

## The relationship between Soliton and Seismic Wave and the center of 2011 TOHOKU Great Earthquake.(Science of form)

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1.none

1. Preface : We had felt two strong earthquake north of Fukushima Prefecture in the earthquake of 2011 the TOHOKU District Pacific Ocean Earthquake.

In this paper, in this second strong earthquake, the soliton was occurred. (Fig.-1) Still more the second strong earthquake was occurred along the axis of the Japan trench. I could proved two methods.

2. The relationship between Soliton and the center of this earthquake.

At K-NET Oshika (MYG011)(Fig.-1), the epicenter length is 121km. This center is first earthquake motion in seismic wave.

Depend on reference (2), Slip Progression in terms of slip amount is spreading off the coast of MIYAGI Prefecture and is spreading to the north part direction along the axis of the Japan trench after 50 seconds. After 60 secs~100secs, large slip is spreading off the coast from the southern part IWATE prefecture to the north part of FUKUSHIMA prefecture along the axis of the Japan trench. (Fig-4 in reference (2))

In this reference, the total moment rate function (fig-5 in reference (2)) shows Soliton. It is as clear as day. (refer to Fig.-1)

This peak point happened before and after the 80 sec of Seismic moment rate. Therefore this reference shows the second earthquake motion along the axis of the Japan trench.

3. Relationship between Soliton and still more location of the second strong earthquake motion and Seismic Wave.

At K-NET Tsukidate (YYG004) or K-NET Oshika (MYG011), strong-motion accelerograms continues for two earthquake motions in Seismic Wave. In short, the first seismic wave peak and the second seismic wave peak quaked continuous motion. Two strong motion with a small continuous shocks of an earthquake in between exist. For that reason, the second earthquake motion had happened off the coast of the first earthquake motion.

Abstract

1. Strong-motion accelerograms recorded at K-NET Tsukidate (MYG004) or Oshika (MYG011 and others) express clearly a continuation of two earthquake motion.

Therefore the second earthquake motion had happened off the coast of the first earthquake motion. And still more the second earthquake motion was occurred along the axis of the Japan trench. It is an earthquake directly above its epicenter. That's perfectly right.

2. the total moment rate function (Fig.-5 in reference (2)) shows Soliton.

Reference

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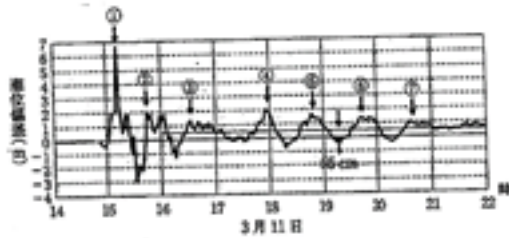
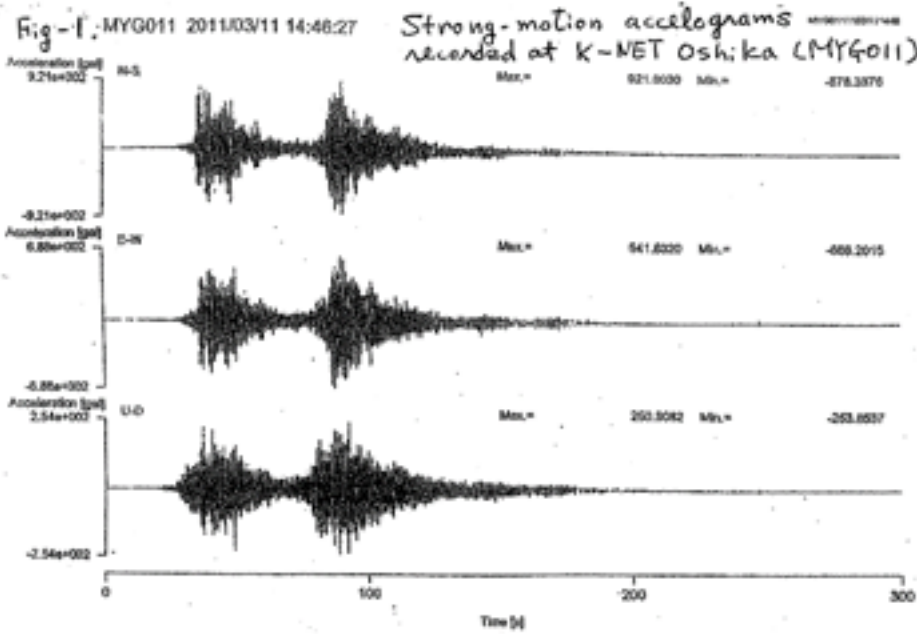
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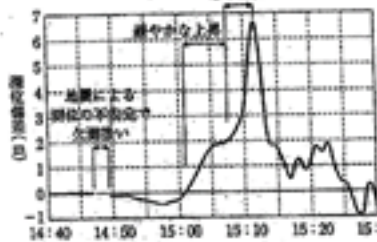
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Soliton ① is recognized in GPS wave gage of 2011 the Tohoku District Pacific.



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① + Soliton ② ~ ⑦: Break down of Solitary <sup>Wave</sup> Solitons.

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