



As early as on 1928, solar astronomers and geophysicists began to daily broadcast series of event reports from the Eiffel Tower station, in Paris. Presently, around the world, several hundred observatories and stations supply with their reports nine Regional Warning Centers (RWC) which cooperate together under the patronage of the International Ursigram and World Days Service (IUWDS), an organization cosponsored by the three relevant scientific unions : IURS, IGGU and IAU. The Boulder RWC, selected as a World Warning Agency, is in charge of issuing a daily GEOALERT message established according to the advices of all the RWCs and distributed through the World Meteorological Organization network. In their regional area, the RWCs collect data and reports, issue daily Ursigram messages including data, reports and forecasts which are broadcasted and distributed by telex and telephone to permanent and temporary users and to other RWCs (fig. 1);

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USIDS 31510 10630 40623 00628 00655 50621 00628
00650 70622 00628 00635
UABSE 36801 01101 30110 90120 01/01

URALN 30509 10701 00169 12010
USSPS 31405 30066 21322 56013 46712 54505 60001 33905
01204 64008 41019 34410 65002 37219 21302 66106 21314
57657 67011 12619 2/901 68001 33412 01205 69005 20106
24409 70001 10419 01202 71001 23115 01205 72001 23604
01203

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Fig. 2 Samples of encoded messages. USIDS and URALIN report respectively a solar UV burst and an auroral disturbance ; URALIN and USSPS describe radio and optical observations of the solar disc.

Nearly 25 codes are used either to describe data or to report events : after a five letter block of code identification, a series of five digit blocks shows the reporting station, the date of the report and the relevant pieces of information (see fig. 2 above).

The special features of this Service are as follows :

1. An international service working thank to the free cooperation of scientific observers and of Regional Centres established and supported by national agencies (Telecommunication, Scientific Institutes, etc..)
2. Several fields of sciences are involved : solar astronomy, interplanetary research, physics of Earth environment and geophysics. The main interests are in both the monitoring of the relevant slowly varying components (solar active centres, critical frequencies of ionospheric layers, etc...) and the report of transient events (solar flares, geomagnetic storms, ionospheric disturbances, etc...);

3. Data and reports are distributed promptly, sometimes in real time : they are used by the RWC staffs to issue warnings and to prepare forecasts. These forecasts are related to events which are supposed to occur after a few hours or days according to the category of event : after these delays, the relevant forecasts are obsolete. Likewise, as most of the event reports are related to "events in progress", they cannot be stored by World Data Centers which request reports established after a careful analysis of completed events.

4. We would like to put the final emphasis on the large variety of users : oil companies, telecommunication services, space agencies and technicians or scientists involved in rocket, balloon and satellite experiments, solar astronomers and geophysicists interested in world wide programs of coordinated observations, water supply to developing countries, etc...

N.B. List of IUWDS RWCs : Boulder (USA), Paris (France), Darmstadt (FRG), Praha (Czechoslovakia), Warsaw (Poland), Moscow (USSR), New Delhi (India), Tokyo (Japan) and Sydney (Australia).