

**ANALYSIS OF AVALANCHE  
DANGER ON THE  
TSULZHANSKAIA TRACK  
MAINTENANCE DEPARTMENT OF  
THE KRASNOYARSK RAILWAY.  
MEASURES OF FIGHT AGAINST  
AVALANCHES.**

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group S-211**

**Siberian Transport University**



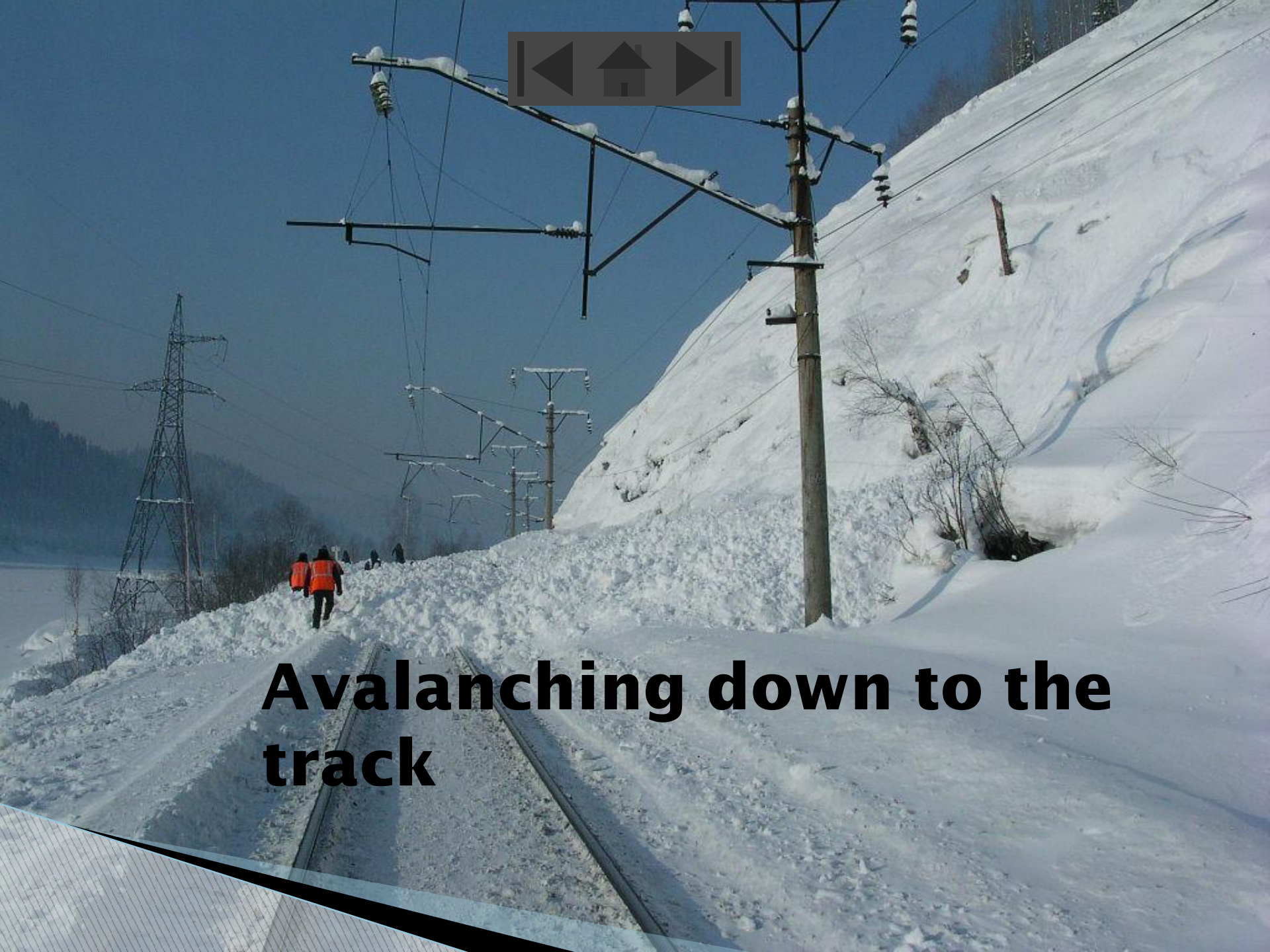
Every year the considerable part of money for snow control on mountain sites of railways spends on elimination of consequences of avalanching





# **Difficult environments within 200 km of the Tsulzhanskaia track maintenance department along the Tom' river**

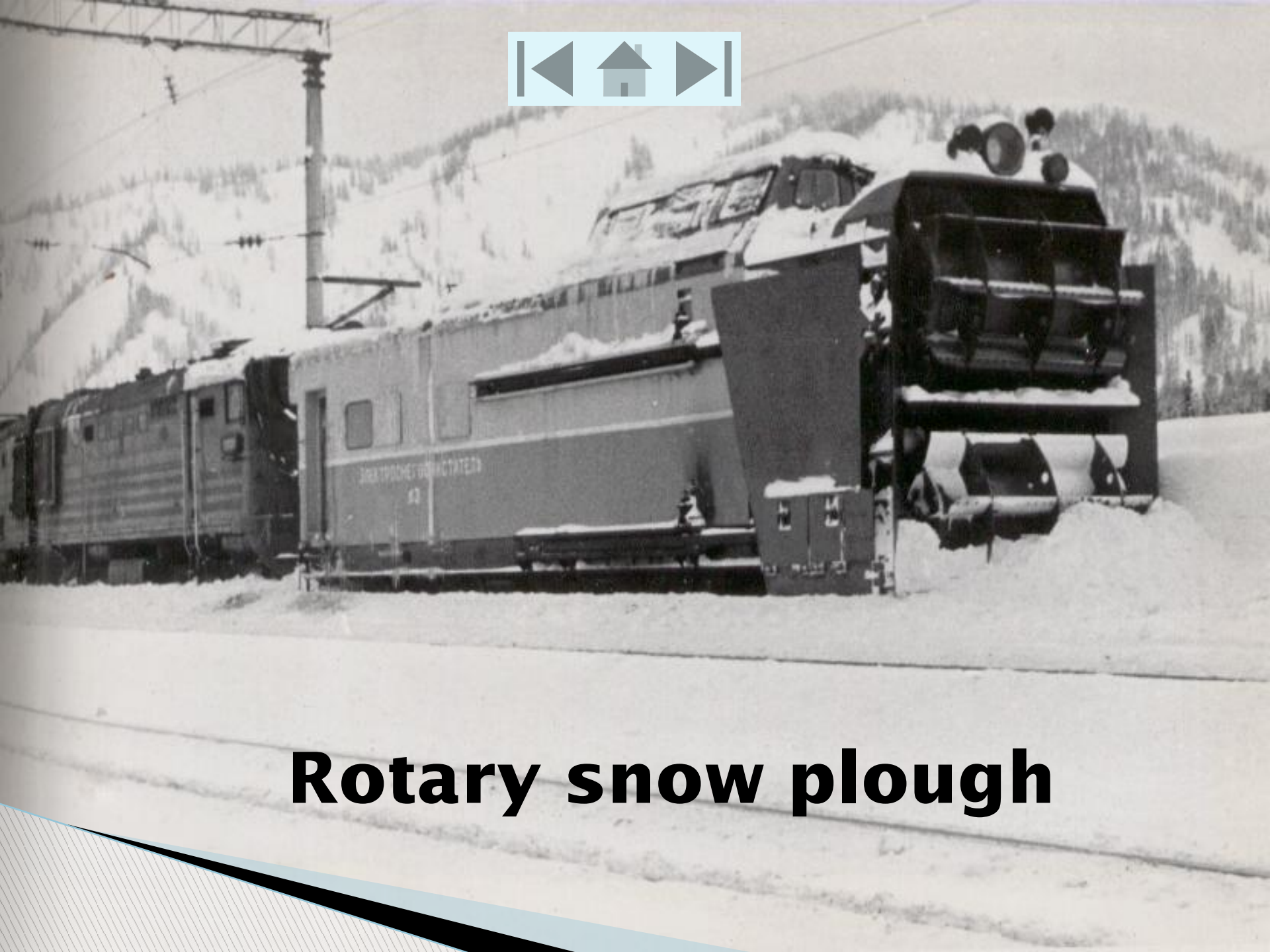
- 4,700 m of avalanche dangerous places
- 1,600 of mudflow dangerous places
- 6,100 m of toppling dangerous places
- 20,580 m of terrace erosion and an embankment base undermining



**Avalanching down to the track**



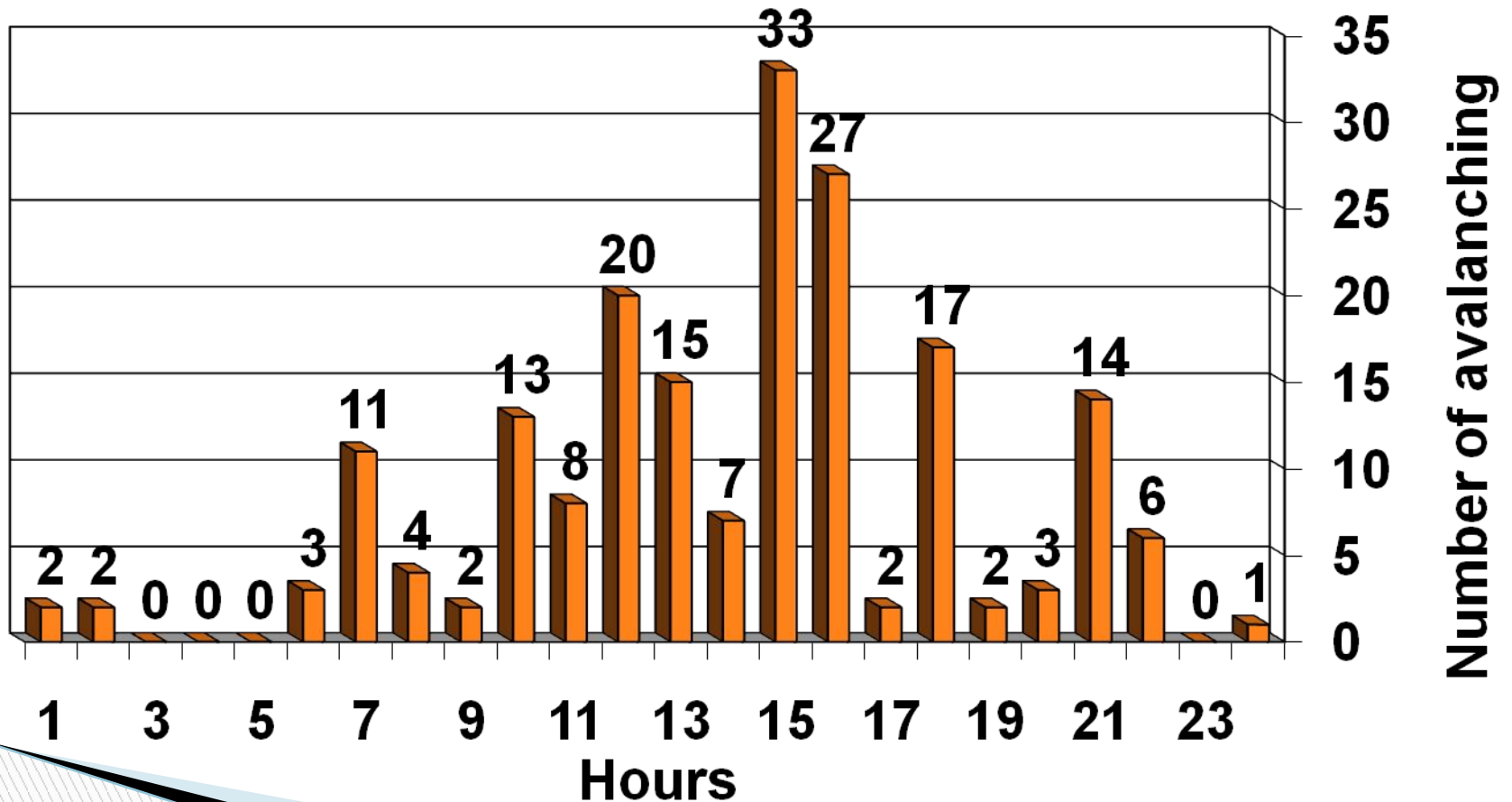
**Blockages liquidation**



**Rotary snow plough**

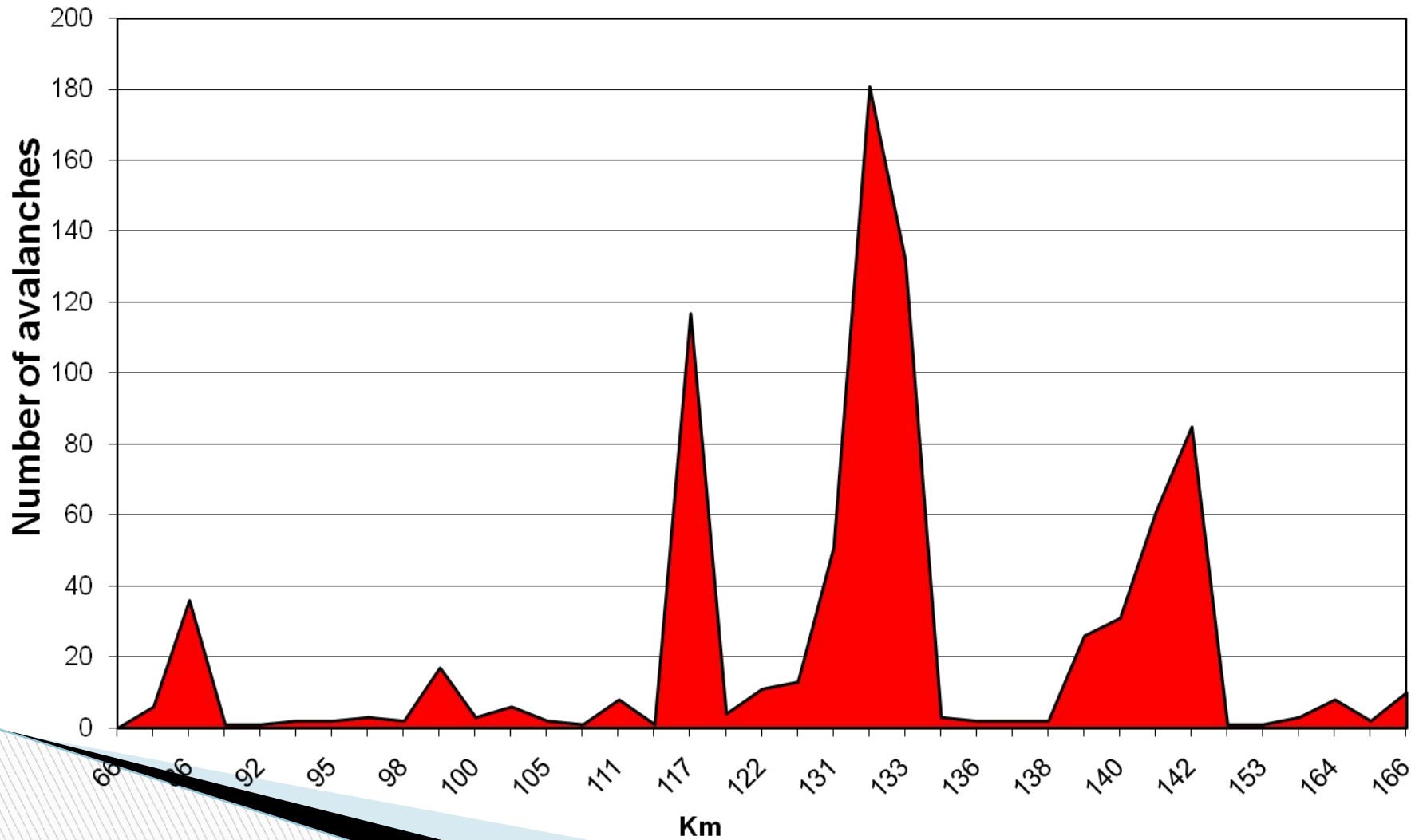


# Number of avalanching for twenty-four hours





# Areas of avalanching

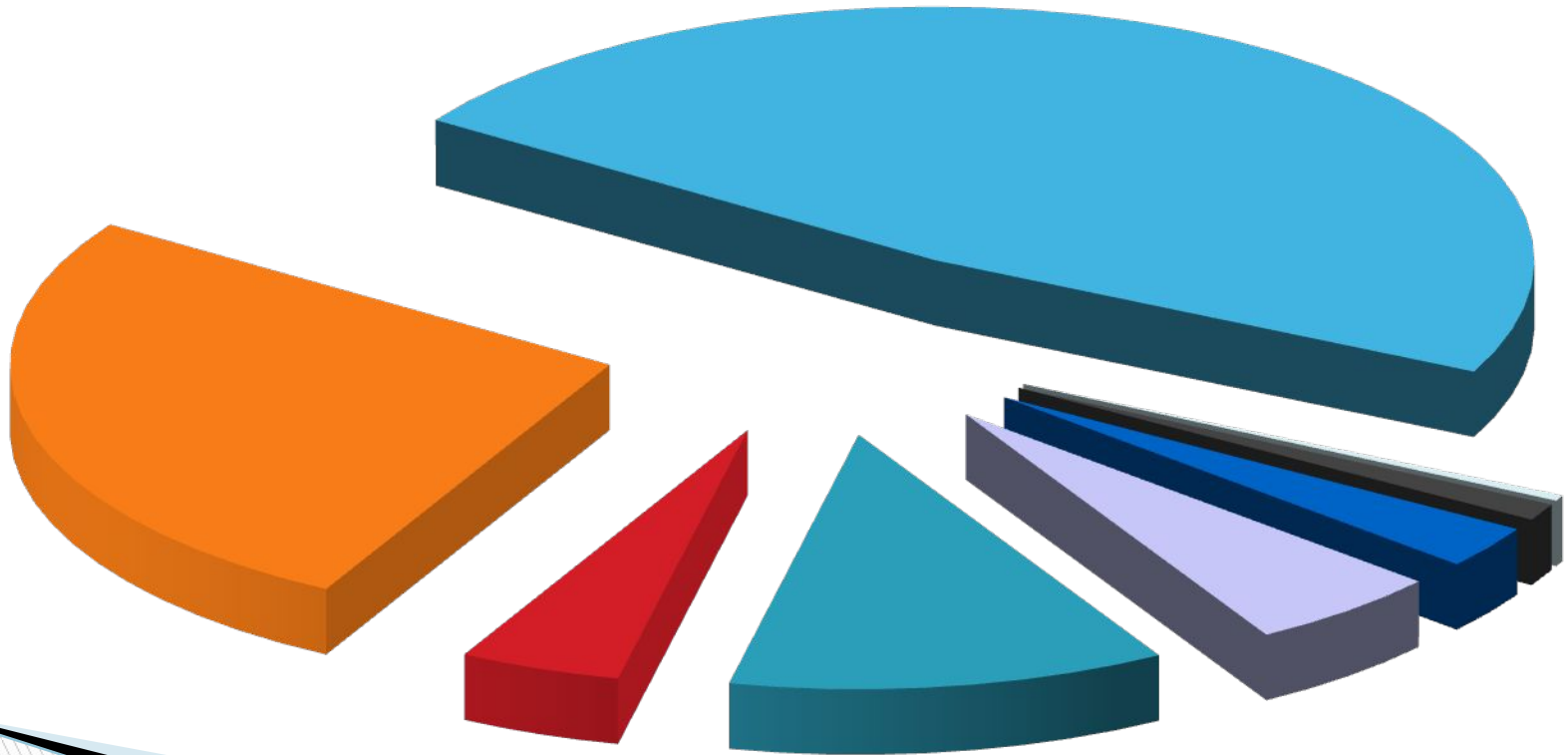






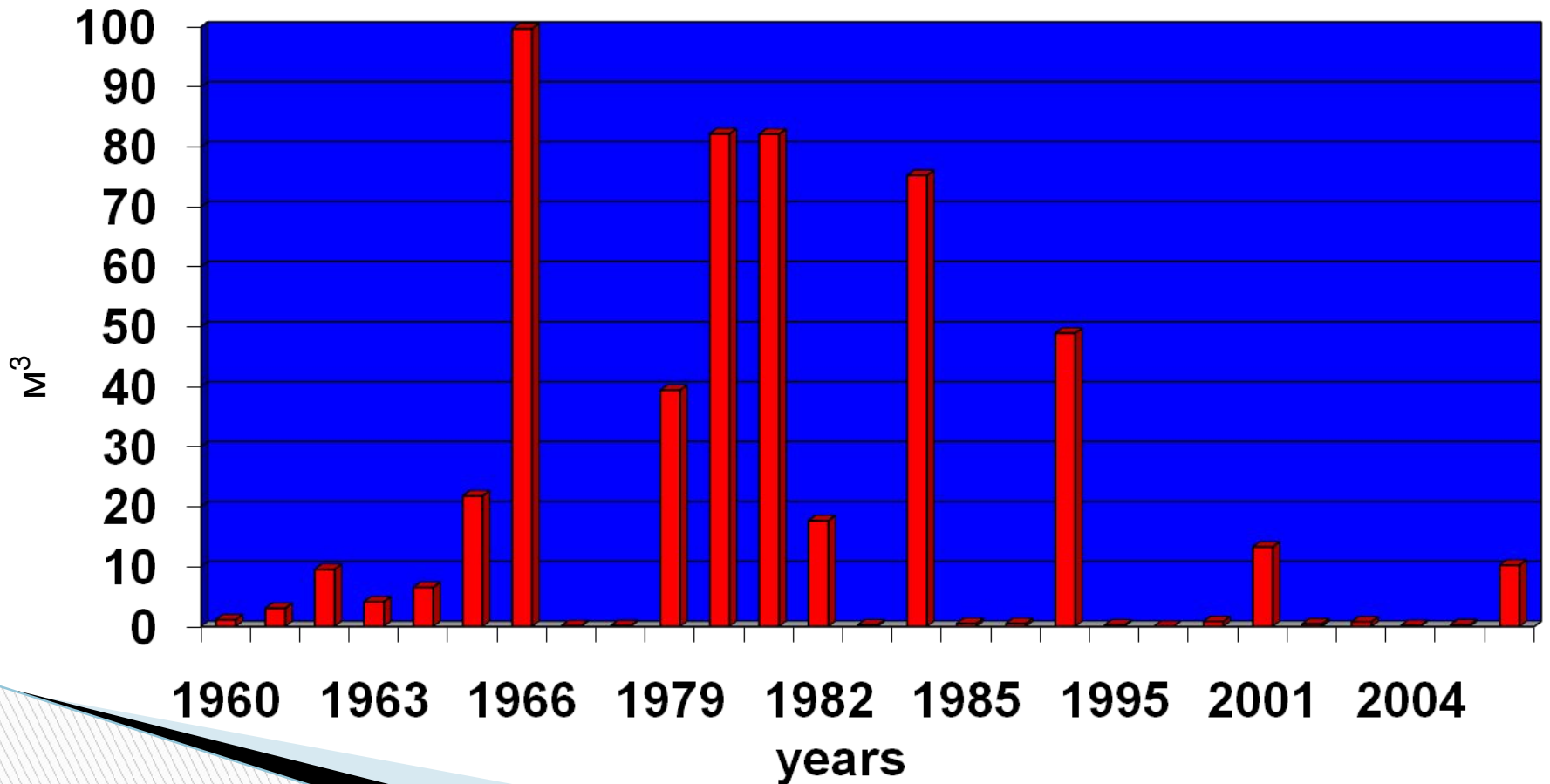
## Number of avalanching, months %

■ Jan ■ Feb ■ March ■ April ■ Others ■ October ■ Nov ■ Dec





# Volume of avalanching, thousand $m^3$



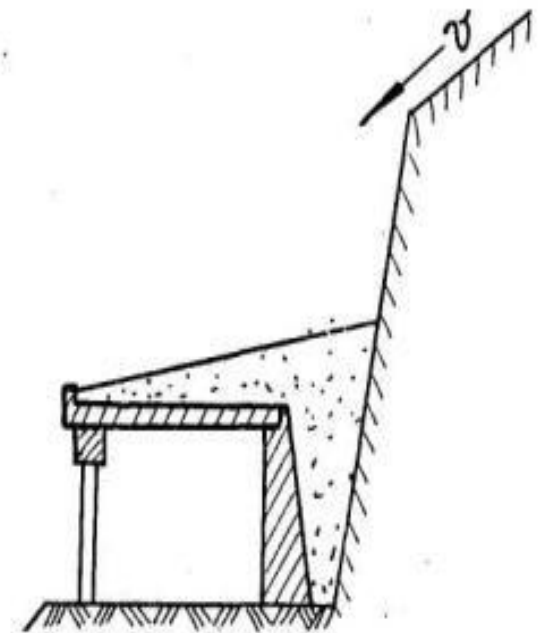
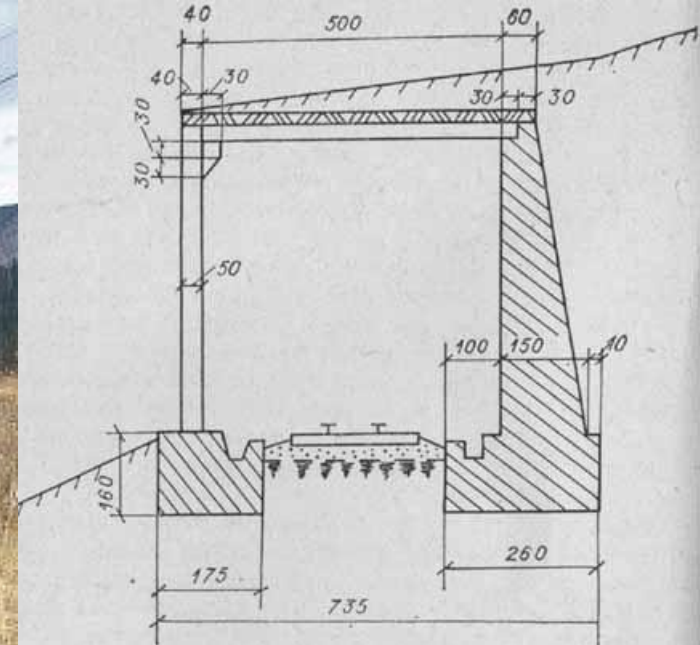
# Shelling from artillery





# **Snow- restraint cage constructions**





# Avalanche gallery

**THANK YOU FOR YOUR ATTENTION!**

