

GATE STILL GOING STRONG

Although the GATE data collection phase has now been over for about a year an equally important phase is still underway. This is the processing of the data collected during the four month long observation phase. Each observation, by man or machine, was recorded and the result was over 300 miles of magnetic tape, thousands of cloud photographs and bales of written records. When the Quadra arrived home in Victoria last October she brought back a wealth of valuable information. The task of the scientists has since been to process these data in order to facilitate its use by the international scientific community. As the Minister of the Environment, Madame Sauvé, said, upon welcoming home the Quadra:

"the knowledge brought back by the Quadra will be common international property just as the High Seas have been called the common heritage of mankind"

How is the data to be made available to the international scientific community? Elaborate data processing organizations and schedules have been set up by the GATE offices of the World Meteorological Organization. Within each country a National Processing Centre (NPC) was designated. In Canada the NPC is the Climatic Data Processing Division of the Central Services Directorate. The data processing is being done within the NPC, the Boundary Layer Research Division and Network Standards Division of AES, at the Bedford Institute of Oceanography and at the Universities of British Columbia, McGill and Toronto. Coordination of these activities is done by the NPC and the GATE Scientific Coordinator, Dr. R.J. Polavarapu.

Each phase of GATE was planned as a coordinated effort of five subprogrammes: synoptic scale, radiation, boundary layer, convection and oceanographic. For each, a subprogramme data centre has been designated: Bracknell (U.K.), Leningrad, Hamburg, Washington, Brest (France), respectively. These subprogramme data centres are responsible for analysing intercomparison data and verifying and assembling into useful data sets the information received from the NPC's. These data sets are, in turn, passed to the World Data Centres (WDC) in Washington and Moscow. The WDC's will act as the international archives for the GATE data and will also distribute, upon request, data to interested scientific groups throughout the world. For example, if a scientist at Lower South-East Slobovia Polytechnical College wanted to study the relationships between atmospheric radiation and clouds he could obtain from a WDC the appropriate data for his study. This approach will, hopefully, maximize the utilization and hence scientific return of the GATE.

When will all the data be available? By international agreement all data will be processed and forwarded to the WDC's by March, 1976. Higher priority data have earlier deadlines. For example, the intercomparison data deadline of March 31, 1975 has long since passed. The time schedules are extremely tight in view of the volume of data to be processed and every effort is required to keep on schedule.

How well is the processing going? To date the Canadian data processing is generally proceeding well and on schedule. Present indications are that most data sets will be completed and forwarded to the WDC ahead of schedule. The first two data sets received by the WDC's were from Canada. At the June Radiation Subprogramme Meeting, Canada was congratulated as being the only country to have submitted radiation data although it was not due until October. Unfortunately, these congratulations could not be accepted as no radiation data have been submitted. Apparently the WDC had not had time to read all the data received from Canada and thought some of it was radiation data.



Welcoming Home the Quadra. (Left to Right) Dr. A.E. Collin, ADM OAA; Dr. R.W. Stewart, Director-General, Pacific Region, OAA; Mr. D.H. Baylis, Telecommunications Area Manager, MOT; Mr. R.F. Shaw, Deputy Minister, Environment Canada; Mme. Jeanne Sauvé, Minister, Environment Canada; Cpt. A.R. Dykes, MOT; Mr. M. Bolton, Chief Scientist, Phase-1, OAA; Dr. W.N. English, Chief Scientist, Phase-3, OAA; Dr. R.J. Polavarapu, Scientific coordinator, AES, and Mr. J.L. Knox, Regional-Director, Pacific Region, AES.

À son retour, le Quadra est accueilli par: (de gauche à droite) M. A.E. Collin, ADM AOA; M. R.W. Stewart, directeur général de la Région du Pacifique, AOA; M. D.H. Baylis, directeur régional des Télécommunications, MDT; M. R.F. Shaw, sous-ministre, Environnement Canada; Mme Jeanne Sauvé, ministre, Environnement Canada; le Capitaine A.R. Dykes, MDT; M. M. Bolton, chercheur principal, phase 1, AOA; M. W.N. English, chercheur principal, phase 3, AOA; M. R.J. Polavarapu, coordonnateur scientifique, SEA, et M. J.L. Knox directeur régional de la Région du Pacifique, SEA.

The major outstanding problem for the processing of the Canadian data is to produce upper air data at 5 mb intervals from the Buekers system. This system was used by several nations and the U.S. provided computer program has unfortunately not proved adequate to handle the problems in the data. An alternate processing procedure has been developed and the data processing is continuing.

In summary, GATE activities are still continuing at a very high level. The work is not quite as exotic as working in the subtropical Atlantic Ocean regions but it is essential to making the program a total success. Canada is again performing well in this data processing phase, as in the observation phase. The scientific interpretation of the results, the next phase, has already begun and exciting and important new findings are beginning to emerge.