

Seconds don't matter

Second is no longer the smallest unit of time. Clocks based on the frequency of excitation of a caesium-133 atom, can now measure time up to a precision of billionth of a second. Thus, seconds now seem infinitesimally long with atomic clocks. This is not just a case of clocks getting more accurate, but is actually an indication of the pace at which the modern world is progressing. In that case should the completion of a year, which actually is the completion of 3,15,57,600 seconds, matter to us? What makes the beginning of a new year so special for all of us that we look forward to it?

As expressed by some of our readers in a recent survey, the beginning of a new year provides an opportunity for all of us to sit back and contemplate on our past and prepare for the future. So, let me take this opportunity to view the happenings in 1997 in retrospect, as we enter 1998.

1997 was an eventful year as far as science and technology is concerned. Man made several attempts to explore his cosmic surroundings, with good success, in 1997. In the early part of the year, photographs of Europa (one of the moons of Jupiter) taken by Venus spacecraft provided vital clues about the composition of the Jovian system. This was followed by the successful landing of Mars Pathfinder, which sent back pictures of Martian surface in July, thus enhancing our understanding of the Red planet. And recently, towards the end of the year, NASA sent Cassini to explore Saturn, the ringed planet. Scientists also gathered more information about the farthest realms of our solar system, by studying Hale Bopp, the largest comet ever observed by man.

In other fields of science, the developments were more dramatic. One of the greatest happenings of 1997, whose repercussions would be felt for many years to come, was 'cloning'. Man played God when Dr. Ian Wilmut created 'Dolly', the first animal clone. Another great happening of 1997 was the victory of a machine over man. 'Deep Blue', a chess playing computer, defeated Kasparov in his own game. This probably is one of the greatest happenings of not just 1997 but this whole century. Other significant developments included the emergence of DVDs and digital floppy cameras, which heralded a new era of digital gadgetry. Also, humanity was awakened to the deadly Hepatitis-B, which is proving to be a greater threat than AIDS. As for India, two significant developments hit the headlines in 1997. India successfully launched an operational remote sensing satellite into space using its own indigenously developed launch vehicle PSLVC. With this, India has now become a major player in the satellite development market. There was more good news for India, when Kalpana Chawla went to space, becoming the first Indian woman to do so.

Predicting or foreseeing what would happen in 1998 would be difficult since the developments in S&T would be more rapid in future. Nevertheless, 1998 is expected to provide more hints to the origins of our existence and also to make it more convenient.

Happy reading & A Very Happy New Year 1999!

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