

Near Earth Objects - 8 June 1999

Nostradamus. That medieval prophet of doom composed hundreds of obscure quatrains which have fuelled endless disaster scenarios, such as the one which speculates that the world will end next month. Or, if we are still alive and breathing, in August.

When Nostradamus died in 1566 he had become famous for so-called predictions. Then, as now, there was little success in figuring them out ahead of time. However after any significant event there were always plenty of people interpreting this quatrain or that as a valid prediction of the event. And so his fame grew among the credulous.

My introduction to Nostradamus came many years ago at a time when the main feature at a cinema was usually preceded by a series of shorter films. One that stuck in my young mind was a scary account of his alleged successful prophesies, concluding with a dire prediction that the city of Paris would be destroyed on the eve of the twenty first century by alien spaceships from another star. Let's wait and see, shall we?

If, by some strange chance Paris or some other large city is destroyed on New Year's Eve it is much more likely to be through an asteroid or comet impact by the debris surrounding our own star, the Sun. There have been the better part of ten such impacts already this century, fortunately over uninhabited regions. Historians are discovering evidence that a number of disappearing populations in the past may have been extinguished by twenty megatonne air blasts like the one over Siberia in 1908 which flattened hundreds of square kilometres of forest at Tunguska. Another just grazed the atmosphere over North America in August 1972 and could easily have destroyed Los Angeles or Mexico City had it struck further south.

The difference between these events and the fanciful guesses based on the writings of Nostradamus is that there is every hope that reliable predictions are possible if early observations of the threatening objects are available. This is the goal of several programs now searching for such NEO's- Near Earth Objects. At last some nations are taking the threat seriously. the US Congress has recently funded a three-fold expansion of NASA's budget for NEO searches and even the British House of Lords has been awakened to the perils of cosmic bombardment.

Films too, like Deep Impact and Armageddon, are alerting the general public to the dangers. But the Australian government dozes on, dreaming of standard bread recipes and controls of the uncontrollable internet. Had the fireball which exploded over Dubbo and Narromine, breaking windows a few years ago, been as large as the Tunguska object the shock waves reaching Canberra might possibly have broken their slumbers.

Australia has the talent to undertake a productive NEO search patrol. The South Australian amateur astronomer's recent observations of the NEO of 1999 AN10 demonstrated what could be expanded many times over with a modest amount of government assistance. Incidentally, the AN10 observation showed how important southern hemisphere data is for accurate impact estimation. The predicted miss

distance of AN10 on August 7, 2027, was decreased from 57,000 km to 38,000 km. That might seem to be a safe margin but just suppose a stray deflection of AN10 between now and 2027 reduces the margin by 40,000 km!

NASA Near Earth Object Program

<http://neo.jpl.nasa.gov/>