

The Addition S2.

To Section 4.1. Sheveluch Volcano Activity in 2015-2022



Figure S15. The state of the Sheveluch volcano lava dome on February 18, 2015. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2056.jpg>)



Figure S16. The explosions sent ash up to 10 km a.s.l. from the Sheveluch volcano on March 25, 2015. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2067.jpg>)

NetCam XL Wed Oct 28 00:42:01 2015
Sheveluch volcano
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Russian Academy of Sciences & project of Alexander Belousov.



Figure S17. A growth of the large extrusive block on the northern part of the Sheveluch lava dome continues. Video data by IVS FEB RAS on October 28, 2015 (<http://www.kscnet.ru/ivs/kvert/imgs/2132.jpg>)



Figure S18. Small explosions and hot avalanches from the Sheveluch lava dome sent ash up to 4 km a.s.l. on October 28, 2015. Ash plume extended to the northwest of the volcano. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2133.jpg>)



Figure S19. The large northern block of the Sheveluch dome covered with lava flows as of March 11, 2016. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2905.jpg>)

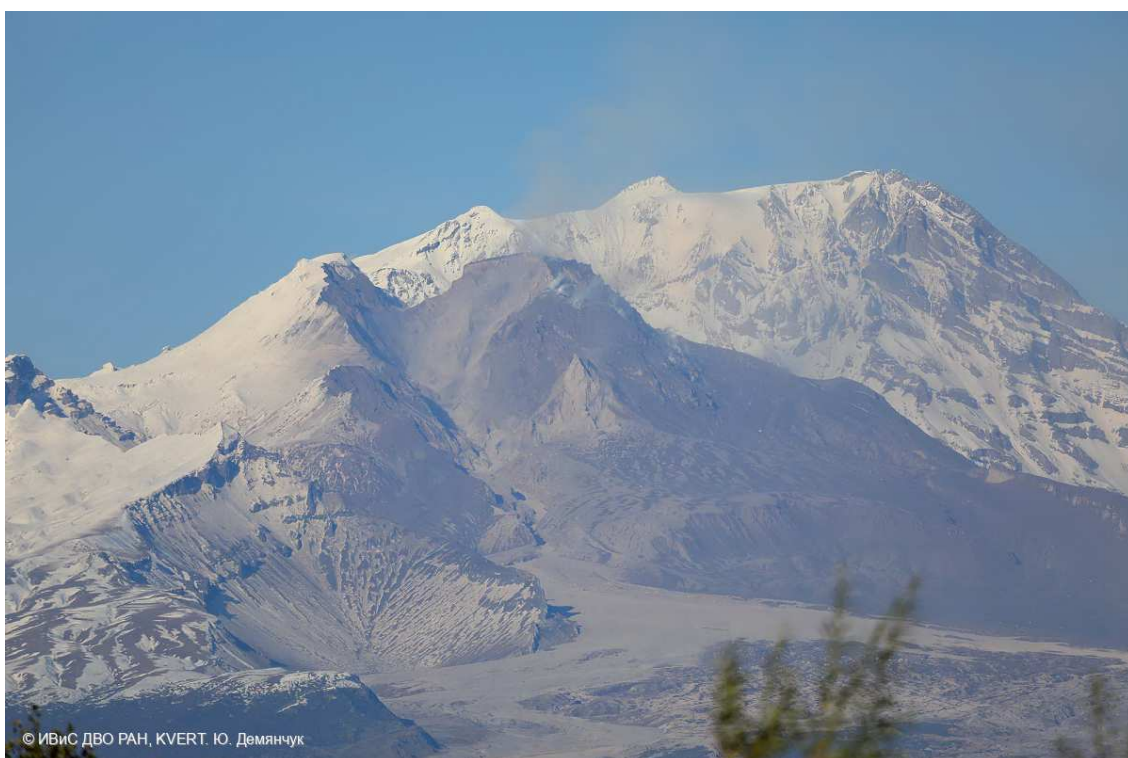


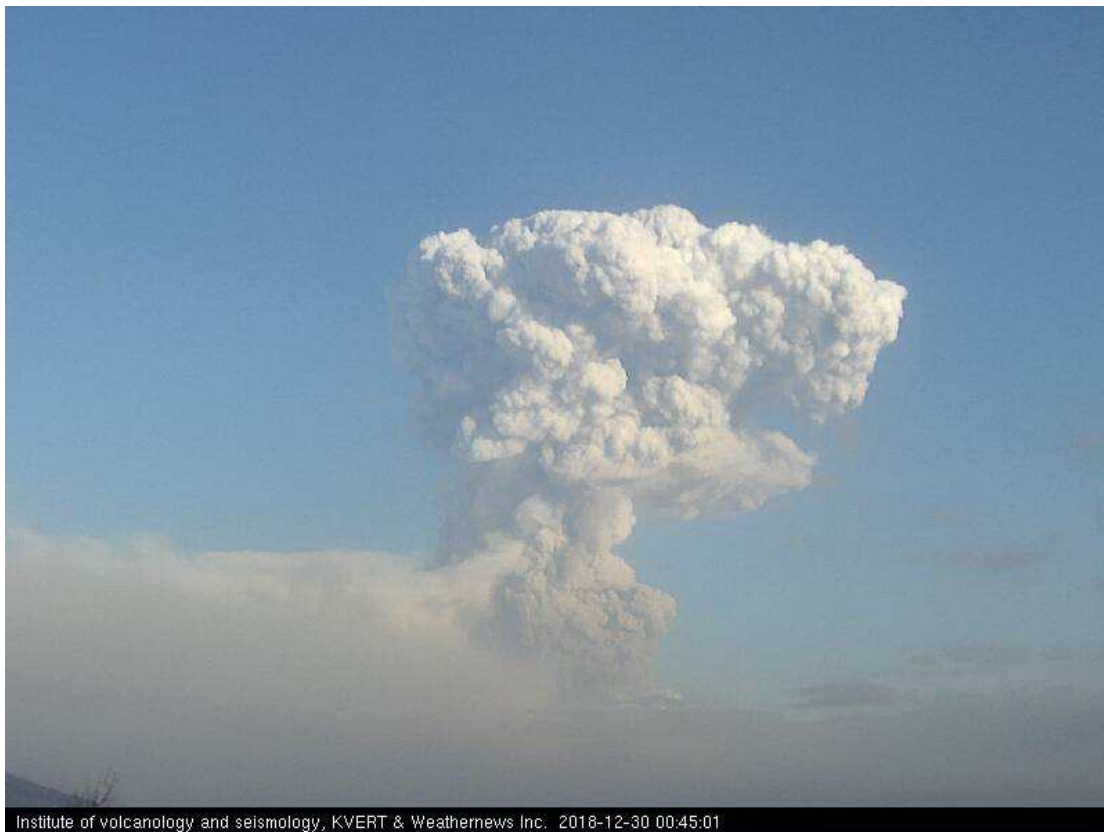
Figure S20. Result of a large lava block collapse in the northwestern part of the Sheveluch dome. Photo by Yu. Demyanchuk on September 23, 2016. (<http://www.kscnet.ru/ivs/kvert/imgs/2906.jpg>)



Figure S21. Explosive activity of the Sheveluch volcano on October 14, 2016. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2208.jpg>)



Figure S22. Explosions sent ash up to 10 km a.s.l. on December 04, 2017, ash plume is extending to the northeast from the Sheveluch volcano. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2333.jpg>)



Institute of volcanology and seismology, KVERT & Weathernews Inc. 2018-12-30 00:45:01

Figure S23. Explosions sent ash up to 10 km a.s.l. on December 30, 2018. The eruptive cloud was dividing on two plumes: its upper part drifted to the northeast, and lower part to the west-southwest of the Sheveluch volcano. Video data by KVERT IVS FEB RAS and Weathernews Inc. (<http://www.kscnet.ru/ivs/kvert/imgs/2408.jpg>)



Figure S24. The explosive eruption of Sheveluch volcano on October 01, 2019. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2505.jpg>)



Figure S26. A new lava block of dacite composition extrude out in the eastern part of the Sheveluch lava dome. The lava block was named "Dolphin". Photo by Yu. Demyanchuk on September 28, 2020 (<http://www.kscnet.ru/ivs/kvert/imgs/2590.jpg>)



Figure S27. The destroyed lava block "Dolphin" in the eastern part of the Sheveluch dome in the rays of the setting sun. Photo by Yu. Demyanchuk on December 08, 2020 (<http://www.kscnet.ru/ivs/kvert/imgs/2652.jpg>)

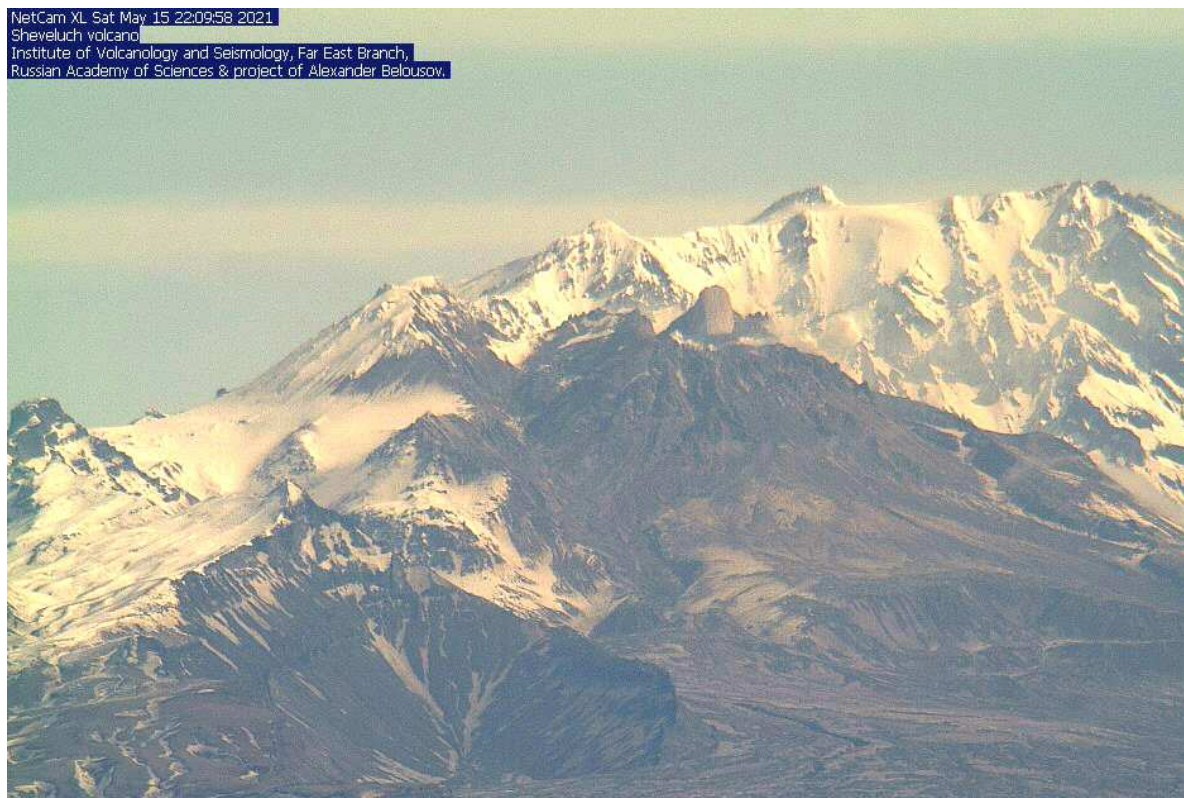


Figure S28. The plastic lava block "Dolphin-2" at the top of the Sheveluch dome on May 15, 2021. Video data by IVS FEB RAS (<http://www.kscnet.ru/ivs/kvert/imgs/2697.jpg>)



Figure S29. The squeezing out juvenile matter on the Sheveluch lava dome on August 26, 2021. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2729.jpg>)

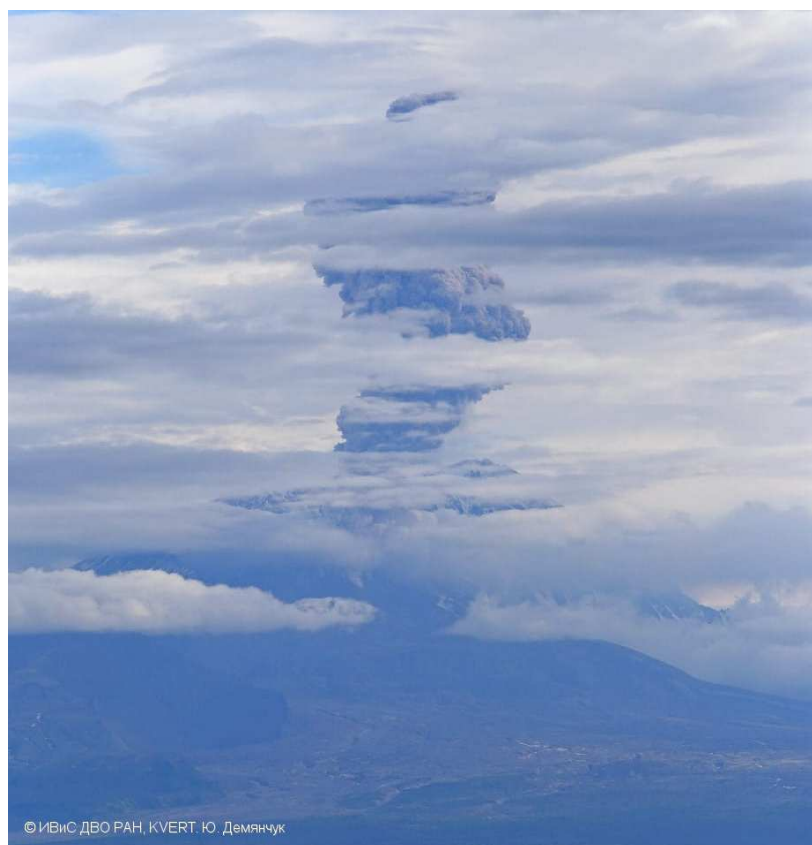


Figure S30. The explosions sent ash up to 7 km a.s.l. from the Sheveluch lava dome on June 19, 2022. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2785.jpg>)



Figure S31. The growth of the Sheveluch dome accompanied by high gas-steam activity, an incandescence of the dome, and the collapse of hot avalanches. Photo by Yu. Demyanchuk on August 05, 2022 (<http://www.kscnet.ru/ivs/kvert/imgs/2798.jpg>)



Figure S32. The southern part of the Sheveluch dome covered by lava flows.
Photo by I. Nuzhdaev on October 17, 2022 (<http://www.kscnet.ru/ivs/kvert/imgs/2907.jpg>)



Figure S33. The powerful gas-steam activity and the hot avalanches collapses from the Sheveluch dome top on November 29, 2022. Photo by Yu. Demyanchuk (<http://www.kscnet.ru/ivs/kvert/imgs/2892.jpg>)