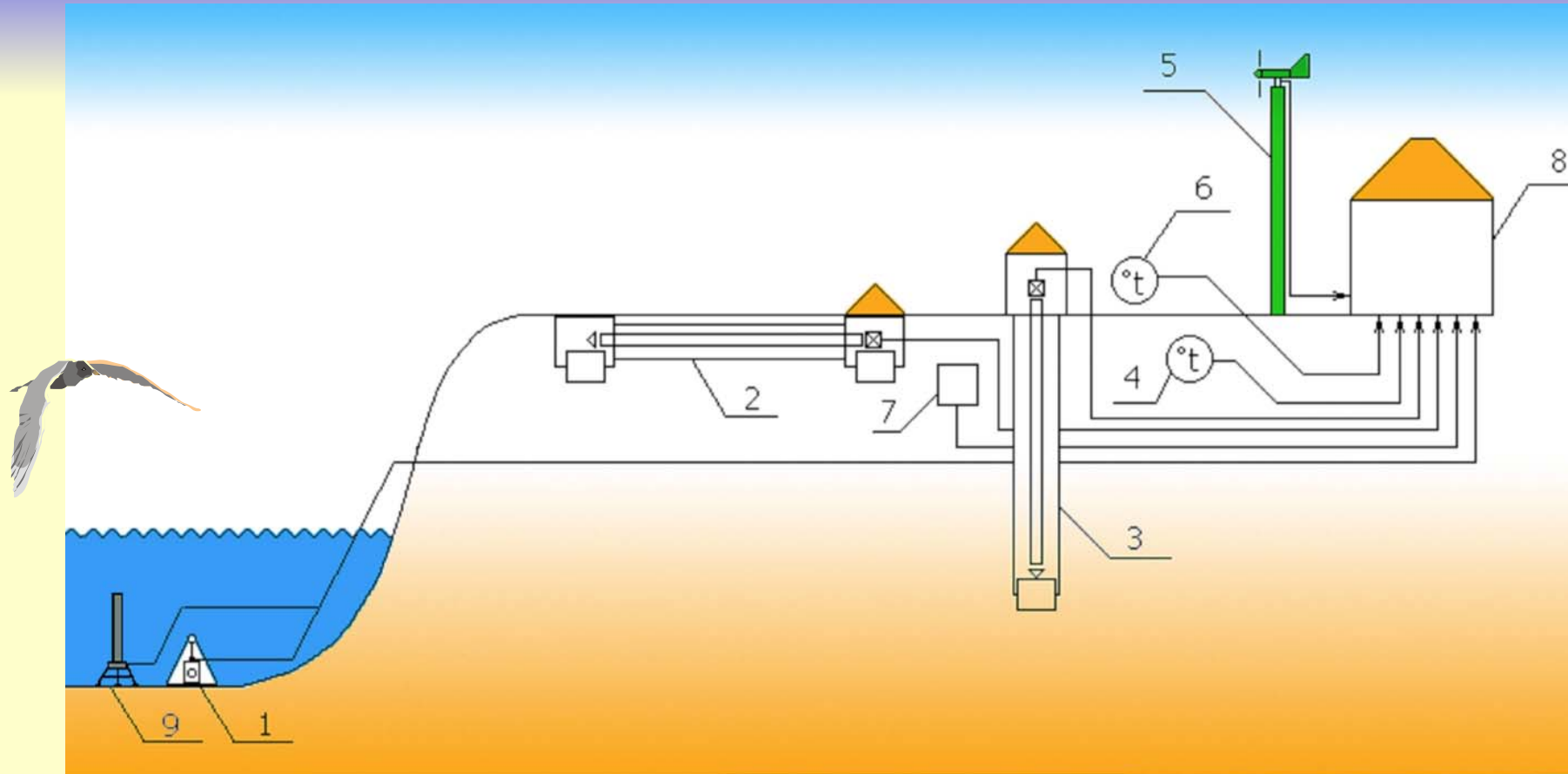


# DEFORMATION MONITORING OF THE TSUNAMI

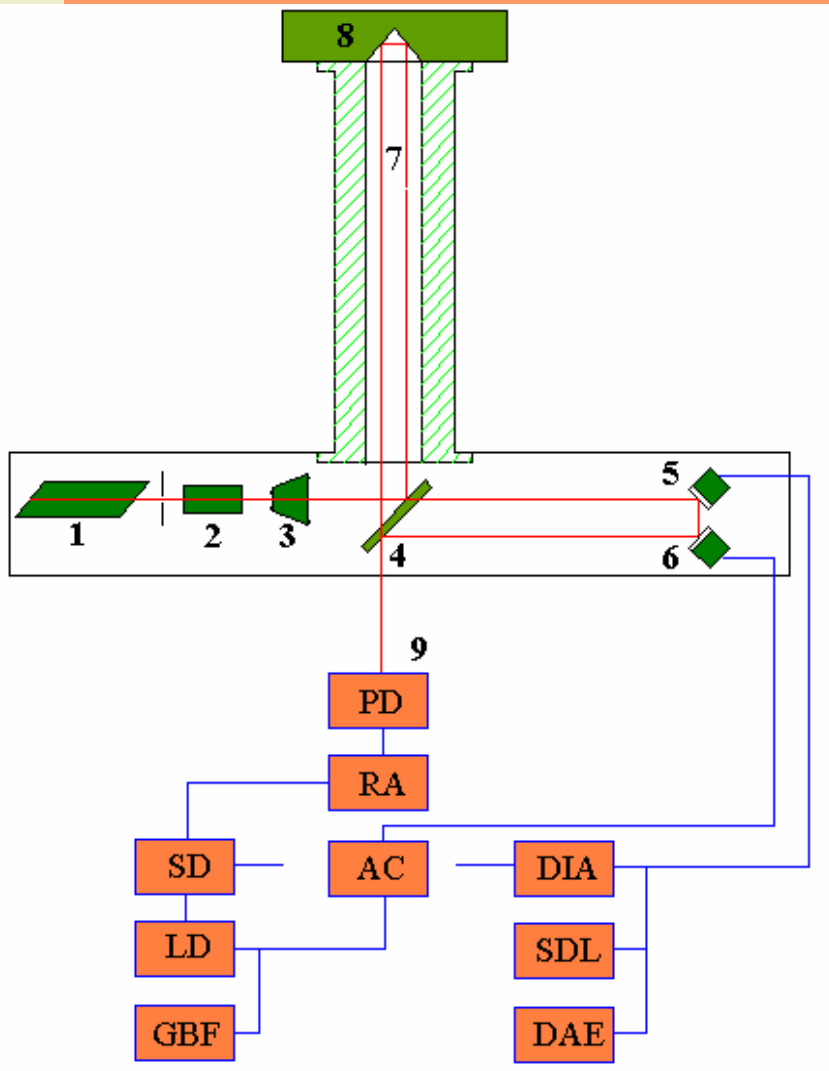
S.G. Dolgikh  
POI FEB RUS

# Seismoacoustic-hydrophysical complex



- 1 – Sea bottom station, 2 - horizontal 52,5-meter laser strainmeter,  
3 - vertical 3,5-meter laser strainmeter, 4 - soil thermograph,  
5 - anemograph, 6 - air thermograph, 7 - laser nanobarograph,  
8 - a laboratory room, 9 - measuring instrument of variations of pressure of hydrosphere

# Laser strainmeter

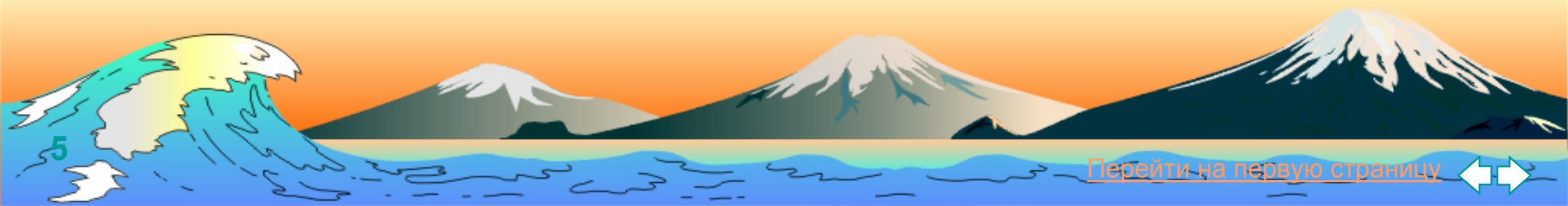


1 - laser, 2 - optical shutter, 3 - collimated,  
4 - translucent plane-parallel plate PI-100, 5 and 6  
plane-parallel mirrors on piezoceramic cylinders, 7  
- optical path, 8 - angular reflector or system «eye  
of a cat», PD - the photo diode, RA - resonant  
amplifier, SD - synchronous detector, AC - amplifier  
of capacity, LD - line of a delay, DIA - the  
differential integrated amplifier,  
SDL - system of dump of levels, GBF - generator of  
basic frequency, DAE - data-acquisition equipment

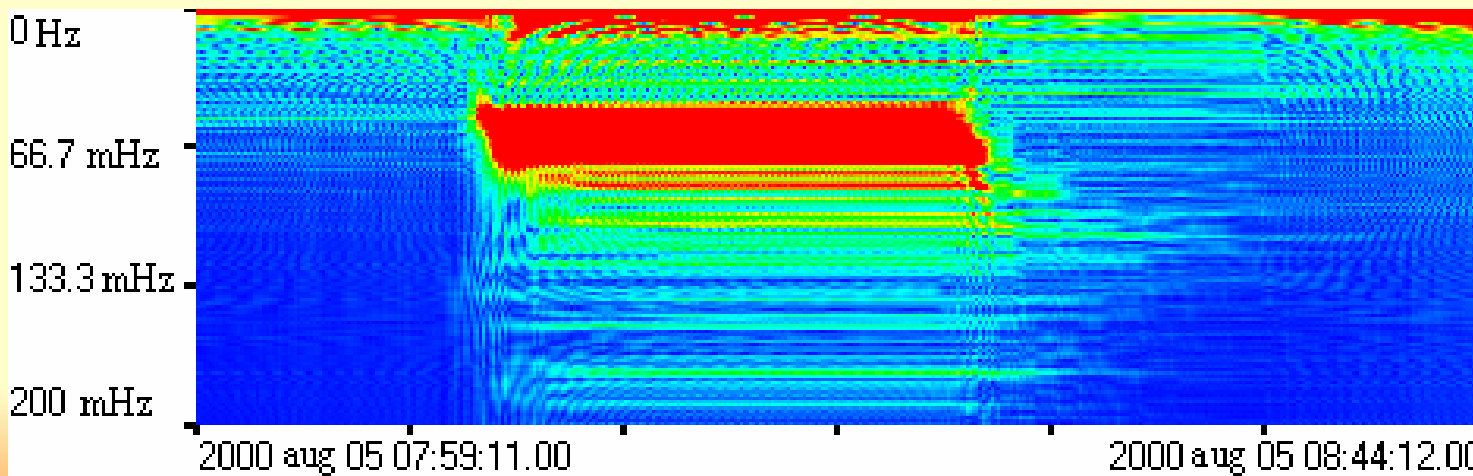
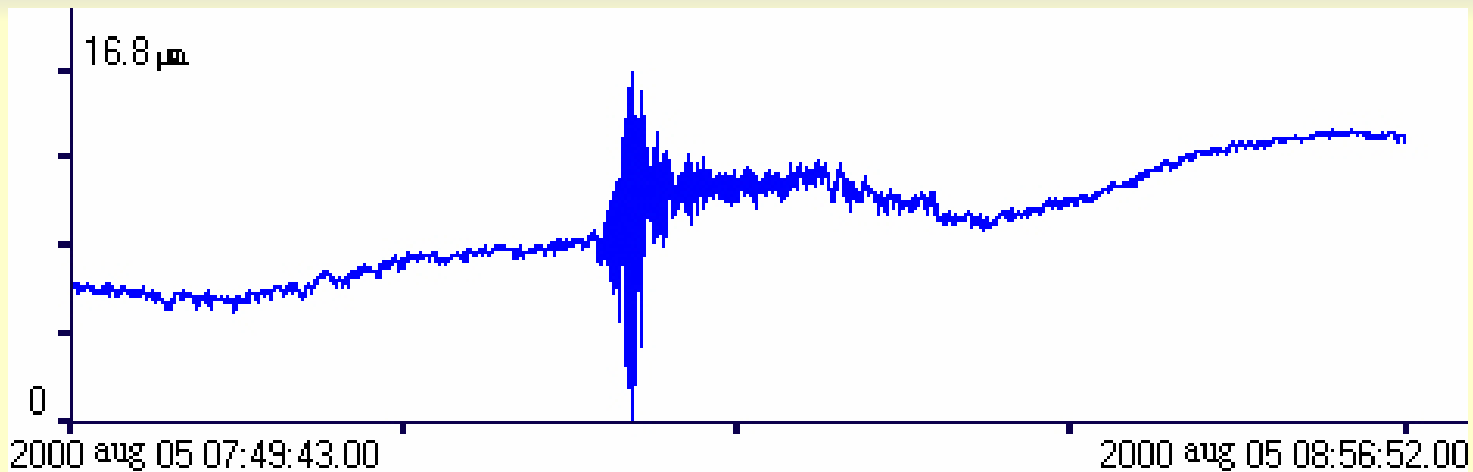
# Underground and ground parts of laser strainmeter, GPS-receiver



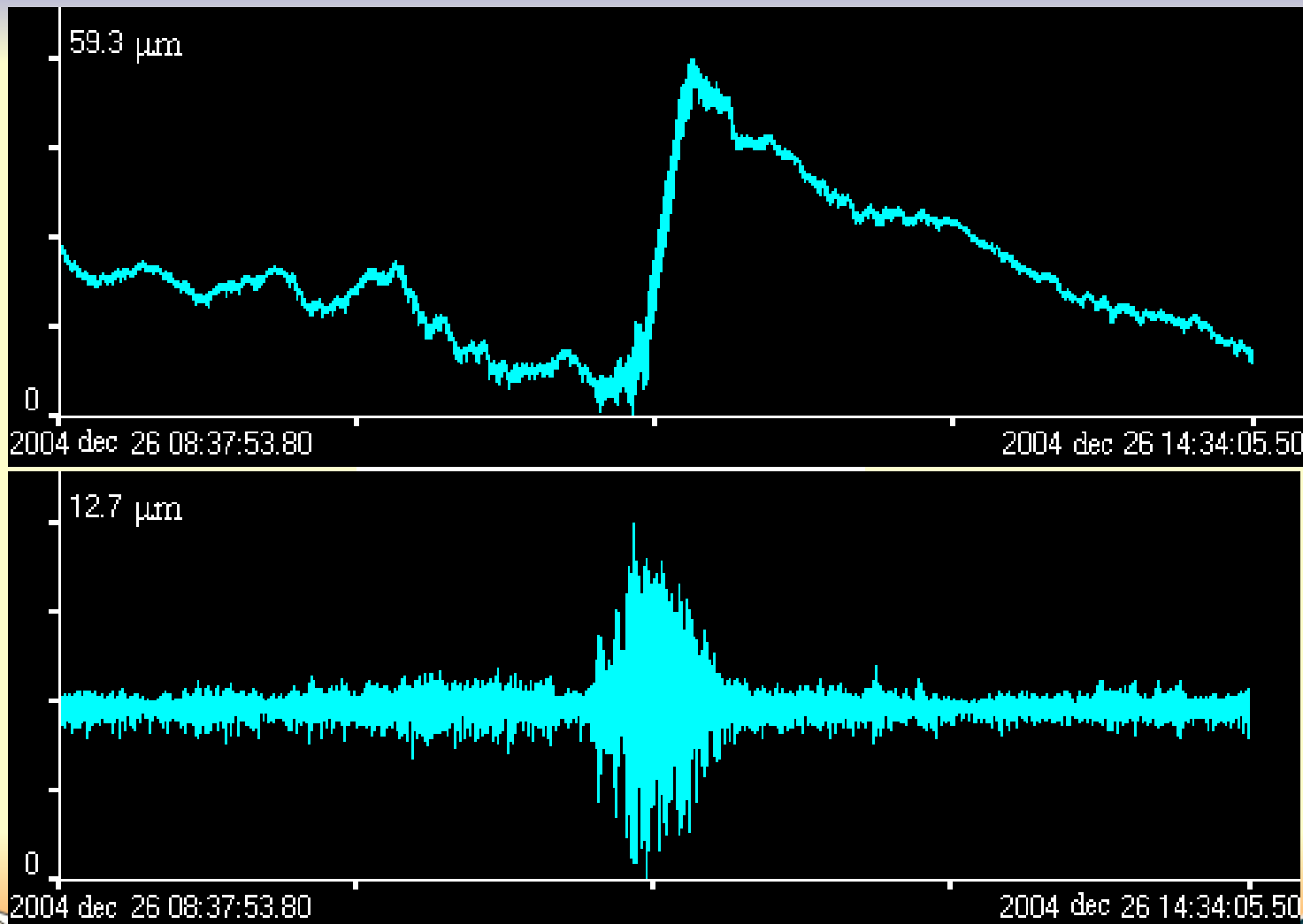
# Appearance of digital system of registration



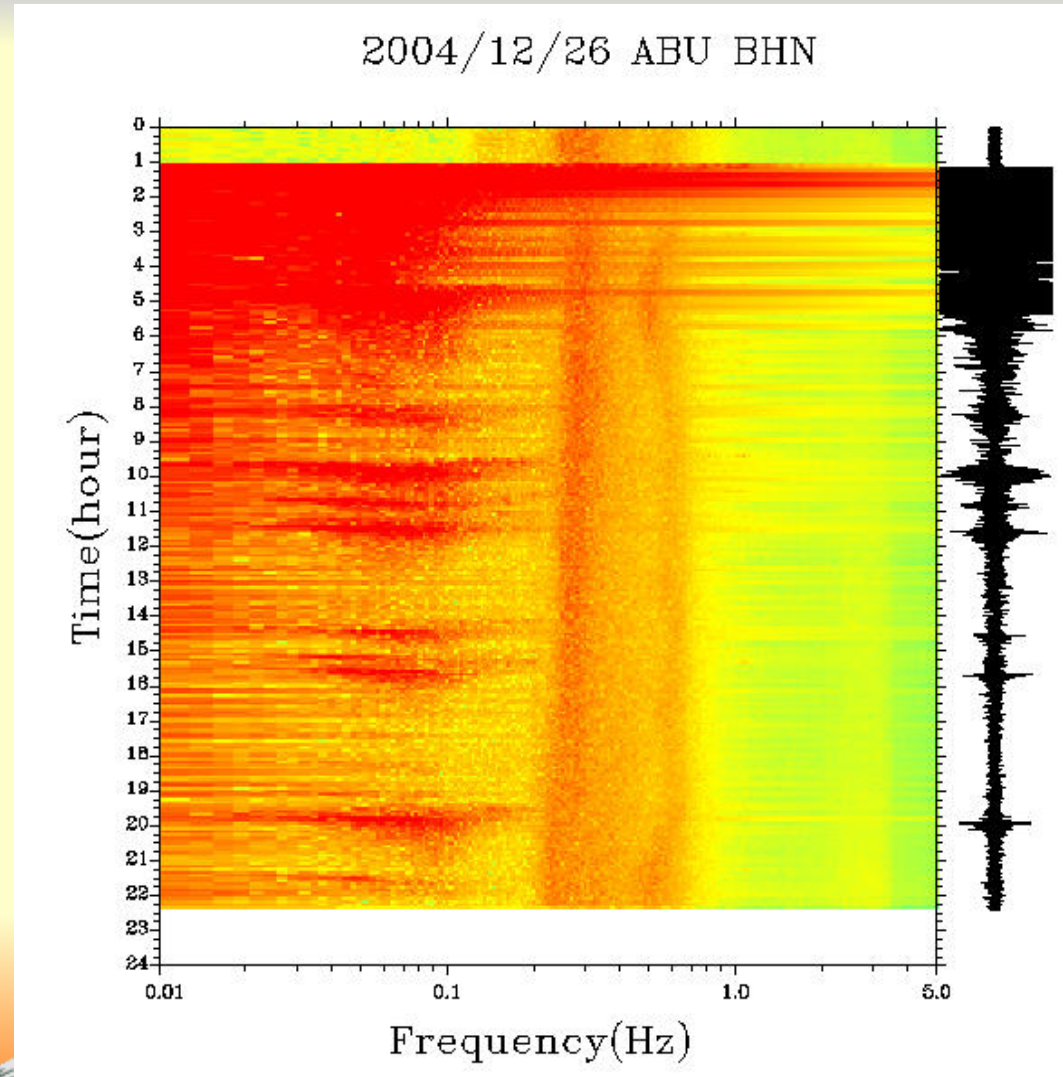
# The Sakhalin earthquake



# Record tsunamigenic earthquake

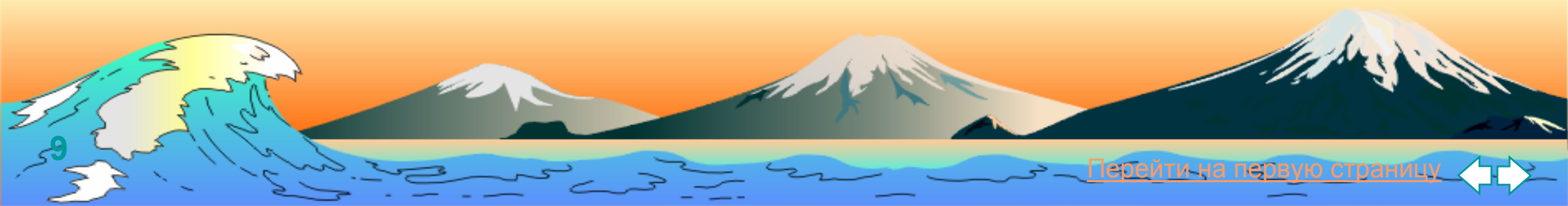
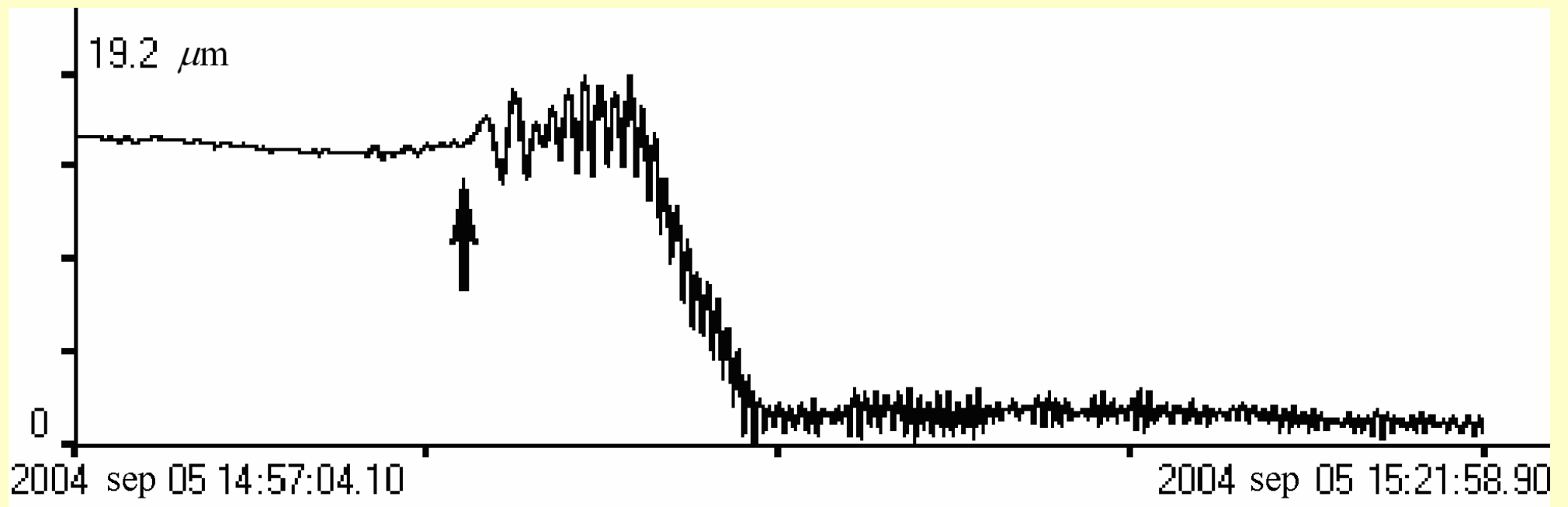


# The spectrogram and record of a broadband seismograph of the Japanese station

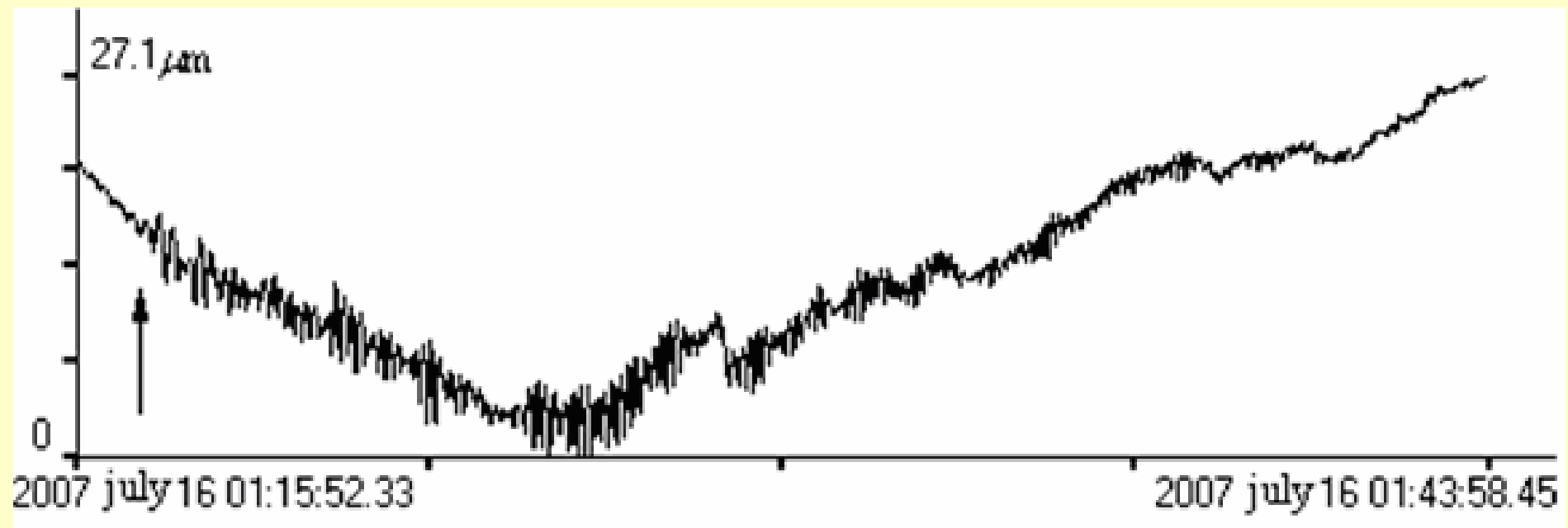




# Record tsunamigenic earthquake in Pacific ocean



# Record tsunamigenic earthquake in the Sea of Japan



# CONCLUSION

On the basis of the experimental data received with the help of 52,5-meter laser strainmeter at registration of earthquakes, having place under oceans, perspective of use laser strainmeters is proved at definition of earthquakes tsunamigenic degree. Taking into account, that propagation velocity of the deformation anomalies causing a tsunami is much more than propagation velocity of a tsunami, the deformation method of definition of earthquakes tsunamigenic is the most perspective at use in warning services of a tsunami.

