

the universe expanded and cooled, these particles combined to form larger particles like protons and neutrons.

Another question scientists have about matter deals with early conditions in the universe. During the earliest moments of the universe, matter and energy were coupled. Just after matter and energy separated, particles of matter and antimatter annihilated each other.

## POLLUTION IN UKRAINE

Dodotchenko M.S., *group EK-71*,  
L. Iarmak, *E.L. advisor*

Pollution is the contamination of the environment air, water, and land. Such contamination originates from human activities that create waste products. An industrial and intensively farmed country, Ukraine contains some of the most polluted landscapes in Eastern Europe. Pollution became evident in Ukraine with industrial development in the 19<sup>th</sup> century.

Air pollution is especially severe in many cities and towns of southeastern Ukraine, notably in Kharkiv, Luhansk, Donetsk, Dnipropetrovsk and Zaporizhia. Metallurgical coke-chemical plants, steel mills, and thermal power plants are major sources of high levels of uncontrolled emissions of sulphur dioxide, dust, unburned hydrocarbons, and other harmful substances. Other Ukrainian cities with major chronic air pollution problems include Kyiv, Komunarsk, Makiivka and Odesa.

Over one-third of the emissions into the atmosphere originate, from automobile transport. That source is aggravated by the use of leaded gasoline and inefficient engines as well as a lack of catalytic converters.

Almost all surface waters of Ukraine belong to the Black Sea and the Sea of Azov basins. The high population density, heavy industrial development, the low governmental priority placed upon environmental protection until very recently, have given rise to chronic and serious levels of water pollution throughout Ukraine. The Dnister and the Danube are included among the most polluted bodies of water in the territory of the former Soviet Union.

Environmental pollution is one of the most burning problems of our time. Nowadays every student knows what acid rain and greenhouse effect mean. In Ukraine, like everywhere in the world, people have done things that have badly damaged the nature. As a result, it's dangerous to eat fish that was caught in the river or mushrooms that were picked in the woods because they may be contaminated. The Chernobyl disaster remains one of the most tragic "unnatural" catastrophes.