WORLD METEOROLOGICAL CONGRESS

The first World Congress under the World Meteorological Convention signed at Washington in 1947 is due to meet in Paris in the second half of March 1951. The Congress will be preceded by an Extraordinary Conference of Directors of the Meteorological Services which are members of the International Meteorological Organisation. The chief business of this Conference will be to arrange for the transfer of the existing functions of the International Meteorological Organisation to the newly-constituted World Meteorological Organisation. The main business of the Congress will be to determine the general policies for the fulfilment of the purposes of the World Meteorological Organisation and to establish the general regulations and rules of procedure of the Organisation. A considerable number of other items relating to the Organisation, like the establishment of its secretariat, of Regional Commissions, of Technical Commissions, and the election of office bearers to the various constituent bodies under the Organisation, are also on the agenda. Mr. V. V. Sohoni, Director General of Observatories and Mr. S. Basu, Deputy Director General of Observatories (Forecasting) will attend the Congress as delegates of India.

TECHNICAL CONFERENCE ON FLOOD CONTROL

A Technical Conference on Flood Control arranged by the United Nations Economic Commission for Asia and the Far East, was held at Delhi on 7-10 January 1951. The Conference was opened by the Hon'ble Minister for Works, Mines and Power, Government of India. Mr. A.N. Khosla, Chairman, Central Waterpower, Irrigation and Navigation Commission, Government of India, was elected as Chairman. Mr. A.K. Roy, Director, Regional Meteorological Centre, New Delhi, attended the Conference as Observer nominated by the International Meteorological Organisation. Dr. S. K. Pramanik and Mr. V.Satakopan attended the Conference as representatives of the India Meteorological Department.

INDIAN INTERNATIONAL ENGINEERING EXHIBITION 1951

On the occasion of the Fourth Plenary Session of the International Commission on large Dams, the Sectional Meeting of the World Power Conference and the Meeting of the International Association of Hydraulic Structures Research, an Indian International Engineering Exhibition was organised for about two months in Delhi from 10 January 1951. At this exhibition the India Meteorological Department was invited to take part. A large number of exhibits in a big hall giving a bird's eye view of the different phases of the department's activities were put up.

The exhibits included a number of charts depicting the meteorological organisation in India and giving chronological picture of its expanding activities. One section was entirely devoted to its day-to-day forecasting service and it brought home to the public how weather maps were prepared and forecasts issued to various services. A good number of charts showed the climatology of India in pictures. In another section, the seismological and astrophysical activities of the department were also depicted.

On the instrumental side, a large number of surface observatory and upper air instruments made in our workshops were on exhibition in the stall. The working of some of these instruments was demonstrated to the visitors. People showed a keen interest in the operation of C and F type radiosondes. A good number of demonstration experiments pertaining to agricultural meteorology were also arranged. These were kept opposite the climatological charts relating to agricultural meteorology. In one corner of the hall, was parked, a mobile meteorological van, fully equipped with all the instruments, etc. for taking field observations at short notice.

THE THIRTYEIGHTH SESSION OF THE INDIAN SCIENCE CONGRESS

The 38th Session of the Indian Science Congress was held at Bangalore from 2 to 8 January 1951. The Prime Minister of India inaugurated the Session on 2 January 1951 in the presence of a large distinguished

gathering of scientists from all over India and from Australia, Burma, Ceylon, France, Holland, Iran, Italy, Malaya, Pakistan, Sweden, U.K., U.S.A. and U.S.S.R. Dr. H.J. Bhaba delivered the Presidential address on "The present concept of the physical world".

Dr. S. C. Roy, Dr. S. K. Pramanik, Dr. L. A. Ramdas, Mr. P. R. Krishna Rao, Mr. S. P. Venkiteshwaran and Dr. R. Ananthakrishnan attended the Session from the India Meteorological Department. A number of papers were contributed to the different sections by the officers and staff of India Meteorological Department. Mr. S.P. Venkiteshwaran opened a discussion on the "Manufacture of Instruments" in the Physics Section on 4 January 1951. Among the joint discussions arranged by two or more sections may be mentioned.

(i) Land Drainage and Reclamation

(ii) Theory of Distribution of Laurent and Schwartz

(iii) Application of statistical methods to Geological problems

(iv) Synthetic Petrol

(v) Place of grass land in the National Economy of India.

There was an interesting series of popular lectures by distinguished scientists from India and abroad.

FIRST BIENNIAL CONFERENCE OF SUGARCANE RESEARCH WORKERS IN THE INDIAN UNION

The Conference was held at the Forest College , Coimbatore from 9 to 12 January 1951. Many sugarcane research workers attended. Dr. L.A. Ramdas, Director, Agricultural Meteorology, attended the Conference from the India Meteorological Department.

The Conference divided into three main sections, *viz*., "Agricultural", "Botanical" and "Plant Protection" at which 36, 22 and 24 papers respectively dealing with the many fundamental problems of sugarcane research and allied topics were presented and discussed. A number of Resolutions were passed recommending

(a) Various cultural, manurial and rotational improvements,

(b) A varietal census, and

(c) A watch and ward service to ensure adequate protection of the crop from epidemics of plant pests and diseases.

The Plenary session was held on 12 January under the Presidentship of the Hon'ble Shri M. Thirumala Rao, when a message from the Hon'ble Shri K.M. Munshi was read.

An interesting exhibition arranged by the Coimbatore sugarcane station and an evening lantern lecture on "Weather and Crops" by Dr. L.A. Ramdas, were important items in the programme.

This Conference is going to be an annual feature.

FORECASTING OFFICERS' CONFERENCE POONA, FEBRUARY 1951

A Conference of Forecasting Officers from the main meteorological offices of Bombay, Calcutta, Delhi, Madras, Nagpur and Poona was held at the Meteorological Office, Poona, during 12 to 17 February 1951, under the Chairmanship of Mr. S. Basu, Deputy Director General of Observatories (Forecasting). The Conference which is the first of its kind in India was inaugurated by Mr. V. V. Sohoni, Director General of Observatories, and discussed technical questions of importance relating to the Forecasting service of the India Meteorological Department.

The agenda of the Conference covered a variety of subjects relating to the problems facing the forecasters in their day-to-day work. Important among them were (1) need for additional observational data (2) measurements of heights and thickness of clouds (3) uniformity in description of weather analysis and forecasting technique (4) Aviation Meteorological Service procedures and (5) training courses in meteorology.

After a review of the present methods and practices, the Conference discussed the items on the agenda and appointed two Sub-Committees to go into details of some important specifications. A number of recommendations were made, the more important of which are :

(1) Provision of 10 upper wind and 50 surface observations at 1000z and 2000z respectively for facilitating forecasting and aviation meteorological service

(2) Provision of mobile radio-sonde observatories in different regions during periods of interesting weather for investigational purposes

(3) Codes for reporting special phenomenon

(4) Classification of synoptic situations for specifying individual days on hollerith punched card of individual station data.

(5) Uniform terminology or describing weather types

(6) Purchasing of range finders and Ceilometers to conduct measurements of cloud ceiling

(7) Preparation of suitable manuals canducive to a uniform procedure regarding methods of analysis and forecasting technique and

(8) Standardised syllabus and lecture notes on meteorology for training and examination of candidates for pilots' licences.

The requirements of Aviation Weather Service were also discussed, the local conditions were recounted and clarifications on certain procedures made.

A distinguishing feature of the Conference was scientific discussions held in Colloquia every day on technical topics relating to the problems of forecasting weather associated with the different regions. The subjects presented were :

(*i*) Analysis of a monsoon depression by B. N. Desai and P. Koteswaram

(*ii*) Masulipatam Cyclone of October 1949 by S. N. Sen

(*iii*) Analysis of western disturbances by P. R. Pisharoty.

(*iv*) Forecasting onset of monsoon at Delhi by P. R. Pisharoty

(*v*) Forecasting Nor'westers of Bengal by N. C. Rai Sarkar

(*vi*) Abnormal rainfall in Madhya Pradesh in winter by S. S. Lal, and

(*vii*) Constant pressure analysis by the differential method by C. Ramaswamy.

JOINT METEOROLOGICAL COMMITTEE

A meeting of the Joint Meteorological Committee (JOMCO) was held at New Delhi on 22 February 1951. The principal items discussed at this meeting were the meteorological facilities required for jet plane services, the future requirements by way of meteorological facilities for national air services in northeast India and the report and recommendations of the Second Middle East Air Navigation Conference (October—November 1950). The meeting considered the report of the Sub-Committee which was appointed by the previous JOMCO meeting to consider the implementation in India of the revised specifications for meteorological services for international air navigation as recommended by the Third Session of the Meteorological Division of the International Civil Aviation Organisation (March 1950). It constituted a Sub-Committee to draft meteorological procedure for air/ground radiotelegraph communication.

RETIREMENT OF THE MYSORE METEOROLOGIST

Mr. T. V. Ramachandra Iyer, Meteorologist to the Government of Mysore, who was in charge of the Meteorological Department in Mysore State proceeded on leave preparatory to retirement from 1 January 1951. The Mysore Meteorological Department has always co-operated closely with the India Meteorological Department in providing weather information over the State.

Mr. Ramachandra Iyer who graduated in Science from the Central College, Bangalore, in 1917, entered service in the Mysore Meteorological Department in March 1919. By conscientious and hard work he became the chief observer of the observatory in 1927 and held the post for 16 years. He became head of the Mysore Meteorological Department in 1943, a post which he held with ability and credit for over 7 years. His unstinted co-operation to the India Meteorological Department in all the work pertaining and precedent to the integration of the federal functions of Meteorology with those of the I.Met.D. from 1 January 1951 was of great value.

Besides being responsible for the several annual publications of the Mysore Meteorological Department during his service as Meteorologist, Mr. Ramachandra Iyer has published technical papers on 'Sunshine over India', 'Climate of Mysore' and 'Climate of Bangalore'.

We wish Mr. Ramachandra Iyer, who is retiring after 32 years of devoted and efficient service for Meteorology, a long and happy period of retirement.

SOLAR AND GEO-MAGNETIC PHENOMENA DURING THE PERIOD OCTOBER TO DECEMBER 1950

During the last quarter of 1950, no striking solar activity was observed. In December there were three days on which the sun's disc was free from spots.

Two minor magnetic disturbances were recorded during the period. The first one, a prolonged disturbance which began on 28 October 1950 at 0700 IST was observed on all the three elements. The disturbance, which continued during the day and the following, was marked by sharp fluctuations during the diurnal maximum. Small fluctuations continued during the following two days, *viz.*, 30 and 31 October. The disturbance subsided on 1 November. The ranges were H, 283γ ; D, 0.4′ ; V, 5γ. A second mild magnetic disturbance chiefly important for a sudden commencement at 0618 IST on 25 November 1950 began with an initial impulse of 19 γ in H and 0.3′ in D. Thereafter minor perturbations continued to be superimposed on the normal trend in H during the following three days. The ranges for this disturbance which subsided at 0424 IST on 29 November were H, 158γ ; D, 0.5′ ; V, 4γ.

WEATHER, OCTOBER—DECEMBER 1950

The outstanding features of the weather during the period under review were (1) Weak northeast monsoon in the south of the Peninsula resulting in moderate deficiency of rainfall in Tamilnad, (2) Formation and movement of two cyclonic storms and

one depression in the Bay of Bengal, (3) Feebleness of the western disturbances and (4) Unusually cold nights over most of the country in the second half of November and the first half of December and over northwest India and Saurashtra and Kutch during the second half of December.

The southwest monsoon completely withdrew from the country by 2 October and the seasonal low established itself over the south Bay of Bengal by the 12th. A shallow depression formed off the Malabar—Kanara coast on the 8th and moving rapidly northeastwards, filled up over south Deccan (Desh) by the 10th. It was responsible for widespread rain in Travancore -Cochin between the 4th and 11th with locally heavy falls on the 8th . The seasonal low over the south Bay of Bengal gradually became more marked after the 12th and a depression formed there by the morning of the 17th centered about 150 miles southeast of Madras. Moving northwards initially and northeastwards later, it passed inland into Eastern Pakistan on the 21st night and became unimportant by 23 October. In association with these developments, the northeast monsoon set in over the south of the Peninsula by 16 October, and widespread rain occurred in the Madras State, Travancore-Cochin and Mysore on 17 and 18 October. Rainfall was also locally heavy along and near the track of depression. Nellore (in coastal Andhradesa) had 23.3" of rain during the 48 hours ending at 0830 IST of the 18th.

After the movement of the depression into Eastern Pakistan, the northeast monsoon weakened in the south of the Peninsula and remained weak till 10 November during which period it gave satisfactory rainfall only in coastal Andhradesa. It, however, appreciably strengthened after the 10th and this led to the formation of a depression in the Bay of Bengal off the Coromandel coast by the morning of the 16th. Moving in a northerly direction, the depression deepened and lay with its centre about 160 miles southsoutheast of Kakinada on the morning of the 17th. The deep depression then curved towards the northeast and intensified into a cyclonic storm by the next morning when it was centred 170 miles south of Calcutta. It crossed the coast near Barisal in Eastern Pakistan on the early morning of the 19th. Thereafter, it rapidly weakened and became

unimportant by the evening of the 20th. This cyclone was responsible for an abnormal wet spell in Orissa, Gangetic West Bengal and Assam between 17 and 19 November. Rainfall was also locally very heavy along and near the track of the cyclone. According to press reports, the heavy rains and the high winds associated with the cyclone caused some loss of life and property in Orissa and Gangetic West Bengal. The British cargo *S. S. Skeldergate* while sailing off the Orissa coast between Puri and Chandbali on the 17th-18th is reported to have run aground and suffered severe damage due to the high winds.

The northeast monsoon considerably weakened in the south Peninsula after 16 November and continued weak during the rest of the month giving very deficient rainfall in the south of the Peninsula during this period. Another depression formed in the south Bay of Bengal by 2 December with its centre within one degree of Lat. 8° N, Long. 85° E. It intensified into a cyclonic storm by the morning of the 4th when it was centred about 270 miles westnorthwest of Port Blair. Moving northeastwards, the storm weakened rapidly after the 5th evening and became unimportant off the Arakan coast by the morning of 7 December. In association with this storm, the Andaman Islands experienced an unusual wet spell between 30 November and 6 December.

The northeast monsoon continued weak in the east coast of the Peninsula during December also. It, however, temporarily revived between 12 and 14 December when it gave widespread and locally heavy rain in south Tamilnad and fairly widespread rain in north Tamilnad and Travancore-Cochin. According to press reports, the weak northeast monsoon during the period under review has seriously affected the crop position in the Madras State.

Eight western disturbances affected the weather over India during the period under review: four in November and the rest in December. Practically all of them were feeble and moved across the extreme north of the country without causing appreciable precipitation. The third disturbance of December (seventh disturbance during the period under review) induced a secondary over east Rajasthan on the 18th. The latter passed away across east Uttar Pradesh by 20 December. It, however, left a residual trough of low pressure extending from east Uttar Pradesh to Gujarat which concentrated into a closed low over south Gujarat on the 24th. The low moved northeastwards upto east Uttar Pradesh, causing widespread thundershowers in west Madhya Pradesh and Vindhya Pradesh between the 24th and 27th and in east Uttar Pradesh on the 24th and 25th.

The formation of cyclonic storms in the Bay of Bengal during the second half of November and the first week of December and their subsequent movement towards Eastern Pakistan or the Arakan coast led to a fairly persistent indraught of cold air from northern latitudes into India during this period. As a result, most of the country experienced unusually cold weather during the second half of November and the first half of December. Later, the secondary western disturbance which formed over east Rajasthan and moved upto east Uttar Pradesh caused a surge of very cold air in its rear. Consequently, northwest India, Saurashtra and Kutch and north Gujarat experienced abnormally low temperatures during the second half of December. The temperatures dropped to freezing point or very near, in north Rajasthan between 18 and 20 December and again between 25 and 27 December.

UNPRECEDENTED HEAVY RAIN AT NELLORE, 16-18 OCTOBER 1950

An exceptionally heavy rainfall of 23.3″ occurred at Nellore town during the 48 hours ending 0830 IST of 18 October 1950. Out of this amount, 17.48″ fell during the 24 hours ending 0830 IST on the 18th. This surpasses the previous record of heaviest rainfall in 24 hours at Nellore during the past 70 years viz. 14″ recorded on 7 November 1936.

This unprecedented rainfall at Nellore occurred under the influence of a depression which formed in the southwest Bay of Bengal on 17 October 1950 and was centred at 0830 IST about 300 miles to the southeast of Nellore. It moved northnorthwest and by 1730 IST of the 18th it was centred about 150 miles to the eastnortheast of Nellore.

The depression gradually weakened thereafter without any further appreciable movement. It caused widespread and locally heavy rain in coastal Andhradesa and in the coastal districts of North Tamilnad on the 17th and the 18th. The exceptionally heavy rain was, however, restricted to Nellore district only. The distribution of the rainfall recorded on the 17th and 18th at the various provincial raingauge stations in the Nellore district shows that it was most intense at Nellore town and rapidly decreased in intensity in all other directions. The heaviest falls around Nellore town on the 18th were 16″ at Krishnapatna, about 15 miles to the southsoutheast and 11″ at Isakapalli, about 20 miles to the northnortheast of Nellore town.

As a result of this phenomenal rain, the river Pennar was in spate as also other minor rivers and canals. The railway line was breached in the vicinity of Nellore town and submerged at two points to the south of Nellore station. Roads and irrigation tanks were also breached at several places in the district. More than 1000 acres of standing crops were submerged. There was, however, no serious damage to property except

for the collapsing of a few mud-houses in the town of Nellore.

PHENOMENAL SWELL OFF VIZAGAPATAM PORT

Given below is an extract of a report received from the Deputy Port Conservator and Harbour Master, Vizagapatam Port, Vizagapatam.

"Whilst proceeding out on the morning of 3 October 1950 at 0600 hrs. (L. W. 0544) a strong N'ly current in outer channel abreast of Dutch Battery, **a phenomenal swell** was experienced off Breakwater, the estimated height of one wave was about 50 feet. Average height 30 feet. Swell was noticed breaking well off the beach approx. 1500 feet off. Wind Light Airs; sea smooth, Visibility clear; Sky Blue with small patches of Stratus-Cumulus Clouds."

It is difficult to account for this phenomenal swell. A study of the synoptic situation of the date indicates that it could not be due to any abnormal weather situation either near about the locality or out in the sea on or about the time of occurrence. An examination of the seismograms of Poona and Calcutta indicates that it was not associated with any sub-terranean earthquake. The cause of this phenomenal swell must, therefore, remain unexplained for the present.

OBITUARY

We regret to report the demise of Shri Khurshed Lal, Deputy Minister of Communications, Government of India, on Sunday the 18 February 1951, after a sudden heart attack at New Delhi.

Born on March 4, 1903, Shri Khurshed Lal graduated in 1924 and took his M.A. degree a year later. He was a leading lawyer in Dehra Dun District Bar till 1930 when he joined the Congress movement. He became the President of the Dehra Dun City Congress Committee in 1931 and was the Chairman of the Dehra Dun Municipality from 1936 to 1940 where his services were most valued. He was elected to the Constituent Assembly in 1946 and appointed as Deputy Minister of Communications in September 1948.

His was a life devoted to the service of the nation and he was held in high esteem among his colleagues. In the India Meteorological Department he was respected by one and all and was well-known for his keenness in promoting the well-being of all ranks. His popularity not only among the Parliamentarians but also among the Government officials and workers was so great that the void created by his absence from public life in India is bound to remain unfilled for a long time to come.

Shri Khurshed Lal leaves a widow, two sons and two daughters. We offer our sincerest sympathies to the bereaved members of the family in their hour of deep sorrow.