

In this issue

AIDS

Almost fifteen years have passed since the disease AIDS surfaced in the United States. This immune deficiency state which rendered patients susceptible to opportunistic infections was soon recognized to be a sexually transmitted disease, with the causative agent being a retrovirus. Originally thought to be limited to homosexual populations, AIDS was soon to assume the dimensions of a major public health problem when heterosexual transmission and infection via blood transfusions and contaminated syringes in drug addicts were established. There is no satisfactory treatment for AIDS and approaches to limiting the spread of the human immu-

nodeficiency virus (HIV) are still to take hold. The magnitude of the AIDS problem in India appears to be relatively small at present; malaria, tuberculosis and diarrhoeal diseases may still be more widespread. However, the dangers of underestimating an insidious enemy are all too clear. A special section in this issue, edited by David Bloom highlights the complexity of the problems involved in addressing the growing AIDS epidemic.

P. Balaram

Fifty years after a landmark

The melting of ice and the loss of magnetism by iron on heating are two examples of

what physicists call phase transitions. In the second example, the order becomes zero continuously at a critical temperature. Various approximate models for this behaviour have been proposed, starting with van der Waals in the last century. On close examination, they proved inconsistent, both with the best experiments and internally. Fifty years ago, Lars Onsager found an exact mathematical solution of one model of a phase transition — a brilliant discovery which changed the course of the subject. This historic event, the prelude to it and its aftermath are recounted for our readers by S. M. Bhattacharjee and A. Khare (page 816).

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