Notes and News

KODAIKANAL OBSERVATORY

The Prime Minister visited the Astrophysical Observatory, Kodaikanal on 6 October 1961. He was received by the Minister for Transport and Communications and the Director General of Observatories, and was shown round the observatory. The Minister for Scientific Research and Cultural Affairs also visited the observatory with the Prime Minister. The various activities of the observatory, specially the recently installed Solar-Telescope with the 60-ft long underground tunnel spectrograph, were explained to the Prime Minister by the Director of the observatory. The Prime Minister addressed a few words of appreciation and encouragement to the staff of the observatory at the end of his visit.

INDIAN NATIONAL COMMITTEE FOR IGY

A meeting of the Indian National Committee for IGY held in New Delhi on 4 December 1961 was attended by Shri P. R. Krishna Rao, Director General of Observatories and Dr. P. R. Pisharoty, Director, Colaba Observatory, on behalf of this department. The meeting was convened to discuss, besides other matters, the publication of IGY data and arrangements for the World Magnetic Survey.

INDIAN NATIONAL COMMITTEE FOR OCEANIC RESEARCH

A meeting of the Indian National Committee for Oceanic Research (INCOR) held at Delhi on 25 November 1961 was attended by Shri P. R. Krishna Rao, Director General of Observatories and Dr. P. Koteswaram, Director, Aviation Services, on behalf of this department. The meeting was convened to discuss, amongst other things, the present position regarding the scheme for setting up an International Meteorological Centre at Bombay in connection with this International Indian Ocean Expedition.

STANDING ADVISORY BOARD FOR ASTRONOMY (SABA)

The Sixth Meeting of the Standing Advisory Board for Astronomy was held at New Delhi on 5 December 1961 under the Chairmanship of the Director General of Observatories. Among other matters, the meeting discussed the question of a Central Astronomical Observatory and examined a scheme submitted by Banaras University for research studies in Ancient Indian Astronomy.

SHIPPING AND SHIP-BUILDING CONFERENCE (1961)

The Shipping and Ship-building Conference (1961) organised by the Institution of Marine Technologists, the Company of Master Mariners of India and the Institute of Marine Engineers (Bombay Section) was held at Bombay from 4 December 1961. Shri K.N. Rao, Director, Regional Meteorological Centre, Bombay, Dr. P. R. Pisharoty, Director, Colaba Observatory and Dr. Ramasastry, Meteorologist, Poona, represented the department at the conference.

ADVISORY COMMITTEE FOR RAIN AND CLOUD PHYSICS RESEARCH

A meeting of the Advisory Committee for Rain and Cloud Physics Research of the

Council of Scientific and Industrial Research was held at New Delhi on 27 September 1961. Shri P. R. Krishna Rao, Director General of Observatories, attended the meeting.

BEAS PROJECT BOARD

A meeting of the Beas Project Board was held on 16 October 1961 at Nangal to discuss the Seismic Design Coefficient to be adopted in the design of Beas dam. Dr. A. N. Tandon, Director of Seismology, attended the above meeting.

ICAO/WMO SEMINAR ON FORECASTING FOR TURBINE-POWERED AIRCRAFT OPERATIONS

The Seminars on forecasting for turbine-powered aircraft operations over the northern half of Africa and the Middle East (referred to in 'Notes and News' for October 1961) were held at Cairo and Nicosia on the scheduled dates. Shri K. M. Ramamurthi, Assistant Meteorologist of this department and Sqn./Ldr. D.V. Deshpande of the Indian Air Force Met. Branch attended the Cairo Seminar. Shri D. V. Rao, Meteorologist, Dum Dum Airport, Calcutta, who was specially invited by the World Meteorological Organisation, delivered lectures at these Seminars at Cairo and Nicosia.

I.U.G.G. SYMPOSIUM ON LAND EROSION

Under the auspices of the I.U.G.G. International Association of Scientific Hydrology, a Symposium on land erosion will be held in Bari (Italy) in October 1962. The subjects for the symposium include factors of soil erosion and kinetic energy of rain.

SYMPOSIUM ON MONSOON METEOROLOGY AT HAWAII

A symposium on Monsoon Meteorology was held at the University of Hawaii on 1 September 1961 in connection with the Tenth Pacific Science Congress. Dr. P. Koteswaram of the India Meteorological Department attended the Symposium by invitation and presented papers by himself as well as by other colleagues in the department. Among other symposia held during the Congress may be mentioned those on Agricultural Meteorology, Numerical Forecasting, Satellite Meteorology and Tropical Cyclones.

ICAO/WMO SEMINAR ON FORECASTING FOR TURBINE ENGINED OPERATIONS BETWEEN WEST PAKISTAN AND WESTERN PACIFIC

The World Meteorological Organisation in collaboration with the International Civil Aviation Organisation will hold a Seminar on 'Forecasting for turbine engined operations' at Bangkok, Thailand, from 26 February to 16 March 1962. The Seminar will deal with techniques of forecasting appropriate to air routes over tropical and sub-tropical areas between West Pakistan and the Western Pacific.

I.U.G.G. SYMPOSIUM ON THE VARIATIONS OF THE REGIME OF EXISTING GLACIERS

Under the auspices of the I.U.G.G. International Association of Scientific Hydrology-Commission of Snow and Ice, a Symposium on "The variations of the regime of existing glaciers" will be held in September 1962 at Obergurgl (Austria). The object of the Symposium is to discuss the problem of recording glacier variations and also to discuss the recent research into the causes of glacier variations and the processes by which glaciers respond to climatic changes.

INTER-REGIONAL TRAINING SEMINAR ON TROPICAL CYCLONES AT TOKYO

Under the auspices of the World Meteorological Organisation and Japanese Meteorological Agency, an Inter-Regional Training Seminar on Tropical Cyclones will be held at Tokyo from 18-31 January 1962. Dr. J. F. Gabites (New Zealand), Mr. R. C. Gentry (USA) and Dr. P. Koteswaram (India) have been invited as Consultants and are scheduled to give lectures on the

Historical survey, origin and movement of tropical storms. There will also be additional lectures by invited lecturers and participants. Practical analysis of tropical storm situations are also planned.

SYMPOSIUM ON COSMIC RAYS AND ELEMENTARY PARTICLES

A Symposium on Cosmic Rays and Elementary particles organised by the Department of Atomic Energy of the Government of India will be held at Madras from 20 to 23 December 1961.

SYMPOSIUM ON UPPER ATMOSPHERE

A Symposium on Upper Atmosphere to be organised by the National Institute of Sciences of India will be held at New Delhi in October 1962. Shri P. R. Krishna Rao, Director General of Observatories and Dr. M. K. Vainu Bappu, Director, Kodaikanal Observatory, have been invited by the Steering Committee to be members of the Organising Committee for the Symposium.

SEMINAR ON AERONAUTICAL SCIENCES

As reported on p. 500 of July 1961 issue of this journal, a Seminar on Aeronautical Sciences was held at Bangalore from 27 November to 2 December 1961. Shri P. R. Krishna Rao, Director General of Observatories, presided over the Session on Aviation Meteorology. The Seminar was attended by Dr. P. R. Pisharoty, Shri P. K. Das, Shri P. Jagannathan, Shri S. M. Kulshrestha and Shri S. D. Williams of this department who presented papers.

INTER—REGIONAL HYDROLOGIC SEMINAR

A group of 40 delegates, visiting India on a study tour following the Inter-regional Hydrologic Seminar on field methods and equipment used in hydrology and hydrometeorology held at Bangkok, were shown round the Central Hydrometeorological Observatory at the Meteorological Office, New Delhi on 14 December. The party is scheduled to visit the Colaba and Poona observatories also. They evinced keen interest in the instruments used in measurement of the meteorological elements particularly the evaporation pan fitted with mesh cover and electrical bird-scaring device as also the distant indicating intensity raingauge.

SEMINAR ON MAGNETO-HYDRODYNAMICS AND ALLIED PROBLEMS

A Seminar on Magneto-hydrodynamics and allied problems was held at the Physical Research Laboratory, Ahmedabad from 3 to 13 October 1961.

Prof. S. Chandrasekhar gave six lectures on Hydrodynamic and Hydromagnetic Stability on 3, 5, 7, 9 and 13 October. Dr. Dessler gave four lectures on the application of hydromagnetics and plasma physics to geomagnetism on 4, 6, 10 and 12 October. General relativity and cosmogony, magnetic stars, stability of inter-planetary plasmas, paleo-magnetism and the dynamo currents in the earth's interior, were the main subjects on which the group discussions were held. The principal contributor in all these discussions was Prof. Chandrasekhar himself. The Physical Research Laboratory proposes to publish in full all the lectures, delivered during the seminar. About 20 delegates from the different Institutions outside Ahmedabad attended the seminar.

INDIAN METEOROLOGICAL SOCIETY

Mr. Kenneth C. Spengler, Executive Secretary, American Meteorological Society visited the Meteorological Office, Lodi Road, New Delhi on 29 and 30 September 1961 and gave a talk about the aims and activities of the American Meteorological Society.

Mr. Vaughn D. Rockney, Head of the Observations Division, U.S. Weather Bureau, gave a illustrated talk on "Radar Tracking of Hurricane "Carla", on 17 November 1961, in the Library Hall of the Meteorological Office, Lodi Road, New Delhi.

GANGA BRAHMAPUTRA RIVERS COMMISSION

The twelfth meeting of the Ganga Brahmaputra Rivers Commission was held at New Delhi on 7 December 1961. Shri S. Banerji, Meteorologist, attended the meeting on behalf of the India Meteorological Department. One of the important recommendation made was that the States should be asked to set up a co-ordination committee to whom copies of inspection report of the raingauges visited by the India Meteorological Department inspectors will be sent to ensure expeditious follow-up action on the basis of these reports. The commission desired that the India Meteorological Department may send a copy of the Inspection Report to the head of department controlling the particular State Raingauge.

THE UNITED STATES NATIONAL OCEANOGRAPHIC DATA CENTER

The new National Oceanographic Data Center, which opened officially on 16 January 1961, represents a new dimension in inter-agency co-operation within the United States government. The need for a central repository of the Nation's oceanographic data had been expressed numerous times by the scientific community and representatives of government, but formal action was not taken to establish such a facility until mid-1960 when the Federal Council for Science and Technology, acting on the recommendations of the Interagency Committee on Oceanography, unanimously recommended that a national oceanographic data center be established. The Data Center has been conceived in an atmosphere of co-operation—its sponsors include those agencies of government having primary interest in the marine environment; namely, the Department of the Navy, the Coast and Geodetic Survey, the Bureau of Commercial Fisheries, the Weather Bureau, the Atomic Energy Commission, and the National Science Foundation. In addition to providing the funds for operation of the center, each agency is represented on the National Oceanographic Data Center Advisory Board which determines the policies of operation of the Center. Additional representation for the scientific community is provided by two members appointed by the National Academy of Sciences.

Since the inauguration of the National Oceanographic Data Center, this spirit of co-operation between agencies has influenced the Data Center's relations with the international scientific community. The NODC has fostered exchange programs with many nations and as of the beginning of August 1961 has inaugurated data exchanges with one or more institutions in 18 countries.

Part of the mission of the Data Center is: to receive, compile, process, and preserve oceanographic data for rapid retrieval; establish procedures for insuring that the accuracy and general quality of the incorporated data meet the criteria established by the Advisory Board; and prepare data summaries, tabulations and atlases showing annual, seasonal, and monthly oceanographic conditions.

The NODC data archives comprise perhaps the world's largest collection of marine environmental data. The various types and amounts of data from all the seas and oceans of the world available at the NODC are: about 650,000 bathythermograph (BT) observations; about 175,000 oceanographic stations (most of which are from the North Atlantic and Indian Ocean areas) containing water temperature, salinity, sigma-t, and sound velocity at observed depths (with interpolations for these factors at International Standard Depths), specific volume anomaly, dynamic depth anomaly and heat index at all International Standard Depths, and other station information; about 20,000,000 surface observations containing surface temperature, sea swell, current drift, and related meteorological data. Most of these data are available on IBM punch cards for rapid retrieval. In addition, miscellaneous data of a physical, geological and biological nature are held. The NODC utilizes an IBM 7070

to handle computation and analytical problem requirements. These data are available to the public for use free of charge at NODC, or they may be reproduced, listed, summarized or treated statistically, as specified, at cost. Requests for data, services, or information should be addressed to: Director, National Oceanographic Data Center, Washington 25, D.C.

Publications of the NODC are divided into three series. These are: the General Publications (G) Series, consisting of publications of a general or informative nature; the Catalog (C) Series, consisting of inventories of data holdings compiled and published by oceans; and the Manual (M) series, describing the techniques and procedures used in processing various types of oceanographic data. These publications may be obtained free of charge from the NODC by interested persons and organizations of the scientific community.

On 10 July 1961, Dr. Woodrow C. Jacobs was appointed Director of the new National Oceanographic Data Center in Washington, D.C. Dr. Jacobs is a well-known meteorologist and is particularly noted for his work on air-sea interchanges.

FOREIGN VISITORS

Prof. S. Chandrasekhar of the Yerkes Observatory, University of Chicago visited the Meteorological Offices at New Delhi and Kodaikanal during his visit to India in September-November 1961.

Dr. Paul Siple, famous Antarctic explorer and climatologist visited the Meteorological Office, Poona on 30 November 1961 and delivered 2 lectures there under the auspices of the Indian Meteorological Society.

The first lecture was on 'Polar Motions and Seismiatry'. With the help of a film Dr. Siple explained the Eulerian motions of the Earth and showed how the spin axis describes a circle round the balance axis (Chandler circle). From the analysis of the astronomical data relating to latitude positions of stars observed over a period of sixty years he has found that the Chandler circle is described in 428 days and its radius undergoes variations with a periodicity of about six years. He believes that internal strains are set up inside the earth with the same periodicity and the release of this strain energy manifests itself in the form of earthquakes. With the help of diagrams he showed the apparent correlation between seismic activity on the one hand and the radius of the Chandler circle on the other. Years of large seismic activity correspond to epochs of maximum displacement between the spin and balance axes of the earth. He remarked that the great Chilean earthquake of 1960 would fit into this picture. He ventured the prediction that the coming one or two years would be years of low seismic activity.

In his second lecture on 'Antarctic Research' Dr. Siple gave an account of his explorations in the Antarctic Regions with the help of a large number of colour slides. He described the camp which U.S. team had put up at Amundsen Scott (the geographic South Pole) during the I.G.Y. He referred to the various types of observations being recorded in the Antarctic—ionospheric, astronomical, meteorological, geomagnetic, glaciological, seismic biological etc—and the conditions under which workers had to live there. At the end of the talk Dr. Siple answered a number of questions from members of audience.

ASSIGNMENT OF INDIAN METEOROLOGIST TO SUDAN

Shri M. Rama Rao, Meteorologist proceeded to Sudan on deputation on foreign service as Meteorological Instruments Expert on Technical Assistance Mission of the World Meteorological Organisation for a period of two years.

VIGOROUS MONSOON CONDITIONS IN THE ARABIAN SEA IN THE FIRST TWO WEEKS OF JULY 1961

In the first fortnight of July 1961, the monsoon was strong to vigorous in the central Arabian Sea. During this period, except on a few days, winds of speed 35 knots or more were reported by the ships in some sector or other of central and southwest Arabian Sea. Between 1st and 4th some

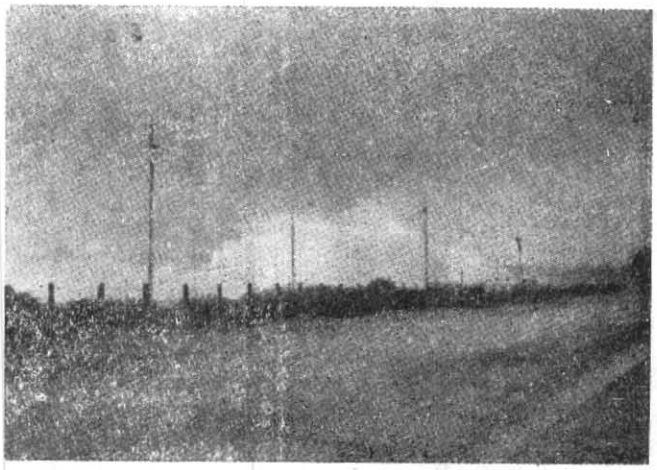

Fig .1

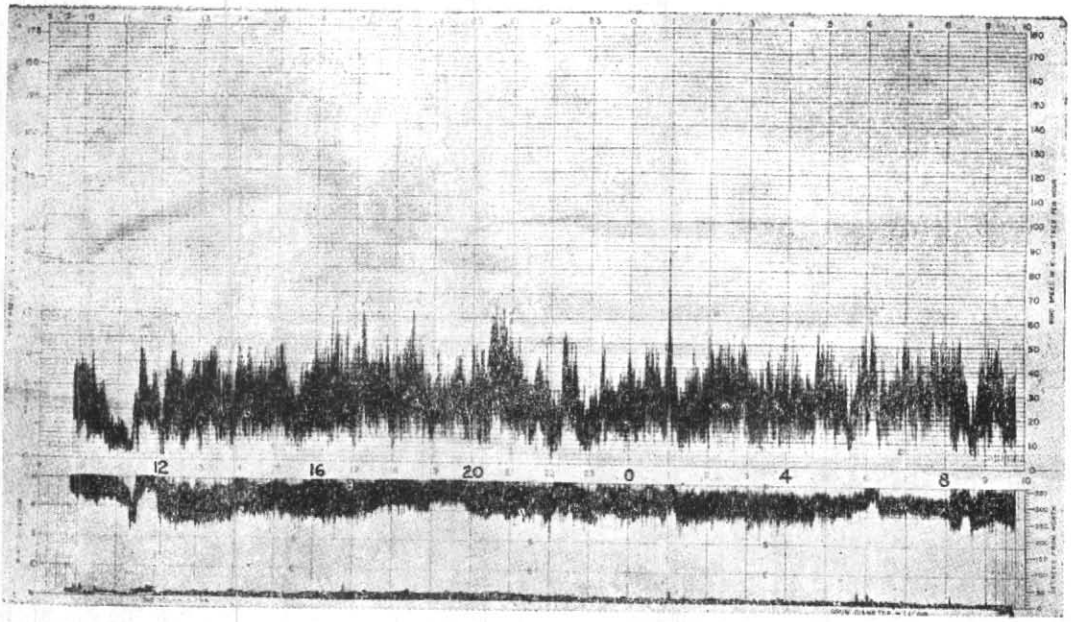

Fig. 2(a). Anemogram record of Colaba, Bombay— 1-2 July 1961

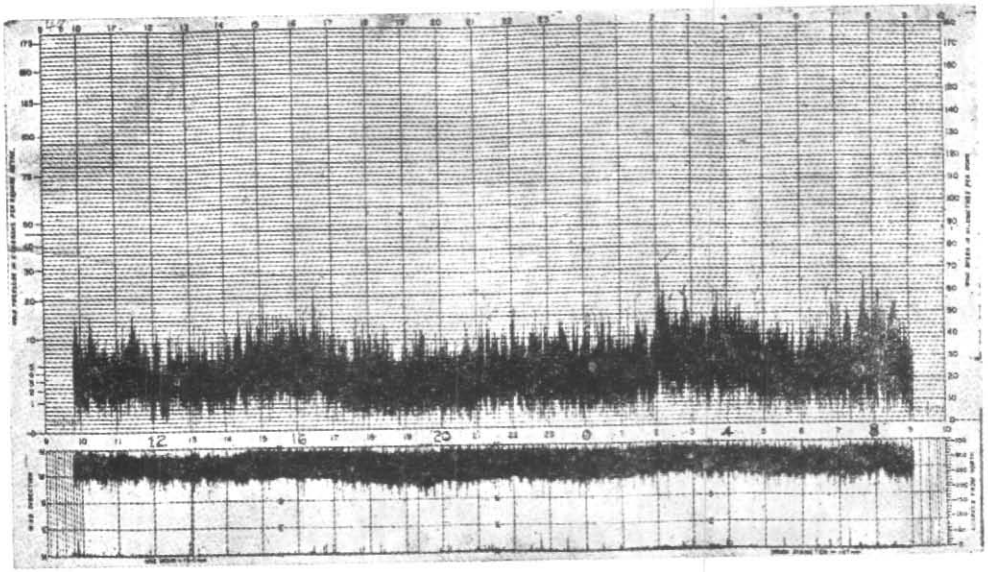

Fig. 2(b). Anemogram record of Colaba, Bombay — 2-3 July 1961

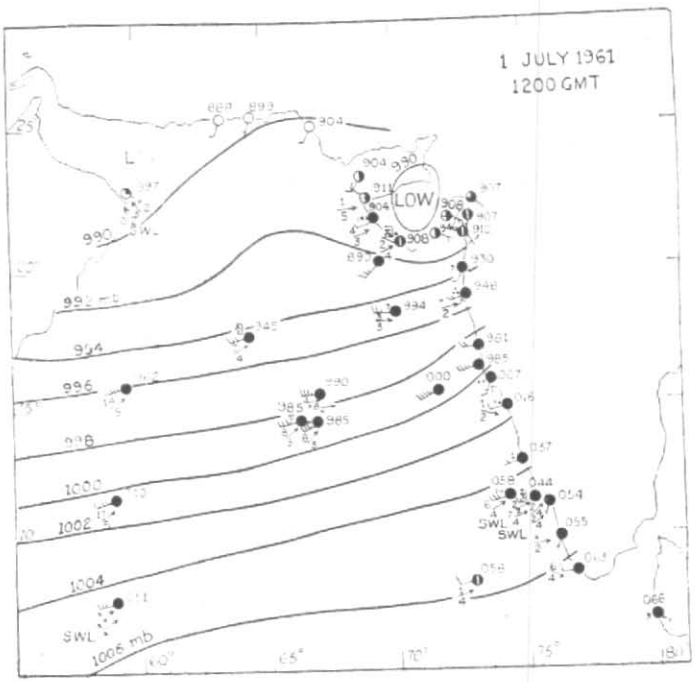

Fig. 3(a)

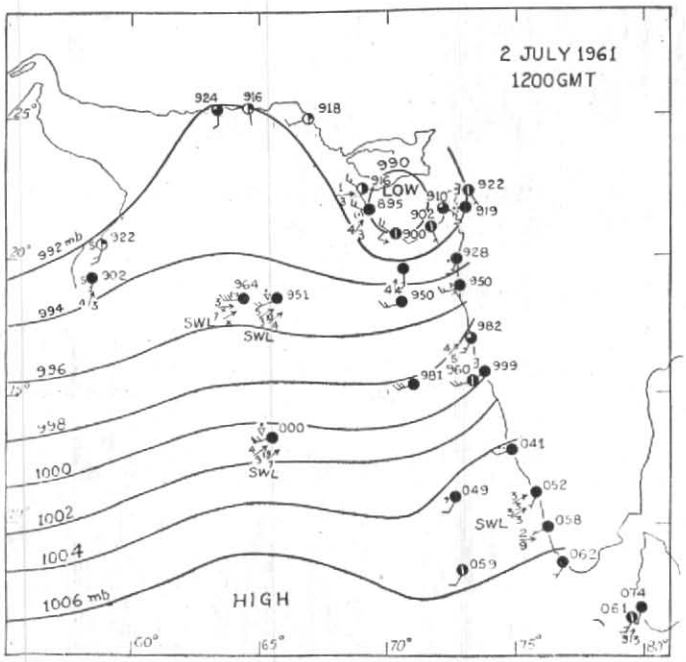

Fig. 3(b)

ships reported winds of speed ranging between 45 and 70 kts. The wave heights reported by the ships were of the order of 20 to 30 feet on these days. In cases where the ships reported more than one wave group, the higher heights invariably corresponded to swells of relatively longer periods.

The vigorous monsoon conditions set in in the central Arabian sea on the evening of 30 June to the west of Long. 70°E and gradually extended eastwards and reached the Konkan coast by night of 1 July. The waves generated by the strong winds travelled ahead of the strong wind belt and appeared on the coast line at Bombay earlier than the strong winds themselves.

Fig. 1 shows one of the waves breaking against the tetropods along the Marine Drive at Bombay. The waves after reaching the coast line and breaking against the tetropods were scattered to as high as 15 to 20 ft as a mushroom growth in the form of foam and spray. The photograph was taken on the afternoon of 2 July at about the time of high tide. On the 3rd at 1200 GMT, S.S. 'Clan Chisholm' reported a wave height of 20 ft at Lat. 18·7°N, Long. 72·3° E, nearly 100 km southwest of Bombay.

On the 2nd and 3rd winds were gusty at Bombay and at Colaba the squalls reached a speed of 48 kts on 2nd and 41 kts on 3rd (see Figs. 2(a), 2(b), 3(a) and 3(b).

According to newspaper reports the vigorous monsoon conditions caused some damage along the south Konkan coast. At Vengurla, 'the waves, nearly 30 ft high, lashed against the Vengurla harbour for more than nine hours on the 2nd seriously damaging its only wharf. The sea water on the crest of the waves rushed through lanes and streets adjoining the beach into the town and reached the octroi post which lies more than hundred yards inside'.

ABSTRACTS OF PAPERS APPEARING IN THE JOURNAL IN HINDI

With effect from this issue of the Journal we are attempting to publish Hindi translations of the abstracts of all the papers appearing in the issue. The translations of abstracts in this issue are given at the end.