

Seismo-Electro-Magnetic Effect and other Precursory Observations from Recent Earthquakes

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Present Knowledge Spectrum

- Earthquake Oriented Research being undertaken at
- Indian Institutes of Technology
- Universities
- CSIR Labs / DRDO Labs
- Disaster Management Institutes
- But we have not been able to save a single life during earthquake

The following Earthquakes have killed more than 3,00,000 people in Indian Sub Continent

The Bhuj Earthquake 26 Jan 2001

The Indonesian Earthquake and Tsunami of 26 Dec 2004

The Kashmir Earthquake of 08 October 2005

Change Philosophy

- Despite heavy death toll a large number of researchers and administrators say, "earthquake cannot be predicted".
- If lives of people are to be saved it is necessary to issue a short duration (minutes / hours) alert to the people.
- For this, change of philosophy is required and prediction oriented research has a priority.

Present Day Earthquake Disaster Management Consists of:

- This scenario was repeated at Latur, Bhuj, Andaman and Kashmir.
- But the lives are lost permanently
- Distribution of Tents + Blankets+ Medicine + Dwellings + Monetary Compensation (One or Two Lakh Rupees) is not the final solution.

Understand that

- ❖ Earthquakes cannot be predicted by seismological methods.
- Earthquakes could predicted by non-seismic , non-geologic and non-geodetic methods.
- The seismic, geologic, geodetic measurements may give some indications.
- The relevant parameters could be detected by satellites, telecommunication, electrical and magnetic methods.

Thermal Changes

- When two parts of the fault move it generates frictional heat and the sub-surface temperature rises.
- As a result of the thermal rise the geo-magnetic field decreases.
- This adversely affects the propagation of electric and electromagnetic waves through cables and also transmitted waves.
- Radio, Television, Landline Telephones, Mobile TF are affected.

Transmission & Receiver

- Trans. >>>>..... >>>>Rec.
- f C and L
- The transmitted freq. f is received at receiver. It depends upon L (Inductance) .

Seismo-Electro-Magnetic Effect

- The basic equation for this is

$$f = 1/2\pi\sqrt{LC}$$

Where f Frequency

L.... Inductance

C.... Capacity

2π.... Constant

Why Frequency changes ?

- For any receiver, the capacitor may be different. In the equation, the major part is played by L (Inductance). Firstly, it is in denominator and also in square root. As such a small change in geomagnetic field increases the reception frequency.
- The transmitted frequency does not change. It is the apparent reception where the frequency changes are observed.

Observations

- Telephone Exchange (200 days advance)
- Radio Reception (5 to 8 days advance) A frequency of 1000 kHz will be received at 1100, 1200,1700,1800 kHz etc
- Television (10 to 20 hours advance) Audio, Visual and Spectral disturbances
- Mobile Telephone (100 to 150 min advance) Mal-function / Non-Function

Animal and Human Precursors

- Case from Kangra Earthquake of 1905
- Hut Bay Incidence from A & N Islands.
- Tsunami Precursors.
- Human Precursors.
- The Earthquake Prediction should be made by the highest authority in the country.
- Others should not be permitted.

Conclusions

- If the present scientific and technological advancements are not capable of predicting earthquake and we want to save lives of people then we must throw our ad hoc egoistic assumptions (earthquakes cannot be predicted) and accept prediction oriented non-seismic observations. The Seismo-Electro-Magnetic Effect is a promising avenue.

Thanks

- ALWAYS REMEMBER
- DISASTER MITIGATION IS NOT DISTRIBUTING DOLES.
- DISASTER MITIGATION IS SAVING LIVES.