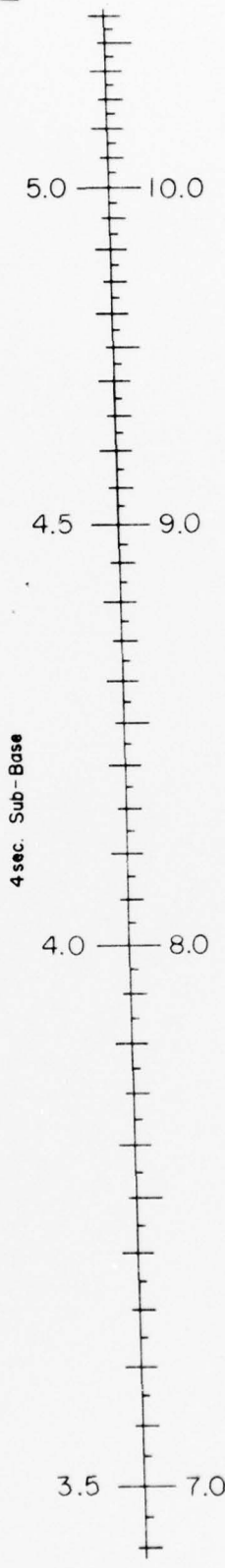
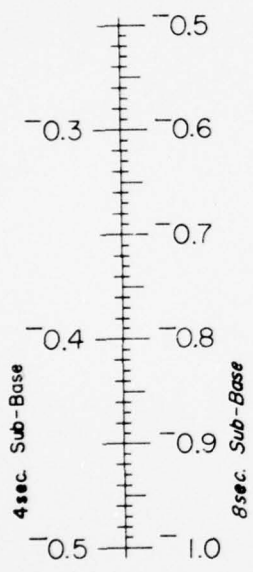
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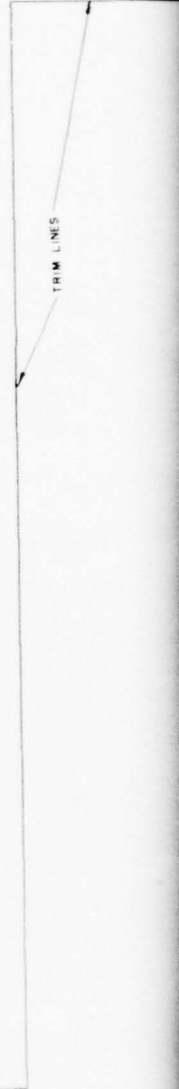


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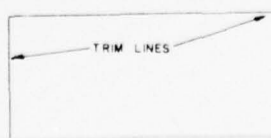
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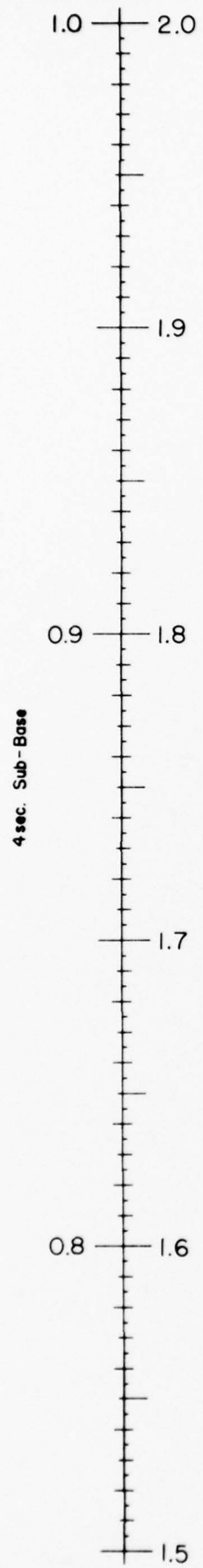


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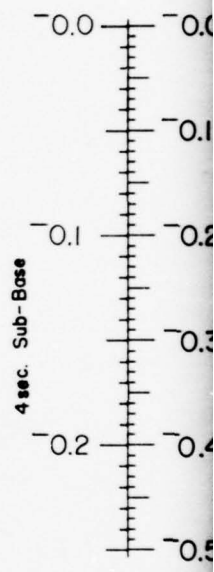
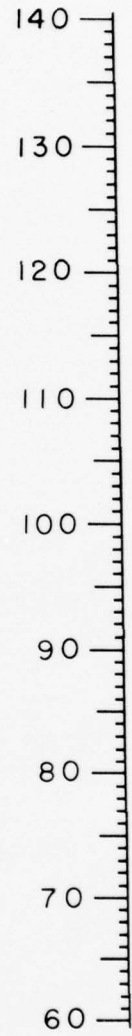
0.25 0.5





t_L

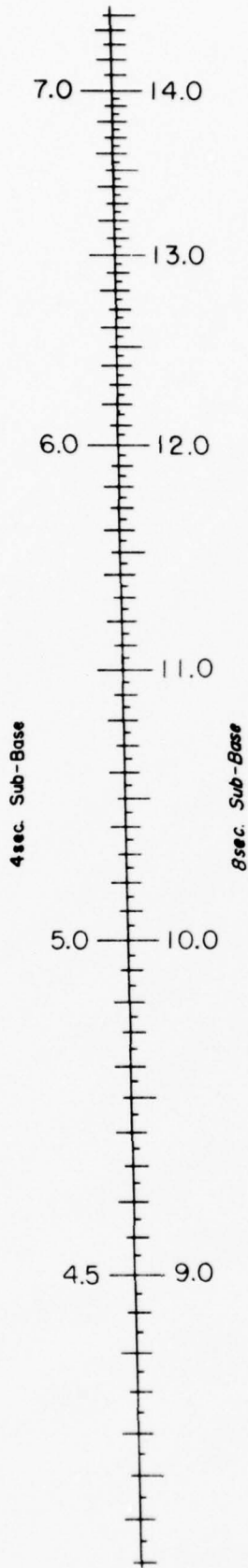
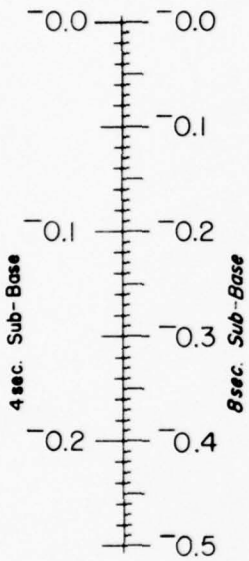
ANGLE
(mils.)



2

RANGE
(Km.)

t_s



-0.0

-0.0

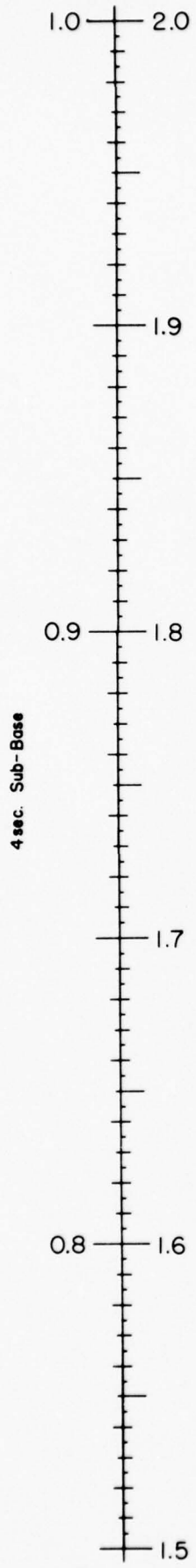
TRIM LINES

0.75

1.1

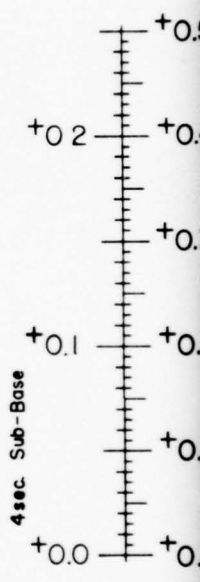
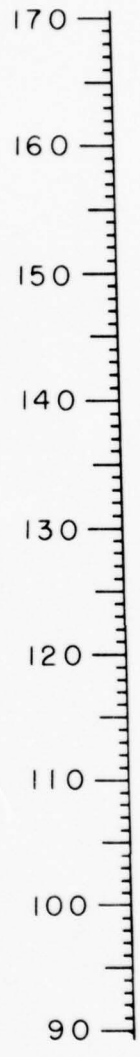
TRIM LINES





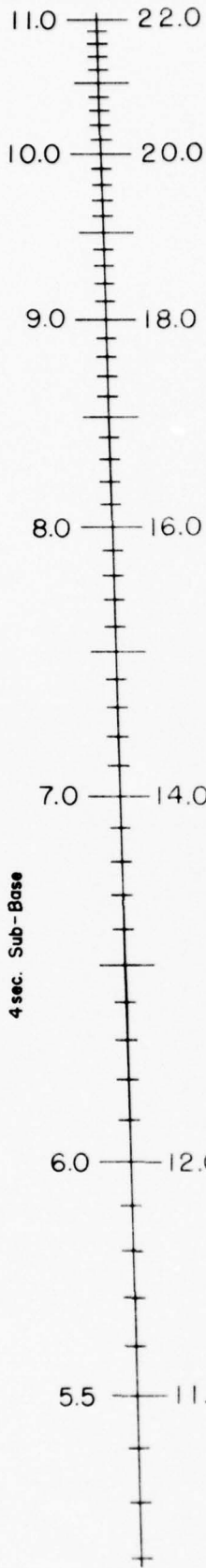
t_L

ANGLE
(mis.)

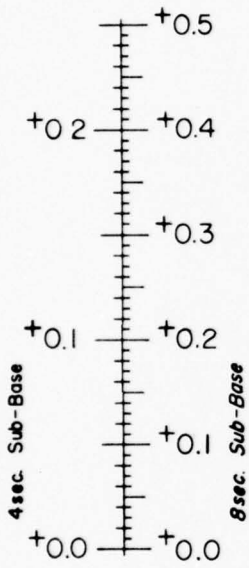


RANGE
(Km)

2



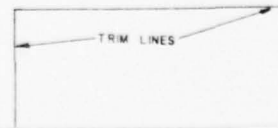
t_s

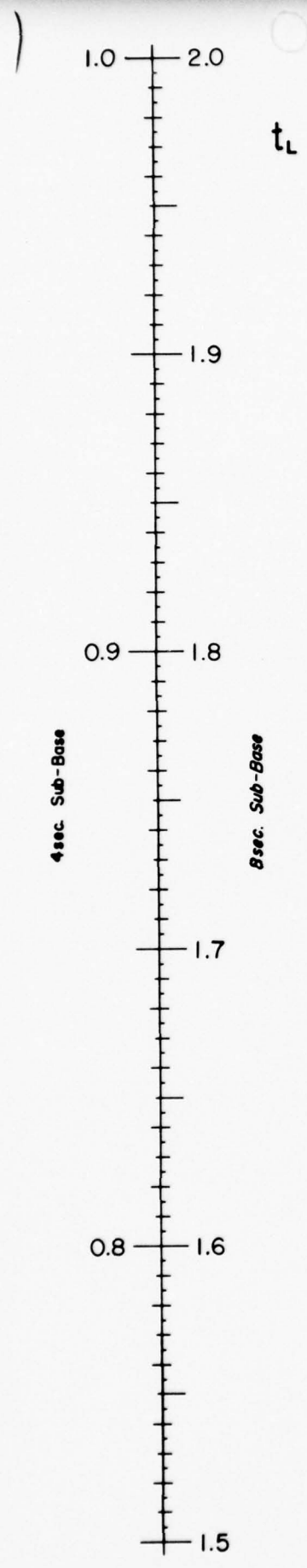


1.5
0.75

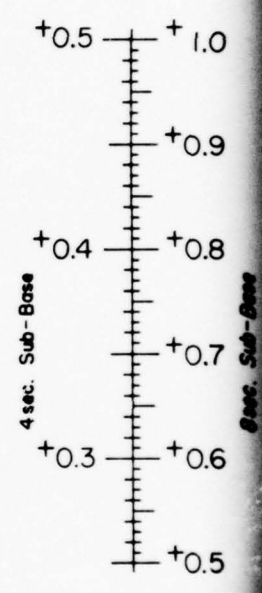


+0.0
+0.0

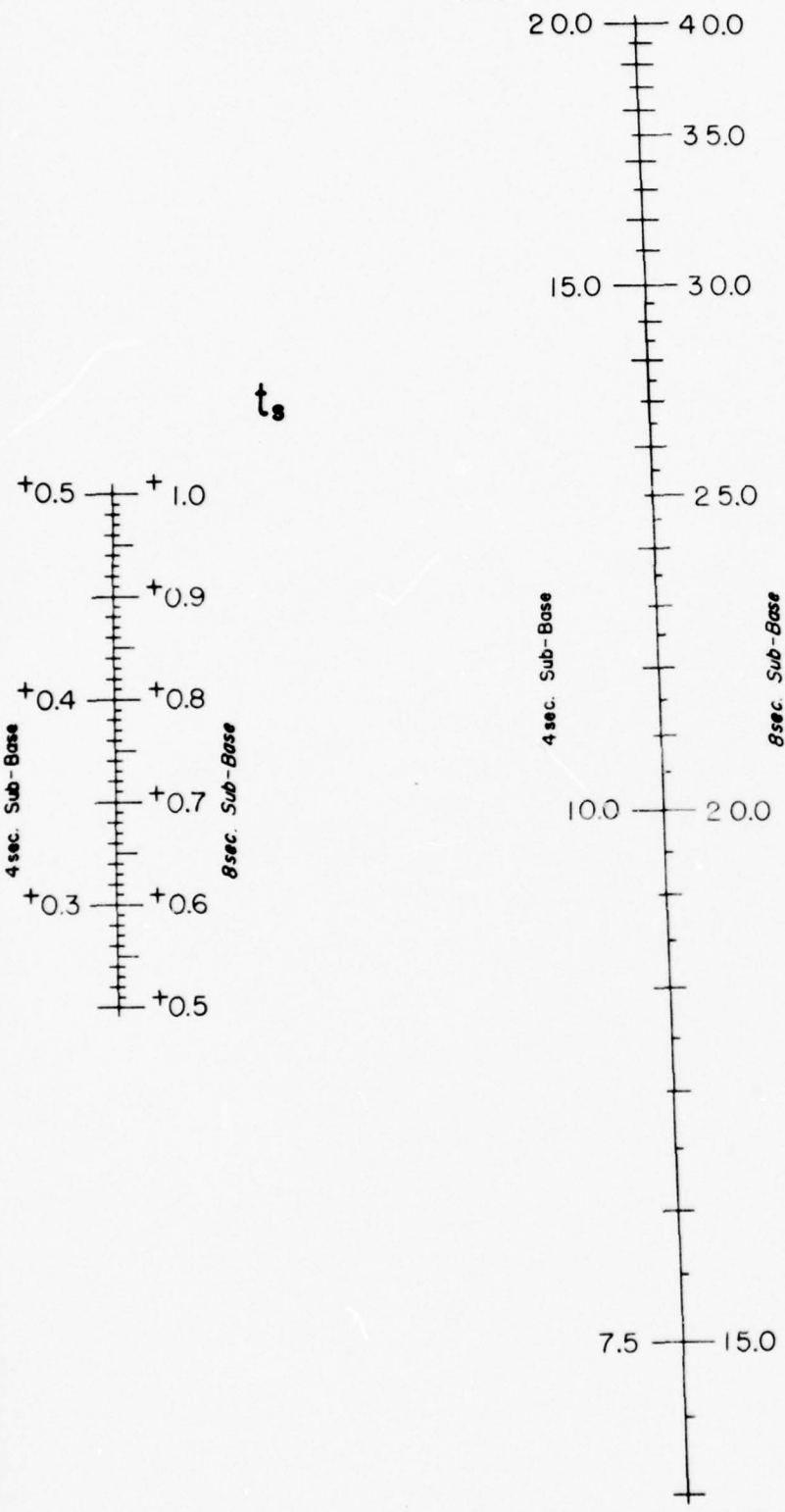




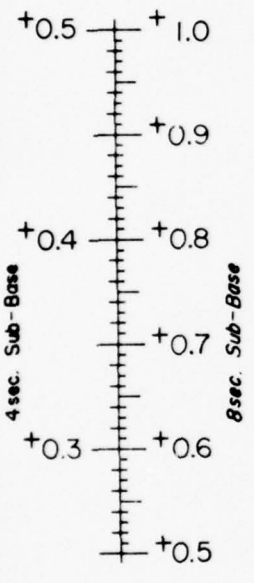
ANGLE
(mils.)



RANGE
(Km.)



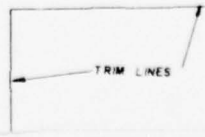
t_s



1.5
0.75



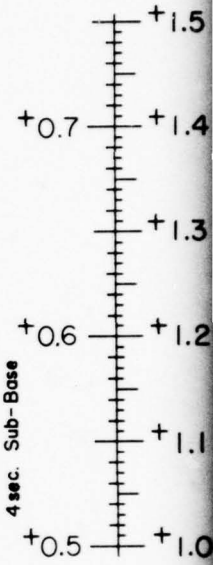
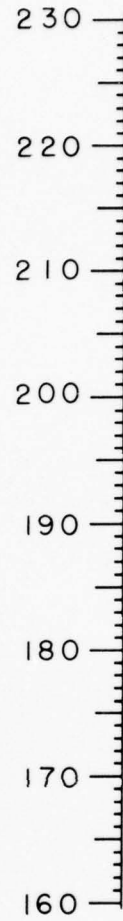
+0.5
+0.25





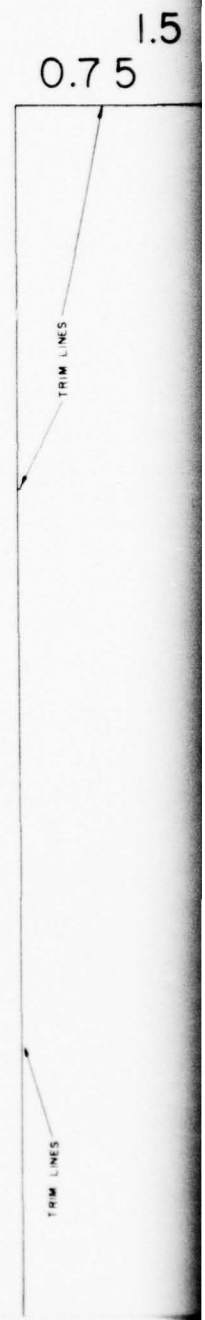
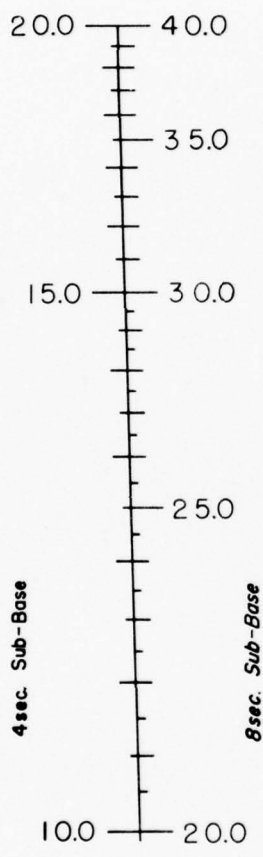
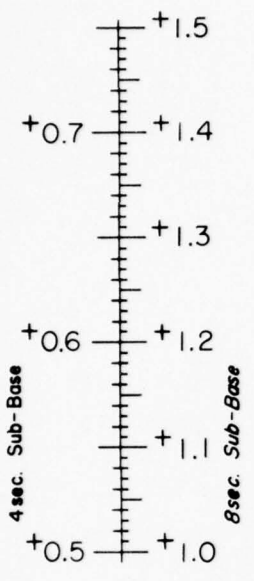
t_L

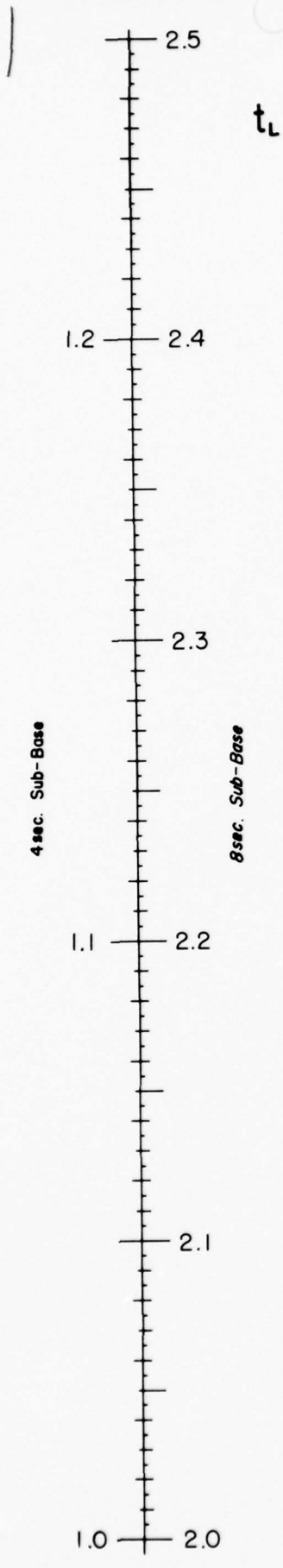
ANGLE
(mils.)



t_s

RANGE
(Km.)

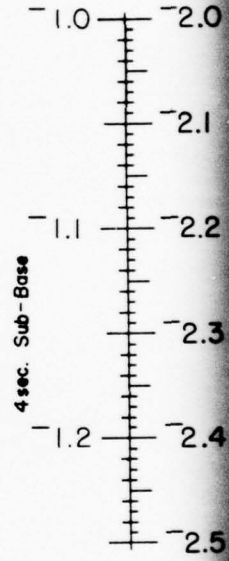
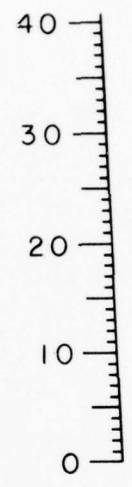




4 sec. Sub-Base

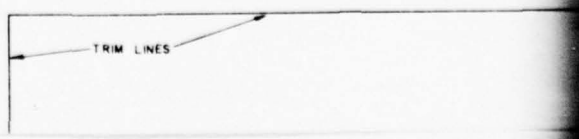
8 sec. Sub-Base

ANGLE
(mils.)



4 sec. Sub-Base

-1.0 -2.0

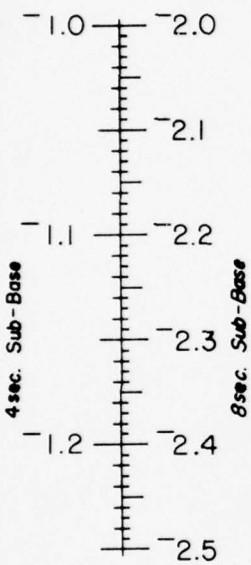


2

RANGE
(Km)

2.5 5.0

t_s

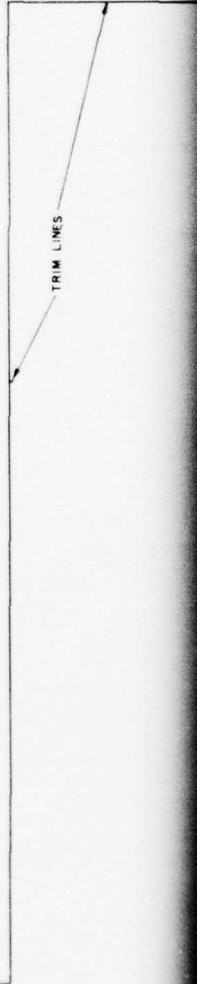


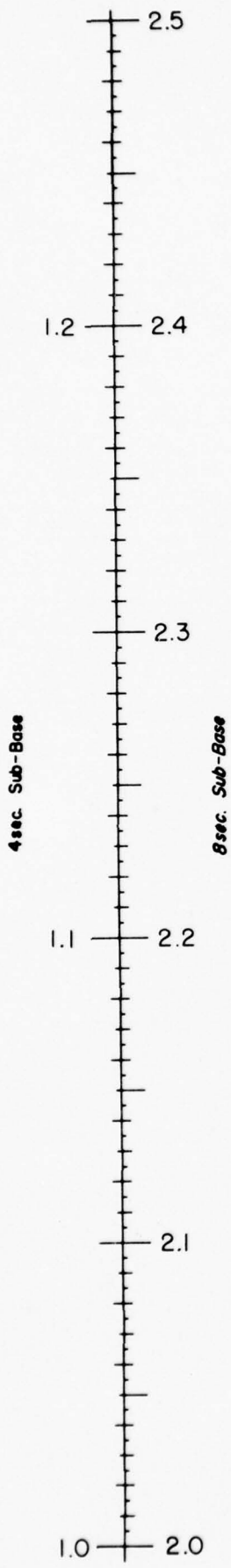
4 sec. Sub-Base

8 sec. Sub-Base

2.0 4.0

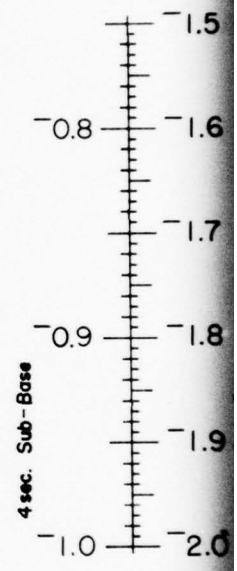
1.0 2.0



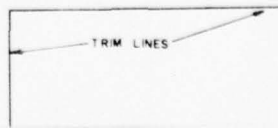


t_L

ANGLE
(mils)

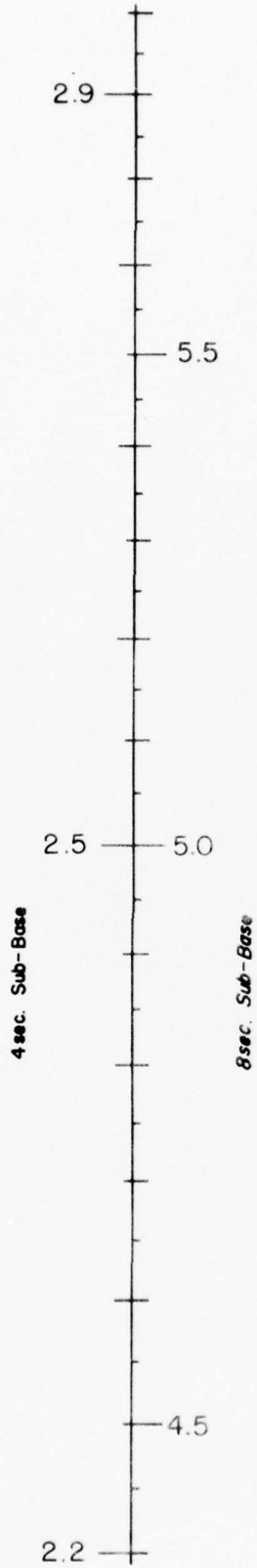
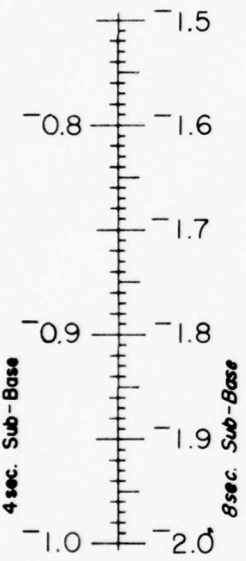


-1.5
-0.75

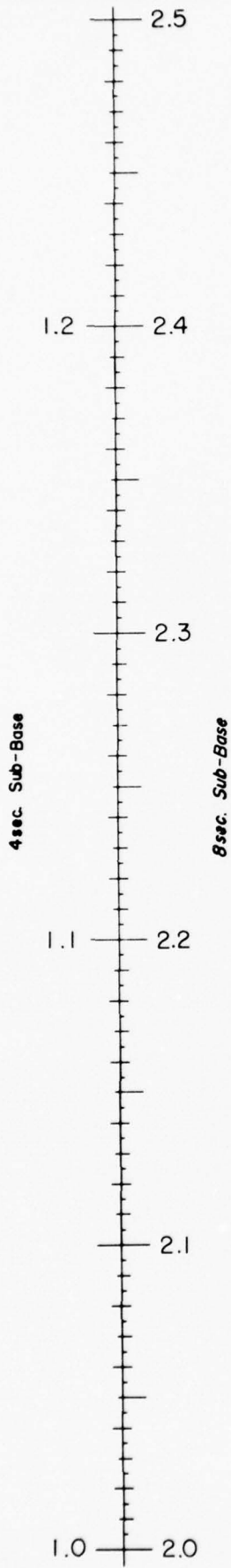


RANGE
(Km)

t_s

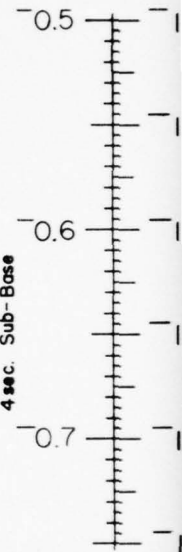
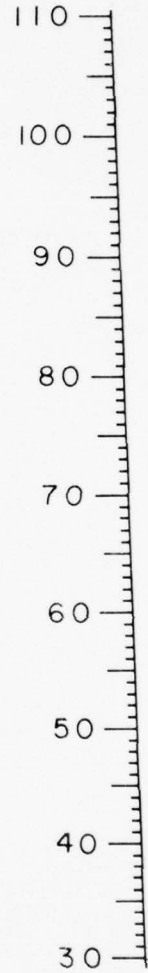


TRIM LINES



t_L

ANGLE
(mils.)



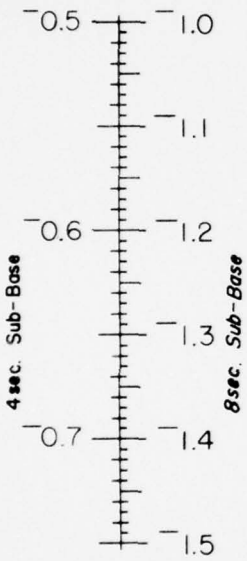
-0.5 -1.0



F LANGE
(Km)



t_s



4 sec. Sub-Base

8 sec. Sub-Base

2

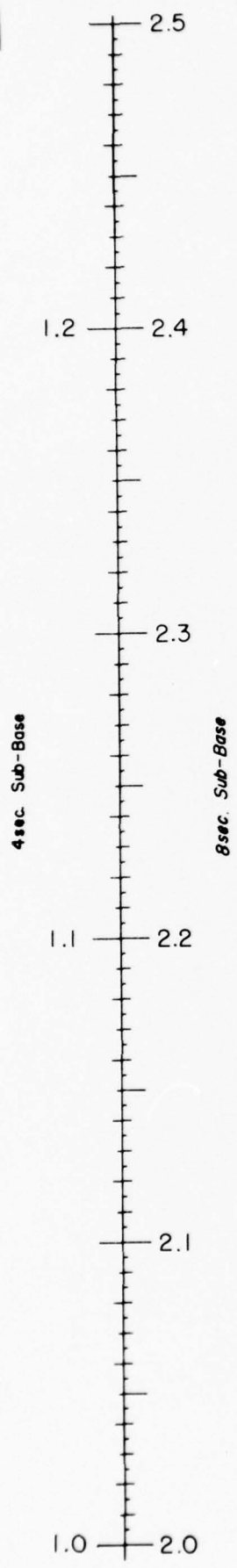
1.0 2.0



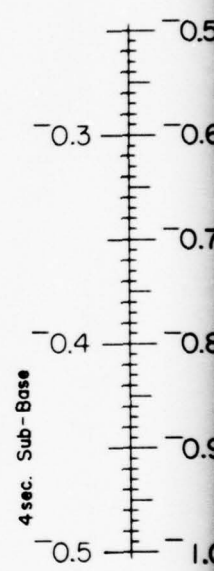
1.0 TRIM LINES

5

1



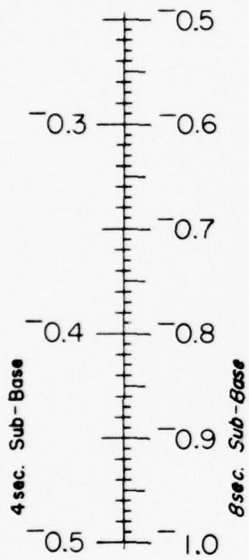
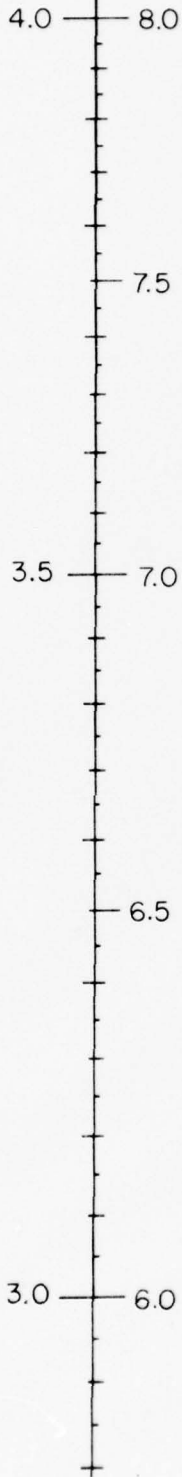
ANGLE
(mis.)



-0.25

RANGE (Km.)

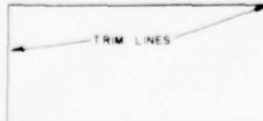
t_s



1.0 2.0



0.5
0.25



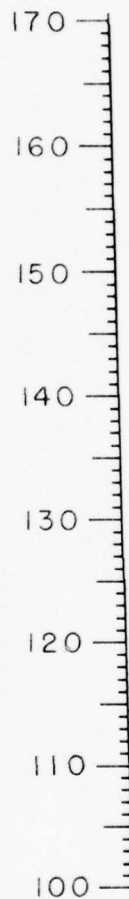
4 sec. Sub-Base



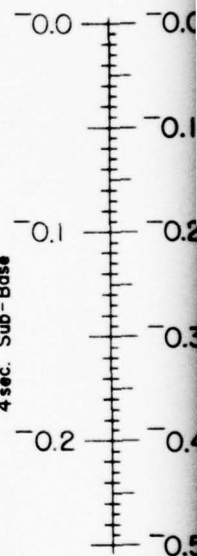
8 sec. Sub-Base

t_L

ANGLE
(mils.)

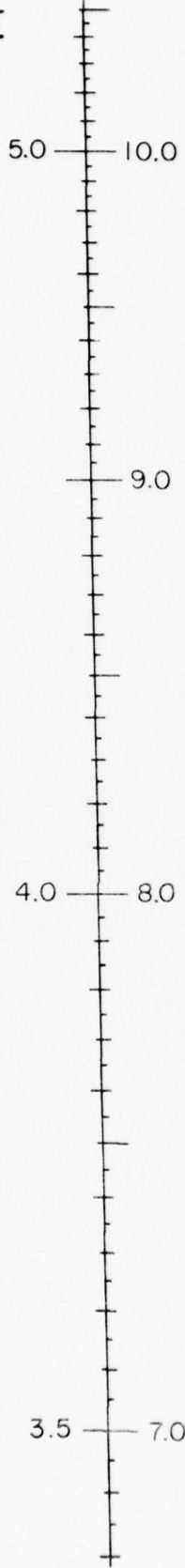


4 sec. Sub-Base

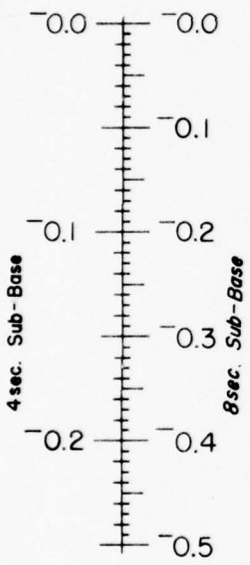


2

RANGE
(Km.)



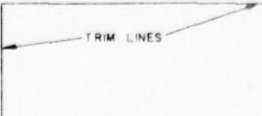
t_s



1.0 2.0



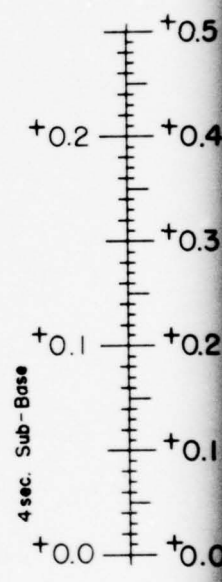
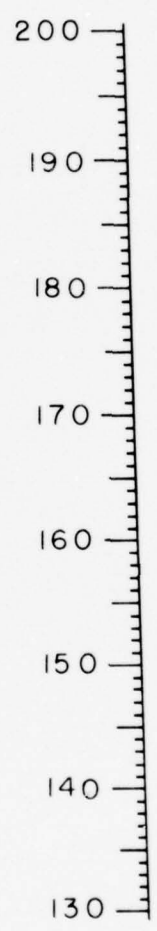
-0.0 -0.0





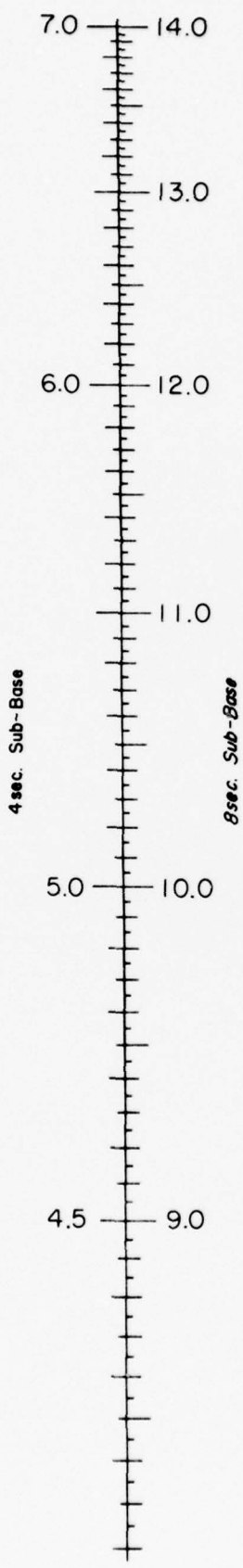
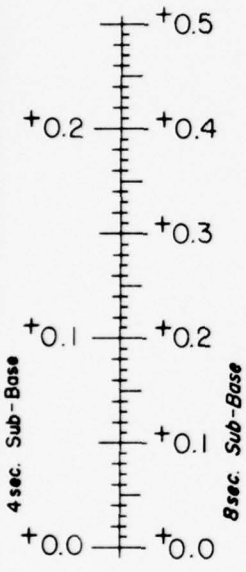
t_L

ANGLE
(mils.)



RANGE
(Km.)

t_s



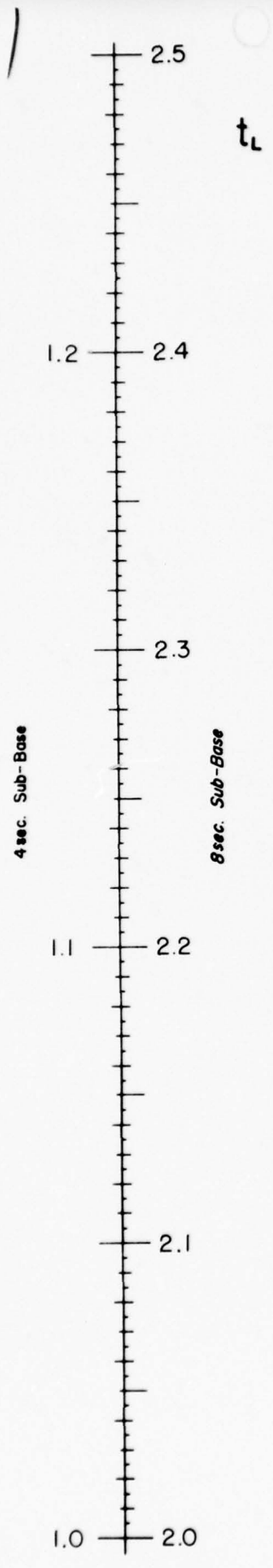
4 sec. Sub-Base

8 sec. Sub-Base

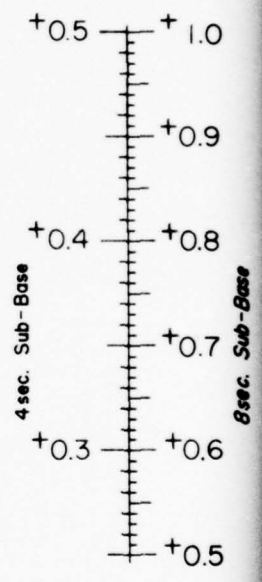
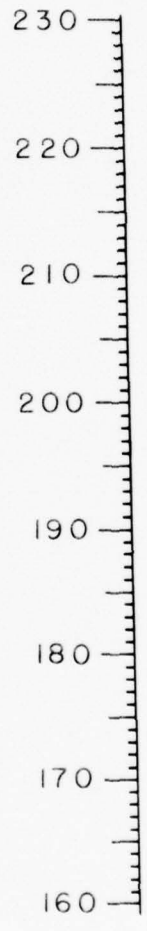
+0.0
+0.0

TRIM LINES

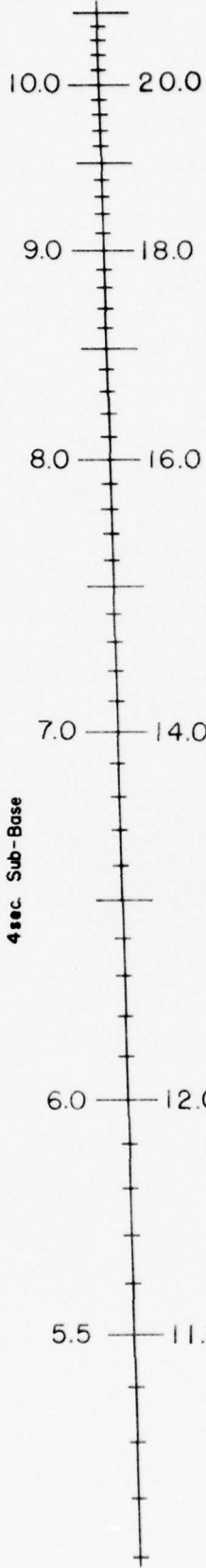




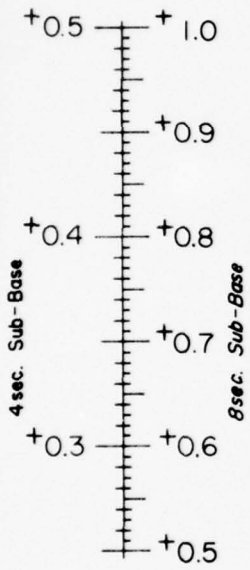
ANGLE
(mils.)



RANGE
(Km.)



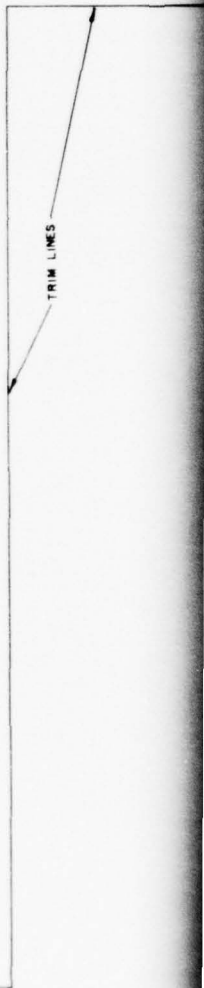
t_s



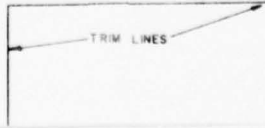
4 sec. Sub-Base

8 sec. Sub-Base

2.0
1.0



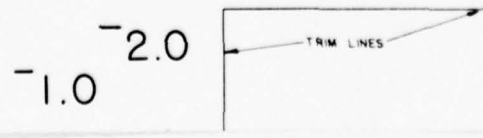
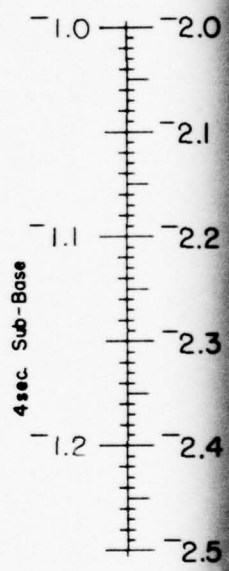
+0.5
+0.25





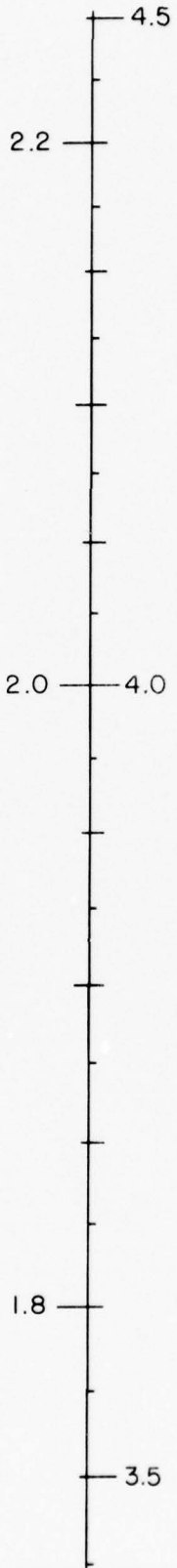
t_L

ANGLE
(mils)

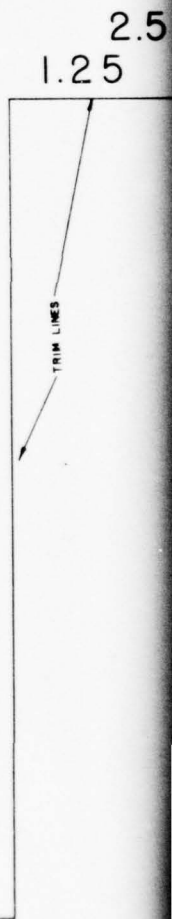
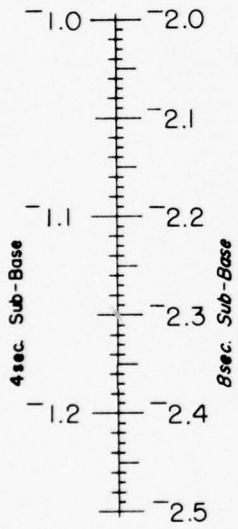


2

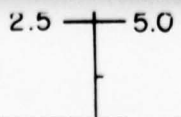
RANGE
(Km)



t_s



RANGE
(Km)

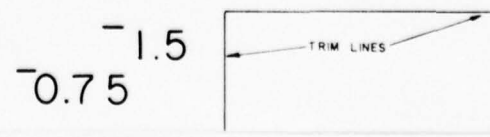
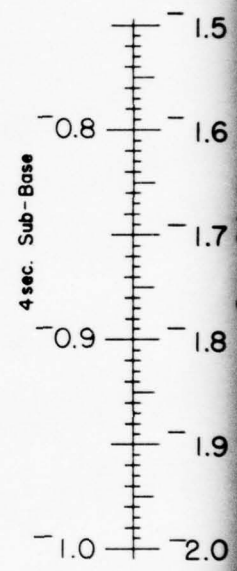
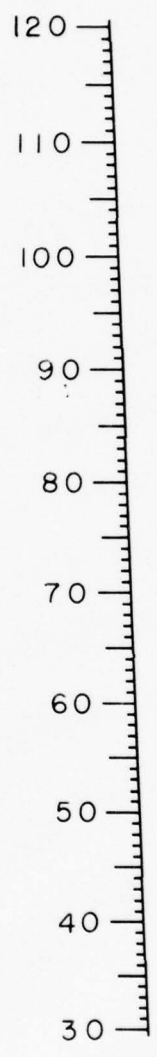


2



t_L

ANGLE
(mils.)

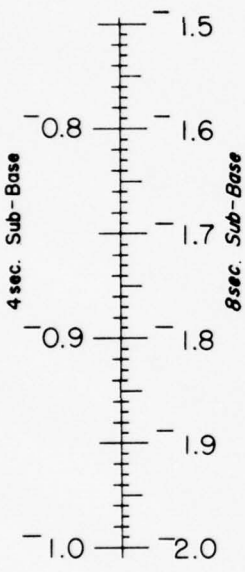


2

RANGE
(Km)

2.5 5.0

t_s



4 sec. Sub-Base

8 sec. Sub-Base

2.0 4.0



1.5 3.0

t_L

2.9

1.4 2.8

4 sec. Sub-Base

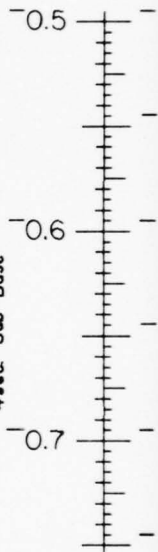
8 sec. Sub-Base

2.7

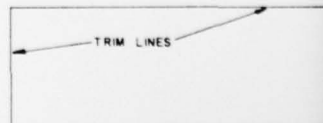
1.3 2.6

2.5

ANGLE
(mils.)

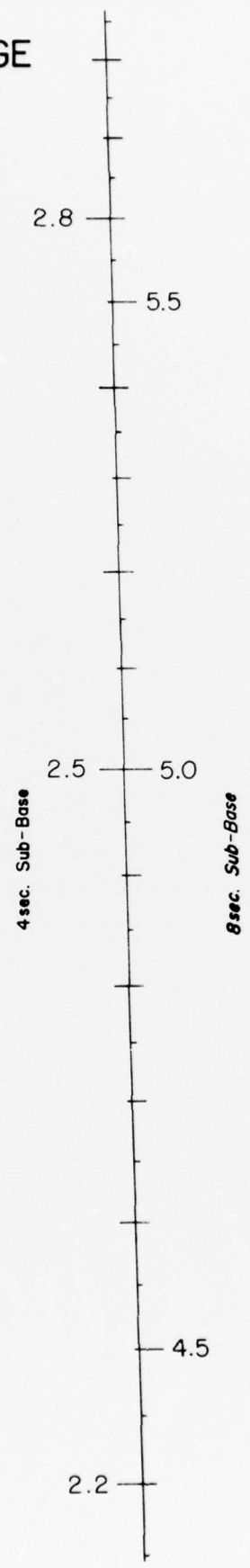
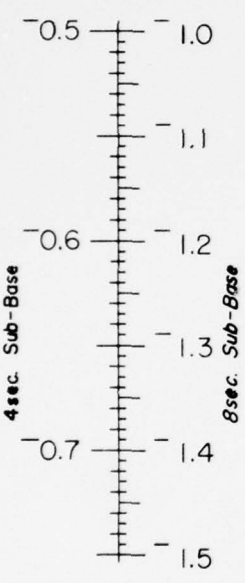


-0.5 -1.0

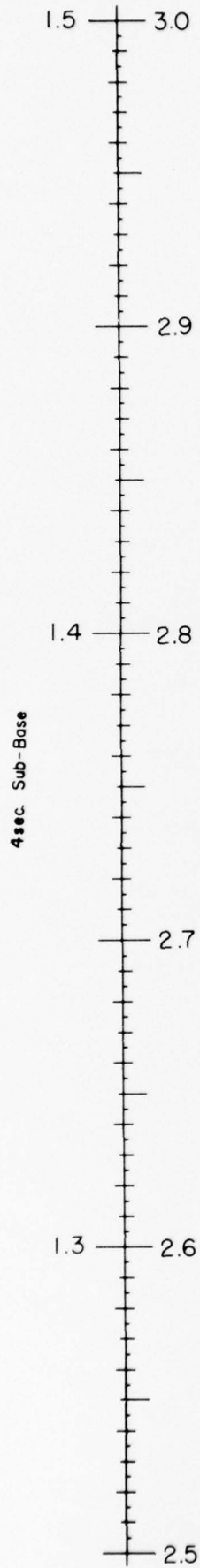


RANGE (Km)

t_s

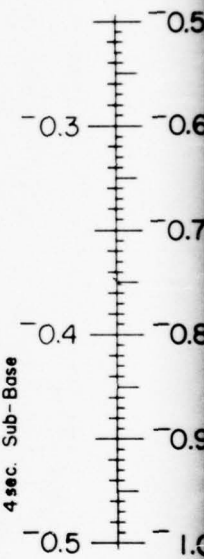


TRIM LINES



t_L

ANGLE
(mils.)

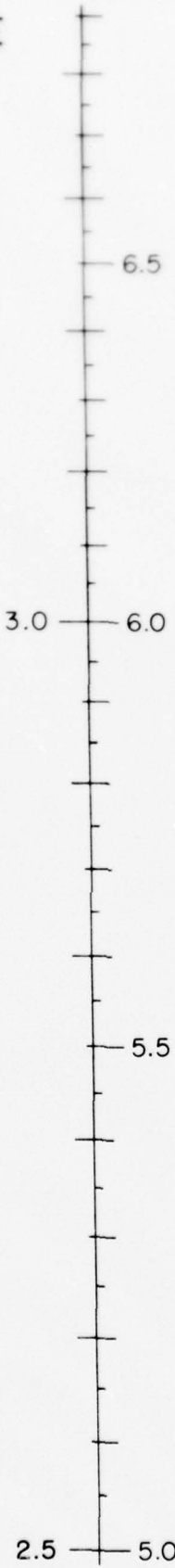
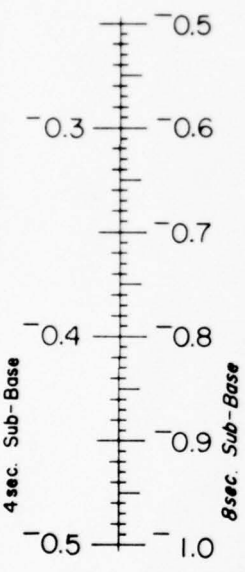


0.25 0.5

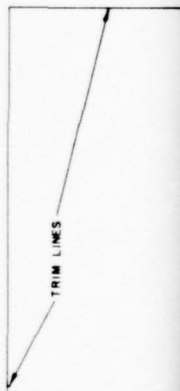


RANGE
(Km.)

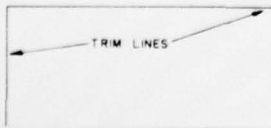
t_s

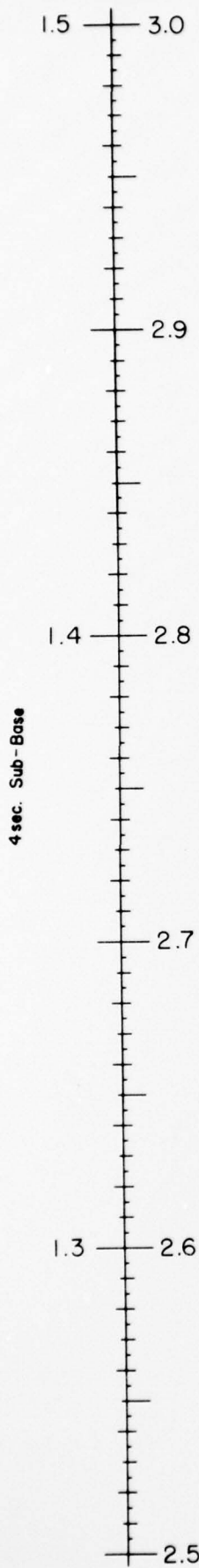


2.5
1.25



-0.5
25

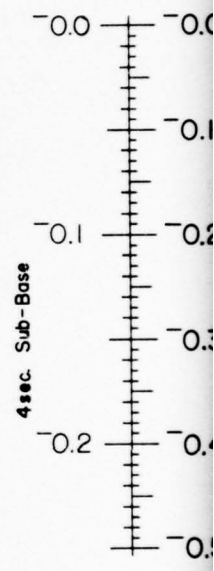
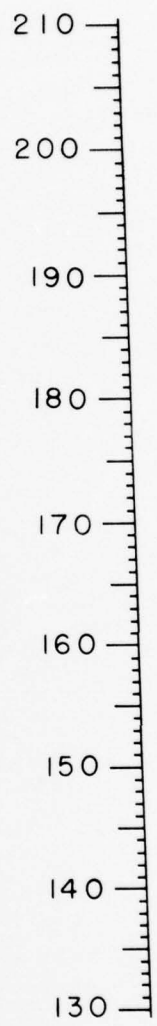




t_L

8 sec. Sub-Base

ANGLE
(mils.)



-0.0

RANGE
(Km)

4.0 8.0

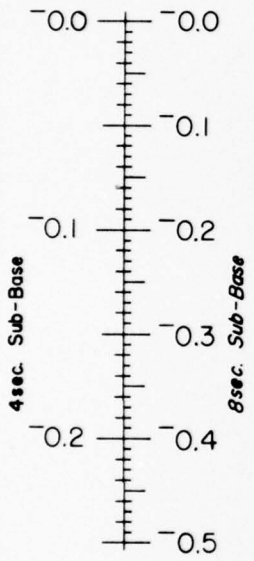
7.5

3.5 7.0

6.5

3.0 6.0

t_s



4 sec. Sub-Base

8 sec. Sub-Base

2.5
1.25



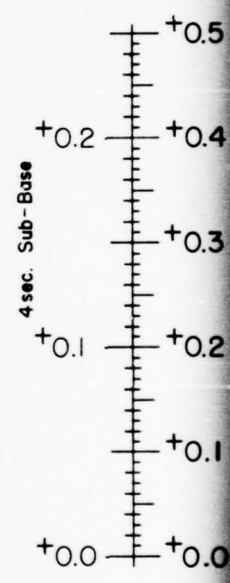
-0.0
-0.0

TRIM LINES

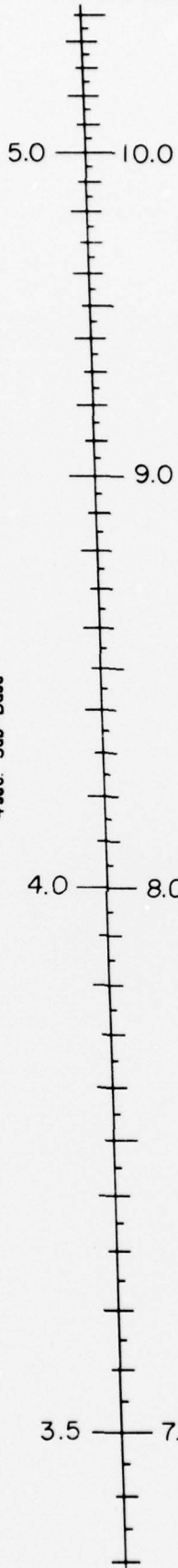


t_L

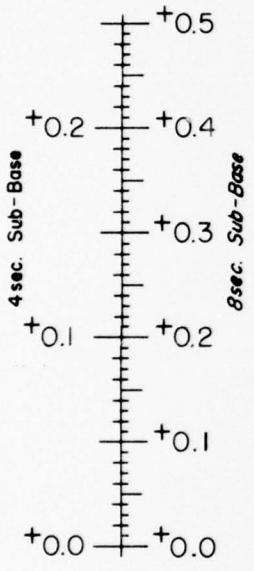
ANGLE
(mils.)



RANGE
(Km)



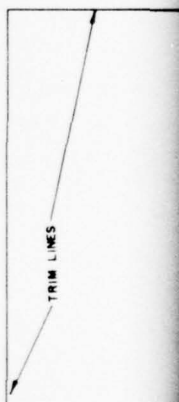
t_s



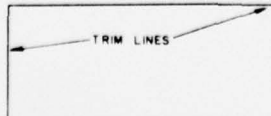
4 sec. Sub-Base

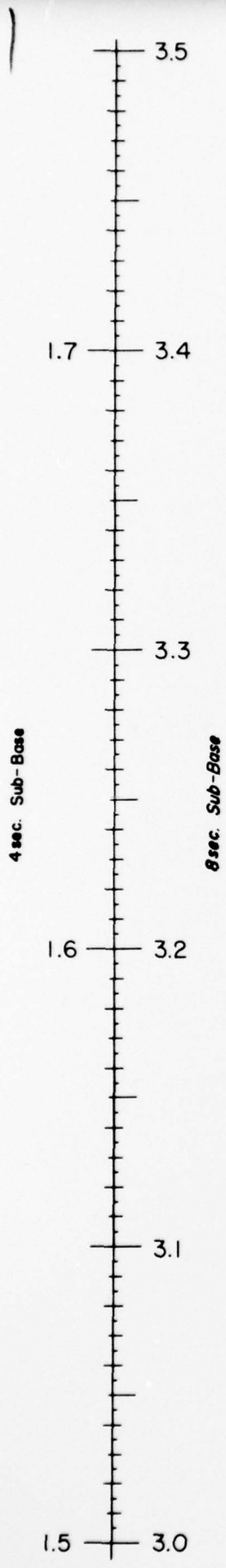
8 sec. Sub-Base

2.5
1.25



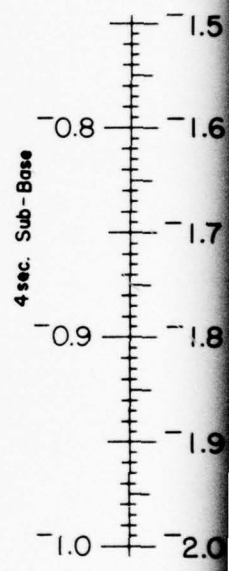
+0.0 +0.0



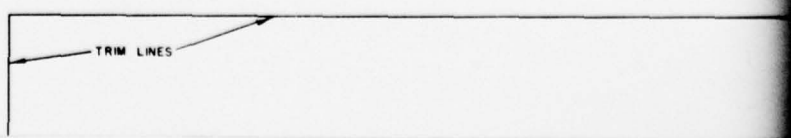


t_L

ANGLE
(mils)



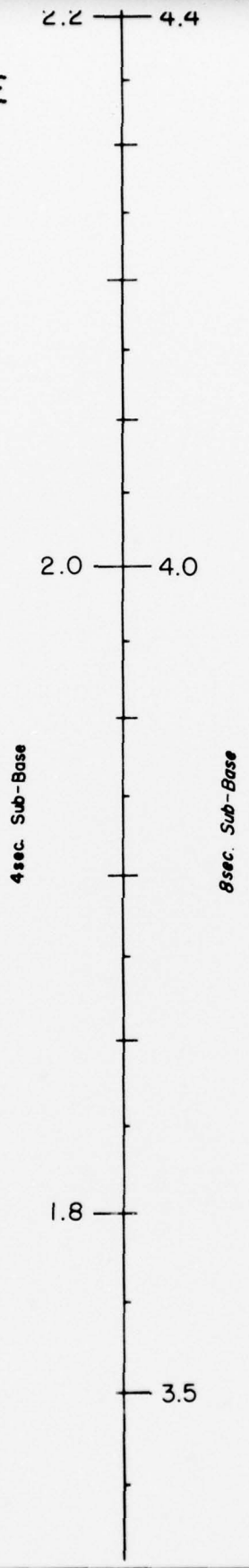
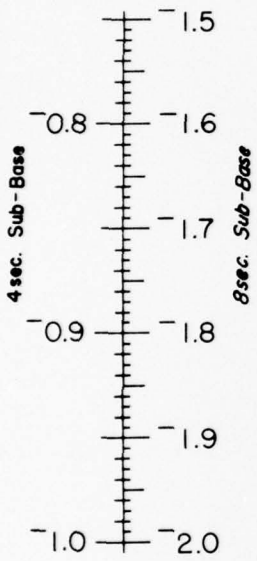
-1.5
-0.75

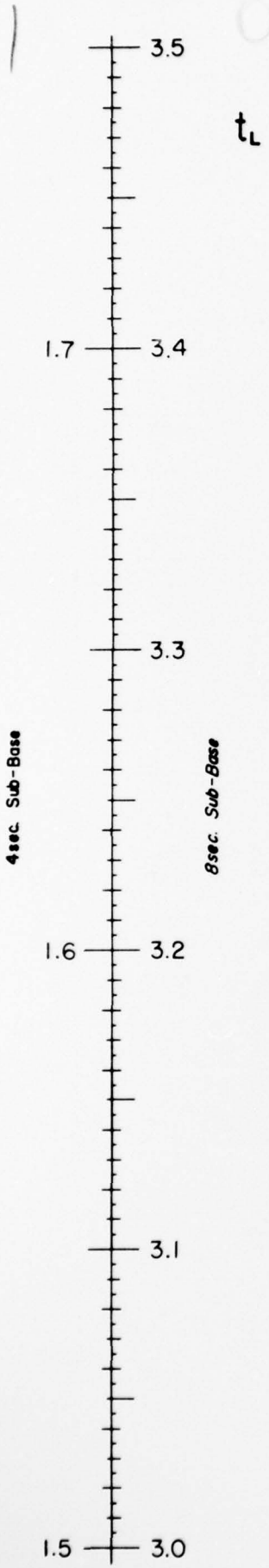


RANGE
(Km)

2

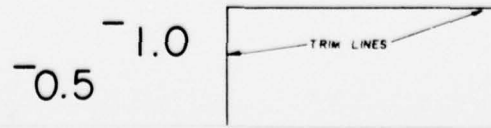
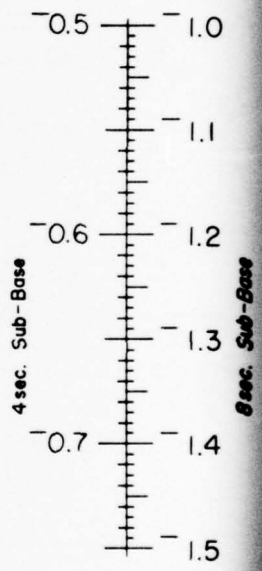
t_s





t_L

ANGLE
(mils.)



RANGE
(Km)

2

t_s



2.5 5.0

4.5

4 sec. Sub-Base

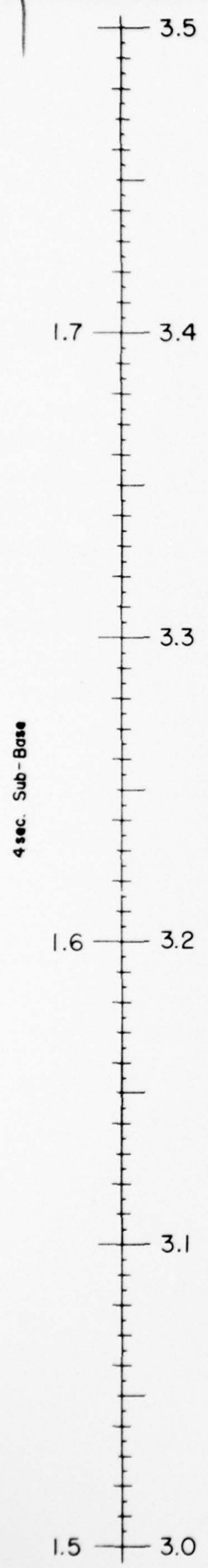
8 sec. Sub-Base

1.5 3.0

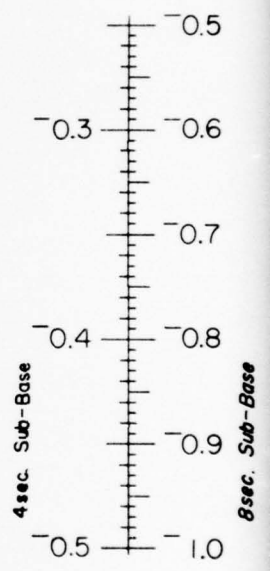
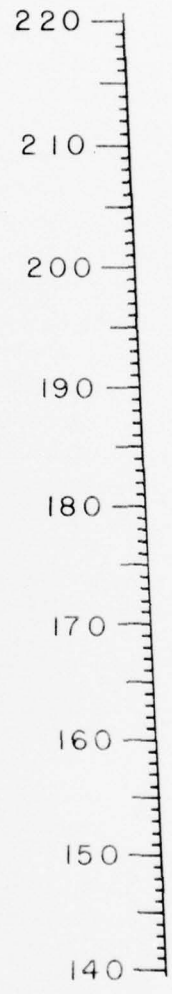
2.0 4.0

TRIM LINES

t_L



ANGLE (mils.)



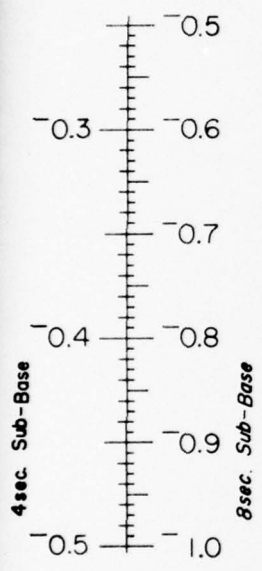
0.25 0.5



RANGE
(Km.)

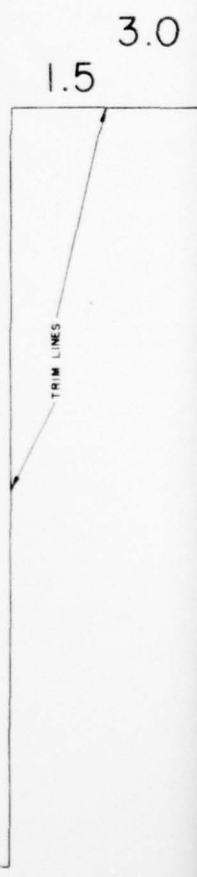


t_s

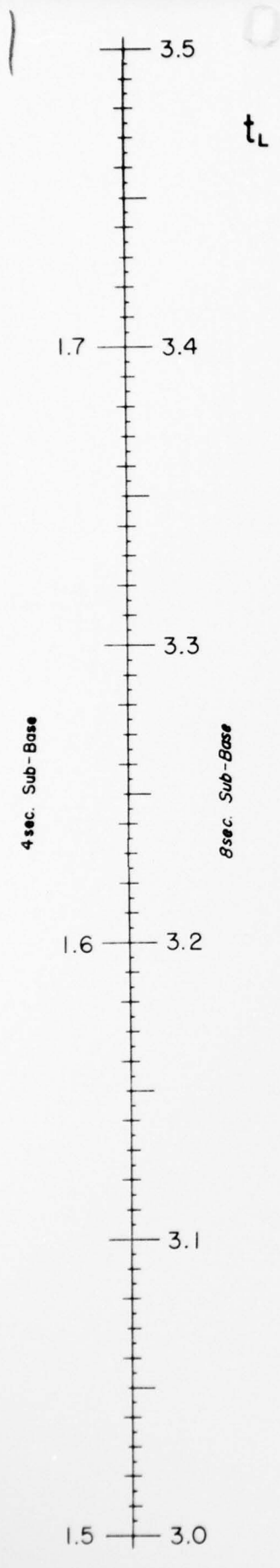


4 sec. Sub-Base

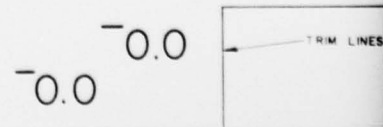
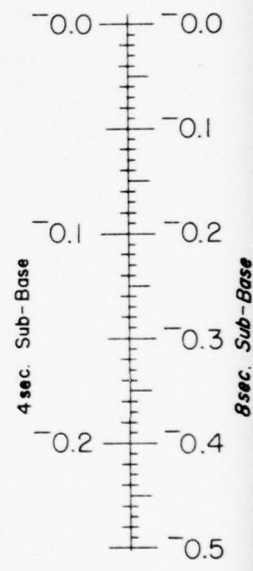
8 sec. Sub-Base



TRIM LINES

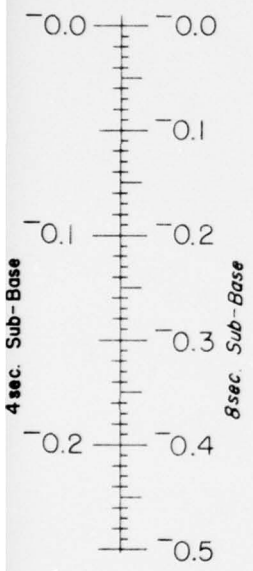


ANGLE
(mils)



RANGE
(Km.)

t_s



4 sec. Sub-Base

8 sec. Sub-Base

