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**EXPERIMENTAL SETTING FOR RESEARCH OF BALLISTICS
 MINES AND SHELLS**

Chygin V.I., Sviderok S.M., Krasnyuk O.P., Kuz'menko R.V., Smychek V.D.

In theory the construction of basic functional elements of the experimental setting and method of research of internal and external ballistics of mines and shells is grounded on spring and pneumatic models. Distances got at measurings of dependence and to the block hours, and also the heights of raising of models of mines and shells from the corner of increase at firing from model mortars are needed for debugging of the system of passive ph t - and radio-locations of trajectory of flight of mines and shells and raising of new method of adjustment of firings taking into account the meteo- and ballistic influencing.

Keywords: experimental setting, aerodynamics, trajectory, shell

355.432.2

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 1,5 . , .
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«...» [1].

«...» 300...400 / , (30 1 44 1,5), «...», 1 27 , 1,5 [2]. [2]

«...» «...» «...» () .

«...» [1] «...» () , 5 W=10 / E

$$E_{W_{x(z)}} = 0,8\sqrt{\Delta t} = 0,8\sqrt{\frac{\Delta d}{25}}; \tag{1}$$

$$E_{\Delta t} \tau = 0,6\sqrt{\Delta t} = 0,6\sqrt{\frac{\Delta d}{25}}; \tag{2}$$

«...» , Δt - () ; Δd - (1) (2)

$$E_{W_{x(z)}}^* = 0,8\sqrt{\Delta t + \frac{\Delta d}{25}} = 0,8\sqrt{\Delta t_y}; \tag{3}$$

$$E_{\Delta t}^* = 0,6\sqrt{\Delta t + \frac{\Delta d}{25}} = 0,6\sqrt{\Delta t_y}; \tag{4}$$

Δt -
 ; Δd -
 25 / -

$$\Delta t_y = \Delta t + \frac{\Delta d}{25}, \quad (5)$$

- 120 2 12 « »;
 - 122 -30;
 - 122 2 1 « »;
 - 152 2 3 « »;
 - 122,4 9 55 « ».

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 (45°),
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« » Δt_y = 4 .
 (5)

$$\Delta t = 4 - \frac{\Delta d}{a}, \quad (6)$$

a = 25 /
 a = 10 /

4 25

10

1

« »

3
 2 .-

2 .,

45°.

20-30 .

. 2.

	120	122	122	152	122,4
	2 12	-30	2 1	2 3	-21
	-	8 480	8 590	8 110	-
	-	6 930	6 920	-	-
1	695	6 060	6 010	7 340	-
2	1 220	5 150	5 070	5 920	-
3	1 700	4 020	4 020	4 730	-
4	2 200	2 990	2 950	4 180	-
5	2 660	-	-	3 590	-
6	3 110	-	-	2 710	-
	3 880	-	-	-	-
	-	-	-	-	7 100
	-	-	-	-	5 840
	-	-	-	-	3 910

2

	122		122		152	
	-30		2 1		2 3	
	5 180	15 300	5 140	15 260	5 630	17 053
	4 140	12 840	4 100	12 874	-	-
1	3 570	11 540	3 500	11 521	5 050	15 734
2	2 990	10 080	2 910	10 043	4 010	13 230
3	2 340	8 340	2 250	8 355	3 020	11 000
4	1 720	6 350	1 640	6 356	2 800	9 937
5	-	-	-	-	2 370	8 743
6	-	-	-	-	1 770	6 751

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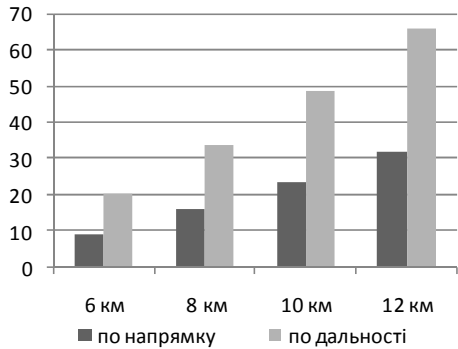
$$E_X^2 = 0,01(\Delta W^2 * E_{W_x}^2 + \Delta X_T^2 * E_{\Delta t}^2 + \Delta X_H^2 * E_{\Delta H_0}^2) \quad (7)$$

$$E_Z = 0,1 \cdot \Delta Z_W^2 \cdot E_{W_z} \cdot 0,001 \quad (8)$$

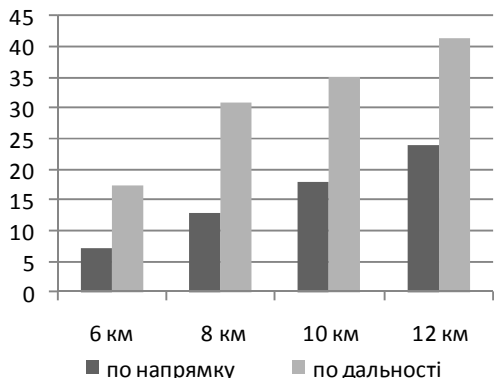
$\Delta Z(X)_W, \Delta X_T, \Delta X_H$
 () ()
 () ;
 $E_{W(z)}, E_{H_0}$
 « »
 (7) (8)
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 6, 8, 10 12 ()
 (.3).
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0	10,1	4,4	17	8	23,2	10,8	31,9	15,1
4	20	9	33,5	16	48,8	23,4	65,7	31,9
%	0,17	0,08	0,21	0,10	0,26	0,13	0,28	0,14

(1),
 « » (3).
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 (.1, 2).



.1.



.2.

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 : « », 1975. – .44 – 47.
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 : , 1978. – .37 – 51.
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 (, , , ,) –
 17.06.2008 261.
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 : , 2009. – 166 .
 2.11.2010 .

MEANS FOR REDUCTION OF METEOROLOGICAL INFORMATION OBTAINMENT TIME WHEN ORGANIZING GROUND ARTILLERY FIRING AND FIRE CONTROL

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The article examines the perspective means for reduction of meteorological information obtainment time from meteorological station to artillery units by decreasing of probing altitude and distance from fire positions.

Keywords: meteorological station, integrated probing, meteorological bulletin “ eteoserednii”.