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Central Intelligence Agency



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DIRECTORATE OF INTELLIGENCE

25 July 1986

Li Xu'e: Launching Beijing Into the International Space Arena [Redacted box]

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Summary

Minister of Astronautics Industry Li Xu'e is leading an ambitious drive to make China competitive in the international launch services market. Since his appointment in June 1985, he has moved swiftly to complete a series of experimental satellite launches and demonstrate the program's openness to foreign inspection. A proponent of multilateral space cooperation, Li appears to believe that the quickest way to modernize his Ministry is through joint participation with more technologically advanced space programs, such as those of NASA and the European Space Agency. His efforts have put Beijing in a position to capitalize on recent failures in Western launch programs and offer the Chinese space program as a cheaper--and, in the short run, the only--alternative. [Redacted box]

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This memorandum was prepared by [Redacted box] Office of Leadership Analysis. Information available as of 25 July 1986 was used in its preparation. Comments and queries are welcome and may be directed to the Chief, China Branch, Asia/Near East Division, LDA [Redacted box]

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A Technocrat in Charge

Li Xu'e has guided China's space program since 1982, when he became a vice minister in the Ministry of Astronautics Industry (MOAI).¹ As the foremost of four vice ministers and the chief assistant to then Minister Zhang Jun, a sexagenarian military officer with little technological expertise, he supervised the Ministry's daily activities. Despite Li's strong roots in China's military space program, he helped oversee a shift from an emphasis on overt military applications to one more supportive of civilian modernization goals. For example, since 1982 the Ministry has conducted eight civilian and no military launches, although the military has subsequently used some of the satellites orbited during this time. [redacted]

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Li's promotion to Minister of Astronautics Industry in June 1985 was part of a wave of changes designed to replace less qualified, aging ministerial-level officers with technically competent, younger officials. Unlike his predecessor, whose strength was his strong Chinese Communist Party and public security background, Li is a leading space scientist. Only 56, he has been involved in the development of China's space capabilities since the inception of the program in the early 1950s. Because of the traditional shroud of secrecy surrounding China's military and scientific programs, we have little specific information about where Li trained or in which program applications he participated. After his 1985 appointment, however, the Chinese press, in one of its first public identifications of a scientist associated with these programs, shed some light on his technical background, noting his involvement in ballistic missile and warhead research throughout the 1950s and 1960s. The media said that he trained as an aeronautical engineer and served with the Third Ministry of Machine Building (Aviation) before being transferred in 1956 to the newly established Seventh Ministry of Machine Building. [redacted]

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Marketing China's Launch Services

The 1986 failures in the NASA and European Space Agency launch programs gave China a unique marketing opportunity as an available, alternative launch services program. Although Li and other senior Ministry officials have told the press that their efforts are not meant to capitalize on Western misfortunes, they have moved quickly to take advantage of the situation.² Beijing is offering prices at least 15 percent lower than

¹ In May 1982 the State Council reorganized the Seventh and Eighth Ministries of Machine Building into the Ministry of Space Industry and assigned a new minister and four vice ministers. Of the other three vice ministers appointed at that time, one retains his position, another is now the chairman of the State Science and Technology Commission, and the third is the secretary of the Shanghai Municipal Chinese Communist Party Committee. The Ministry was given its current name in 1983. [redacted]

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² In 1986 the Soviet Union also announced that it intended to enter the commercial launch services market. We believe, however, that its efforts will be severely

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those of Ariane, the space sales company for the European Space Agency, which has traditionally undercut the lowest prices offered by the United States. In February 1986 MOAI made its services even more attractive by offering payload insurance at what it advertises as "low premium rates." (Li's reluctance to risk his Ministry's limited assets insuring foreign customers had created a major impediment to sales until the People's Insurance Company of China agreed in late 1985 to underwrite the Chinese launch of any foreign satellite.) [Redacted]

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Li's Ministry entered the highly competitive worldwide space services market in October, when Li launched an aggressive marketing campaign aimed at the United States, Europe, and Third World countries. Using the Great Wall Industrial Corporation (GWIC)--an MOAI front company--as a marketing agent, Ministry officials have held discussions with scientific and corporate officials from over a dozen countries, including Argentina, Australia, Indonesia, Italy, and the United States; given negotiations to date, they appear likely to conclude several launch agreements during the next year. During the past three months MOAI officials have negotiated (but not yet signed) contracts for the launch of US and Swedish satellites. [Redacted]

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Beijing's marketing effort is built on its vigorous and rapidly growing space program. During the past 15 years MOAI has designed, built, and orbited communications, scientific, and land-mapping/surveying satellites. In February 1986 it successfully launched its 18th satellite--the third from the Xichang Launch Services Complex, China's newest and most technologically advanced launch facility. The complex, which will serve as the primary launch site for foreign satellites, has been described by senior NASA officials as comparable to the older single-pad launch areas at Cape Canaveral. As part of his publication of Beijing's entrance into the worldwide launch services market in February 1986, Li--in an unprecedented move--opened Xichang to visiting US and other Western scientists. [Redacted]

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The Future: Expanding China's Capabilities

Li has initiated a press blitz to outline the Ministry's future goals, emphasizing MOAI support for China's economic development.³ The chairman of the Ministry's Science and Technology Committee stated in May 1986 that during the next decade the

hampered by US export laws prohibiting the launch on a Soviet rocket of any satellite containing US-derived components. US space officials say that virtually all satellites constructed outside the Soviet Bloc contain such components. [Redacted]

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Ministry would launch indigenous satellites in order to:

- Provide television coverage across the entire country.
- Extend the country's antiquated telecommunications system.
- Afford accurate weather forecasting, surveying, and reconnaissance capabilities.

Li's long-range goals appear even more ambitious. Senior MOAI officials have said that China plans to develop a small, two-man version of the space shuttle, the basic purpose of which would be to aid in the construction of a modular space station. [redacted]

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China's current level of technology and ability to fund Ministry projects probably make Li's long range goals overly ambitious. We believe he has sought to surmount these difficulties by signing a series of bilateral space science and technology cooperation agreements. Under his guidance, for example, the MOAI has during the last two years:

- Signed a comprehensive agreement with Brazil for the exchange of space technologies.
- Initialed a memorandum of understanding with Great Britain calling for an exchange of scientists and engineers and the joint development of ground launching bases and carrier rockets.
- Signed a five-year protocol with France providing cooperation in the exchange of personnel and joint research in the development of satellites and launching systems.
- Announced its intention to continue negotiations with Hughes Aircraft Corporation for the design and construction of a joint launch facility located in the Hawaiian Islands. [redacted]

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Implications for the United States

Li's commitment to foreign involvement in the development of China's national space program affords more opportunities for bilateral cooperation in space than existed under former Astronautics Minister Zhang Jun, who strictly limited contacts with the West. An admirer of the US space program, Li told the Chinese press that the Challenger accident did not reduce China's confidence. He remains supportive of ongoing discussions with NASA officials to place a Chinese astronaut aboard a future US shuttle flight. [redacted]

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Bilateral cooperation would also provide the technology the Chinese need to speed the development of their space program. Exchanges that help the Chinese overcome deficiencies in the development and production of computerized circuitry, telemetry and tracking equipment, and sophisticated lighter launch vehicles--all current technology in the US inventory--would move the Chinese space program ahead much more rapidly than MOAI could do independently. Such improvements would, however, aid efforts to undercut NASA and European Space Agency launch service marketing programs and to enhance the military ballistic missile program. Improved technology would further strengthen MOAI efforts to design and/or launch satellites for European and Third World countries that are now valuable clients of Western space organizations. Moreover, the technology acquired through civilian bilateral cooperation could be used to increase the range of both intermediate and intercontinental missiles

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In an exclusive interview with China News Services (Zhongguo Xinwen She) last October, Minister Li Xu'e announced China's intention to enter the international space arena. Li said, "The successful development, launching, and recovery of our satellites signifies a new success China has achieved in promoting national economic development by means of the astronautics industry. China will now undertake an overseas satellite launching business. We will provide preferential prices for foreign customers requesting satellite launching services and will be responsible for training technicians."

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