Notes and News

THE FORTYSECOND SESSION OF THE INDIAN SCIENCE CONGRESS HELD AT BARODA IN JANUARY 1955

The 42nd Session of the Indian Science Congress was inaugurated by Shri Jawaharlal Nehru, Prime Minister of India, at Baroda on 4 January 1955. The session was attended by a large number of distinguished scientists from all parts of India and from a number of foreign countries. Delegates from some international agencies also attended the session.

K. P. Ramakrishnan, M. Rama Rao, S. Rangarajan, P.S. Sreenivasan and A. K. Mukherjee attended the session from the India Meteorological Department and read papers in the various sections.

The scientific business of the session was carried out in as many as thirteen different sections representing different branches of science covering a wide range of subjects. A large number of symposia on different scientific subjects were held. The following popular lectures were arranged and they were largely attended—

(1) "Symmetry in the atom world" by Prof. P. A. M. Dirac

(2) "On the human value of Scientific Progress" by Prof. P. Auger

(3) "Volcanic erruptions" by Prof. T. Watanabe

(4) "Relation of Science to Democracy" by W. Kaempffert

(5) "Haemoglobin" by Prof. Linus Pauling

(6) "Scientific foundation of planning in the U.S.S.R." by Acadamician K. V. Ostrovityanov

(7) "Study of India in U.S.S.R." by A. A. Guber

(8) "Scientific Research in new China" by Chien Tuan-Sheng

(9) "Science and Social Relations" by Prof. A. R. Wadia

Among the special lectures the following may be mentioned—

(1) "Work of the Atomic Energy Commission in India" by Prof. H. J. Bhabha

(2) " Field Theory" by Prof. P. A. M. Dirac

(3) "Synthesis and stereochemistry" by Paul Karrer

(4) "Metallogenetic provinces and epochs in Japan" by Prof. T. Watanabe

(5) "Extensive showers of cosmic rays" by Prof. P. Auger

(6) "Structure of proteins" by Prof. Linus Pauling

(7) "Chinese Herbal medicines" by Dr. Hsieh Yu

(8) "Irregularities of the Earth's rotation" by N. N. Parysky

Dr. B. C. Roy was elected as general president for the session in 1957. Dr. M. S. Krishnan of the Geological Survey of India will be the general president for the 43rd session of the Congress which will be held in Agra in 1956.

SYMPOSIUM ON GROUND WATER IN INDIA

A Symposium on Ground Water in India organised by the Ground Water Research Committee of the Central Board of Geophysics, was held at New Delhi on 1 and 2 February 1955. The symposium was inaugurated by Shri K. D. Malaviya, Union Minister for Natural Resources and was presided over by Dr. M. S. Krishnan, Director, Geological Survey of India. Nearly fifty papers, dealing with various aspects of ground water were presented at the symposium. The following

papers relating to meteorological aspects of the subject were contributed to the symposium by officers of the India Meteorological Department—

(1) "The movement of moisture through the soil" by L. A. Ramdas

(2) "The utility of wind power for lifting ground water in India" by K. L. Bhatia

STANDING ADVISORY BOARD FOR ASTRONOMY

A meeting of the Standing Advisory Board for Astronomy was held at the Meteorological Office, New Delhi on 22 February 1955. Prof. M. N. Saha presided. Dr. A.K. Das of the Kodaikanal Observatory, who was elected as the Secretary to the Board for its present term of appointment, presented a report on the implementation of the recommendations made at the previous meeting of the Board held at Hyderabad in January 1954. The Board considered the report submitted by him on his tour to Ujjain, Udaipur and Aurangabad for the selection of sites for observations of "seeing conditions" in connection with the location of a site for the proposed Central Astronomical Observatory. The scheme of observations to be taken at suitable sites in these areas and proposals regarding the equipment for the projected Central Astronomical Observatory were also considered at the meeting. Proposals for the establishment of astronomical observatories in Universities and the inclusion of Radio-Astronomy in the programme of research of Universities equipped with good electronic laboratories were also considered.

NORTHEAST MONSOON OF 1954

With the revival of the normal activity of the northeast monsoon in 1953, after a six year period of drought, the public in South India were naturally hopeful that the northeast monsoon of 1954 would also be normal. Rainfall during the month of October 1954 after the onset of the northeast monsoon appeared to justify this expectation. In November, however, the activity of the northeast monsoon slackened very much and with the advance of the month, the seasonal total of each station showed progressive deficits. This caused considerable anxiety to the agricultural interests and to the State Governments as the crops were beginning to wither away in districts dependent on the seasonal rains. The monsoon however revived under the influence of a depression in the southwest Bay during the second week of December 1954 and continued fairly active for the rest of the month, bringing the seasonal rainfall nearly to normal at many stations. It was thus a peculiarity of the northeast monsoon of 1954, that the usually rainy month of November happened to be the driest, although during the season as a whole rainfall was nearly normal in the greater part of South India. A brief account of the northeast monsoon of 1954 is given below—

The northeast monsoon set over South India on 11 October in the wake of the southwest monsoon which withdrew from the area two days earlier. A depression formed in the southeast Bay on 19 October and moving westnorthwestwards, crossed coast near Cuddalore on the 21st and recurving thereafter emerged into the west central Bay off south Circars coast on the 22nd and moved away slowly northeastwards skirting the Circars coast. It gave widespread and locally heavy rain to the whole of South India, particularly the east coast. The noteworthy amounts of rainfall associated with this depression were—14″ at Tiruthuraipundi (Tanjore district) on 20th; 8″ at Cuddalore and Villupuram on the 21st; 6″ at Madras (Meenambakkam) on the 21st, Nellore and Arogyavaram on the 22nd, Ongole and Yellamanchilli (Visakhapatnam district) on the 23rd; 5″ at Muthupet (Tanjore district) on the 20th, Cuddapah on the 22nd, Visakhapatnam and Chodavaram (East Godavari district) on the 23rd, Calingapatam and Chipurupalli (Visakhapatnam district) on the 24th.

Irrigation tanks and channels in the coastal area of Tanjore district breached and vast stretches of wet lands with crops were submerged under water on the 20th, also train and bus services were interrupted on the same day. Low lying areas in Madras city were under water on the 22nd. Heavy rainfall in Guntur and neighbourhood on the 23rd and 24th resulted in heavy floods and submersion of standing crops and 2000 huts in the low lying areas of Guntur town were also washed away. Railway communications were interrupted in Andhra State.

The month of November as a whole brought little rain to South India.

A depression which formed in the Bay during the second week of December caused very heavy rain in coastal Tamilnad and was instrumental in almost wiping out the seasonal deficit of rainfall. The following places in Tanjore district reported very heavy falls of rain on the 10th—Mayavaram 12 5″, Nannilam 11·5″, Shiyali 8″, Tranquibar 7″ and Coleroon 6″.

By the end of December, the seasonal rainfall was normal in Mysore, in slight defect in Andhra State and Tamilnad and in moderate defect along the west coast.

WATERSPOUTS

Vessel	:	S.S. Mohammedi
Captain	:	E.A. Steggles
Voyage	:	Aden to Chittagong
Observers	:	K.E. Charles, Chief Officer
		A.A. Nazareth, 2nd Officer
		D.F. Prakash, 3rd Officer

8 October 1954. 2400 GMT. Position—09°09′N, 83° 30′E.

Vessel sighted twin waterspouts to eastward. The waterspouts extended from the base of the large cumulonimbus cloud to ea level. After 10 minutes the waterspouts were obscured by rain shower.

Weather at the time of observation—Bar. 29·727″ (corrected), attached thermometer 81°, air temp. 80°, overcast with scattered thundershowers, wind was westerly of force 3, slight sea and low swell, visibility good.

NEW WEATHER CODES

In accordance with the recommendations of the World Meteorological Organisation, the New Weather Codes, devised by the First Session of the Commission for Synoptic Meteorology (of the WMO), were introduced in India from 1.1.1955 as in other countries of the world. These new codes have brought about a greater measure of uniformity in practice all over the world.

WEATHER, POST MONSOON SEASON, OCTOBER–DECEMBER 1954

Chief features—(1) Rapid withdrawal of the southwest monsoon from the country by the second week of October, (2) formation and movement of three depressions and one short-lived cyclonic storm in the Bay of Bengal, and (3) deficient northeast monsoon rains over the Peninsula.

October—The depression which lay over Madhya Bharat on 29 September curved towards the northeast and broke up over the hills of west Uttar Pradesh on the morning of 2 October, leading, as usual, to the withdrawal of the monsoon from the Punjabs. Fairly widespread and locally heavy rain fell in and near Madhya Bharat on the 1st and in Uttar Pradesh and south Punjab (I) on the 1st and 2nd. New Delhi experienced a record downpour of 9·3″ for the 33 hours ending 1730 IST of the 1st.

By the 3rd of the month, the southwest monsoon withdrew from northwest India, Uttar Pradesh, Bihar, Chota Nagpur, the central parts of the country, Gujarat, Kutch-Saurashtra and north Deccan (Desh).

The monsoon rains continued in Gangetic West Bengal till about the 5th, and in Assam till about the 9th. Thereafter the activity of the southwest monsoon decreased considerably and it practically withdrew from the country by the 11th.

By about the same time, northeast monsoon conditions set in over the Bay of Bengal, and the south Peninsula. Tamilnad and Malabar-south Kanara experienced widespread rain on the 12th and 14th with a few very heavy falls over south Tamilnad on the 12th.

A trough of low pressure formed in the east Arabian Sea off Malabar-south Kanara on the 15th and persisted there till the 19th. Under its influence, most parts of the Peninsula experienced a spell of local or fairly widespread rain between the 15th and 20th.

A depression formed in the southeast Bay of Bengal on the 20th morning. Moving westnorthwestwards and deepening at the same time, it crossed the coast near Cuddalore on the 21st evening. Thereafter it weakened into a low pressure area which extended into the west central Bay, where it reconcentrated into a depression on the 24th evening. Moving northeastwards, it was centred about 100 miles southsoutheast of Calcutta on the 26th morning. Weakening thereafter, it crossed the Sundarbans coast between Barisal and Chittagong in the early hours of the 27th and moved away across northeast Assam as a shallow low. In association with these developments, widespread rain occurred in the south Peninsula between the 21st and 22nd with very heavy falls at many places in and near north coastal Tamilnad on the 21st and in Rayalaseema and south coastal Andhradesa on the 22nd. Tiruthirapundi (Tanjore district) had 14″ of rain on the 20th, Cuddalore had 8″ of rain on the 21st and Nellore 10″ on the 21st and 22nd together. The rainfall belt extended to Hyderabad, Orissa and east Madhya Pradesh by the 23rd and to most parts of northeast India by the 25th. Widespread very heavy rain occurred in coastal Andhradesa and adjoining coastal Orissa on the 23rd and 24th with an exceptionally heavy fall of 20″ at Gopalpur on the 25th and a few very heavy falls in Assam on the 27th—Haflong recording 9″ of rain.

Local or fairly widespread rain continued to occur in most parts of the south Peninsula between the 24th and 27th. Thereafter, the activity of the northeast monsoon decreased over the south Peninsula and weather remained rainless over the country till the end of the month.

According to press reports heavy rainfall in Guntur and neighbourhood on 23rd and 24th resulted in heavy floods and submersion of standing crops and the destruction of about 2000 huts in the low lying area of Guntur town.

Four western disturbances including the one in the first week, moved across the extreme north of the country. Of these, the second caused local showers in and near the Punjab hills on the 11th while the third was responsible for a few showers in the Punjab(I) on the 15th. The last disturbance did not cause any precipitation.

November—The northeast monsoon remained generally weak throughout the month. A temporary activity of the monsoon caused widespread rain in south Tamilnad and local rain in Malabar-south Kanara on the 4th, and fairly widespread thundershowers in Travancore-Cochin on the 6th and 8th. South Tamilnad experienced local showers also on the 17th. Other brief spells of activity of the monsoon caused local showers in south Tamilnad and in Travancore-Cochin between the 18th and 20th, in south coastal Tamilnad on the 22nd and 23rd and in Travancore-Cochin on the 21st and 23rd.

Six western disturbances moved across northwest India during the month. Of these the second caused scattered shower in west Rajasthan on the 6th. The fifth and sixth western disturbances which affected the weather during the last week of the month, were responsible for a few light showers in the Punjab hills on the 24th and a few showers of rain or snow in Kashmir between 29 November and 1 December. The rest were inactive.

December—Except for fairly widespread showers in north Assam on the 6th, weather

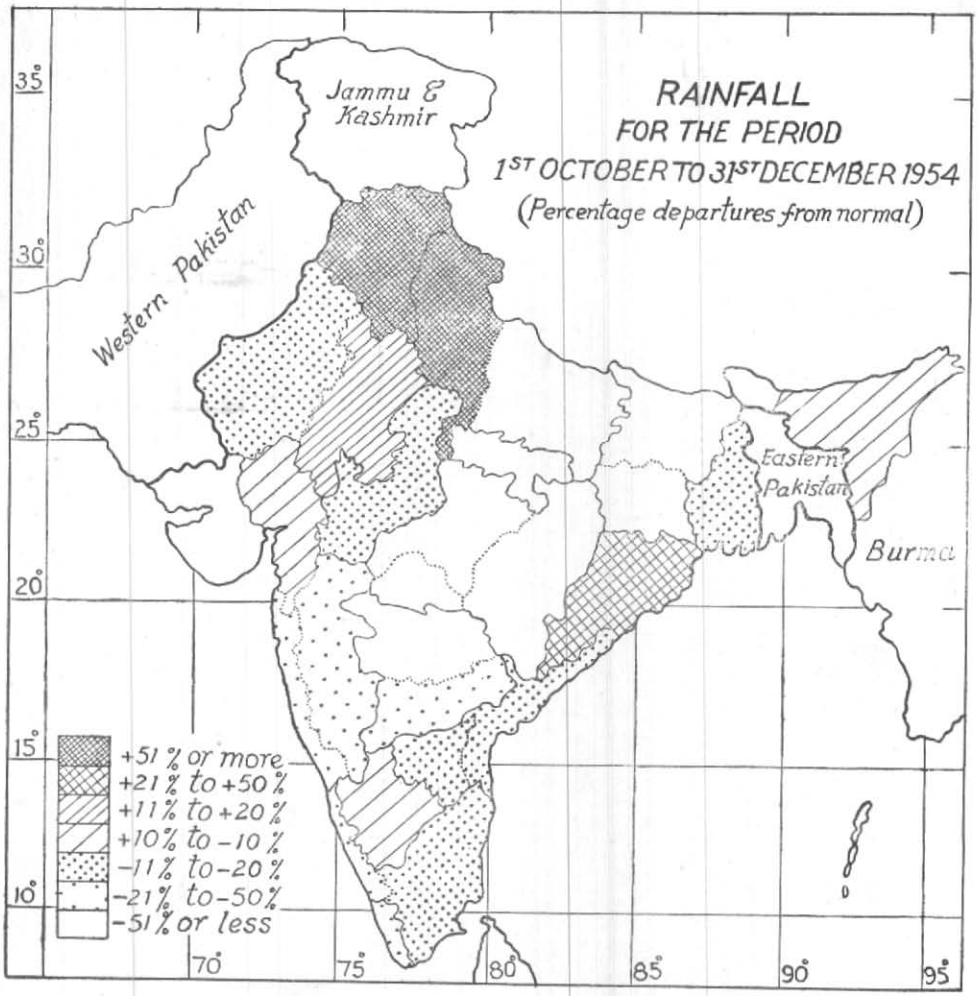

Fig. 1

was mainly dry over the country till the 9th. A depression which formed over the southwest Bay of Bengal on the 8th evening, was centred about 150 miles east of Madras on the 12th morning where it weakened into a low pressure area. This low moved into the Arabian Sea off Malabar-south Kanara by the 14th. Recurving towards the northeast it lay over west Hyderabad on the 17th evening where it finally became unimportant. In association with these developments, the northeast monsoon revived over the south Peninsula and well-distributed rain fell over most parts of this region between the 12th and 15th. Heavy to very heavy falls occurred along coastal Tamilnad on the 10th. According to press reports, state raingauge stations at Mayavaram recorded 12·5″, Nannilam 11·5″, Shiyali 8″, Tranquebar 7″, Coleroon 6″, and Mannargudi 5″ of rain on the 10th. There was also local rain in the Konkan on the 16th and 17th and in Deccan (Desh) on the 18th.

Unsettled conditions in and near southeast Bay of Bengal rapidly concentrated into a cyclonic storm by the 16th noon with central region near lat. 7½°N, long. 86°E. It moved

northwestwards and weakened equally rapidly into a depression by the 17th evening, when the central region was near lat. 10°N long. 84°E. Thereafter, moving in a northeasterly direction and gradually weakening along its course, it became by the 19th morning an elongated low over the south Bay, which finally merged with the seasonal low. The above synoptic conditions served to extend rainfall to coastal Orissa and coastal Gangetic West Bengal. Local or fairly widespread rain occurred in coastal Orissa and coastal Gangetic West Bengal on the 19th, in coastal Andhradesa on the 20th and in parts of the south Peninsula between the 20th and 27th.

Six western disturbances moved across the extreme north of the country during the month. Of these only the last disturbance was active. It caused fairly widespread light snowfalls in the Punjab hills on the 27th, local or fairly widespread snowfalls in the same region between the 28th and 30th and in the hills of west Uttar Pradesh on the 30th. Two of the others caused scattered light showers of rain or snow along the hills of the Punjab(I) and in Assam. The rest did not cause any precipitation.

A secondary low formed over east Madhya Pradesh on the 28th. It moved eastwards and lay over Orissa and adjoining southeast Madhya Pradesh on the next day, and a well-marked trough extended to the head Bay of Bengal by the 30th morning. Under its influence fairly widespread or local thundershowers occurred in Chota Nagpur on the 28th and 29th, in Gangetic West Bengal and Orissa on the 29th and 30th and in Assam and coastal Gangetic West Bengal on the 31st. Sandheads reported 3″ on the 30th.

Night temperatures were appreciably to markedly below normal in east Rajasthan, between the 13th and 15th and in northwest Madhya Pradesh, Madhya Bharat, Vindhya Pradesh and southwest Uttar Pradesh on the 14th and 15th. South Saurashtra experienced a moderate cold wave on the 19th, Veraval recording minimum temperature of 47°F (15°F below normal). They were markedly below normal in the West Punjab (I) and appreciably below normal in north Gujarat and Madhya Bharat on the 29th.

Another moderate cold wave prevailed over the Punjab (I) on the 30th and 31st, the minimum temperatures there being very near the freezing point even on the plains. They were 6° to 8°F below normal in west Uttar Pradesh, Vindhya Pradesh, Madhya Bharat and Deccan (Desh) on the last two days of the month.

The rainfall distribution over the country during the period under review is shown in Fig. 1.