

# Sanctions to slow India's space effort

by Ramtanu Maitra and Susan Maitra

The U.S. decision to slap a two-year sanction against the Indian Space Research Organization (ISRO) and the Russian enterprise Glavkosmos, barring them access to U.S. technology during the banned period, has stirred strong anti-U.S. emotions in India. Although Washington claims that Glavkosmos's sale of cryogenic rocket engines to ISRO is a violation of the Missile Technology Control Regime (MTCR)—an agreement signed by 12 nations including the United States, Canada, Australia, and European nations and not yet ratified in the United Nations—Indian scientists claim that the motive behind imposing sanctions was entirely economic and was designed to slow down the Indian space program which is now poised for international commercial applications.

The reaction in the Indian Parliament to the U.S. announcement was tumultuous. The government of Prime Minister P.V. Narasimha Rao was urged by both opposition and ruling party leaders to give Washington "a fitting reply" without clearly defining what form the retaliation would take. The elected representatives were particularly riled up since the sanctions against ISRO came a few days after the White House had also removed Indian pharmaceuticals and chemicals, sold in the U.S. markets, from the non-tariff quota privileges.

## Moscow's dilemma

Perhaps, with the intention of twisting the Russian arms further, or to soften the impact of the sanctions, the United States has notified India and Russia, that the sanctions will be removed instantly if the deal is called off. The mood in India suggests that New Delhi is willing to accept the two-year ban, and suffer in the process. However, reactions from Moscow are most confusing. Besides the double-talk of State Secretary Gennady Burbulis during his recent visit to India, it has been reported that Russia is planning to set up a joint parliamentary commission to conduct urgent talks with India on the matter. Ostensibly, the Russians would consider three alternatives: a) scrap the contract, sign the MTCR, and demand a quota for satellites to be launched by Russian space launch vehicles; b) seek an exception in this case and save the contract; and c) seek an exception, sign the MTCR,

and seek approval from Kazakhstan for the satellite launch quota since the main launch facility at Baikonur is on its territory.

Although there may be at least some Russians who would like to defy the ban and honor the agreement with the ISRO, there is no doubt that they are more than willing to appease Washington and consider this as their top priority. This is reflected in a recent statement made by former foreign minister Eduard Shevardnadze, who has urged the Russian government to sign the MTCR immediately.

Whatever Moscow's final decision on the issue, there is little doubt that the Bush administration is busy twisting arms in both Russia and India, and resorting to blatant lies.

The most ridiculous of these lies came from a State Department spokeswoman in response to Prime Minister P.V. Narasimha Rao's claims in the Parliament on May 6 that General Dynamics had bid for the cryogenic rocket engines deal but was rejected because its price was too high. She said "it is not true" and that no U.S. firm had made a formal bid or submitted an export license application for such a sale to India.

However, a May 2 interview by ISRO chief U.R. Rao with the U.S. magazine *Space News* blew a gaping hole in the State Department's denial. Dr. Rao had told *Space News* that General Dynamics Senior Vice President Alan Lovelace had visited the ISRO headquarters in Bangalore to discuss an agreement. Lovelace refused to "return phone calls seeking comments" from *Space News*. Dr. Rao had also told *Space News* that the French-based firm Suresnes also tried and failed to win the contract. Again, the magazine's efforts to confirm Dr. Rao's claims were in vain because Suresnes' spokesman refused comment.

## Can't take the competition

Washington's concern that India is going to use the cryogenic rocket engine technology to manufacture ballistic missiles—since the cryogenic engines are useless for short- and intermediate-range missiles which India already has manufactured—is a mere ruse. Otherwise, General Dynamics would not have tried to grab the contract. Washington's decision was intended to make sure that India's space program gets slowed down to the point that India cannot challenge the West's launch capabilities on the international scene.

During his May 12 press conference, Dr. Rao made this point. "It is the commercial interest" which was behind placing the ban, he said. He pointed out that the Indian launch pad is the second best in the world—next only to the launch pad in Kourou, French Guinea—and it is evident to the United States and others that India could build world class satellites at half the price of developed countries. Mixing sarcasm with bitterness, Dr. Rao added: "The U.S., which professed free enterprise, seemed to be interpreting it to mean 'free enterprise' for them and no enterprise for others."

## What's at stake?

How badly will India's space program will be affected by the ban? There is no question that India has advanced its research on cryogenic rocket engines significantly, and if the Russians back out, India's work will be set back about five years. On the other hand, the Indian space program has been strongly supported by the U.S. National Aeronautic and Space Administration (NASA) from the very beginning. The first rocket that India launched in 1963, when Dr. Homi Bhabha was in charge of the nascent space program, was donated by NASA. From then on, the U.S. had allowed ISRO to use transponders for unique instructional and communications experiments, and had built the four multi-purpose satellites in the INSAT-I series and launched three of them. An Indian astronaut had been scheduled to fly on the Space Shuttle, until the 1986 Challenger disaster. Such a close relationship had also developed a close mixing of technologies. Electronic components required for satellites constitute a major share of imports from the United States. Reports indicate that crucial processor chips on the onboard Altitude and Orbital Control System, radiation-hardened solar cells, detectors for meteorological instruments, among other items are also imported.

However, Dr. Rao seems to be optimistic. He said that if the ban continues, delays will occur in certain areas, "but we will have to do it [indigenous development] as a country." He also emphasized that there is no "technology problem," but to re-invent the wheel means delay and cost overruns. There are also expectations in the ISRO that many of the electronic components, if not all, imported from the United States can now be imported from other countries, meaning technology-fitting, and in the long run, greater cost and delays.

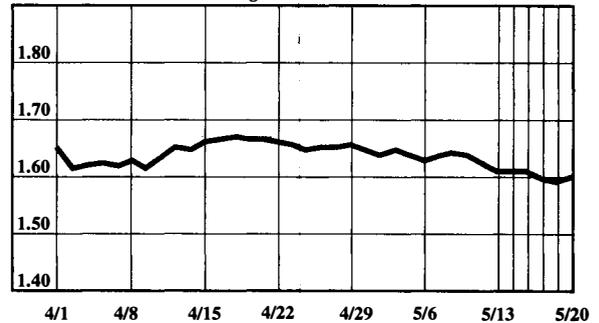
However, there are also fears that the United States may prevail upon other signatories of the MTCR to also ban the ISRO and Glavkosmos. State Department spokesman Margaret Tutwiler has already addressed the other signatories, telling them that "being a member of the MTCR or a signatory to it, you abide by the rules."

If the United States is able to pressure the signatories, the Indian space program will surely be affected. Its program for putting in orbit the latest series of satellites, INSAT-II, will be delayed, and so also the Polar Satellite Launch Vehicle development program. Since the INSAT series plays a significant role in India's economy, this will have a deleterious effect. There are also reports that the United States is shooting for a bigger game. The Indian newspaper carried an unconfirmed report which suggests that the U.S. Secretary of State James Baker had called upon Prime Minister Narasimha Rao to tell him that the U.S. is willing to lift the ban if India agrees to sign the Nuclear Non-Proliferation Treaty. Baker has apparently assured the Indian premier that, under such circumstances, the U.S. will be keen to supply India with the rocket technology if the U.S. Congress approves it.

## Currency Rates

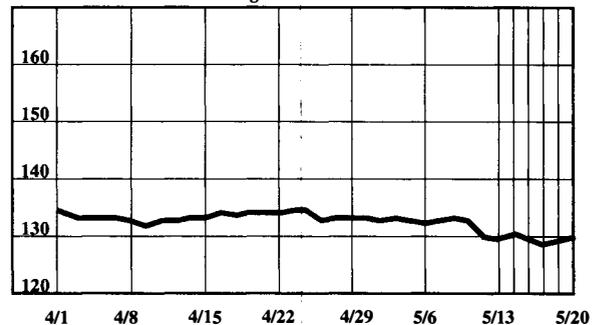
### The dollar in deutschemarks

New York late afternoon fixing



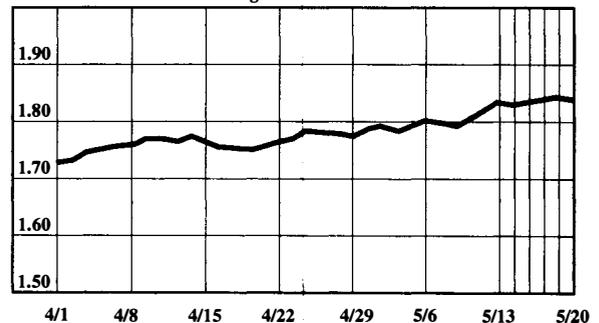
### The dollar in yen

New York late afternoon fixing



### The British pound in dollars

New York late afternoon fixing



### The dollar in Swiss francs

New York late afternoon fixing

