

BEIJING REVIEW

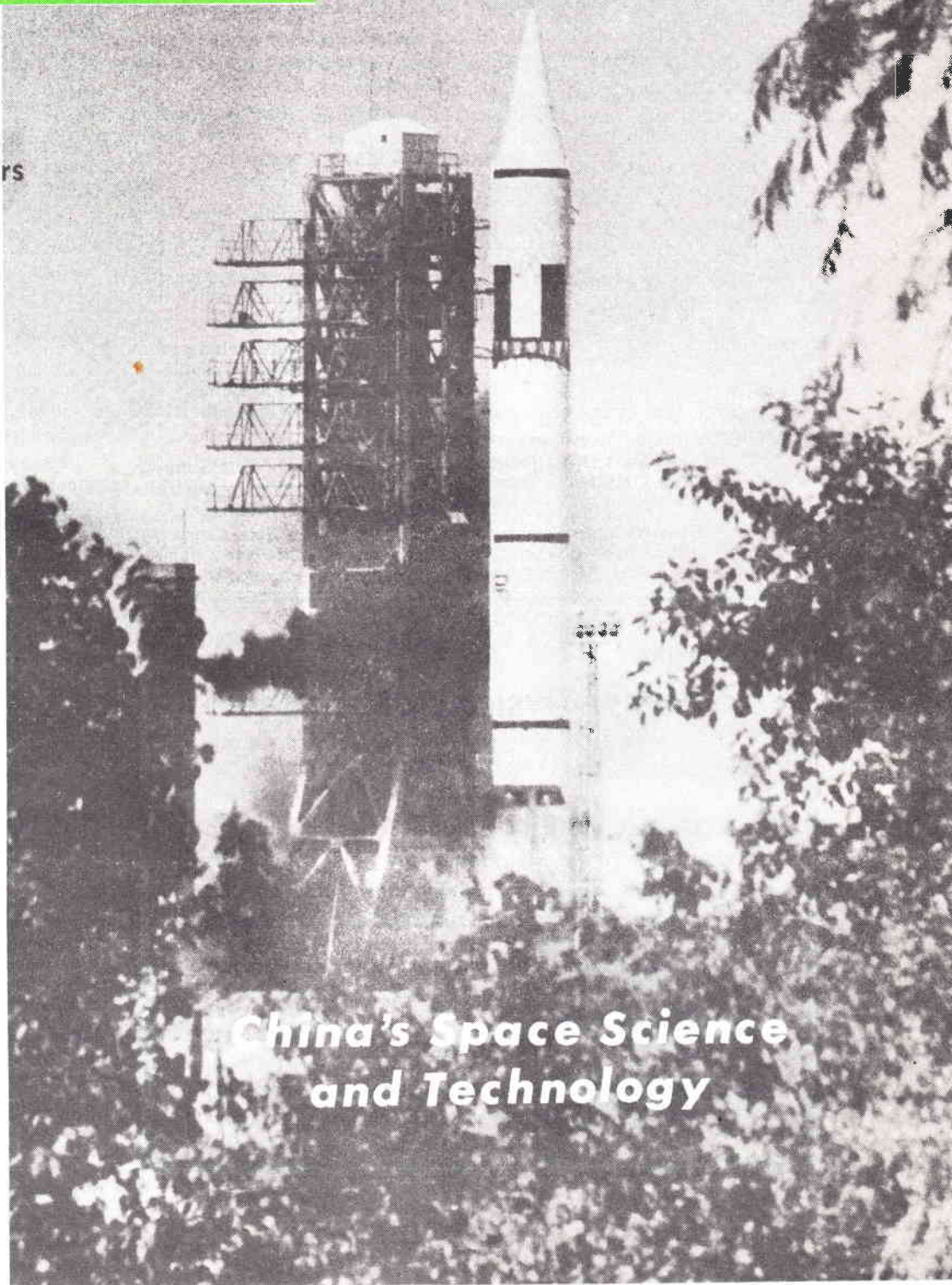
北京周報

A CHINESE WEEKLY OF
NEWS AND VIEWS

Chinese Leaders
On Sino-US
Relations



China's
Economic
Performance
In 1982



*China's Space Science
and Technology*

LETTERS

25th Anniversary

First, I would like to congratulate you on the 25th anniversary of your journal. I appreciated your "New Year Message" to readers in issue No. 1 this year. From it readers have learnt something about your magazine. The picture with this article introduced us to the German edition staff (German edition only).

I hope you will continue with your work. The "International" column should continue to analyse world events, not only those in Asia, from the Chinese viewpoints.

I enjoy the self-critical and objective reports on China's problems.

Tables accompanying articles facilitate understanding, for example, the tables with "Report on the Implementation of the State Budget for 1982 and the Draft State Budget for 1983" (No. 3, 1983).

Statistics and short articles of world events for each year (for example "10 major world events of 1982" in issue No. 1, 1983) make saving *Beijing Review* more valuable.

Heinz-Gunter Foerster
Bielefeld, FRG

In order to better understand the People's Republic of China, I started reading *Beijing Review* several months ago. I was amazed to find a German-language magazine published in Beijing. From it, I learnt that the German edition of *Beijing Review* is going to celebrate its 20th anniversary and I warmly send my greetings.

Unfortunately I couldn't take part in your celebration because I am not going to Beijing until April. As a woman reporter I am very interested in your work.

I wish you success in your future work. Please accept my greetings from Berlin.

Barbara Kastrup
West Berlin

Tibet Reports

I found your articles about Tibet (Nos. 47-51, 1982) interesting and well presented. The reporters informed the reader on major improvements which have taken place in Tibetans' lives:

I suggest that you include more articles about ordinary people of China, articles about Chinese minority communities, e.g., the Haka (Kejia) people.

T. Simpson
Clayton S., Australia

Your weekly carried a series of articles on Tibet. I was pleased

with your frankness in exposing the existence of problems in Tibet and shocked by the destruction of monasteries during the 10-year "cultural revolution." It is necessary to make clear why problems occurred at that time, for there are all sorts of explanations about it here.

I cannot imagine the theocracy which ruled Tibet for centuries did anything good for the people. It is convincing to explain that the people's belief in religion is traditional and does not derive from their understanding of the real world. I hope you will include such explanations in future articles.

I think the article "The Developing Countries' Grain Problem" in issue No. 47, 1982 is significant, as famine is still an unsolved problem that demands urgent solution. Your analytic article is encouraging.

Peter Romen
Lochau, Austria

I enjoyed the series of articles about Tibet. To me Tibet is a mysterious area. I think the series is of significance in the education of foreigners like myself.

"Humour in China" is eye-catching and thoughtful. "New miniature carvings" (No. 46, 1982) was interesting and attractive. I liked the art page on batik (No. 45, 1982). In fact, I am interested in all artistic creations.

Your magazine is already good but I hope you will still seek improvements.

Pierre Laterte
Quebec, Canada

Articles About Third World

I think it is interesting to research the position of China as a socialist country belonging to the third world.

For one who is studying economics, in particular economics of the developing countries or the third world, under the auspices of University of Amsterdam, articles on this topic are always welcome.

Many people are now studying the development of the third world countries. I think this is an indication of a trend, not merely a result of spontaneous enthusiasm.

T.M. Siregar
Amsterdam, Holland

Forthcoming

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HIGHLIGHTS OF THE WEEK

Chinese Leaders on Sino-US Relations

China is optimistic about the long-term prospects for Sino-US relations, but is not happy with the present developments (p. 8).

Belgian Foreign Minister in China

In the talks between Leo Tindemans and his Chinese counterpart Wu Xueqian, both sides agreed in demanding complete Vietnamese troop withdrawal as the key to the solution of the Kampuchean issue. Premier Zhao expressed China's wish to develop stronger relations with Belgium and with the EEC countries (p. 8).

China's Space Programme

China's space science and technology serve the modernization drive. China will not join the space race. While encouraging international co-operation, China will rely on its own resources to develop space projects (p. 15).

Employment System Begins to Change

A new contract employment system, being tried out in China's factories and other enterprises, helps improve business management, raises efficiency and encourages workers to smash the "iron rice bowl" mentality which stifles initiative and creativity (p. 5).

Economic Progress in 1982

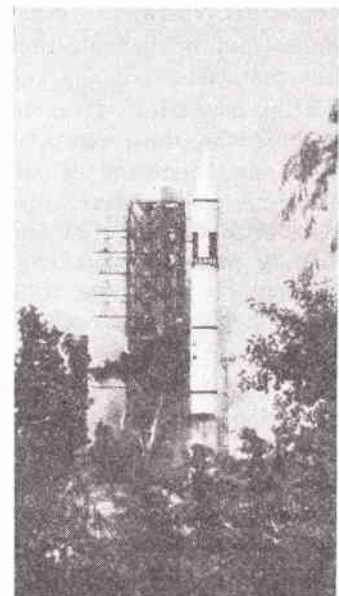
The Comprehensive Economic Bureau of the State Economic Commission reports 1982 figures on the national economy, noting achievements and problems (p. 20).

Reform of a Beijing Opera Troupe

Addressing the chronic problem of egalitarianism Zhao Yanxia, superstar of Beijing opera, has initiated management reforms in China's theatrical world (p. 25).

Combating Economic Crisis

Latin American nations are trying to overcome economic difficulties by developing regional co-operation and strengthening their economic relations with other third world countries (p. 12).



Blast off.

Photo by Zhang Tongsheng

South-South co-operation

The Symposium on South-South Co-operation is soon to take place in Beijing. How would you assess the prospects for South-South co-operation?

Some say that South-South co-operation is limited, that at most it can only supplement North-South relations and cannot bring much economic benefit. Their argument is that the developing countries, plagued by insufficient funds and backward technology, lack the ability to help each other and therefore must rely on support from the developed countries.

This is a pessimistic view which does not conform to the realities.

South-South co-operation, i.e., economic co-operation among the third world countries, has since the 1960s appeared in various areas in the form of regional and sub-regional economic co-operative organizations, and of organizations of raw material-producing and exporting countries. Over 70 per cent of the third world countries are members of the 25 economic co-operative organizations or the 20-odd organizations of raw material-producing and exporting countries. These organizations have played a positive role in promoting regional economic co-operation, in jointly exploiting natural resources and protecting the interests of raw material-producing countries, in weakening imperialist and superpower monopoly and control and changing the old international economic order. The great vic-

tory won by the Organization of Petroleum Exporting Countries (OPEC) in their struggle to protect oil prices is well known.

It was against this historical background that the first South-North dialogue on South-North economic relations was held in Paris in 1975. Obstructed by the United States and some other developed countries, South-North dialogue long remained deadlocked. The third world countries were therefore compelled to strengthen co-operation for their mutual interests, so as to defend their economic independence and win a more favourable position while continuing global negotiations with industrially developed countries. Such being the case, the question of well-organized and planned economic co-operation among the developing countries became the order of the day.

In proposing closer South-South co-operation, the third world countries expect to promote their own national economic development through co-operation among themselves. On the other hand, they want to increase their collective economic strength and co-ordinate their stand so as to better their position in the South-North dialogue. They aim to change the existing irrational, unequal international economic relationship and gradually free themselves from their economic dependence on the developed countries.

While the majority of developing countries are poor, a small number of them are well-to-do. But even these remember their recent experiences of poverty, hardship and their common interests. Thus the developing nations can treat each other with sincerity, can give each other real help, learn from each other's strong points and help overcome each other's weaknesses, establish mutual beneficial relations and thereby achieve the aim of common progress. Therefore, South-South co-operation is a new relationship of full equality, providing a solid foundation for development.

Take development-aid funds for example. The OPEC states spend 1.44 per cent of their gross national product to give economic aid to other developing countries, far exceeding the 0.34 per cent of GNP given in aid by the developed countries in the West. The former provide low-interest or preferential loans without strings, very unlike most loans from the developed countries.

Technologically, not a few developing countries possess unique techniques, which are more practical for other developing countries. Further, the experiences of developing countries in promoting their national economies provide useful lessons for one another.

In short, the developing countries have vast markets and enormous potential for development. The prospects for further co-operation among them are inestimable. China participates actively and optimistically in South-South co-opera-

tion and gives it special attention. In his recent 11-nation African tour, Premier Zhao Ziyang explored various possibilities for economic and technological co-operation with African countries and put forward four principles for developing such co-operation, that is, equality and mutual benefit, emphasis on practical results, diverse forms of co-operation and common development. In compliance with these principles, China will promote South-South co-operation with other third world countries.

Of course, we must not fail to notice that the development of South-South co-operation will by no means be easy. Efforts have to be made to overcome some difficulties and obstacles. And some problems remain to be examined and explored. This requires that the countries concerned work together. The Symposium on South-South Co-operation to be held in Beijing constitutes part of this common endeavour. The Chinese people are following with great interest the convocation of this symposium and sincerely wish it full success.

— *International Editor Mu Youlin*



Reform of the employment system

China's factories and other enterprises are trying out a new contract employment system.

The contract specifies the assignment, term of contract, probation period, rewards, insurance and welfare, labour protection, conditions for cancelling or changing the contract, responsibility for violating the terms of the contract as well as duties and rights for both parties.

The present employment system is not entirely rational. Workers are arbitrarily assigned to work units by labour departments. Neither the enterprises nor the individual workers have any freedom of choice. The result is that those wishing to work in a certain enterprise cannot be employed and those actually employed do not want to be there. What is more, those employed cannot be fired and they become "life-long" or permanent workers. At the same time, they receive fixed wages every month regardless of how well they perform or how competent they are. Coupled with egalitarian income distribution, the irrational employment system has dampened the people's enthusiasm and fettered the development of the productive forces.

A survey of 160,000 contract workers in nine provinces, municipalities and autonomous regions which were the first to experiment with this system found that the new system benefits both the enterprises and workers. On the one hand, the enterprises can employ contract workers in accordance with their needs and dismiss those who are not up to the required

standards at any time. This is conducive to improving management and raising economic effects. On the other hand, the workers will not develop the "iron rice bowl" mentality that stifles initiative and creativity. So long as they study and work hard, their jobs will be secure and at the same time, those who work harder will receive more remuneration.

The Ministry of Labour and Personnel issued a circular last February, calling on the whole country to promote this system.

The circular pointed out that contract workers are part of the working class and, as such, they enjoy the same political rights and have equal opportunities for political and vocational training as regular workers.

The socialist principle of distribution, namely, "from each according to his ability, to each according to his work" and more pay for more work, should be truly implemented in determining the wages, welfare facilities and labour insurance for contract workers.

The wages of contract workers may be higher or lower than those for regular workers. Various kinds of wage systems may be adopted for contract workers, such as supplemental wages for extra responsibilities or a floating wage system (base wage plus profit-sharing), etc.

A transitional period is needed in the future in which "the new workers carry out the new system and those employed in the past carry out the old one," that is, the newly enrolled workers will carry out the contract system and the regular

Party schools to reorganize their curricula

The Chinese Communist Party will reorganize the curricula of Party schools in order to provide full-scale training to leading cadres at all levels. The break from the past tradition of short-term cadre education was announced recently by the Central Committee.

China now has more than 2,000 Party schools run by the CPC Central Committee, and Party committees at and below provincial, municipal and autonomous region levels. Some of the Party schools are run by big industrial enterprises.

In the past, these schools taught Party members the basic theory of Marxism-Leninism and Mao Zedong Thought and Party's policies in order to

raise their communist consciousness.

Now in addition to these, the Party schools will offer speciality courses including basic mathematics and physics, the science of management, foreign languages, and theory and criticism of literature and art.

The new programmes will enroll cadres in Party schools for two or three years.

According to Wang Zhen, president of the Party School run by the Party Central Committee, the new resolution on cadre training in Party schools is an important step in the current drive to effect structural reform and readjust leading bodies.

Song Renqiong, Member of the Political Bureau of the

Party Central Committee, recently told leaders of Party schools from various parts of China that the work of readjusting leading bodies must be accelerated so that younger cadres with both ability and political integrity are promoted to positions of leadership. Song Renqiong also said that 69 per cent of the 450,000 cadres at and above the level of deputy county head and deputy department leader, are under 55 years old. The role of these people must be brought into play. In the meantime, college educated people are to be selected to leading bodies at various levels. All this requires that the task of cadre training in Party schools to be done well.

workers enrolled formerly will go on to carry out the existing system. However, the existing system will also be gradually improved so as to break away from the mentality of "big public pot" and finally reach the goal of all workers and staff carrying out the contract system.

Cities to administer nearby counties

An important reform of the administrative system is now being practised in various parts of China. "Cities exercising direct leadership over surrounding counties" is essential to modernization, said Premier Zhao Ziyang.

In the past, each Chinese province was divided into pre-

fectures which were subdivided into counties. There was no relationship between the big and medium-sized cities in the province with the counties.

The new system merges the city governments with the prefectural governments in areas with comparatively developed economies and industrial bases, so that the former can exercise leadership over the surrounding counties.

Both Liaoning Province in northeast and Jiangsu Province in east China have successfully experimented with these administrative measures.

"The countryside is the source of agricultural and sideline products for the cities, while the cities provide support for the economic and social development of the rural areas," said Xu Jiatusun, the first secretary of

the Jiangsu provincial Party committee.

The previous administrative system arbitrarily cut off the connection between cities and countryside. However, the new system allows both rural and urban areas to maximize their strengths while promoting their own economies through appropriate interactions.

Formerly, Liaoning Province was divided into 12 prefectures which embrace 48 counties. Now the administrative authority of 10 prefectures has been rescinded and 33 of the 48 counties are under the leadership of 10 cities.

Liaoning is one of China's provinces where heavy industry is relatively developed, with more than 400 big or medium-sized enterprises. In addition, small industrial enterprises

dot the counties and communes throughout the province. Before the new system was instituted, cities were not guaranteed agricultural or sideline products, nor raw materials for their industries while the county-run industries and agriculture did not have easy access to energy resources, chemical fertilizer or farm chemicals. Today, as the economy of the city and counties is administered by the same authorities under unified planning, these problems can be solved.

With urban industrial support, the gross output value of the province's county-run and commune-run industries in 1982 increased by 100 per cent over 1976.

Haicheng and Taian Counties, for example, are now under the direct leadership of the city of Anshan. The newly co-ordinated production and circulation inspired Anshan to establish two slaughterhouses to serve the urban needs for fresh pork.

Liaozhong and Xinmin Counties have come under the authorities of the provincial capital Shenyang. With funds from Shenyang, the two counties have constructed 200 drainage centres to free their low lying lands from waterlogging.

Peasants buy trucks

Peasants in China who just a few years ago regarded watches as luxuries are today buying trucks.

A truck sales division in Nanjing sold 346 trucks to individual peasant households between January 6 and February 20, 1983.

Early this year, the Nanjing automotive corporation sent representatives to Jiangsu, Anhui, Jiangxi, Fujian, Hubei and Henan Provinces to investigate the potential for truck sales to peasants. It is estimated that China's rural areas will need 50,000 to 60,000 trucks annually during the last three years of the Sixth Five-Year Plan (1981-85).

Peasants buy trucks to increase production. At present, they urgently need trucks to transport their farm and sideline products to market and to carry fodder, chemical fertilizer and building materials. They mainly want durable, reliable and low gasoline consumption trucks with cargo capacity of one to three tons. They are not looking for fancy exteriors. Trucks with larger cabs seating six people are in high demand.

China has had a policy of agricultural mechanization since the 1950s. But it has not been realized, because the state did not allow individual peasants to buy trucks and farm machinery.

This restricted the initiative of the peasants. In the past, peasants could not afford to buy trucks because their low levels of production left them little savings. Also, the peasants saw no connection between agricultural mechanization and higher income. Thus, they were not interested in farm mechanization.

Since the introduction of the various production responsibility systems in the countryside at the end of 1978, the peasants have begun to see a relationship between agricultural output and their own earnings. Thus the peasants' enthusiasm for production has led to a demand for trucks and farm machinery to raise productivity. With the growth of production, the peasants have increased their income which provides them the money to buy trucks and other production equipment. At the same time, current policies allow the peasants to buy such products.

This change has helped accelerate the mechanization of agriculture.

Chinese leaders on Sino-US relations

Premier Zhao Ziyang said on March 29 that from a long-term point of view China is optimistic about the prospects for Sino-US relations.

China will continue to work towards better relations between the two countries and hopes the US legislative bodies will play a more active role in promoting Sino-American relations, the Chinese Premier told the delegation from the US House of Representatives led by Speaker Thomas P. O'Neill, Jr, which arrived in Beijing on March 27.

Premier Zhao said China is not satisfied with the present state of Sino-American relations. "The situation has not improved since the Joint Communiqué issued on August 17, 1982 or since Secretary of State George Shultz's China visit last February," he said.

The Premier stressed that relations can be developed only on the basis of mutual respect for sovereignty and non-interference in each other's internal affairs. The Chinese people have fought for their independence,

sovereignty and territorial integrity for well over a century and have suffered tremendous sacrifices. China will never place its relations with any foreign country above the principle of safeguarding its national dignity, independence and sovereignty.

Zhao Ziyang told the guests that China adheres to its policy of opening to the outside world. Sino-US economic and technical co-operation benefits both countries. Trade and economic co-operation should develop on the basis of equality and mutual benefit. "There are many things to be done in these fields," he added.

Speaker O'Neill expressed his appreciation and understanding of Premier Zhao Ziyang's remarks.

Deng Xiaoping, Vice-Chairman of the Central Advisory Committee, also met with the US House of Representatives Delegation. He said China and the United States should see that closer ties between the two countries are conducive to both peoples as well as world peace.

Deng said he hopes the visitors will work to resolve the differences between the two countries so that a relationship of mutual trust can be built.

After reviewing the growth of Sino-US relations over the past decade, Deng said a number of obstacles need to be removed. But the important thing is to take actions, he added.

O'Neill said his excellent and fruitful talks with Chinese leaders enabled him to see the problems in US-China relations and acquire a deep understanding of the feeling of the Chinese on these matters. He and his colleagues will work to advance US-China relations, he added.

US stand on bank refuted

At a press briefing on March 29 in Beijing, Qi Huaiyuan, Director of the Information Department of the Chinese Foreign Ministry, said, "In a recent news briefing, US State Department spokesman, Allan Ronberg, in comments on China's application for membership in the Asian Development Bank, demonstrated that the United States is actually placing obstacles in the way of the bank's admission of the People's Republic of China."

Qi said: "Since Allan Ronberg stated that the United States recognizes the Government of

the People's Republic of China as the sole legal government of China and the representative of China in international organizations and that the People's Republic of China is qualified for membership in the Asian Development Bank, any excuse for preventing the bank from terminating the membership of the Taiwan authorities is legally untenable and impermissible."

Qi demanded that the United States demonstrate with deeds rather than words that "the United States does not support a policy of 'two Chinas' or 'one China, one Taiwan.'"

Leo Tindemans pays visit to China

Leo Tindemans, Minister of External Relations of Belgium, paid a friendship visit to China from March 26 to 29 at the invitation of the Chinese Government.

On the evening of March 27, at a banquet in honour of Minister Tindemans, Foreign Minister Wu Xueqian called upon all the peace-loving and justice-upholding countries to adhere to principles, support the Coalition Government of the Democratic Kampuchea and urge Viet Nam to implement the resolutions of the UN General Assembly and the Declaration of the International Conference on Kampuchea and to completely withdraw all its troops from Kampuchea.

"Thus," he said, "it is possible

for the Kampuchean issue to be solved fairly and reasonably through political means."

Wu said: "The Ministerial Meeting of the Association of Southeast Asian Nations (ASEAN) reaffirmed the determination for promoting a complete and political solution to the Kampuchean issue on the basis of a total withdrawal of Vietnamese troops from Kampuchea in the spirit of the International Conference on Kampuchea and the resolutions of the UN General Assembly.

"We appreciate and support this statement by the Ministerial Meeting of the ASEAN. We also pay tribute to the joint statement issued at the Fourth Ministerial Meeting of the ASEAN and the European Economic Community (EEC) which condemned the Vietnamese military occupation of Kampuchea and the Soviet Union's occupation of Afghanistan."

Wu praised Belgium for its just stand on supporting the Kampuchean Coalition Government's seat at the UN General Assembly and on demanding Viet Nam to withdraw its troops from Kampuchea.

He expressed the hope that the Kingdom of Belgium, as Vice-Chairman of the Ad Hoc Committee of the International Conference on Kampuchea, would play a positive role in seeking for a fair political solution to the Kampuchean issue.

Tindemans said that he was very pleased with the talks the two sides had on the Kampuchean issue. "Our two sides are doing our best to end the tragedy in this region as soon as possible through political means in accordance with the resolutions of the UN General Assembly and the principles laid by the International Conference on Kampuchea," he said.

On March 27, Wu Xueqian and Leo Tindemans held two rounds of talks in Beijing. Tindemans said that the Belgian Government does not recognize the existence of the Heng Samrin regime and has always supported the Government of Democratic Kampuchea for its seat in the United Nations and supported the Kampuchean Coalition Government. It has never had any intention or done anything to split the coalition of Kampuchea. "It maintains that a true free election will be conducted in Kampuchea under UN supervision after the withdrawal of the Vietnamese forces from that country," he added.

Wu and Tindemans also signed a memorandum on co-operation in telecommunications between China and Belgium.

On March 29 Chinese Premier Zhao Ziyang met with Leo Tindemans, welcomed him to visit China again, and expressed appreciation for his efforts to enhance Sino-Belgian relations and relations between China and the European Economic Community.

"China has always respected the importance of developing its relations with Belgium and with the European Economic Community," the Chinese Premier said. "We are willing to co-operate with European countries in developing our economy, in carrying out the technological transformation of enterprises, in exploiting energy resources and

building railways and other communications facilities."

Zhao expressed the hope that industrialists and entrepreneurs of the two countries would make joint efforts to expand by various means long-term co-operation in the economic, scientific and technological fields on the basis of mutual benefit.

Tindemans said that Belgium and China held common views on many points. "We hope to enhance the friendly relations and co-operation existing between our two countries. The changes that have taken place in China in the last few years are astonishing," he added.

China, Britain to build nuclear plant

State Councillor Gu Mu on March 25 greeted the progress made at talks between Chinese and British officials on the construction of a nuclear power plant in Guangdong Province when he met with a delegation from the British Department of Industry.

Gu Mu said that he hoped the co-operative project would be a success and set an example for economic and technological co-operation between the two countries. The construction of the nuclear power plant will benefit the economic development of both Guangdong and Xianggang (Hongkong) and will be conducive to Sino-British co-operation in other fields.

Noting that there are more than 80 joint ventures in China, Gu Mu said, "We welcome more firms from the United Kingdom and other countries to co-operate with us."

During the four-day talks in Beijing between the Chinese delegation led by Li Peng, Vice-Minister of Water Conservancy and Power, and the British delegation led by M. G. Manzie, Deputy Secretary of the Department of Industry, the two sides expressed support for the joint construction of a nuclear power plant by the Guangdong Power Company, Xianggang's China Light and Power Company and other firms. The plant, equipped with pressurized water reactor units, will have a generating capacity of 1.8 million kilowatts. It is to be built at Daya Bay, some 60 kilometres east of the Shenzhen Special Economic Zone.

ASEAN

Hanoi's new proposal rejected

AT the end of a one-day meeting in Bangkok on March 23, the foreign ministers of the ASEAN countries (Thailand, the Philippines, Malaysia, Singapore and Indonesia) issued a press statement, reaffirming that settlement of the Kampuchean problem should be worked out within the framework of the International Conference on Kampuchea and on the basis of the relevant UN resolutions. It stressed that a comprehensive settlement should be sought based on total withdrawal of Vietnamese troops from Kampuchea, the restoration to the people of Kampuchea of their right to self-determination free from intimidation and coercion and the establishment of a non-aligned and neutral Kampuchea.

Aim of "Regional Conference"

Viet Nam has persistently rejected the relevant UN resolutions on the Kampuchean ques-

tion, but it has again and again proposed a "regional conference" with the ASEAN countries to discuss this problem. The most recent proposal was issued by Vietnamese Foreign Minister Nguyen Co Thach on March 11 during the New Delhi Non-Aligned Summit.

The only difference in this offer from those of the past is that the puppet Heng Samrin regime would not join the negotiations between the ASEAN countries and Viet Nam and Laos. However it, is obvious that Viet Nam's stand is that of Heng Samrin. The absence of the Phnom Penh regime at the negotiations would not affect the essence of the "regional conference" promoted by Hanoi. Hence the ASEAN's rejection of the proposal.

As long as the Vietnamese authorities continue to refuse to withdraw their forces from Kampuchea, the Kampuchean

question cannot be settled. The aim of Viet Nam's offer for a conference between the ASEAN and Indochinese countries may be summarized as follows:

To create a false impression that Viet Nam is willing to settle the Kampuchean crisis by negotiations and make peace in Southeast Asia and thereby deceive world opinion and extricate itself from its isolation;

To turn the Kampuchean problem into a regional one instead of settling it in the United Nations, hoping thus to sow discord between ASEAN and other nations supporting the UN resolutions on Kampuchea and among the ASEAN countries themselves;

To lure the ASEAN states into giving up their support for the Kampuchean people against Vietnamese aggression; and

To lure the ASEAN states such as the foreign military bases in the Philippines and Thailand so as to divert ASEAN attention from the Kampuchean problem and prevent its members from calling on Viet Nam to pull its troops out of Kampuchea.

The fact that the Vietnamese authorities refuse to withdraw their troops from Kampuchea, proves that they are clinging to their regional hegemonic ambitions, that they want to create an "Indochinese federation" as a basis for further expansion in Southeast Asia.

Soviet Support

It seems clear that Hanoi's latest proposal for a "regional conference" has won Moscow's approval and support. Earlier, in February, when Soviet



ASEAN foreign ministers meet in Bangkok.

Deputy Foreign Minister Mikhail Kapitsa visited the ASEAN countries, he strongly advocated a regional conference on the Kampuchean question. On March 9, two days before Nguyen Co Thach issued this latest proposal, Kapitsa met with the ASEAN ambassadors in Moscow, urging the ASEAN countries to talk with the "Indo-chinese countries."

However, it is Kapitsa who stated unequivocally on March 4 that any political solution to the Kampuchean problem which demanded Viet Nam's uncondi-

tional troop pull-out as a prerequisite was an illusion. He said that the present situation in Kampuchea will not be changed and that talks with the ASEAN countries should be conducted on this basis. He also told ASEAN ambassadors in Moscow on March 9 that Viet Nam would not withdraw its troops from Kampuchea whatever losses it might suffer in that country. Kapitsa's statements indicated that Viet Nam's latest offer signifies nothing new.

— Ren Xin

EEC

A respite from monetary crisis

AFTER three days of heated discussions, on March 21 the finance ministers of eight European Economic Community (EEC) countries finally reached an agreement on a readjustment of the central exchange rates within the European Monetary System (EMS), thus easing for the time being worries on West European foreign exchange markets precipitated by the panic buying of Deutsch marks.

Under the present readjustment, the Deutsch mark will rise in value by 5.5 per cent, and the French franc will be devalued by 2.5 per cent. The Dutch guilder, the Danish krone, the Belgian and Luxembourg franc will rise by 3.5, 2.5 and 1.5 per cent respectively, while the Italian lira and the Irish pound will be devalued by 2.5 and 3.5 per cent. The central banks of the EMS countries will make corresponding readjustments.

Money Market Confusion

Following the general election in West Germany and mu-

nicipal elections in France in early March, speculators on West European foreign exchange markets rushed to buy the Deutsch mark pushing its price up sharply. In accordance with EMS regulations, fixed exchange rates are maintained among the EMS currencies while they float together externally. In mid-March, the international price of the Deutsch mark rose well beyond the point at which EMS regulations specify the implementation of corrective measures by the affected EEC countries.

At the same time, the exchange rate between the French franc and other currencies has fallen steadily reaching the minimum fluctuation limit, thus causing turmoil on the West European foreign exchange market.

To cope with this situation, the French, Belgian and other governments were forced to take measures to release large sums of their foreign exchange holdings to defend their own currencies.

However, these measures can only bring temporary stability to the foreign exchange market. Under these circumstances readjustment was imperative. The French Finance Minister held that tension on the foreign exchange market mainly stemmed from the rising exchange rate of the mark. According to EMS rules, German Government should adopt due measures to revalue the Deutsch mark or lower interest rates to stabilize the foreign exchange market.

But West Germany refused to adopt measures unilaterally. It held that if the mark was revalued then the franc must be devalued. As the French franc had been devalued twice since the French Socialist Party came to power, France refused to devalue again.

Emergency Measures

At West Germany's request, eight EEC finance ministers decided to meet to work out a concrete plan for readjusting the EMS central rates.

The first EEC Summit Conference of this year, which opened in the afternoon of March 21 in Brussels, would have been affected if the EMS conference had failed to reach a compromise. Thus both West Germany and France had to make concessions.

The adjustment of central rates was expected. The French trade deficit reached 93,000 million francs last year, while West Germany's favourable balance of trade reached 51,000 million marks. The French inflation rate for 12 months was over 9 per cent, while that of West Germany was between 3 to 4 per cent. The economic disparity between the two countries has led to a wide gap be-

tween their currencies. The readjustment of central rates reflects the economic difficulties faced by the West European

countries, but it is not a cure for their economic problems.

— Lin Jun and Yao Li

Soviet Union

Promotes collective-contract system

RECENTLY the Political Bureau of the Communist Party Central Committee of the Soviet Union held a meeting to discuss organization for the collective-contract system in all collective and state farms and requested that Party and government leaders at all levels and the departments in charge of agriculture popularize the collective-contract system.

At the end of the all-Soviet agricultural conference held in Belgorod City on March 19, M.S. Gorbachov, Politburo Member and Secretary of the CPSU Central Committee in Charge of Agriculture, said that this year would be the initial phase and that this system would be consolidated throughout the Soviet countryside during the 11th Five-Year Plan period (1981-85). He said in order to resolve the problems facing agriculture and animal husbandry, such as the need to raise output and the proportion of marketable products and to enhance the efficiency of agricultural capital investment, new incentives should be injected into economic, cultural and other activities.

Effective Way To Raise Output

At present the organization of labour and the distribution of

remuneration are not directly related to the final results of production. This affects the output and the efficiency of work.

A Soviet newspaper, *Country Life*, said that a state farm in the suburbs of Moscow had not had a good harvest for a long time. The key problem was that the farm machine drivers were not interested in the farm output. They worked in the field just as they were ordered. Their income was decided by the area of farmland they tilled. Later one team tried the collective-contract system and harvested the highest yield in the whole region the very first year. Grain output rose 4 per cent, soybeans 40 per cent and maize 13 per cent.

Where the collective-contract system is well implemented the output of grain has risen rapidly. In 1977, 27 cotton planting units in Uzbekistan implemented the collective-contract system. The collective unit in Syr Darya of this republic which introduced the collective-contract system got 850 kilogrammes more cotton per hectare than the average output in this region in 1981. The output value created by each member of the contract team was 3.5

times the average target of the whole region.

Last May the plenary session of the CPSU Central Committee decided to introduce the collective-contract system in the countryside, but this has not yet made rapid progress. The purpose of this conference of the Politburo meeting was to speed up the process.

— Ren Yan

Latin America

Steps to combat economic crisis

JUDGING from the performance in the first three months of this year, "the prospects this year for the overall economic growth of Latin America look dim and herculean efforts are needed on the part of many countries if they want to maintain their last year's productive activities," stated Enrique Iglesias, Executive Secretary of the Latin American Economic Commission, in an interview with the Chilean daily *La Segunda* on March 18.

Iglesias also called on Latin American nations to take joint actions immediately to grapple with the current economic crisis and not to wait passively for the economies of the developed countries to pick up.

The member states of the Latin American Economic System held a conference in early March which pointed out that

the best way for Latin American nations to combat the economic crisis is to make economic adjustments aimed at promoting regional integration and intraregional co-operation. The conference called on the developed countries to join together to renegotiate their foreign loans to make sure that the new terms will not strangle or inhibit the economic development of Latin American countries.

GDP Growth Rate Falling. After World War II, Latin America's economic growth rate was high. Even during the Western economic recession of 1976-80, the region's economic growth averaged 5.2 per cent. But Latin America's gross domestic product (GDP) only increased 1.2 per cent in 1981 and dropped still further by 1 per cent last year, the lowest point in 40 years.

The economies of Chile, Paraguay and Uruguay had been growing rapidly in the past, but in 1982, the GDP in these countries dropped by 13 per cent, 2.5 per cent and 9.5 per cent respectively. Oil-exporting countries, like Mexico and Venezuela, were plagued with sagging production. The GDP of Bolivia and Argentina which had dropped in 1981, fell still further by 7.5 per cent and 5 per cent last year. Only a few Latin American countries, such as Colombia, showed slight gains in economic growth.

Foreign Debt. In recent years, the total foreign debt of Latin American countries has grown rapidly, reaching nearly US \$300 billion by the end of last year. US\$274 billion of this total were owed by governments, accounting for 44 per cent of the total foreign debt of \$623 billion owed by the developing countries. Ten years ago, the total foreign debt of Latin

International People's Tribunal

Israel found guilty of war crimes

AFTER hearing the testimony of witnesses from more than 10 countries and areas including Palestine, Lebanon, the United States and Italy, the International People's Tribunal on the Israeli invasion of Lebanon, which opened on March 18 in Tokyo, on March 21 convicted the Israeli government of committing war crimes and the United States of "complicity." The tribunal demanded that Israel withdraw its troops from Lebanon, release political prisoners and prisoners of war and recognize the Palestinian people's rights to self-determination.

Testimonies showed that since last June 4, when Israel began its invasion of Lebanon, Israeli troops have used sophisticated

weapons to destroy schools, hospitals and residences in Lebanon, killed a large number of Palestinian refugees and carried out one massacre after another.

The tribunal solemnly noted that the US Government bears a grave responsibility for these crimes, that the United States made the Israeli invasion of Lebanon possible by supporting the aggressive policy of the Israeli government diplomatically and militarily.

In his speech, Rui Mu, China's juror, condemned Israel for invading Lebanon and slaughtering Palestinian refugees. He expressed firm support for the just struggle of the Lebanese and Palestinian peoples.

— Yan Zhen

America was only \$43 billion; it reached \$255.2 billion in 1981. In 1982 more than \$34 billion were spent on profits and interests on foreign capital investments and foreign credit, up from \$27 billion in 1981.

Brazil, Argentina, Mexico and other heavily debt-ridden Latin American countries have asked the International Monetary Fund and the international banks to provide more assistance to relieve their financial difficulties.

Inflation and Unemployment. Latin America's runaway inflation rate of 80 per cent in 1982 was the highest in its history. Argentina, with the third largest economy in South America, experienced an inflation rate of 209.7 per cent last

year. In Bolivia the rate of increase in consumer prices, about 25 per cent in 1979-80, jumped to 200 per cent in 1982. Mexico's consumer price hikes topped 85 per cent by last November because of the depreciation of its currency. The rate of inflation in Brazil was 100 per cent in 1981-82.

The serious economic recession in South America forced many factories to close down leaving large numbers of workers unemployed. Unemployment has become a severe problem in many Latin American countries.

Internal and External Causes. Latin America's economic crisis was caused by both internal and external factors. Historically, Latin American countries developed lopsided economies and

were compelled to depend to a considerable extent on foreign countries. Thus the present recession in the industrial countries has had a serious impact on the Latin American countries.

Recently, world market demands have been falling and the prices for primary products have declined sharply. Furthermore, there exists in international trade a trend towards protectionism and many countries have high interest payments for their loans. All these have aggravated Latin American countries' economic difficulties.

Domestically, the turbulent political situation in some coun-

tries has had a serious impact on investments. Some other countries have carried out incorrect economic policies or have poor enterprise management.

In view of the fact that the Western economy will not recover soon, some South American countries have now adopted measures to reduce their budgetary deficits and encourage more exports. They are trying to control inflation and stabilize their economies. At the same time, they have developed regional co-operation and strengthened their economic relations with other third world countries.

— *Zhong Tai*

August 1975, have issued statements on many occasions firmly supporting the just aspirations within the scope of the sovereign rights of the Republic of Argentina, and urged Britain and Argentina to hold talks. This stand was repeated at the Managua meeting of the non-aligned countries' co-ordinating bureau last January. The Political Declaration adopted at the 7th Non-Aligned Summit reiterated support for Argentine sovereignty over the Malvinas Islands and for reopening talks between Argentina and Britain with the participation and good offices of the UN Secretary-General. This has led Argentina to deeply appreciate the power of international support from the third world.

Another motivation for the Argentina's change in foreign policy is economic. The economic crisis in the Western capitalist countries has brought great difficulties to Argentina and the country is now deep in foreign debt.

With the drop in world prices for grain, beef and its other main exports, Argentina's foreign exchange earnings fell sharply. Some of its manufacturing departments are also seriously affected by the difficulty in importing materials. As these problems cannot be resolved by Argentina itself, it is giving its support to the North-South dialogue, the establishment of a new international economic order, and the strengthening of economic and technological co-operation between the developing countries so as to overcome its economic difficulties.

— *Guan Yanzhong*

Argentina

A major change in foreign policy

THE presence of Argentine President Reynaldo Bignone at the recent New Delhi Non-Aligned Summit signalled a major change in Argentina's foreign policy. It was the first time since the country became a member of the non-aligned movement in 1973 that its President attended a summit conference of the movement and it underlined the fact that Argentina's current policy is to build closer relations with the other non-aligned and third world countries.

An important factor for the change is last year's war between Britain and Argentina over the Malvinas Islands. During that 75-day South Atlantic conflict, the

United States and Western Europe sided with Britain and imposed economic sanctions and an arms embargo on Argentina while most of the third world, including the non-aligned countries, supported the just demands of the Argentine people.

After the war, the recovery of sovereignty over the Malvinas became Argentina's main preoccupation. From the platforms of various international forums, it has repeatedly called on the world community to compel Britain to hold negotiations with it on the Malvinas issue.

The non-aligned countries, beginning with the Lima foreign ministers' conference in

China's Space Science and Technology

by Ke Qi

China was the fifth country in the world to launch satellites with indigenously developed carrier rockets, the third country to master the technique of retrieving satellites and the fourth country to launch multiple satellites with a single rocket. This year, or early next year, China expects to launch a communication satellite.

Today, China has developed a basic infrastructure in the field of space technology, accumulated valuable experience in management, trained a contingent of space scientists and built several satellite and carrier rocket research and production centres. It also has established comprehensive testing facilities throughout the country.

This is a brief account of the development of China's space science and technology. — Ed.

THE Party and government first drew up plans for China's space projects in the mid-1950s. The country's rocket technology research institutes were set up at that time and construction of testing sites began. Tens of thousands of scientific and technical personnel, cadres, workers and People's Liberation Army commanders and fighters have contributed to the growth of China's space science.

Process of Development

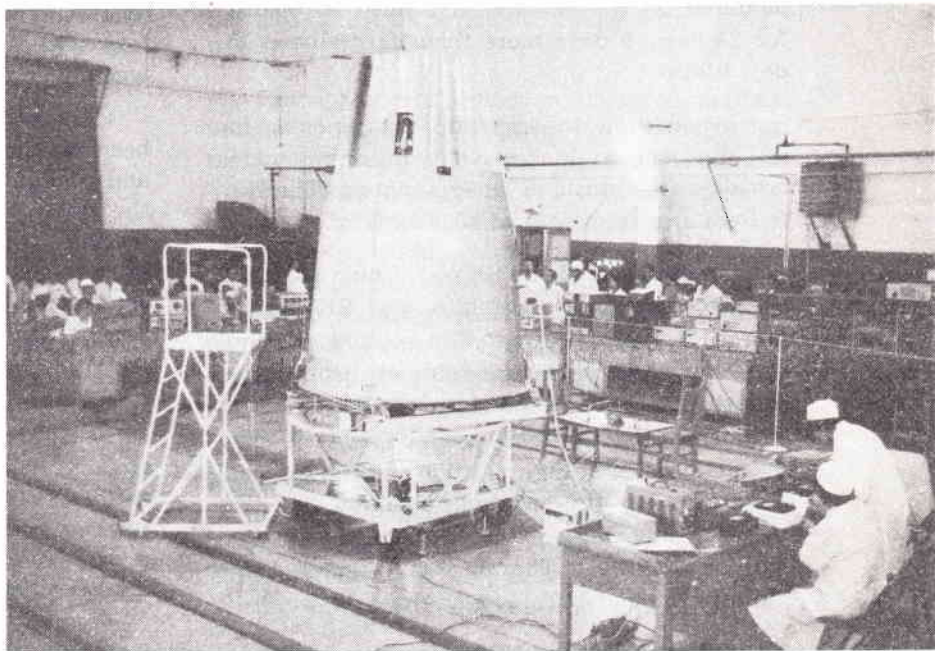
Sounding Rockets and High-Altitude Balloons. China began developing research rockets, known as sounding rockets, in 1958 and has succeeded in building three types for space research.

The first is a liquid-propellant, single-stage rocket that provides constant measurement of upper atmosphere parameters.

The second is a two-stage rocket that employs liquid fuel in the first stage and solid propellant in the second. It is used to probe upper

atmospheric conditions (such as wind direction and velocity, temperatures and atmospheric density), cosmic rays and magnetic fields, and to conduct space biological experiments and test scientific instruments.

The third is a solid-propellant, two-stage rocket that collects upper atmospheric data.



A space physics research satellite gets a final check.

Through the development, testing, launching and application of sounding rockets, Chinese scientists have learnt much about manufacturing rocket engines and equipment and about the instrumentation necessary for complicated operations like the recovery of rocket payloads.

These rocket tests produced substantive data on space physics, the basis for the development of satellites.

Since 1977, China has also conducted many experiments using high-altitude balloons as vehicles.

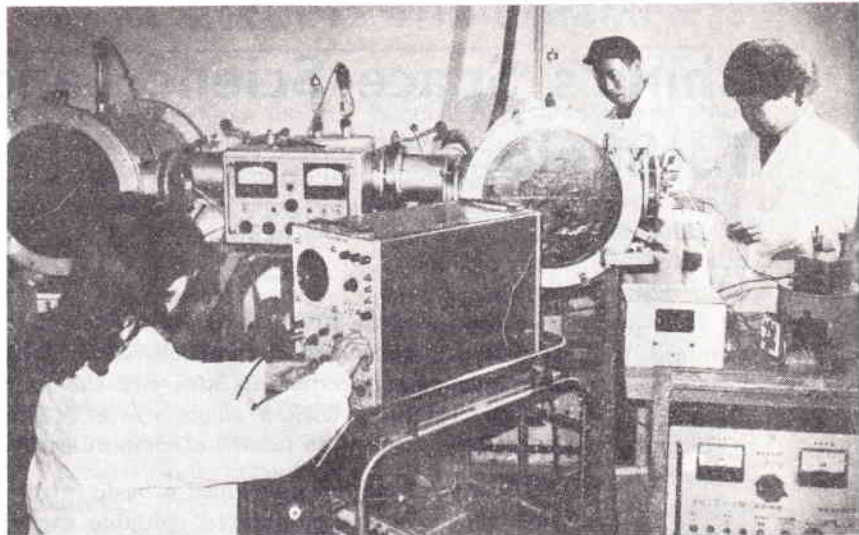
Artificial Earth Satellites. In 1965, China began its development of artificial earth satellites with the research and design for its first satellite, the SKW-1. After more than five years of effort, the first satellite was successfully launched into a predetermined orbit on April 24, 1970.

China's first satellite had a more sophisticated technological programme and design than the first satellites launched by the Soviet Union, the United States, France and Japan. It weighed 173 kg, 24 kg heavier than the total weight of the first satellites launched by those countries. Measuring and tracking instruments mounted on the satellite continued to operate for 24 days, 9 days more than its designed 15-day lifetime.

In addition to scientific instruments, the satellite had a short-wave transmitter which broadcast the music of *Dongfanghong* (The East Is Red) at a frequency of 20.009 MHz.

On the basis of the SKW-1, China launched its second scientific satellite, the SKW-2, on March 3, 1971. The satellite orbited continuously for eight years and routinely transmitted scientific data to ground stations. It carried instruments that probed cosmic rays, X-rays, magnetic fields at high altitude and the external heat flow of the orbiting satellite. It was the first time China gathered space physics data with a satellite. The SKW-2 re-entered the atmosphere and burnt up on June 17, 1979.

From 1975 to 1982 China successfully launched 12 scientific satellites of various types



Scientists test an electrically propelled rocket in a simulated space environment.

and successfully retrieved four of them. The four recoveries were possible because of China's advances in orbit control technique and in developing retro-rockets and heat-resistant materials.

Through these tests China acquired extensive data about satellite technology, space remote sensing and space exploration, and obtained useful information for the application of remote sensing in different fields of its national economy. China also enhanced its ability to design and manufacture satellites and carrier rockets, while its scientists conducted exploratory studies of space medicine and engineering techniques for manned spacecrafts.

Another satellite research emphasis has been on the development of the infrastructure and of individual items of space technology in the fields of satellite structure and materials, thermal control, altitude control, power resources, tracking and telemetry, and ground environmental testing.

Carrier Rockets. The development of large carrier rockets is a prerequisite for developing space technology. China began this work in the early 1960s. By the end of that decade, it already had the capability of launching satellites of considerable weight. The 1970s saw a further rise in the technical level of China's carrier rockets and the country's capacity to produce them.

In May 1980, China launched a large carrier rocket into the Pacific, and in October 1982 it launched a carrier rocket from underwater to a

predetermined ocean target area. These achievements signalled a new level in China's carrier rocket technology.

The country has developed three types of carrier rockets.

The first type is the CZ-1, a three-stage launch vehicle that uses liquid propellant in the first and second stages and solid propellant in the third. It can put a 300 kg satellite into a near-earth orbit. China's first satellite was launched by the CZ-1.

The second type is the FB-1, a two-stage liquid-fuelled rocket capable of putting 1,000-1,200 kg objects into low orbit.

The third type, the CZ-3, is being developed. It is a three-stage vehicle using liquid propellant capable of placing satellites into geostationary orbit or of launching enormous satellites into low orbit.

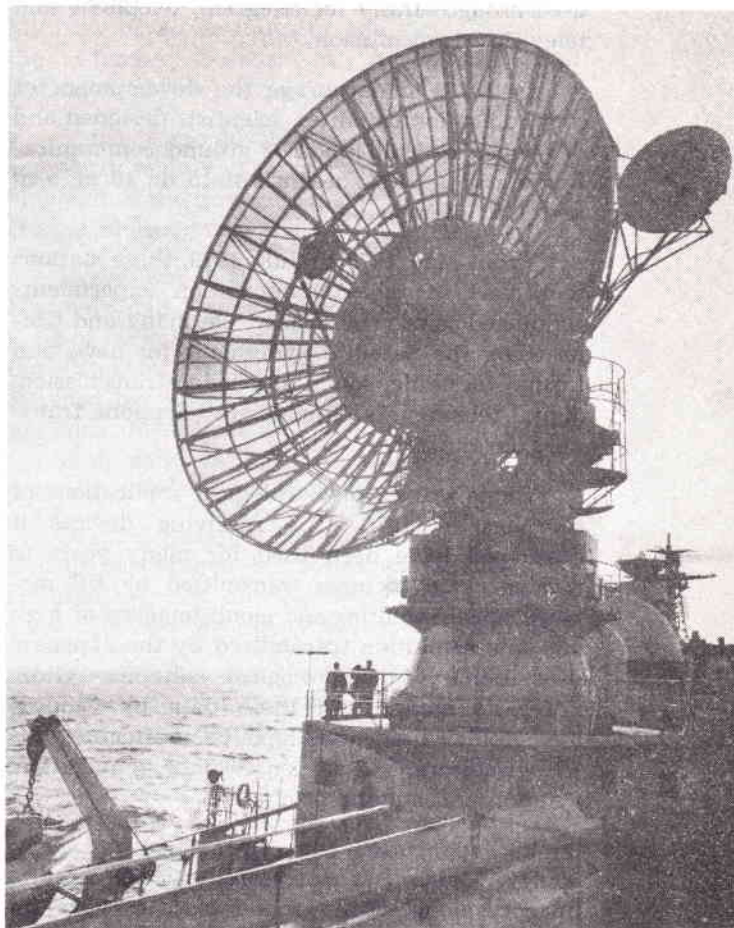
China launched a group of three experimental space physics satellites with a single carrier rocket on September 20, 1981, for the first time in its history. It became the fourth country following the United States, the Soviet Union and France to launch multiple satellites with a single carrier rocket.

The three satellites played an important role in the study of space physics and radio technology. They were equipped with more than a dozen instruments capable of probing atmospheric density, magnetic fields at high altitudes, infrared-rays, ultraviolet-rays, the quantity and energy of protons and electrons in high altitude environment, and solar X-rays.

They transmitted large amounts of data to the ground which have proved to be of significance in the study of space physics and the further development of space technology.

During 1981-82, China made new progress in developing a geostationary orbit communication satellite and the CZ-3 three-stage carrier rocket. This has laid a solid foundation for the launching of a communication satellite in the near future.

Satellite Launching Sites and TTC Ground Stations. To support satellite research and development, China has built numerous satellite technology facilities and established launching sites in northwest China's Gansu Province and other places. China now also possesses tracking and telemetric equipment for monitor-



A telemeter control vessel designed and built by China conducts rocket guidance tests.

ing and putting the launch vehicles and satellites into their orbits.

China has established an effective satellite telemeter control (TTC) network capable of monitoring many different types of satellites. This network consists of one control centre in Shaanxi Province's Weinan Prefecture and a number of ground stations in other provinces and autonomous regions. China has also succeeded in building satellite tracking and telemeter control vessels. The stations and vessels are equipped with Chinese-made computers and devices for telemetry, telecontrol, tracking, data transmission and communications.

Application of Space Science and Technology. China is developing geostationary orbit communication satellites and polar orbit meteorological satellites, as well as researching remote-sensing equipment and satellite applications.

In communication applications, China imported Standard-A ground stations in 1974 and

used it successfully for telegram, telephone and television transmission.

In 1978, to encourage the development of communication satellites, scientists designed and developed several kinds of ground communication stations with antennas of 15 m, 10 m, 5 m and 1 m diameters.

From May 1978 to July 1979, these stations took part in the communication experiments conducted jointly by France, Germany and China using the Satellite Symphonie for news and format facsimile, sound and video transmission, digital telephone and analogue telephone transmission and other tests.

China started meteorological applications of satellites in 1970. The receiving devices it developed have been used for many years to receive cloud pictures transmitted by US meteorological satellites and cloud imagery of high and low resolution transmitted by the Japanese geostationary meteorological satellite GMS. Forecasts made from these data by Chinese meteorological agencies have been effective aids to agriculture, water conservancy, navigation, aviation and aquatic production.

In applications of remote-sensing technology, China has successfully used satellite imagery along with "ground truth surveys" in land resources investigations, forest monitoring, regional geologic and hydrologic survey, mineral exploration, seismology forecasting, oceanography and environment monitoring.

In addition, some space technology developments have been successfully employed in other sectors of the national economy. For instance, the achievements of sounding rockets have been applied to the manufacture of hail-suppression rockets, and thermal control techniques that were developed for satellites are used in medical treatment and in harnessing solar energy. Silicon solar cells developed for satellites are now used in railway communications, navigation (unattended beacon lights) and microwave relay stations (in mountainous areas).

Self-Reliance

The space industry utilizes the latest achievements in modern natural sciences and technology. It requires a comprehensive industrial complex and highly trained scientific and technical personnel. In the past two decades,

China has blazed a trail in space science and technology suitable to its own conditions through hard struggle under very difficult economic and technical conditions.

In 1958, soon after the Soviet Union launched its first man-made earth satellite into orbit, Mao Zedong issued a call to the nation: "We too will make man-made satellites." The Party Central Committee agreed, noting that China has already acquired the necessary foundation for tackling key scientific problems in this field. It formulated a plan for developing space technology and set up a space science committee headed by Zhou Enlai.

During the early days, China's space industry encountered numerous difficulties. First, the Soviet Union withdrew its experts in 1960, and the ensuing economic difficulties temporarily held back the development of space technology. Assisted by people throughout China, however, the scientific and technical personnel, workers, cadres and People's Liberation Army commanders and fighters built numerous factories, research institutes and testing and launching facilities.

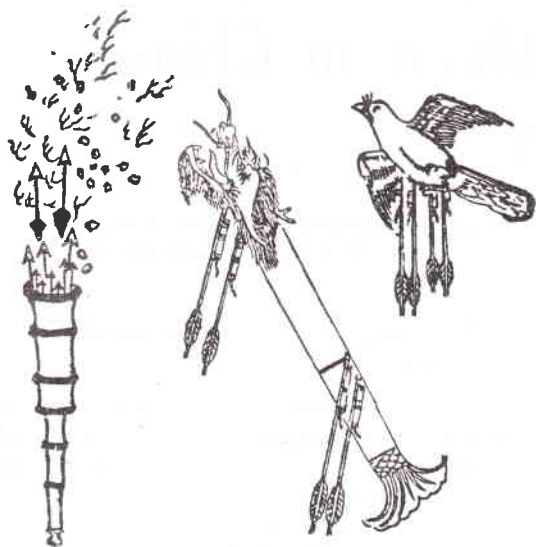
Many senior scientists and young scientists and technicians had had no previous experience in space technology. They relied on their own efforts to independently undertake the tasks of designing the major engineering systems needed in space science. Working closely together under difficult conditions, the technical personnel and workers assembled products that met technological standards and completed many ground and space environmental experiments.

Space science involves highly comprehensive technology. An independent space industry requires nationwide co-ordination. Under unified planning, the different regions and departments joined forces and gradually established a scientific research and production network throughout the country.

Unquestionably, socialist public ownership and the Party's centralized leadership have provided the necessary conditions for such complicated work.

China's space technology was developed relatively late and its foundation is fairly poor. There are still big gaps between China and the advanced countries. At present, because of economic readjustment, the country is unable to devote more funds to this work. As a result,

Ancient Chinese Rockets



- Left: A Song Dynasty "fire gun" for shooting arrows and pellets.
- Middle: A Ming Dynasty "fire-dragon emerging from the water" explosive device propelled by rockets.
- Right: A Ming Dynasty "magic fire flying crow" fire-bomb propelled by rockets on the arrow shafts.

priority is being given to developing urgently needed and practical space technology.

The purpose of China's development of space technology is to facilitate its modernization of agriculture, industry, national defence and other branches of science and technology, and to benefit the people. Hence, China will not join the space race nor will it rely on others to develop space projects. But it values foreign experience and seeks to develop international co-operation and exchanges. China has participated in various activities sponsored by the related organizations of the United Nations and this has helped promote the development of China's space science.

A Rocket Expert

During World War II, a Nazi rocket fell and exploded only 100 metres away from a Chinese electrical engineering student in Britain. Luckily he was not hit. But the experience taught him what a rocket was.

He came to know a great deal more about rockets. About a decade later, Huang Weilu was asked to study rocketry and he has become one of China's outstanding rocket experts.

Today Huang is a chief engineer in the Ministry of Space Industry and vice-director of the Chinese Society of Aeronautics and Astronautics.

China began developing rockets in 1956. A rocket is mainly composed of two parts, the engine and the guidance system. Huang was in charge of designing the guidance system.

Everything had to be learnt from scratch. Not only had Huang never worked on rockets, none of his colleagues had. They studied foreign data and information together and were instructed by Soviet rocket experts then working in China. In August 1960, the Soviet Union tore up its agreements and took away all the blueprints and informative materials.

In the face of this unexpected setback, Huang encouraged his colleagues saying, "We Chinese are not dunces. What the foreigners have achieved we can certainly do ourselves."

Pressing his stomach with one hand to relieve the pain of a gastric ulcer, Huang worked day and night, despite his colleagues' entreaties that he see a doctor. In October 1960, three months after the Soviet Union withdrew its experts, China successfully launched its first rocket, marking China's entry into the field of rocket designing through self-reliance.

After the success of the first test, Huang set even stricter demands on himself. To prevent errors, he and his colleagues checked and rechecked their experiments. Huang summarized this experience in a 30,000-word paper entitled *On the Reliability of the Guidance System and Controlling Instruments*. Written in the early 1960s, it remains a valuable reference document today.

During the "cultural revolution," some scientists were prohibited from pursuing research work. Disregarding the various interferences, Huang continued his work and shouldered the tasks of those engrossed in factional struggles. In addition to designing and research work, he worked simultaneously as a cartographer, an instrument testing worker and a purchaser.

Once he suggested combining two tests in one rocket. The plan he designed was successful and saved a large sum of money for the state. He also helped a rocket engine plant discover a serious mechanical problem and avoid substantial economic losses.

(Continued on p. 24.)

Achievements and Problems in China's 1982 National Economy

by the Comprehensive Economic Bureau
of the State Economic Commission

The year 1982 saw steady and healthy progress in China's national economy, a sustained increase in the production growth rate and further improvement in economic results. The preliminary estimate for the nation's gross industrial and agricultural output value was 806,000 million yuan, fulfilling 104.7 per cent of the annual plan or, according to comparable standards, 7.3 per cent higher than 1981. The estimated figure surpassed the 4 per cent annual growth rate set in the Sixth Five-Year Plan.

MAJOR achievements by various departments of the national economy in 1982 are as follows:

1. Agriculture reaped a rich harvest and created many new records.

The preliminary statistics indicated that the country's total agricultural output value was up some 7 per cent compared with 1981. The output of such major agricultural products as grain, cotton, oil-bearing and sugar-bearing crops, cured tobacco and tea hit an all-time high.

Although the nation's area sown to grain crops was cut by 2.1 per cent, the output of grain was 5.9 per cent higher than the previous year with its total output amounting to more than 344 million tons; and the per-hectare grain yield averaged 3.06 tons, a record in China's history.

The output of cotton reached 3.37 million tons, up 13.6 per cent compared with 1981 and its annual average increase in the last three years hit 15.2 per cent.

The total output of oil-bearing crops exceeded 11.2 million tons, an increase of 9.8 per cent over 1981 following four consecutive years of growth. The past five years saw an increase of 180 per cent in this product, with a yearly average increase of 22.8 per cent.

The output of cured tobacco, sugar-bearing crops and tea was respectively 41.3 per cent, 14.5

per cent and 11.1 per cent higher than the previous year.

The stabilization and improvement of the agricultural production responsibility system expedited the development of the diversified rural undertakings and the growth of rural industrial and sideline production. Investigation of typical examples showed that the total income of commune- and brigade-run enterprises already accounted for 34.6 per cent of all agricultural earnings.

The emphasis of rural financial activities has been shifted to the households under the communes. Agricultural Bank branches and agricultural credit co-ops have enormously increased loans to households which entered into contracts with production teams for production quotas, households engaging in specialized lines of production and households doing specialized jobs besides crop cultivation. The amount of such loans rose by 170 per cent over that of 1981. By the end of 1982 they reached 7,900 million yuan, making up 45.6 per cent of the total agricultural loans issued to communes and brigades — up from 19.2 per cent in 1981.

The good agricultural harvest and growth of sideline products helped increase the total volume of agricultural and sideline products purchased by domestic and foreign trade departments to 86,120 million yuan, up 12.6 per cent compared with 1981, thereby better meeting the needs of light and textile industries for raw materials, enriching the supply of non-staple foodstuffs and promoting the development of food industry.

2. Industrial production registered a sustained overall increase.

In 1982, industries began to organize and readjust production in line with the social demand. The nation's gross industrial output value was 556,000 million yuan, 7.4 per cent higher than 1981; heavy industry was up 9.3 per cent and light industry, 5.6 per cent. The

gross output value of light industry accounted for 50.6 per cent of the gross industrial output value.

The output value of the state industrial enterprises covered by the state budget (accounting for 63.5 per cent of the nation's gross industrial output value) was 6.3 per cent above 1981 and their sales income increased 6.2 per cent. The simultaneous growth of both output and sales was achieved at a time when there was a wider choice of commodities on the market and more products were turned out to fill orders. This showed that production was better integrated with demand and that we were moving away from the tendency to one-sidedly pursue the production growth rate to the neglect of economic results.

Planned output was met for 90 of the 100 major industrial products covered by the state plan. Of the 10 products whose output failed to meet the state plan, except timber which fell behind, the output of chemical fibres, tractors and other products was lowered according to changing market demands.

Of these 100 products 54 topped their previous production records. They included coal, electricity, petrol, rolled steel, cement, plate glass, sulphuric acid, soda ash, caustic soda, ethylene, synthetic ammonia, chemical fertilizers, dyestuff, plastics, cotton yarn, cotton cloth,

silk fabrics, woollen fabrics, paper, bicycles, sewing machines, wrist watches, television sets, tape recorders, cameras, sugar and beer.

Fabrics of mixed polyester fibres and cotton, radios and other products whose supply exceeded demand met their plans for limited production.

The nation's total output of primary energy (converted into standard coal) amounted to 656 million tons, 3.8 per cent higher than the year before. The key coal mines ended the passive state of uneven progress in mining and tunnelling, and the local coal mines raised output following two consecutive years of decreased production. The nation's total coal output hit 651 million tons, 29 million tons more than the planned target and 4.8 per cent higher than 1981.

The output of crude oil stabilized at 100 million tons for the fifth consecutive year, thus creating favourable conditions for improving reserve resources. The output of electricity was 5.2 per cent higher than the previous year; of this, hydroelectricity increased 10.9 per cent.

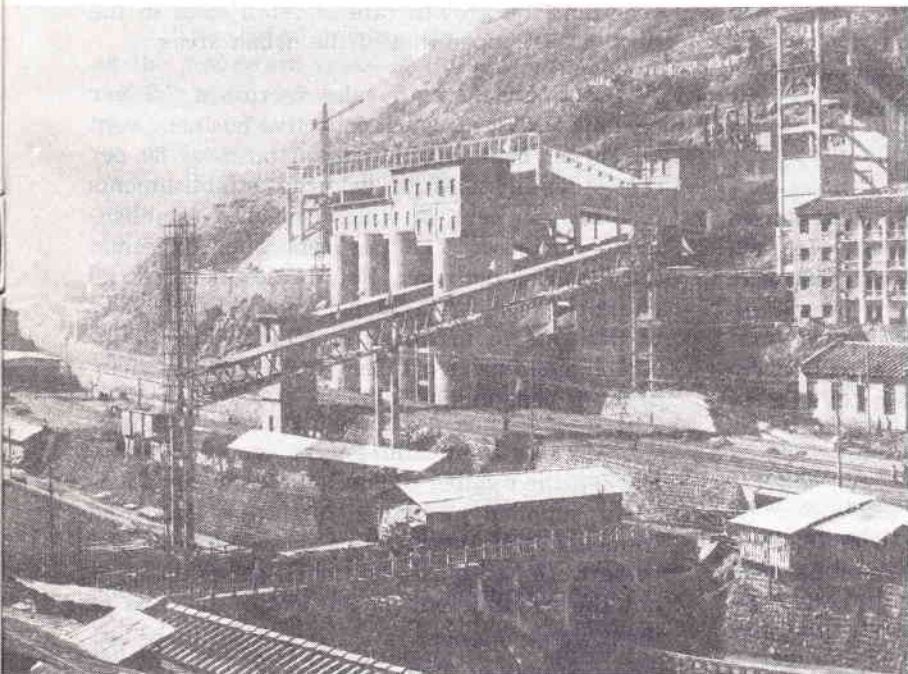
3. Transport and communications basically met the needs of economic development.

The state plan for transport was overfulfilled and the transport of key materials and passengers was guaranteed.

The volume of goods transported by railways amounted to 1,110 million tons, 5.9 per cent greater than 1981. The volume of coal transported by rail, which has close bearing on the national economy, hit 439 million tons, 6.5 per cent more than 1981; the amount of coal that was moved from Shanxi Province to other places reached 90.17 million tons, an increase of 10.4 per cent over 1981.

The volume of cargo carried by railways reached 610,900 million ton-kilometres, 7.2 per cent higher than the previous year.

The number of railway passengers amounted to 990 million persons, a 5.1 per cent increase over 1981.



The highly mechanized Chongqing Shihao Coal Mine with an annual production capacity of 900,000 tons has recently started operation.

The volume of goods transported by ships under the direct administration of the Ministry of Communications was 149 million tons, 5.7 per cent over 1981. The volume of cargo handled by the various seaports was 8.4 per cent higher than 1981, of which the amount of foreign trade goods was 8.6 per cent more than 1981.

The total volume of freight carried by civil aviation (in terms of ton-kilometres) was 18.1 per cent higher than 1981. Post and telecommunication transactions for the whole country were up 4.5 per cent compared with 1981.

The land-to-water through-transport was further developed and more than 4,000 railway stations and 100 ports throughout China handled land-to-water through-transport.

4. Investment in fixed assets hit an all-time high.

The investment in capital construction undertaken by state-run units amounted to 54,500 million yuan, overfulfilling the state plan by 10,000 million yuan. It was 10,200 million yuan or 23 per cent more than 1981, the highest in China's history. Of this total, the investment covered by the state budget was 740 million yuan or 3.6 per cent more than 1981; the investment from domestic loans was 52.7 per cent higher; foreign investment went up 53.6 per cent; self-financed and other investments rose 34.6 per cent, reaching 18,960 million yuan and overstripping the plan by 5,040 million yuan.

Added to the investment in equipment updating and technical transformation, the country's total investment in fixed assets also topped the highest record in history.

The plan slated 80 large and medium-sized projects to go into operation in 1982. In fact, 107 went into production, of which 50 were covered by the state plan. Furthermore, 80 individual projects were expected to go into operation according to the plan; 100 actually went into production, of which 55 were covered by the state plan.

Plans for the newly added production capacity of 20 of the 27 major products were fulfilled or overfulfilled. The 20 items included coal, crude oil, natural gas, generating sets, cement, synthetic ammonia, cotton spindles, length of double-track railway route that was open to traffic and commercial cold storage.

The fields of investment were further readjusted. Investment for productive projects was

20.2 per cent higher than 1981. Investment in non-productive projects was 26.9 per cent greater than 1981. Of this 13,150 million yuan was used in housing construction, an increase of 20.4 per cent. The floor space of housing construction totalled 157.52 million square metres, and 84.25 million square metres were completed, making 1982 the record year in residential construction for urban workers and staff.

5. Commodity supply exceeded social purchasing power.

The urban and rural market presented an unprecedented scene of prosperity as a result of the bumper agricultural harvest and growth in sideline production, plus the increased output of consumer goods and the expansion of different economic sectors and circulating channels. Supplies of retail goods for the domestic market provided by industrial, agricultural, commercial and catering departments were 11.6 per cent higher than the previous year, and social purchasing power increased by 9.8 per cent during the year. The long period when consumer goods always fell short of purchasing power was ended.

The year's total retail sales were 257,000 million yuan, 22,000 million yuan or 9.4 per cent higher than 1981. Of this the increase in urban areas was 6,400 million yuan or 6.2 per cent, and that in rural areas was 15,600 million yuan or 11.8 per cent. It was the fourth consecutive year that the growth rate of retail sales in the rural areas topped that of the urban areas.

Commercial retail sales increased 7.8 per cent over 1981, of which collective business went up 30 per cent and individual business 80 per cent. Retail sales of catering establishments rose 10.5 per cent, of which collective establishments increased 17.8 per cent and individual business 57.8 per cent. Retail sales of industrial enterprises went up 19 per cent. Retail sales of peasants to urban citizens, according to incomplete statistics, reached 10,900 million yuan, 21.9 per cent higher than the previous year.

As more commodities were available on the market, the number of goods which were rationed or supplied in limited quantities decreased tremendously. Investigation showed that in 1978 there were 73 kinds of rationed goods throughout the country, but at the end of 1982, 64 of them were no longer rationed, instead there was a good supply of them. Because of the increased supply, the rationed goods could also be bought at negotiated prices.

The nation's general retail price index basically remained at the year-end level of 1981 and was about 2 per cent higher than the 1981 average.

6. Exports kept rising and there was a favourable balance in foreign trade.

Although the international market suffered a recession and the world total volume of trade dropped, our volume of exports saw a sustained increase. According to the Ministry of Foreign Economic Relations and Trade statistics, China's total volume of exports increased 3.5 per cent over 1981 (it rose 8.6 per cent if the factor of the reduced prices of export commodities on the international market is excluded); the total volume of imports decreased 12.8 per cent (it basically kept the 1981 level if the factor of the reduced prices is excluded). Exports topped imports.

7. The central government's revenue reversed the downward trend of the past three years and began to pick up.

The state revenue exceeded the budgetary figure. Revenue from various taxes was greater than expected. Income rose from railway, transport and communications enterprises; profits turned over to the state by industrial enterprises were below the budgetary estimates, but they remained at the 1981 level in terms of comparable standards; the income from commercial enterprises was lower than the previous year and the loss from grain and foreign trade enterprises was higher than 1981.

The state expenditures exceeded the targets of the budget. This was chiefly because of increases in the operating expenses for culture, education and public health, administrative expenses and expenditures for aiding agriculture. All of them exceeded the budgetary figures and topped those of the previous year. There was still a deficit in the final account of the state.



Peasants buying synthetic fabrics at a rural fair in Anhui Province.

8. The issuance and repayment of bank loans and the banks' cash receipts and payments showed tremendous increases; the circulation of money in the market was healthy.

The total cash receipts of the banks was 17.4 per cent higher than 1981 and their total cash payments went up by 16.7 per cent. The balance between cash receipts and payments showed that an additional sum of 4,280 million yuan was put into circulation, 720 million yuan less than planned. The volume of currency circulating on the market by the end of the year totalled 43,910 million yuan, an increase of 4,280 million yuan or 10.8 per cent compared with the end of 1981. As more cash was withdrawn from circulation through commodity sales and bank savings deposits, 1982 saw the least amount of additional currency put into circulation in the last few years, which signaled an improvement of money circulation in the market.

With the improved standard of living, the ample supply of commodities and the basic stabilization of prices, the savings deposits of the urban and rural people increased markedly. At the end of 1982, these deposits amounted to 67,500 million yuan, an increase of 15,170 million yuan over 1981. They have become an important source of bank loans.

The good results in China's 1982 national economy were achieved on the basis of the

readjustment in the previous years and the improved proportionate relations between accumulation and consumption and among agriculture, light and heavy industries.

At present, we have basically completed the task of setting our guiding thought in economic work to rights, and the work of readjusting, restructuring and consolidating the national economy has entered a new stage. Many kinds of work have been gradually undertaken; this includes consolidating the existing enterprises and carrying out technical transformation in them in a planned and systematic way, and paying attention to personnel training and technological progress.

The following problems, however, still exist in such economic activities as production, construction and circulation and should be solved.

First, the area sown to grain crops has been reduced every year since 1979 and the country's area sown to these crops was 1,687 million *mu* (including multiple crop index) in 1982, which was 36.9 million *mu* less than the previous year and dropped to a level equal to the early years after the founding of the People's Republic.

In the future, the ratio of areas sown to grain and industrial crops should be well defined in accordance with the conditions of different areas.

Second, in industrial production, the product mix should be improved, attention should be paid to increasing the quality and variety of products, and the work of sales and services should be strengthened.

Third, the national scale of capital construction should be strictly controlled, and investments using self-financed funds or loans should particularly be well controlled.

Fourth, the commercial departments should further expand commodity markets and accelerate the turnover of commodities.

Fifth, the fundamental task is to continually emphasize improving economic results, both in guiding ideology and in practical work.

Following the unified arrangements of the central authorities and proceeding from reality, the reform of economic systems should be carried out comprehensively, systematically, resolutely and in good order. □

(Continued from p. 19.)

His three children answered the government's call to settle in remote rural locations just at the time when his wife became ill with a lingering disease. As a result Huang was responsible for all household chores in addition to his scientific pursuits.

In his work unit, he worked painstakingly to unite those who tried to force factionalism into vocational discussions. Both sad and angry, he said to his colleagues: "We should share weal and woe together and work with one heart!"

Huang's efforts were not futile. During the 10 chaotic years, China continued to launch satellites and rockets.

Huang won the respect of his colleagues for his diligence and modesty, and his extraordinary courage at critical moments.

Once, when the launch date of a new rocket was approaching, the area faced unremitting rain with forecasts of even more bad weather. Huang decided to launch the rocket on schedule. Just five minutes before launching time, the

pointer of the voltmeter flickered, which made all those present very nervous. "Anything wrong on the platform?" asked Huang calmly. Assured that there was no problem there, he ordered the launching to begin.

The rocket test was a complete success. Later, when asked how he could make the decision so rapidly, he said, "The rocket is highly sensitive, even to breezes and minor earthquakes hardly felt by human beings. During the ground tests I found that the pointer flickered when people approached the rocket. After I inquired about the platform, I was sure that the rocket had no problems and that the flickering was caused by outside factors, so I made the decision to launch the rocket."

Huang is only one of the rocket experts in China's history. As early as in the Song Dynasty (960-1279), China invented rockets and firelocks powered by gunpowder. In the Ming Dynasty (1368-1644), China built rocket propelled fliers to resist foreign enemies. Today's Chinese rocket experts have inherited the wisdom and traditions of their predecessors from ancient times and are advancing their country's space science to a new level. □



Zhao Yanxia advising younger colleagues about their make-up.

Good-Bye to 'Big Public Pot'

— An interview with Zhao Yanxia on the reform of a Beijing opera troupe

by Giichi Yokoyama

As a follow-up to our report on the restructuring of cultural institutions published in issue No. 3 this year, this article describes what is being done in a Beijing opera troupe. Zhao Yanxia, who initiated the ongoing reorganization of cultural institutions in China, organized and led the reform of this troupe. — Ed.

SHE is a prestigious superstar in China's theatrical world and heads the First Troupe of the Beijing Opera Theatre of Beijing under the Beijing Municipal Cultural Bureau, yet she struck us as no different than an affable, ready-witted woman living next door. In a two-hour interview on January 31, the day before she was to lead her troupe on tour to perform for soldiers stationed in Fujian, Zhao Yanxia, 54,

Giichi Yokoyama, a Japanese citizen, currently works on the staff of the Japanese edition of *Beijing Review*. He wrote this article in collaboration with his Chinese colleagues.

fielded every question we asked with candour and ease.

In her family, theatrical performance was a household tradition begun by her grandfather, who managed an itinerant opera troupe for a living.

At eight, Zhao Yanxia started learning the ropes from her father, Zhao Xiaolou, who was a famous actor. Talented and quick-to-learn, she made a name for herself by the time she was 15. In the four decades that followed — except for the "cultural revolution" (1966-76) during which she was persecuted and forced off the stage by the gang of four — she has been an outstanding star on the Beijing opera stage.

She has many achievements to her credit, having spent the good part of her life on the stage. But today, rather than resting on her laurels, she masterminded the structural reform of the theatrical circles, determined to introduce the new management system — one may

call it a "production responsibility system" — into her field. What, then, is she up to?

A Chronic Malady

Zhao Yanxia made her intention clear in an article published in *Beijing Ribao* (Beijing Daily). Opera troupes in China, she wrote, are over-staffed, offering scanty stage opportunities for the actors and actresses, whereas salaries are fixed, with everyone eating from the "big public pot" whether he or she performs or not; and the "iron rice bowl" (meaning permanent job once assigned) is a boon to the lazy and indolent but a bane to those eager to take on creative tasks. Finding this situation intolerable, Zhao Yanxia took it upon herself to introduce structural reform into China's theatrical world.

She began her pioneering endeavour in March 1981, her determination fortified by an earlier experience. In 1980, the Beijing Opera Theatre of Beijing led by Zhang Menggeng (theatre director) and Zhao Yanxia herself went on a three-month tour of 10 cities in the United States from late August to early November, earning 310,000 US dollars for the state. But after they returned to China, they gave only three performances in four months. Zhao Yanxia, who is confident of her popular box-office appeal, felt guilty of doing so little to receive her regular monthly salary from a nation still in the grip of financial deficits. Her sense of responsibility as a Communist Party member and a Deputy to the National People's Congress made her all the more uneasy. I've got to do something about this, she told herself.

Her determination also stemmed from her sympathy with the many promising young actors and actresses in her troupe. With little opportunity for their talent to flower because of undue emphasis on "seniority," they had to stand aside, spending their precious art lives unchallenged and unnoticed. She understood their trauma and anxiety, she herself having been robbed of the peak of her career by the gang of four.

What is the root cause for this situation?

The Beijing Opera Theatre of Beijing, with 700 on its payroll (170 of them in the first troupe

led by Zhao), received government financial support to the tune of 1.4 million yuan yearly. The salaries of all the members were fixed whether the theatre made or lost money.

Before the "cultural revolution," the Beijing municipal opera theatre had only 200 members. These, divided into several performing teams, staged more than 500 performances a year. In this way the theatre, earning more than enough to pay staff salaries and other expenses, handed over a yearly surplus to the state.

But all this was stopped short by the "cultural revolution." The theatre, merged with other troupes, was allowed only to stage "model theatrical works." With the institution of the fixed wage system, the theatre no longer paid salaries to its staffs. Its size swelled to overflowing as performing-arts graduates were assigned to work according to state plan and few people left as jobs were virtually life-long once assigned. Many members were reluctant to undergo the inconveniences of performing in other parts of the country partly because when on tour, they received a meagre 1.2 yuan for each late-night snack, only 45 fen more than they got in Beijing.

The lackadaisical atmosphere undermined the quality of stage performances. This, plus the fact that young people who grew up during the "cultural revolution" knew little about Beijing opera, estranged the audience in large numbers. The opera wallowed on the verge of a



A scene from "Blue-Wave Angel," starring Zhao Yanxia.

crisis. A dedicated actress, Zhao Yanxia could no longer keep silent.

The Reform

Her reform was directed at disengaging the troupe from the "big public pot." Since it is still in its experimental stages, it is unlikely to convert the troupe into an independent accounting unit overnight. At present, the state subsidizes 70 per cent of the staff salaries and the remaining 30, over and above expenses for performances (hotel, publicity work, etc.), come from the theatre's own box-office returns. When deficits occur, the troupe members get less pay: when there is a surplus, 30 per cent of it is put aside as a public accumulation fund, 10 per cent is delivered to the theatre treasury and the remaining 60 per cent is divided among the members.

Zhao Yanxia chose 71 members from the 170-member First Troupe and set up a separate unit to operate under the new system. Her troupe now includes a deputy head who takes care of day-to-day work full time; 44 actors and actresses, 13 instrumentalists and a number of stage art workers. A division of power was worked out: the Party branch is responsible for political and ideological work; a five-member board decides the managerial policy, arranges performance tours and make decisions on major issues; an art committee of experienced actors and actresses decides the repertoires, assigns and takes responsibility for the parts, maintaining high standards in the quality of performances and musical accompaniment; and financial affairs are handled by an actor who has been with the theatre for well over two decades. In this way what could be accomplished previously by 170 people can now be done by one-third as many. Well-organized, the new troupe is of an ideal size for making regular tours across the country.

The reform has paid off handsomely. In the two tours it made after April 1981, totalling 16 months, the troupe gave 340 performances in 16 cities in Liaoning, Heilongjiang, Jilin, Hebei, Henan, Hubei and Jiangsu Provinces and the two municipalities of Shanghai and Tianjin, presenting a rich repertoire of 40 operas. In the past Zhao Yanxia never appeared on stage for more than 10 times a year (except for her visit to the United States); now she makes 15 stage appearances a month. Her middle-aged

and young colleagues are delighted now that they have ample opportunities to use their talents, some of them taking on three or four different roles to perform when called upon.

The troupe earned 270,000 yuan in the 16 months. After deducting 27,000 yuan for various expenses and public accumulation, they distributed the remaining sum as extra pay among the members, each of whom averaged 50 yuan a month. The rewards fall into three classes. First-class pay goes to Zhao Yanxia's supporting cast and accompanists, who deserve it because they are among the very few who can match her superb acting and singing. Second-class pay is given to Zhao Yanxia and most of the veteran members, while the third-class goes to the 60 others, mostly young actors and actresses. Incidentally, before the reform, Zhao Yanxia's monthly salary was 330 yuan, that of most of the veteran actors and actresses averaged 170 yuan and that for the young ones ranged from 40 to 50 yuan. The new distribution system has obviously resulted in improving the lot of the young. Although most of the theatre-goers come to enjoy the performance of one of the nation's leading Beijing opera actresses, Zhao Yanxia alone cannot carry the whole production to success. She must have the support of the collective.

The new troupe makes a hit wherever it goes. As the practice of handing out free tickets to keep in the good graces of close relatives and friends has been abolished, faithful fans flock to see what they have paid for. More often than not, they are reluctant to leave at the end of a performance. Some gather around the orchestra pit or outside the theatre, anxious to catch just one more extra glimpse of the actors and actresses off-stage.

Pros and Cons

The reform has drawn positive responses from local opera fans and yielded plentiful stage opportunities for new-emerging stars. Yet from the very beginning it has never been smooth sailing.

Just when she had made up her mind to undertake the reform, some genuine well-wishers tried to dissuade her, unable to understand why she should go to such trouble at her age; after all, she had passed the half-century mark. Amidst good-humoured remonstrances were also slanders, mostly from those wishing to cling to the "iron rice bowl" practice. "Just



Zhao accepting a message of appreciation from spectators after a performance.

trying to steal the limelight," some said. "She wants to build up her own forces," chimed in a few others. "What's new about this reform?" asked some. "Touring the country has been a tradition among actors since ancient times!"

Open opposition fell silent after the Minister of Culture gave Zhao Yanxia endorsement and support, but in day-to-day proceedings, there were plenty of people unwilling to go ahead and who sought only to make things difficult.

Undaunted, the actress carried out the reform with a will. After two years of careful probings, the changes at long last won public recognition. They are now being undertaken in the Beijing opera circles and are expected to sweep through the theatrical world in China. "If we had not the unstinting support of our colleagues," wrote Zhao in an article full of heartfelt reminiscences, "we would have been drowned in the sea of the 'big public pot.'" Fortunately for her and many others, institutional restructuring has already become an irresistible trend of the times in China.

Many troupes soon followed suit. In the Beijing Opera Theatre of China under the Ministry of Culture, an experimental troupe has been set up, headed by Yuan Shihai, a famous actor as well as the theatre's deputy head. The same is being done in the China Youth Art Theatre and many others. The reorganization of opera troupes in China is, in the final analy-

sis, a microcosm as well as an integral part of the ongoing drive to revamp the managerial system in all walks of life. Although the methods now being adopted leave something to be desired and new ones are yet to be found, the reform represents the general trend of historical development. To follow this trend, Zhao Yanxia will make new contributions.

Remaining Problems

It will be some time before China can completely eliminate the abuses arising from dependence on the "big public pot." Zhao Yanxia's pioneering efforts represent one of the first steps towards that end. She has, so to speak, just made a dent on the edge of the "iron rice bowl."

Her troupe's three-tiered distribution system retains traces of egalitarianism. They had thought of the work-point method, but having discovered it to be too complicated, settled on the current system as a temporary expediency. The troupe is still probing for more appropriate ways and means to do justice to everyone's contributions. They will succeed, because, as the saying goes, where there is a will there is a way.

Since the article deals exclusively with managerial reform, it says nothing about the reform of Beijing opera itself, including the creative process and stage performances, for both of which Zhao has also formulated ambitious plans.

"I know of a man who is ever so dogmatic about traditions," she said. "Times have vastly changed, so has the theatre, yet he stubbornly hangs on to stuff suitable only for the tiny stage of bygone days."

With these words, she stood up, took four steps forward and told us, "One step further would bring you nearer the mike and the results would be much better. But this guy refuses to allow this one further step because, he says, his father took only four steps!"

This, perhaps, is one of the vivid examples showing what still needs to be done in Beijing opera, one that impinges on the management system. There is a long way to go before Zhao Yanxia's efforts can come to full fruition, but we rejoice to see that she and her colleagues have taken the first step — and a solid one at that. □

MUSIC

Ancient chimes brought to life

China's music halls will soon hear something different, an instrument of pure Chinese origins that has remained silent for thousands of years.

The chimes were unearthed in 1978 from a tomb in Suixian County, Hubei Province and are named after their owner Marquis Yi of the State of Zeng who died in 433 B.C.

The bronze chimes (65 in all, totalling 2,500 kilogrammes in weight) were supported by a wooden stand which was 13 metres long and 2.7 metres high. They were arranged into three tiers according to their pitches and it took five to seven musicians to play them with sticks and hammers.

A seal-script inscription of 2,800 characters which records

pre-Qin (prior to 221 B.C.) musical theories is located on the chimes. The chimes are the largest musical instrument ever unearthed in China and the world.

The chimes have a complete 12-tone system and a range of five octaves, almost as wide as the modern piano which usually has seven octaves. As far as the arrangement of tones is concerned, the two are exactly the same.

For ages it was thought that the Warring States period (475-221 B.C.) knew nothing of the seven-tone system and that the Chinese 12-tone system and the concept of musical transposition were copied from the Greeks in late Warring States period and then sinicized. It was assumed that it was only after the Han Dynasty (206 B.C.-220 A.D.) or, even more likely, after the Sui Dynasty (581-618) that musical transpositions appeared in China. The Marquis

Yi chimes, however, refute these views. For the chimes already had 12 tones and could be used for transposition freely.

Of particular noteworthiness is that each bell of the set is capable of producing two different tones, a landmark in the manufacturing skills for musical instruments. This has led Chinese scholars to research this particular physical phenomenon. As the Chinese composer He Luting said, after the finding of the chimes we should "begin anew the study of some aspects of the history of the ancient Chinese music."

Four years of research into the chimes has revealed that this ancient instrument is capable of singing monophony tunes, polyphony tunes and tunes with tonal modifications. Over 20 melodies have been performed, including parts of the ancient Chinese string instrumental melody *Li Sao* from the Tang Dynasty (618-907), the Chinese



The replicas of the Marquis Yi chimes accompanying a singing group.

modern song *Ripples on the Honghu Lake* and fragments from Beethoven's Symphony No. 9 in D minor *Choral*.

To enable the music of the chimes to reach more ears, the State Administrative Bureau of Museums and Archaeological Data and the Hubei provincial government allocated 200,000 yuan in 1979 to duplicate the chimes.

Early this year, some 80 specialists from the Chinese Musicians' Association, the China's Machinery Engineering Society and archaeological organizations gathered in Wuhan, capital of Hubei Province, to examine the first replicas of 28 chimes which are identical in appearance and reduplicate the original sound — clear melodious high-pitch octaves and deep resounding low-pitch octaves. They will be used in recitals and as accompaniment. Their sounds are so powerful that the vibration can be felt even a dozen or so metres from the stage. Using scientific instruments, it was determined that almost all the 56 tones from the 28 replica chimes are very similar to those of the original ones, with a tolerance of less than 5 cents

(there are 100 cents between C and #C, or 200 cents between C and D). Thus variation is hardly distinguishable by the human ears.

Last Spring Festival heard the replica chimes ringing for the first time in Wuhan. It has been suggested that replication of all the 65 original chimes be completed and multiple sets be cast so that they can tour the country and the world to be enjoyed by more people.

SPORTS

Fifth national winter games

Three teams — Heilongjiang, "August 1" army and Jilin — swept all the gold medals at the 12-day Fifth National Winter Games in Harbin which ended March 22. They captured 33, 14 and 13 golds respectively, placing one, two, three overall.

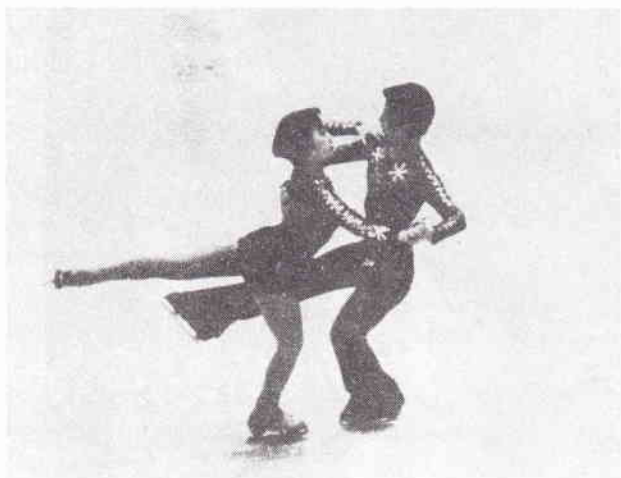
The winter games were held separately from other national games this year for the first time. Events included figure skating, speed skating, short-course speed skating, ice hockey, and alpine and cross-country

skiing. The grace of the skaters from the Heilongjiang, "August 1" army, Jilin, Inner Mongolia and Xinjiang teams was enhanced by a new multipurpose ice rink which had been built especially for this occasion.

The "August 1" army team dominated the skiing events, which were held in advance at the Qingshan Mountain in the southern part of Heilongjiang, taking 14 golds in 20 events. The army's surprisingly strong showing, outscoring all northern competitors, proved that training methods are more crucial than training facilities.

In speed skating, Heilongjiang won the men's and women's team titles and also bagged most of the gold medals in short-course speed skating. Three young men and a young woman from this team daringly executed several triple jumps, causing predictions that figure skating may be another sport with which China will soon reach international heights.

Good sportsmanship was also recognized at the Fifth National Winter Games: the whole Jiamusi hockey sextet and 74 athletes and judges received "spiritual civilization awards."



Left: Gold medalists Yang Shuanghong (left) and Gao Haijun executing the compulsory figures. Right: Ma Xiaohong (m.) from the "August 1" army team in action in the cross-country event.



Lichee.

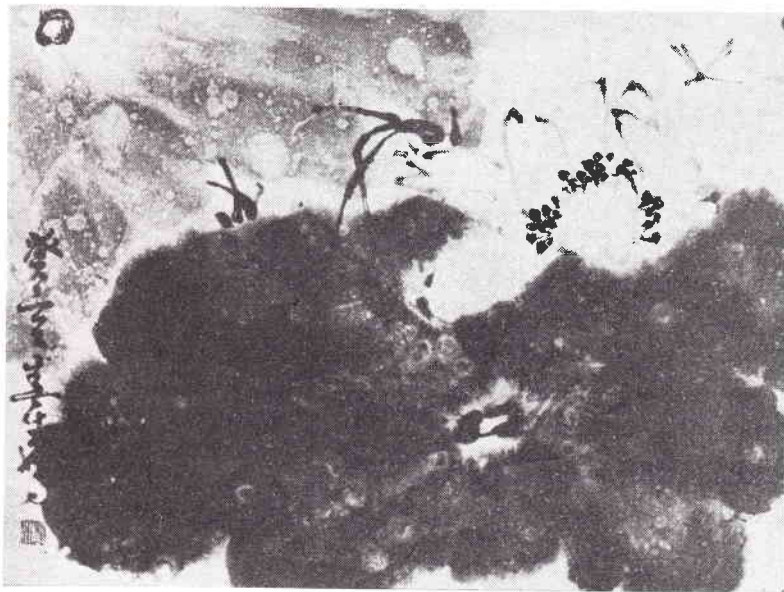


Narcissuses.



Loquats and a bird.

Paintings by Yang Chunsheng



Lotus.

Amateur artist Yang Chunsheng is a worker at the Beijing Foreign Languages Printing House. Born in 1939, he taught himself to paint.

Yang's paintings in traditional Chinese styles have a particular characteristic: free-hand expression in bold composition. In *Lotus* the added water drops on the leaves in splash-ink make the image more vivid.

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