



NAL is 45

NAL, established on 1 June 1959, is now 45 years old. This year's Foundation Day celebration, on 25 August 2004, was particularly special coming as it did just three days after the successful SARAS inaugural flight.

As always, the S R Valluri Auditorium was overflowing (in fact, so full that it's probably time for NAL to plan the construction of a larger auditorium). The Foundation Day function proceeded in the now-well established sequence: welcome by NAL Director, Dr B R Pai and introduction of the day's speakers; NAL Foundation Day Lecture (this year's lecture, the 18 th of the series, was delivered by Dr G Madhavan Nair, Chairman ISRO); NAL Technology Lecture (the seventh of this series was delivered by Dr K Yegna Narayan); [release of the NAL Annual Report](#); distribution of the NAL Outstanding Performance Awards; distribution of prizes to children of NAL employees excelling in academics or sports and finally the vote of thanks (by Mr M R Nayak, Head, TS, this year).

Dr B R Pai began his welcome address by paying a tribute to NAL's first Director, Dr P Nilakantan, and marvelling at his vision of planning a 4ft trisonic wind tunnel as early as in 1960 when there wasn't even a whiff of any major national aerospace programme. Dr Pai also greeted his predecessor, Dr T S Prahlad – NAL's fifth Director – and Prof U R Rao who graced the gathering.

Dr Madhavan Nair's Foundation Day Lecture on *Future Space Transportation Systems* was truly a remarkable narrative. What one found especially pleasing was how ISRO has its roadmap so wonderfully lined up even up to the year 2025. The lecture itself covered wide ground: ISRO's 39+4 missions, applications (broadcasting, meteorology, communication, developmental), evolution of ISRO's launch vehicles, today's concerns (expensive and infrequent launches, no abort capability, no or minimal reusability, non-standard payload interfaces) and tomorrow's challenges (reusable launch vehicles).

There were also observations made in passing that were very informative: ISRO's first satellite has one transponder onboard, today's satellites offer 36 transponders; the resolution of satellite pictures has improved from 1 km to 1m; 85% of TV channels covered by INSAT systems etc.

Dr K Yegna Narayan spoke engagingly and compellingly on *SARAS: from an idea to first flight*. For someone who has been so intimately involved with

SARAS for all of 15 years, the lecture must have been easy to deliver, but the audience – who had just seen SARAS soar into the skies three days ago – were enthralled by a narrative that talked of the highs and the lows, and the agony and the ecstasy, of leading a SARAS-like programme. By dividing the SARAS programme into the early years (1990-94), the middle – and frustrating – years (1995-99) and the years of success and achievement (1999-2004), Dr Yegna Narayan forcefully brought home the point that SARAS was effectively a five-year programme (“it bothers me when the media uses expressions like ‘long delayed’ or ‘finally’ with reference to SARAS – the truth is that we flew the plane in just five years after the money came in!”).