

## decay rate

*in atmospheric chemistry*

The rate at which a pollutant is removed from the atmosphere either by reaction with reactive transient species such as the HO radical, O<sub>3</sub>, etc., by photodecomposition initiated by light absorption by the impurity, or by loss at the surface of aerosols, the earth, etc. The decay rate as applied to radioactive materials is related to the radioactive half-life ( $t_{1/2}$ ) of the particular isotopic species **A** and its concentration  $[A]_t$ , at the given time ( $t$ ):

$$\text{Rate} = \frac{[A]_t \ln 2}{t_{1/2}}.$$

**Source:**

PAC, 1990, 62, 2167 (*Glossary of atmospheric chemistry terms (Recommendations 1990)*) on page 2183