

APPLICATIONS WITH MULTI-SPECTRAL ENVIRONMENTAL SATELLITES



Faculty members & trainees scientists

An International School on **Applications with the Newest Multi-spectral Environmental Satellites** was conducted at Satellite Meteorology Division, India Meteorological Department New Delhi from 30th January to 5th February 2011. The course was inaugurated by AVM (Dr.) Ajit Tyagi, DG, IMD on 30th January 2011. The course includes forty hours lectures and Labs on topics, Radiation and the Radiative Transfer Equation, Spectral signatures from Earth's surface and atmosphere, Multi-spectral monitoring of land, ocean, and atmosphere, Image combinations for cloud and volcanic ash detection, Sounding using infrared high resolution spectral data, Microwave detection of vertical changes of moisture in the atmosphere. The faculty to this course were Prof. Paul Menzel, Verner Suomi, Professor, Dr. Paul Antonelli and Dr. Sanjay Limaye Scientists (from Space Science and Engineering Centre, University of Wisconsin USA). There were 24 trainees from IMD, NCMRWF, INCOIS, IITM, IISc, IAF, New Delhi and IIT, Delhi.

OBITUARY

Prof. P. K. Das, former Director General of Meteorology, India Meteorological Department (during 1979-1983) passed away on 14 January 2011 at the age of 84. He had joined the IMD in 1949. Prof. Das made pioneering research and contributions to Meteorology, in particular to the development of Numerical Weather Prediction in India. He worked on Cloud Physics at Imperial College, London with Sir John Mason in 1946 and wrote his thesis on "Computation of collection efficiencies of large raindrops falling through a population of small drops". He worked with Prof. Jule Charney, Prof. Norman Phillips and Ed Lorenz of the Massachusetts Institute of Technology (MIT) during 1958-1960 and Reid Bryson at the University of Wisconsin in the late 1960s.

P.K. Das was the winner of several awards, including Indian Journal of Meteorology and Geophysics award; the K.R. Ramanathan Memorial Lecture 1990; the Datta Memorial Lecture Award, 1991; and the K.R. Ramanathan Medal, for contributions to monsoon dynamics and prediction of storm surges (1993). He was fellow of the Indian Academy of Sciences (1975) and of the Indian National Science Academy (1981) and was awarded the "Gilbert Walker Medal" by the Indian Meteorological Society. He was invited by WMO to deliver the prestigious Fifth IMO lecture on Monsoons during the WMO Congress of 1983.



Dr. R.P Sarkar, former Director General of Meteorology during 1986-88 passed away on 10 March 2011 at the age of 78. He had joined the IMD in 1958. He made pioneering contributions to the study of Mountain Waves and Orographic Rainfall, which was the subject of his own PhD Thesis and subsequently that of several of his students who together led to a substantial growth of the subject in India. He also made significant contributions in Agrometeorology and Climatology. He was elected to the Executive Committee of WMO in 1986 and later served on several Executive Panels, notably those on Agricultural Meteorology and Training. He was the Chairman of the WMO Working Group on Drought and Desertification. He undertook several short term teaching assignments in various Universities in India and abroad.

Editorial Team

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मौसम विज्ञान विभाग समाचार
IMD NEWS

INDIA METEOROLOGICAL DEPARTMENT
(Ministry of Earth Sciences)

IMD FOUNDATION DAY

136th Foundation day of India Meteorological Department was celebrated on 15th January, 2011 in the IMD H.Q. campus. Mr. Kapil Sibal, the then Hon'ble Minister for Ministry of Earth Sciences was the Chief Guest on this Occasion and the function was presided over by Dr. Shailesh Naik, Secretary, Ministry of Earth Sciences. The function was attended by a large number of employees and distinguished invited Eminent Scientists. An exhibition displaying the recent developments and achievements in the modernization programme of the department was also arranged.

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Hon'ble Minister Kapil Sibal addressing the audience



Release of Monsoon Monograph CD

On this occasion the 'Monsoon Monograph' and NOAA/METOP/MODIS Satellites products Catalogue were released. A quiz and an art competition on the relevant theme was organized on this occasion for school children of Delhi & NCR. Students of Shyama Parsad School, Lodi Estate and Delhi Public School, Greater Noida won the 1st and 2nd prizes respectively. About 15 Schools participated in the Art Competition with great enthusiasm. Sakshi Yadav, Archit S. Nair and Monika won the 1st, 2nd & 3rd prize respectively. The awards were given by Prof. Yashpal, Eminent Scientist & Educationist. The outstanding officers and staff were also given the Best employee's award. The program was followed by a cultural show by the artists of song and drama division of government of India.



Prof. Yashpal distributing awards

VISION AND MISSION OF IMD

The vision of IMD is to nurture the science and technology of meteorology, to provide increasingly more efficient Weather and Climate Services for safety of life and property and to contribute to the cause of national development.

- Flood**: To take meteorological observations and to provide current and forecast meteorological information for optimum operation of weather-sensitive activities like agriculture, irrigation, shipping, aviation, offshore oil explorations etc.
- Aviation**: To warn against severe weather phenomena like tropical cyclones, norwesters, dust storms, heavy rains and snow, cold and heat waves etc.
- Cyclone**: To provide climatological information required for agriculture, water resource management, industries, oil exploration and other nation-building activities.
- Shipping**: To conduct and promote research in meteorology and allied disciplines.
- Agriculture**: To detect and locate earthquakes and to evaluate seismicity in different parts of the country for development projects.
- Storm Surge Warning**: To provide climatological information required for agriculture, water resource management, industries, oil exploration and other nation-building activities.
- Fisheries Warning**: To conduct and promote research in meteorology and allied disciplines.
- Environmental Monitoring**: To detect and locate earthquakes and to evaluate seismicity in different parts of the country for development projects.
- Meteorological Services to Mountaineers**: To detect and locate earthquakes and to evaluate seismicity in different parts of the country for development projects.

PROJECT EVALUATION

IMD undertakes expert reviews of project proposals sent by other Ministries seeking our opinion on matters of Meteorological importance.

The EMRC carried out the evaluation of 209 Development Projects of Thermal Power, Industries and Mining activity on behalf of MoES and 2 projects on Science & Technology referred to us by the DST.

PUBLICATIONS

Climate Diagnostic Bulletin of India for the month of December, January and February have been brought out during the period. **Monsoon Monograph** Vol. I was released on 15th January 2011 on the occasion of IMD Foundation Day.

A paper entitled **"Drought Scenario over India during monsoon 2009 – analyses based on SPI"** by Jayanta Sarkar et al, has been submitted for publication in the Asian Journal of Water Environment & Pollution New Delhi.

A paper entitled **"Assessing Probabilistic Rainfall Scenario over the Vidharbha region, India for proper risk evaluation and management of water resources"** by Dr. Jayanta Sarkar Sc. 'E' has been submitted to the Asian Journal of Water Environment & Pollution New Delhi for publication.

A paper entitled **"Climate Change and Agriculture over North East India"** by Dr. R.P. Samui and M.V. Kamble was published in the 'SATSA MUKHAPATRA'- Annual Technical Issue, Vol. 15, 2011 on Climate Change – its Impact, Adaptation and Mitigation in Agriculture'.

A chapter on **"Climate Change and Food Security in India"** authored by Dr. N. Chattopadhyay was published in Springer publication entitled "Climate Change and Food Security in South Asia" in March 2011.

Twelve research papers and three Letters were published in quarterly departmental research journal **"MAUSAM"** Vol. 62, No. 1, (January 2011).

EXHIBITION

RMC Chennai participated in the 98th Indian Science Congress "Pride of India Exhibition" held at SRM University, Chennai from 2nd to 7th January 2011.

IMD (HQ) participated in exhibition "Garwal Sarjan (Parola) 2011 at Parola, Distt. Uttrakashi, Uttrakhand w.e.f. 25th to 27th March 2011 organized by CYME of Social Development (CSD), New Delhi. Shri J. P. S. Bhullar, A.M.-I was deputed on exhibition duties at Parola, Distt. Uttrakashi, Uttrakhand.

INEMREC - 2011

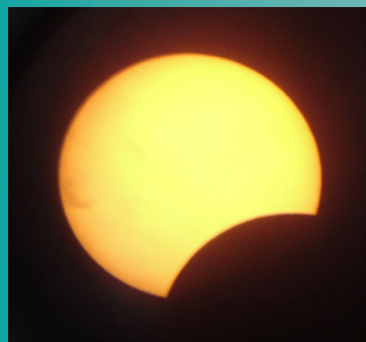
A seminar INEMREC-2011 on 'Indian Northeast Monsoon – Recent Advances and Evolving Concepts' was jointly organized by Indian Meteorological Society, Chennai Chapter and Regional Meteorological Centre, Chennai during 24-25 Feb 2011. Dr. S. Balachandran, Scientist 'E' delivered an invited talk on "Radiation budget and cloud effects during northeast monsoon" A book containing abstract of talk delivered during this seminar was also released and the first copy of this book was handed over to Dr. J. Radhakrishnan, IAS, UNDP, New Delhi.



Releasing of book during the seminar

SAC, PAC Meeting

22nd Standing Advisory Committee Meeting of Positional Astronomy Centre was held on 26th March 2011 at Salt Lake, Kolkata under the chairmanship of Dr. G. M. Ballabh, Professor, Osmania University, Hyderabad in presence of AVM (Dr.) Ajit Tyagi, DG, IMD. The meeting was also attended by Shri U. P. Singh, Director (Publication). The meeting ended with several recommendations for future programme and progress of the PAC with vote of thanks by Shri S. Sen, Director, PAC, Kolkata.



PARTIAL ECLIPSE OF THE SUN

A partial eclipse of the Sun occurred on January 4, 2011 (14 Pausa, 1932 Saka Era) from 12h 10m IST to 16h 31m IST. The eclipse was visible from the northwest India. The partial eclipse was visible from most of Europe, the northern half of Africa, the Middle East, western Asia, northwest China, western Mongolia and the northwest part of India. The eclipse began at 12h 10m IST when the penumbral shadow of the Moon touches the Earth at local sunrise at a point in northern Algeria. The eclipse ended at 16h 31m IST when Moon's shadow finally leaves the Earth at local sunset at a point in east Kazakhstan.

LECTURES BY VISITING PROFESSORS



AVM (Dr.) Ajit Tyagi, DGM welcoming Dr. Marat Khairoutdinov

Dr. Marat Khairoutdinov, Associate Professor in School of Marine and Atmospheric Sciences, Stony Brook University, USA, visited IMD. NWP Division, New Delhi on 24th January 2011 and delivered a lecture on "Multi-scale Modeling Frame work".

Dr. Suresh Boodhoo, Ex-Chief, Mauritius Meteorological Services delivered a lecture on the topic, "Impact of climate change on Mauritius" on 24th March 2011 at IMD, New Delhi.



DG, IMD presenting memento to Dr. Ramesh Kumar Kakkar

Dr. Ramesh Kumar Kakkar, Weather focus Area Leader, NASA, delivered a lecture on the topic, "The NASA 'GRIP' (Genesis and Rapid Intensification Process) (Tropical Cyclones) experiment," on 24th March 2011 at IMD, New Delhi.

LECTURES BY IMD SCIENTISTS

Sh. B. Puttanna, Director has delivered lecture on 11th January 2011 on **"Weather systems & forecasting and their likely impacts on water resources"** in the trainers training program on 'scaling up of water productivity in Agriculture for livelihoods' organized by University of Agricultural Sciences, Bangaluru.

AVM (Dr.) Ajit Tyagi, DG, IMD participated and delivered a talk on "Observed Climate Variability and Change" on 19th Jan 2011 in the Seminar on **"Socio-Economic Implications of Climate Change Initiatives"** organized by GIS Development in association with DST, MoES and ISRO International Convention Centre at, Hyderabad.

Dr. R. P. Samui, Sc. 'E' delivered lectures on **"Climate Change, Climate Extreme, Weather Events and Indian Agriculture"** on 4th February 2011 and **"Weather - based Insurance in Agriculture and Allied Sectors"** on 5th February 2011 in the 5th SERC School on "Agricultural Drought: Climate Change and Rain fed Agriculture" held at CRIDA, Hyderabad.

Dr. N. Chattopadhyay, Sc. 'E' delivered a lecture on **"Impact of Climate Change on the Indian Monsoon"** in the 10th Agricultural Science Congress held at National Bureau of Fish Genetic Resources, Lucknow during 10-12th February, 2011.

Sh. Anand Kumar Sharma, Sc. 'E', M C, Dehra Dun delivered lecture on Ethics and Values in Scientific research to the middle level and senior scientists of various national scientific organizations at a workshop organized by the Lal Bhadur Shastri National Academy of Administration, Mussoorie on 1st March 2011.



Dr. S.D. Attri, Sc. 'E' delivering lead talk

Dr. S. D. Attri, Sc. 'E' delivered a Lead talk on "Environmental Monitoring Strategies in India" in National Seminar on "Multidisciplinary Approach on Frontier areas of Environmental Science and Engineering" at GJU Hisat during 4-5th March, 2011.

Dr. A. Kashyapi, Sc. 'E' delivered lecture on "The Impacts, Vulnerability and Adaptation of Climate Change for Agriculture based on IPCC report" at Tamil Nadu Agricultural University on 14th March 2011.

श्रीमती सरिता जोशी, वरिष्ठ अनुवादक ने मुख्यालय की राजभाषा कार्यान्वयन समिति के सदस्यों के लिए कंप्यूटर प्रौद्योगिकी और हिन्दी विषय पर 28 फरवरी 2011 प्रेजेंटेशन दिया जिसमें कंप्यूटर पर यूनिकोड सक्रिय करने और हिन्दी में सरलतापूर्वक कार्य करने के विषय में बताया गया।



Advisory and Monitoring Committee Meeting



Release of ACR/ AMR/ ATR 2011 Report at Nagpur



WMO /ESCAP panel members alongwith Secretary, MoES & DG, IMD



Dr. K.K. Singh, Scientist 'E' giving presentation before Steering committee

संसदीय राजभाषा समिति द्वारा निरीक्षण

माननीय संसदीय राजभाषा समिति की दूसरी उपसमिति द्वारा 15 जनवरी को विभागीय कार्यालय प्रमुख वाष्पोत्सर्जन वेधशाला, पूसा का निरीक्षण किया गया। इस निरीक्षण के दौरान कार्यालय की तरफ से डॉ. एल. एस. राठोर, डॉ. ओ. पी. सिंह एवं सुश्री रेवा शर्मा ने समिति की बैठक में भाग लिया।

MEETING OF ADVISORY AND MONITORING COMMITTEE

Fifth Meeting of Advisory and Monitoring Committee of Seismic Microzonation study of NCT Delhi on 1:10000 scale was held on 5th February 2011 at Earthquake Risk Evaluation Centre (EREC), India Meteorological Department, under the chairmanship of Padmshree Prof. A. S. Arya. The meeting was attended by eminent professor and scientists from IIT, GSI, IMD, IISc and the representative of CGWB, and SOI, New Delhi. Preliminary results of Seismic Microzonation of NCT Delhi, i.e., Design response Spectra at 25 sites and accelerated time history at bed rock depth and at surface at 25 representative sites distributed over NCT were discussed.

ANNUAL REVIEW MEETING

The Departmental Annual Review Meetings 2011 along with Users' meet was organised at RMC, Nagpur during 16-19 February 2011. The meeting was attended by scientists from RMCs, MCs, H.Q. and Pune office. All technical issues related to weather forecasting, monsoon and cyclones and administrative issues along with future plans were discussed and recommendations were made on various issues.

38TH SESSION OF WMO/ESCAP PANEL

38th session of WMO /ESCAP panel was hosted by cyclone warning division New Delhi during 21-25th February 2011. Secretary Ministry of Earth Sciences presided over the function and Vice Chairman, NDMA was the Chief guest of the inaugural function. AVM (Dr) Ajit Tyagi, DGM, IMD was elected the chairman of the 38th session. Dr. T. Toya, Regional Director of Asia and South Pacific, WMO; Dr Koji Kuroiwa, Chief Tropical Cyclone Programme (TCP), WMO; Dr Yuichi Ono, ESCAP; Dr, Qumar-UZ-Zaman Choudhry, Secretary WMO/ESCAP Panel on Tropical Cyclone (PTC) and scientists from WMO/ESCAP panel member Countries, i.e., Bangladesh, Pakistan, Sri Lanka, Oman, Myanmar, Maldives, Thailand & India were the delegates for this session.

MEETING ON IMPLEMENTATION OF FASAL

A Steering Committee Meeting on implementation of FASAL Scheme for crop yield forecasting held at DGM office on 18th March 2011. The meeting was attended by FASAL committee members from CRIDA, SAC, DAC, IMD, IARI and ANGRAU. The meeting was chaired by Dr. J.S. Parihar, SAC, Ahmedabad. He suggested IMD and ISRO should make efforts for developing good data base of Crop experiment and weather with larger accessibility. Dr. L.S. Rathore emphasized on building strong satellite based estimates of crop and weather parameters. The crop yield forecast at sustainable basis need to be institutionalized.



DG, IMD & participating Scientists in the orientation programme



Group of Scientists of Agro Meteorological training



IMD Scientists & Trainees Forecasters



DG, IMD, and Senior Scientists during inauguration of WRF Model Training

ORIENTATION PROGRAMME

An orientation programme for office and asset management under modernization scheme phase – 1 was conducted at DGM office, New Delhi for M.C. in-charges during period from 7-12th February 2011. The aim of the programme was to have a brief knowledge regarding office procedure, management of stores and other Government of India guidelines issued under various rules and regulations. DGM addressed the trainees during the inauguration and the certificates were given by Secretary, MoES at the concluding session.

TRAINING COURSE ON AGRO METEOROLOGY

A training course on 'Agro meteorology towards better advisories for serving end users requirement' for AMFU scientists, was conducted from 15 Feb to 7 March, 2011 at CTI, Pashan by the Agrimet Division. 24 trainees in the rank of Assistant Professor, Associate professor from different State Agriculture Universities Advisory Board members from different Agrometeorological Field units participated in the course. The course covered various theoretical, operational and practical aspects of agrometeorology. The experts from IMD and other leading Institutes/Universities viz., NCMRWF, IIT, IITM, CASAM, SAU, SVU, MSSRF, ICAR, IARI, CAZRI, CRIDA, ICRISAT and SAC delivered lectures.

TROPICAL CYCLONE FORECASTERS TRAINING

A training Course organized by RSMC, New Delhi for WMO Sponsored Cyclone forecasters from WMO/ESCAP panel member Countries, i.e., Oman, Bangladesh and Myanmar was held during 28th February to 11th March 2011. Nine cyclone forecasters from Area Cyclone Warning Centers (ACWC) Kolkata, Chennai & Mumbai and Cyclone Warning Centre (CWC), Bhubaneswar, RMC, New Delhi and National Weather Forecasting Centre (NWFC) also participated in the training.

The welcome address was given by Dr. M. Mohapatra, Sc.'E' and the training programme was inaugurated by Shri B.K. Bandyopadhyay, DDGM(S). The valedictory function of this training course was held on 11th March 2011 and certificates were distributed by DGM, IMD to the trainees.

WRF MODEL TRAINING

A WRF Model Training Program was conducted by NWP Division during 28 March - 8th April, 2011 at Mausam Bhavan, New Delhi which was inaugurated by DGM. The aim of the training program was to familiarize the model configuration, data assimilation and model products evaluation to officers working at various RMC's. The training program was attended by 33 officers from all RMCs, MCs viz., Bangalore, Hyderabad, Ahmedabad, Thiruvananthapuram and O/o DDGM(WF) Pune including 8 local participants. Speakers from NCMRWF, IIT Delhi, IAF New Delhi, HCL New Delhi, NARL Gadanki and IMD Scientists were identified as resource persons to deliver lectures covering various aspects of the WRF model configuration, data assimilation, model evaluation and diagnostic studies. During the practical session, the trainees were made familiar with Model Evaluation Tools software installation and utilization for WRF model performance evaluation.

DISTINGUISHED VISITORS



Shri A.K. Sharma, Sc 'E' briefing activity of MC Dehradun to Shri N. D. Tiwari

N. D. Tiwari, Ex. Chief Minister of U.P. and Uttarakhand visited Meteorological Centre, Dehra Dun on 9th March 2011 and enquired about the various new developments and coordination with state departments to facilitate various works.

Dr. Anil Kulkarni, Scientist, IISc, Bangalore delivered a lecture on "Himalayan Glaciers and Climate change" at M. C. Bangalore on 23rd March 2011.

Dr. B. G. Sidhartha, Director, B M Birla Science Centre delivered a lecture on "THE EARTH IN SPACE" at M. C., Hyderabad on the occasion of WM Day the 23rd March 2011.

30 Trainees from National Institute of Disaster Management including senior Govt. officials from 17 African countries visited National Weather Forecasting Centre on 14th January 2011. They were briefed regarding NWFC and Cyclone Warning Organisation of IMD.

FOREIGN VISITS

Dr. R. Suresh, Sc. 'E', participated in ICAO's Asia Pacific Wind Shear Systems acquisition workshop" held at Bangkok from 1st to 3rd January 2011.

S/Sh. G. Suresh, Sc. 'E' and **P. R. Baidya**, Sc. 'E' of Seismo division visited Mexico from 28th Jan to 6th February 2011 for joint collaboration Project "A near real time estimation under Indo-Mexican Joint research Project".

Sh. B. K. Bandyopadhyay, Sc. 'F' visited Kathmandu, Nepal from 10th to 11 February 2011 for workshop on "Improvement of weather services the social development" and delivered a lecture on "Weather Services in India" in the workshop.

Sh. A. K Sharma, Sc. 'F' visited Tokyo, Japan from 21st to 23rd February 2011 to participate in the WMO Meeting of the coordination of the RAIL Pilot to develop support of NMHSS in Satellite data, Product and Training.

Dr. M. Mohapatra, Scientist 'E' was deputed to Miami, USA from 21st March 2011 to 1st April 2011 to participate in RA-IV Workshop on Hurricane forecasting and warning & Public Weather Service, Florida, USA.

VISIT OF WMO TEAM



A review meeting of WMO Team members & IMD Scientists

A 3-member WMO team comprising of Mr. Jeffrey Wilson, Dr.(Ms) WANG Mehua and Prof U.S. De, Retd. ADGM(R) IMD visited IMD during 21-28th March, 2011 to review the working of our Central Training Institute at Pune and Regional Training Centre at Delhi. Such reviews are conducted periodically to extend the recognition of designated Regional Training Centres of WMO(RTC). The above two Training Centres of IMD are RTC's for RA-II and RA-V regions.

An interactive session of faculty members of CTI, Pune with WMO team was held at CTI Pashan on 24th March 2011. The team also visited Agrimet Division on 25th March 2011 and they were apprised of the training activities of the division by Dr. R. P. Samui, DDGM(Ag). The training programmes and infrastructures are currently undergoing improvement to stand requirements of the department in good stead.

VISIT OF INDONESIAN DELEGATION

A six member delegation from Indonesian Meteorological Geophysical and Climatological Agency (BMKG), Jakarta visited Earth Risk Evaluation Center New Delhi on 25th January, 2011. They were briefed about activities of EREC regarding monitoring, detection and evaluation of seismic hazards in and around country. They were also briefed about optimum seismological network program of the division. A brief presentation was made by Dr. A. K. Shukla, Sc. 'F' Head EREC regarding the function of EREC and seismic Hazard evaluation of NCT Delhi



Shri L.R. Meena, Scientist "F" briefing to Indonesian delegates

WORLD METEOROLOGICAL DAY



Secretary, MoES addressing during National Seminar



Secretary, MoES and DG, IMD along with User of Climate Information – the Farmers



School children are being briefed on WM Day

World Meteorological Day was celebrated by India Meteorological Department, New Delhi and its various Meteorological Centres all over the country on 23rd March, 2011 by organizing exhibitions, seminars, press release, specialized talks on the theme for 2011, viz., "Climate for You". On this occasion Shri P. K. Bansal the Hon'ble Minister for Science & Technology and MoES and Shri Ashwani Kumar the Hon'ble Minister of State, Science & Technology and MoES, both conveyed their warm wishes to entire Meteorological community for rendering excellent weather and climate services to the nation and complimented for conservation of long series of quality data.

A national Seminar on "Climate for you" was organized in New Delhi by IMD. It was attended by more than 200 participants including scientists from Government and other research institutes, professors, WMO experts, IMD personals, farmers, media personnel, university scholars etc. The seminar was inaugurated by Dr. Shailesh Nayak, Secretary, Ministry of Earth Sciences who stressed on the use of climate resource for societal benefits. WM Day address, Welcome address and Vote of thanks were delivered by AVM (Dr.) Ajit Tyagi, DGM, Dr. L. S. Rathore, Head (Agromet) and Dr. S. D. Attri, Scientist 'E' respectively.

Dr. Ajit Tyagi (IMD) on 'Climate Perspective', Dr. Anil Kumar Singh (ICAR) on 'Climate Resources for Agriculture', Dr. B. Bandyopadhyay (MN&RE) on 'Climate and Energy Management', Sh. B. Mukhopadhyay (IMD) on 'Climate Services', Dr. R. C. Dhiman (ICMR) on 'Climate Change and Health', Dr. A. K. Gosain (IITD) on 'Framework for Water & Climate Change Impact Assessment', Wg. Cdr. Ajay Lele (IDSIA) on "Climate and Aviation Strategic Applications" specialized talks were delivered during the seminar. A press release was given highlighting WMO theme for this year and inviting the general public to visit IMD offices/observatories for popularizing meteorology.

WM Day was celebrated in all sub-offices of IMD situated in various places of India and open exhibition was arranged. It was celebrated with overwhelming response of students and public. Dr. Medha Khole, Scientist 'E', O/o ADGM (R), Pune delivered a radio talk on this occasion on the topic, "Climate for you" in Marathi. The talk was broadcast by All India Radio on 23rd March at 0915 Hrs (IST).

SCIENCE WEEK

Science week was celebrated from 23-28th February 2011 at most of the sub-offices of IMD. A number of schools and colleges visited M C, Dehra Dun during the period. On this occasion, "Science Day Utsav" was conducted by Gujarat Council of Science city, Government of Gujarat and an exhibition was arranged at Science city, Ahmedabad from 27th February to 3rd March. M C, Ahmedabad participated in the Utsav by putting exhibits, posters, weather instruments. A meteorological exhibition was also organized at RMC Chennai, for students, teachers and public. They were suitably briefed about various meteorological and environmental issues and were also taken around the observatory for first hand knowledge about the working of the instruments.



Science Day exhibition at Ahmedabad