

ESTABLISHMENT OF NPO JEPCOC

(JAPAN EARTHQUAKE PRECURSOR COMPREHENSIVE OBSERVATION CENTER)

Japan Geoscience Union Meeting 2015
2015/5/26

**NPO Japan Earthquake Precursor Comprehensive
Observation Center(JEPCOC)**
Director General SAITO Yoshiharu

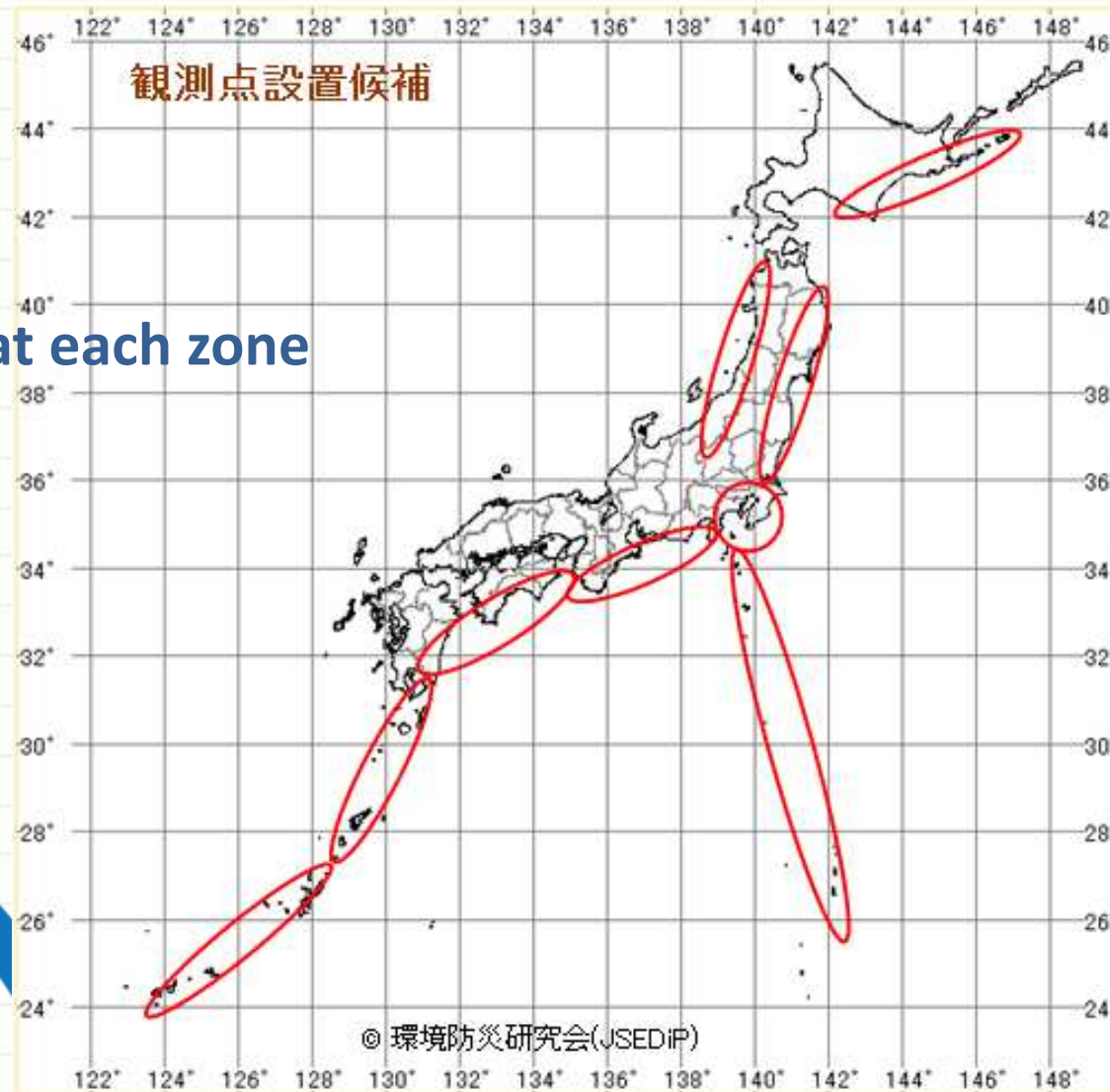
Purpose and What to do

- Observe Tree Bio-electric Potential (TBP) and **Direct emit ion EM** by adjacent Dual Freq. method at Multi-Freq. band at multi-point
- Frequency band: VLF, LF, MF, VHF and UHF
- Operate by engineers and ordinary people
- Observation Equipment: Develop and fabricate by ourselves
- We plan to cooperate with other groups which are observing tidal level deviation, air ionization, and so on.
- Experiment of EQ occurrence prediction
- → to issue **Practical prevention information**

Plan to facilitate Observation Posts

- 2 posts at each zone

- In the future
100km Mesh in all over Japan also at each isolated islands

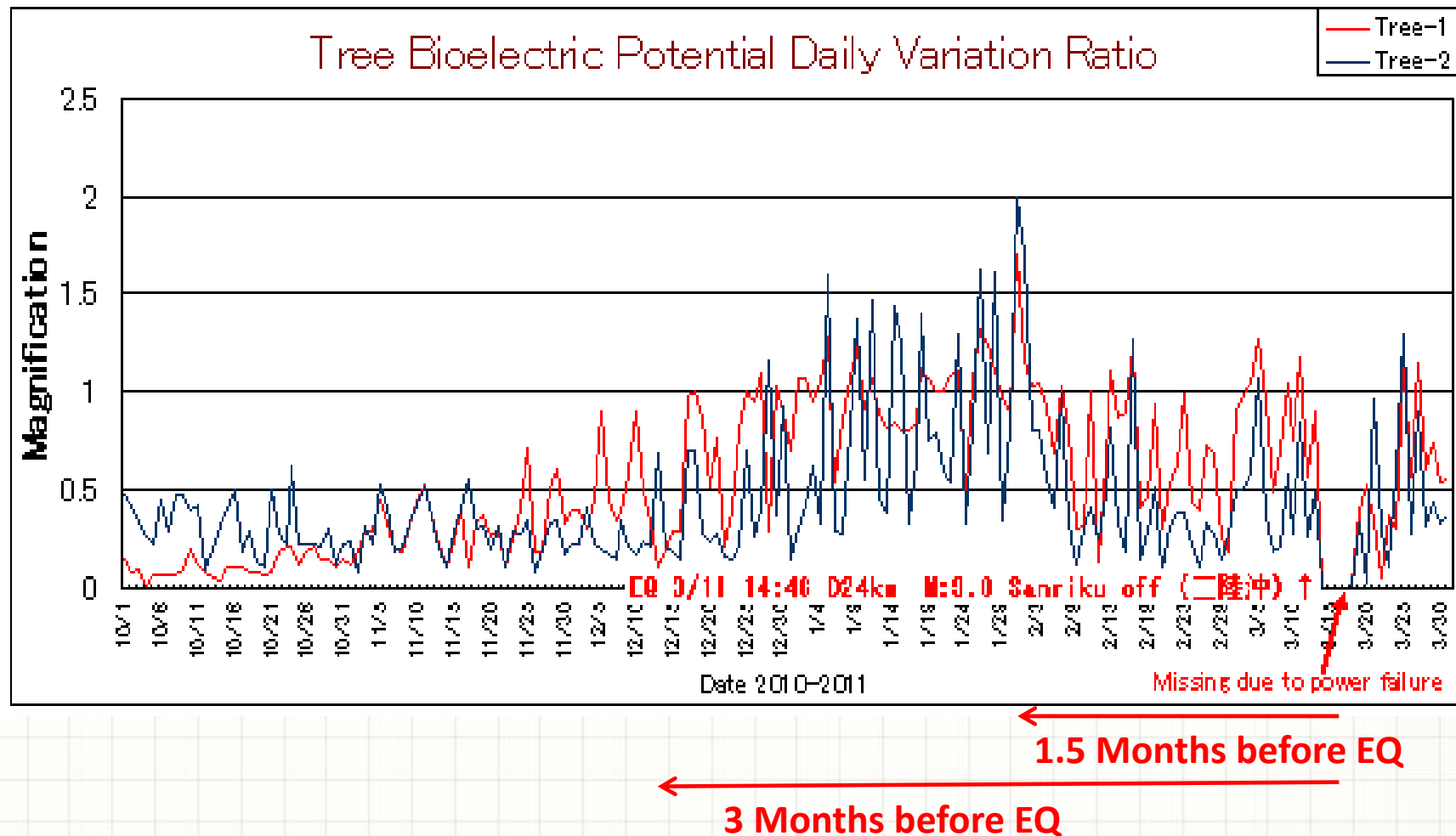


Policy for Prediction dissemination

- Predict more than $M=5$ class
- Our policy is "swing out is OK, no swing and miss is NOK" aiming as practical disaster information
- We publish the abnormal data
- If EQ doesn't occur, "Think it was happy" (similar to typhoon forecast)
- Let you to use our prediction information at your own risk

Example of anomaly of each observation method

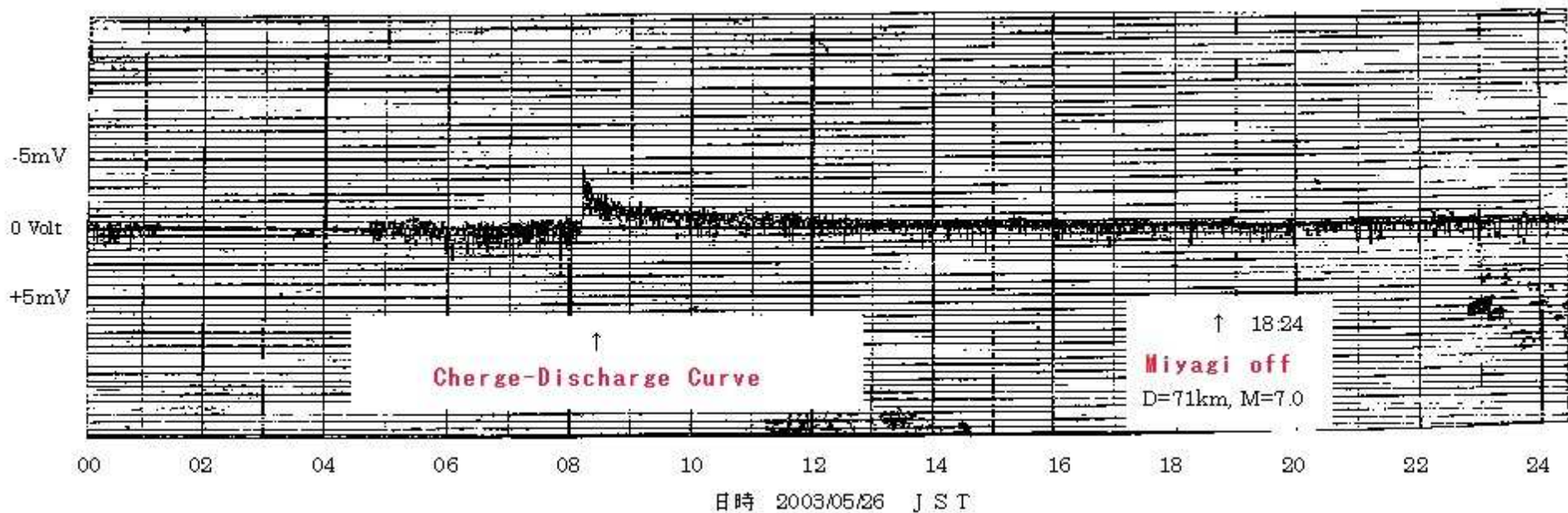
Tree Bio-electric Potential (TBP)



Example of anomaly of each observation method

Tree Bio-electric Potential (TBP)

TBP at Sagamihara



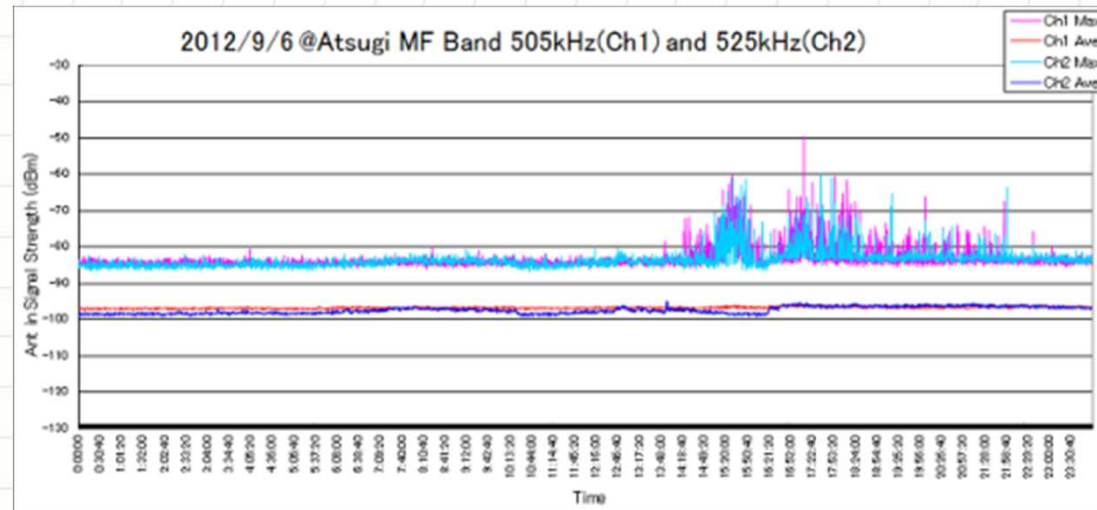
T B P 法 : Toriyama Bioelectric Potential Method

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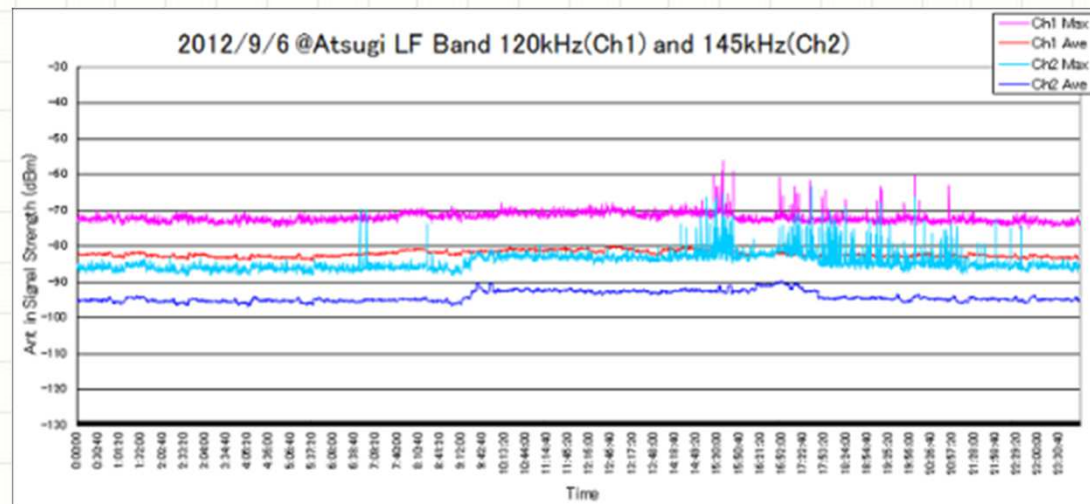
Dual Freq. Simultaneous EM Observation Method

Synchronization is seen in multiple frequency bands at various observation point

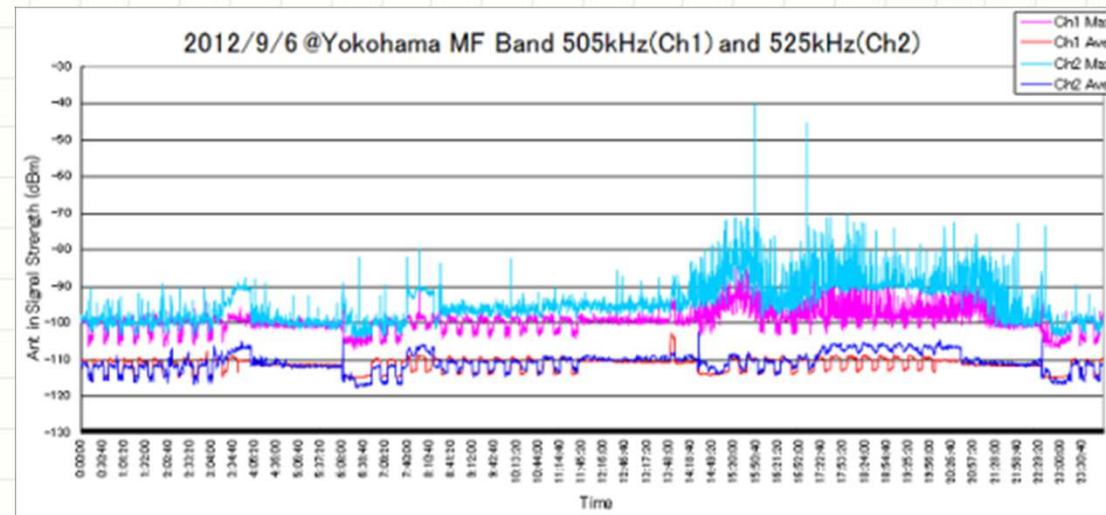
1 week before at
Atsugi MF Band



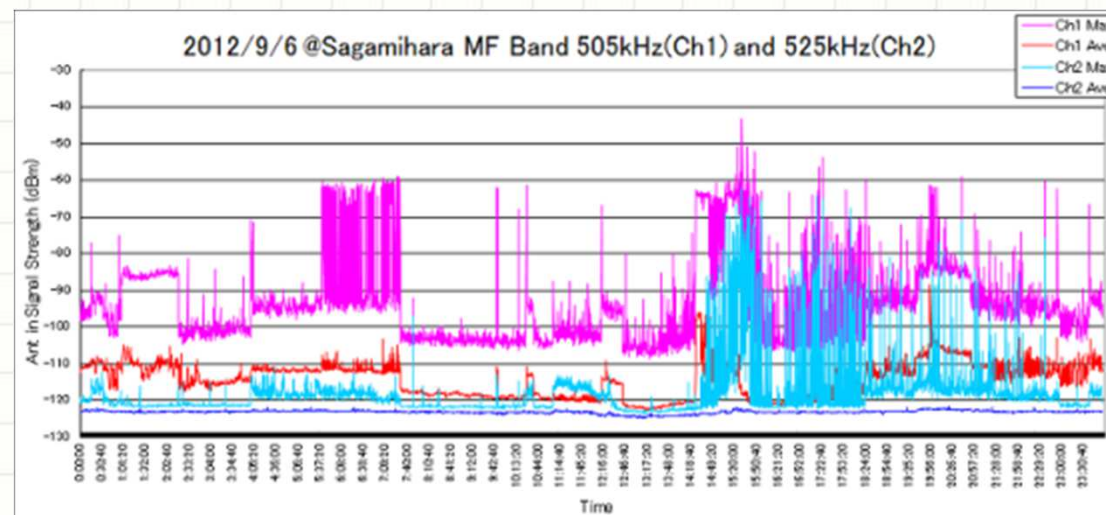
1 week before
atAtsugi LF Band



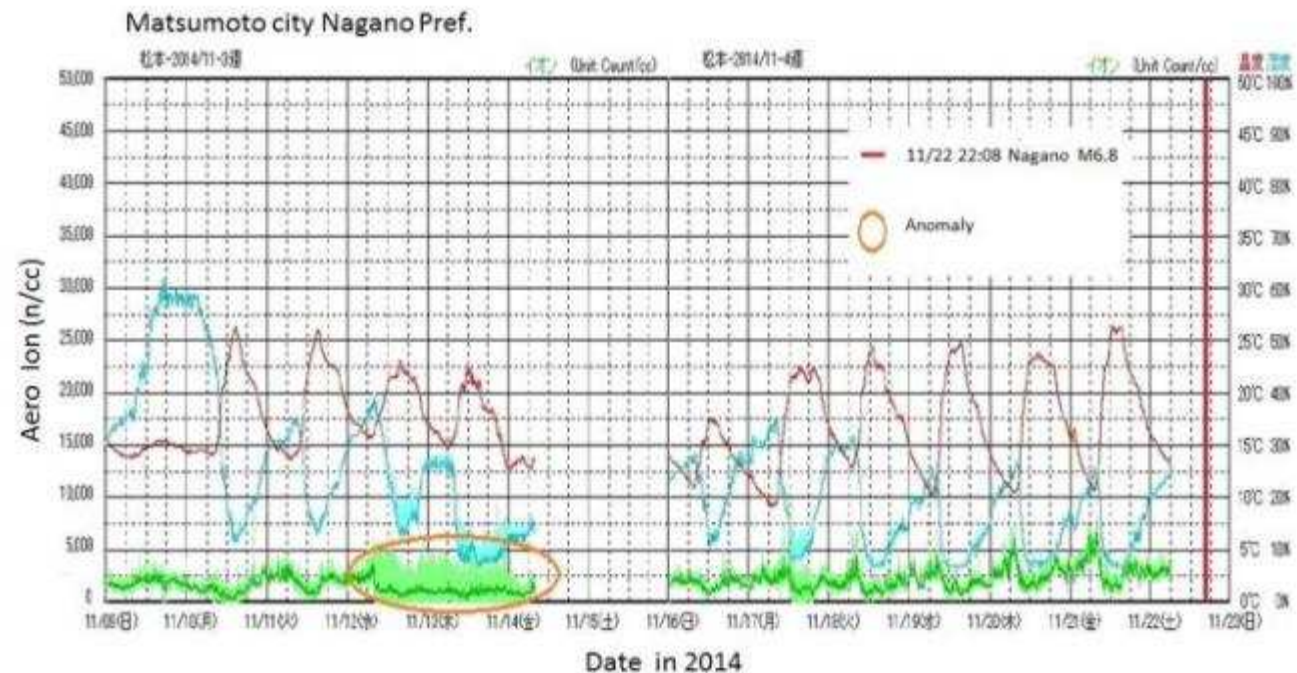
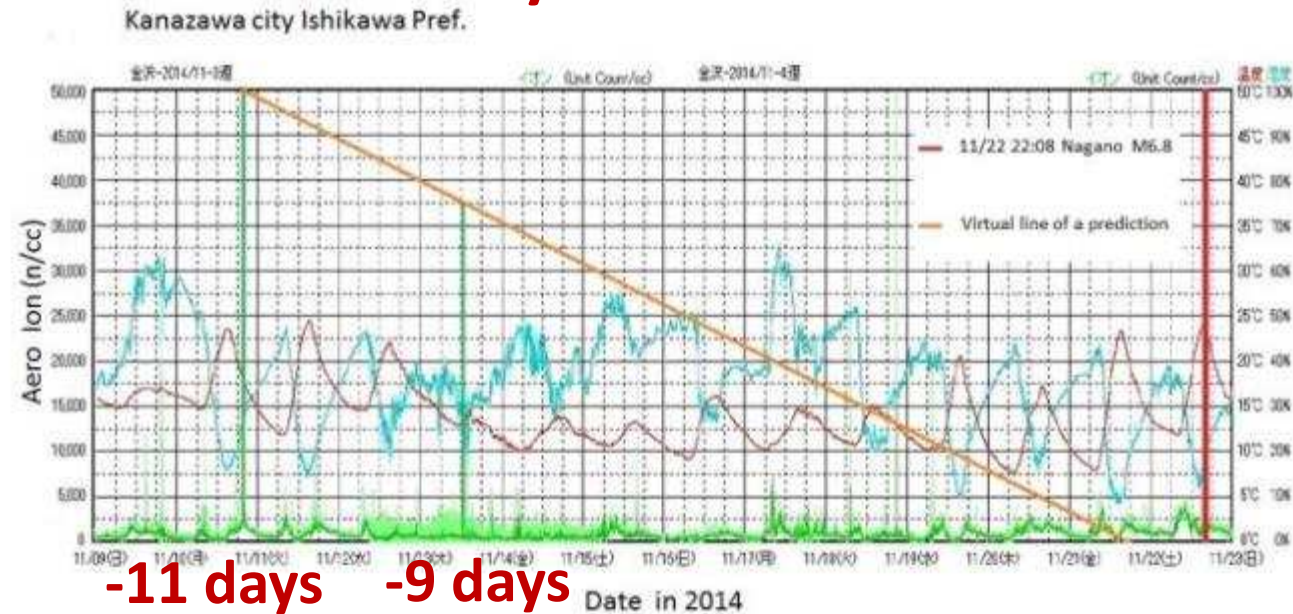
**1 week before at
Yokohama
MF Band**



**1 week before at
Sagamihara
MF Band**



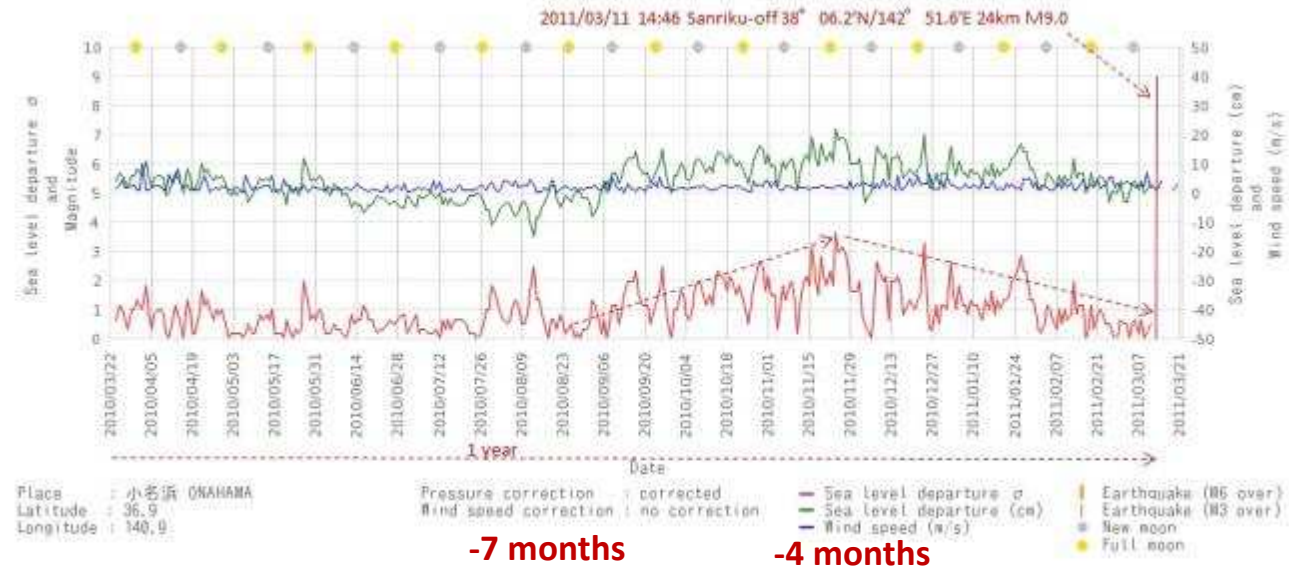
Air Ion density Observation



Tidal deviation Observation Method

Before 2011/03/11
M9 Tohoku EQ

1 year before the
EQ

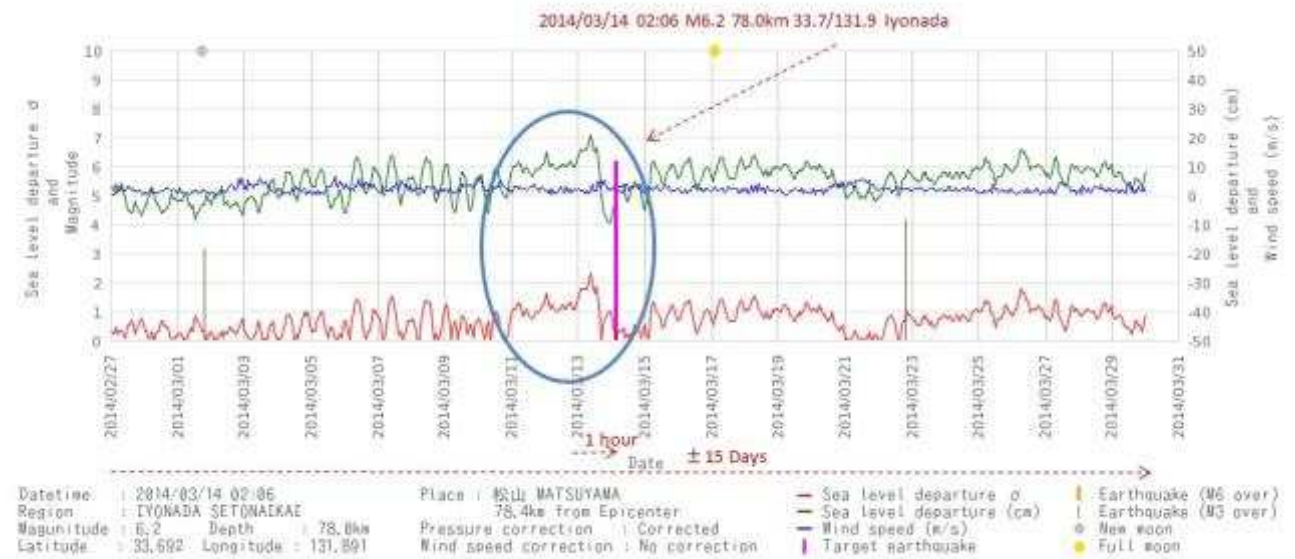


1 day on the day
of EQ



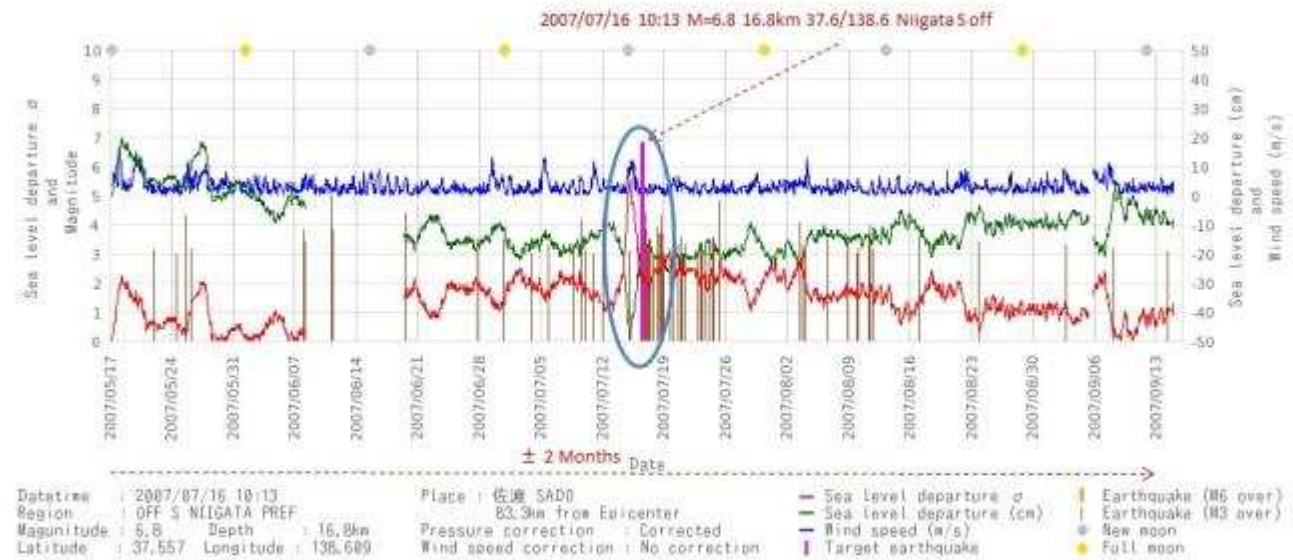
2014/03/14 M6.2 78.0km Iyo-Nada

±15 days

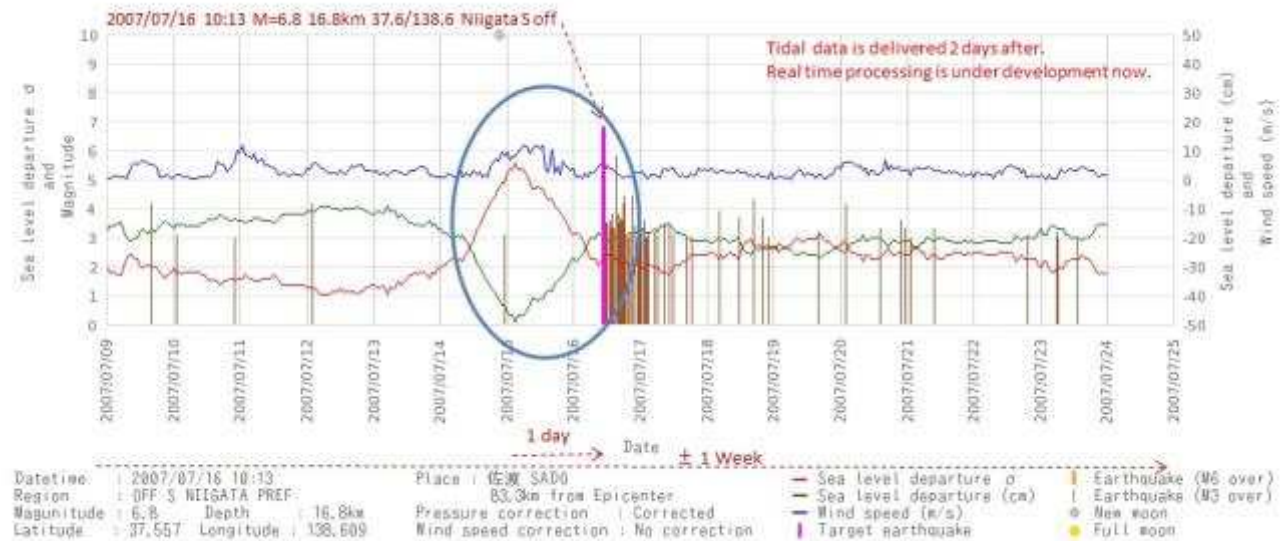


2007/07/16 M=6.8 Off Niigata

±2 Months



1 day on the
day of EQ



JEPCOC Standard Data Processor

- 1) LINUX operation
- 2) Input: DC $0V \sim +3.7V$, 10 Channel, with Buffer Amplifiers
- 3) Sampling Time: 1 kHz
- 4) Output Data: Once in 1 minute, Maximum, Minimum, Average value
- 5) EM value is shown in [dBm] CSV Format 1441 Lines/day
- 6) Auto Reboot: Once in 1 day
- 7) Price: ¥110,000

Topics

- Presentation on TBP and dual freq. EM observation at NASA IGRS on 2014/12/10
- Document, Voice, Photos are on our Web Site





Please

- cooperate with us to facilitate observation posts
- let us know when you observe any anomaly of great EQ precursor
- E-Mail: saito@jepcoc.jp
- Web Site: <http://www.jepcoc.jp/>