

Naziv vježbe: 4. Sudari (zračna tračnica)		Fakultet elektrotehnike i računarstva Zavod za primijenjenu fiziku Zagreb	Prezime i ime:	
Grupa:	Dani:		JMBAG:	Ocjena:

1)	$v_1$	$v_2$	$v_1'$	$v_2'$	$q$	$k$	$S_q$	$S_k$	$q_0$
mjeritelj 1	83,376	0	-18,004	56,250	0,5516	0,8842	0,0128	0,0128	
mjeritelj 2	90,216	0	-17,580	57,360	0,5321	0,8307			
mjeritelj 3	96,211	0	-17,112	57,500	0,5074	0,7755			

$$q_0 = \frac{m_1}{m_2}$$

$$k = \frac{|v_2' - v_1'|}{|v_1|}$$

$$u_q = S_q = \sqrt{\frac{(q_1 - \bar{q})^2 + (q_2 - \bar{q})^2 + (q_3 - \bar{q})^2}{3 \cdot 2}} = 0,0128$$

$$q = \frac{v_2'}{v_1 - v_1'}$$

$$u_k = S_k = \sqrt{\frac{(k_1 - \bar{k})^2 + (k_2 - \bar{k})^2 + (k_3 - \bar{k})^2}{3 \cdot 2}} = 0,0128$$

Srednja vrijednost

$$\bar{q} = \frac{q_1 + q_2 + q_3}{3} = 0,5304$$

$$\bar{k} = \frac{k_1 + k_2 + k_3}{3} = 0,8301$$

$$q_{mer.} = (\bar{q} \pm u_q) [m \cdot s]$$

$$q_{mer.} = (0,530 \pm 0,013)$$

$$k_{mer.} = (\bar{k} \pm u_k) [m \cdot s]$$

$$k_{mer.} = (0,830 \pm 0,013)$$

$v_1$	$v_1'$	$v_2'$	$q$	$k$	$S_q$	$S_k$	$q_0$
91,060	4,12	94,310	1,0848	0,9904	0,1266	0,0020	
58,875	8,287	65,814	1,3010	0,9771			
70,313	7,100	75,616	1,1962	0,9744			

$$\bar{q} = \frac{q_1 + q_2 + q_3}{3} = 1,1940$$

$$u_q = S_q = 0,1266$$

$$\bar{k} = \frac{k_1 + k_2 + k_3}{3} = 0,9806$$

$$u_k = S_k = 0,0020$$

$$q_{mer.} = (1,19 \pm 0,13)$$

$$k_{mer.} = (0,9806 \pm 0,0020)$$

	$V_1$	$V_2'$	$q$	$Sq$	$\bar{q}_1$
medie 1	81,9	20,9	0,4823	0,0172	0,4550
medie 2	94,4	25,6	0,3721		
medie 3	106,5	36,0	0,5106		
medie 4	86,583	20,4	0,3082	0,0312	0,3377
medie 5	107,90	26,0	0,375		
medie 6	118,87	33,2	0,3875		

$$q_0 = \frac{m_1}{m_2}$$

$$q = \frac{|v_2'|}{|v_1 - v_2'|}$$

$$\bar{q}_1 = 0,4550$$

$$\bar{q}_2 = 0,3377$$

$$q_{med.1} = (0,455 \pm 0,017)$$

$$q_{med.2} = (0,338 \pm 0,031)$$