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THE HISTORY OF KOREAN ROCKETS (1377-2009) - FROM JU-HWA TO KSLV-1 -

Abstract

The first Korean rocket, 'Ju-hwa (running fire)' was manufactured by Muson Chai. 'Ju-hwa' between 1377 and 1380. Ju-hwa was developed into 4 kind of Sin-gi-geon: Small, Medium, Large and Fire-scattering until 1448. length of Large sin-gi-jeon is 5.5m and it's range is about 700 800m. It is the largest paper-propellant case rocket in the world. It's drawing and detail manufacturing description in Kuk-cho-ore-sorye which book was compiled in 1474. Sin-gi-jeon's blueprint is the oldest rocket blueprint which was used for reconstruction. The first modern sounding rocket, IITO-1A was developed by IIT (Inha Institute of Tech.) in 1959. The Korea Aerospace Research Institute (KARI) was established in 1989. The first National Space Development Plan which includes Korea Sounding Rocket (KSR) and Korea Space Launch Vehicle(KSLV) program was made in 1996. KARI began in 1990 to research and develops its own sounding rocket program. KARI launched its first single-stage solid propellant sounding rocket, KSR-I, in 1993. KSR-II was launched in 1997 and 1998 as two-stage solid propellant sounding rocket with a 150kg scientific payload and 150km apogee. KARI embarked on its first liquid propellant sounding rocket project in December 1997. KARI successfully launched KSR-III which reached an altitude of 42.7km and flew over 84km for 231.44 seconds on November 28, 2002. Korea plans to develop a satellite launch vehicle, KSLV-1, capable of putting a 100kg payload into orbit by 2009 from Naro spaceport.