



REKAMAN GROUND MOTION GEMPA FLORES

Disiapkan Oleh:
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Badan Meteorologi Klimatologi dan Geofisika

2026

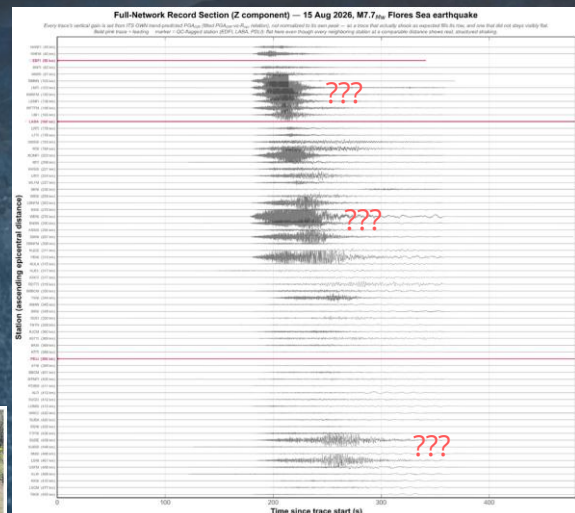
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Full-Network Record Section (Z component)

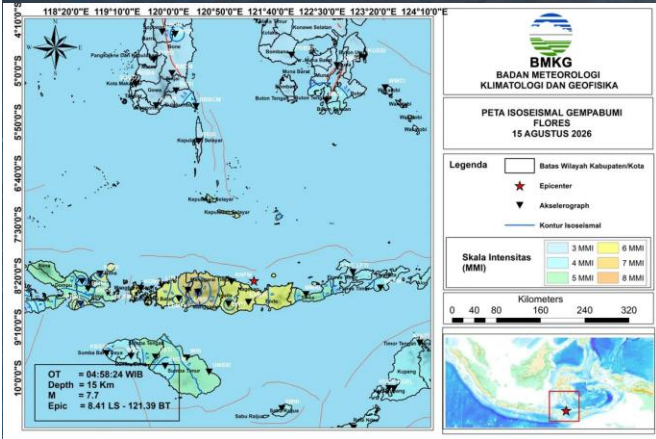
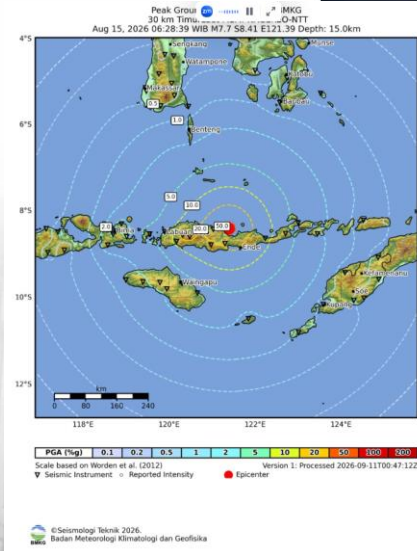
15 Aug 2026, M7.7Mw Flores Sea earthquake



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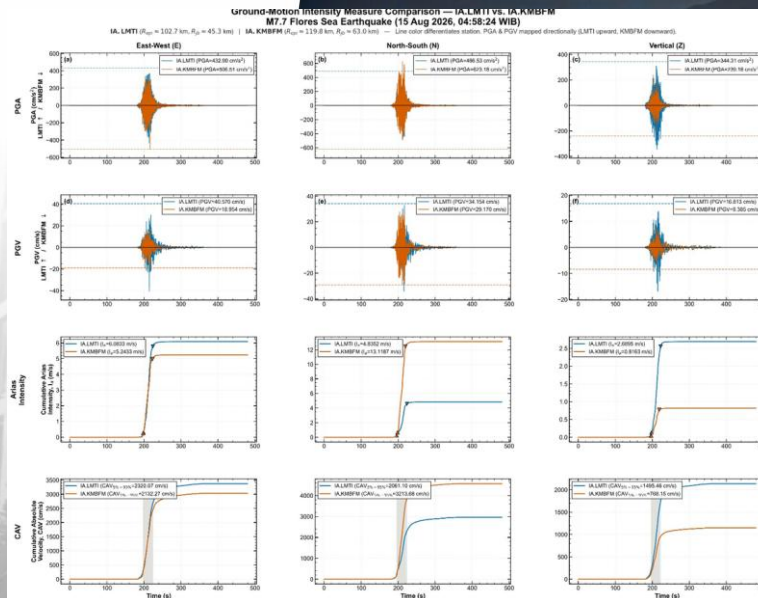
Sumber: web
BMKG

Isoseismal Instrumental adalah Peta yang menggambarkan Informasi tingkat guncangan yang tercatat di alat Akselerometer

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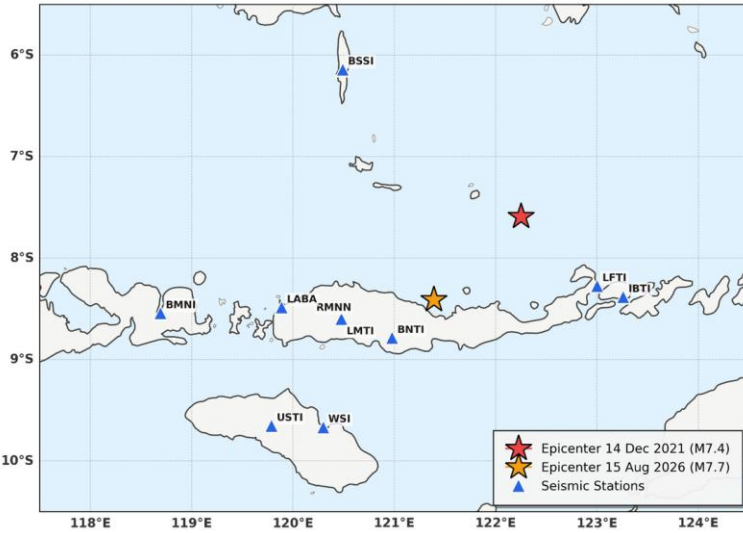
2026



PERAN PGA DAN PGV DALAM
PENENTUAN MMI

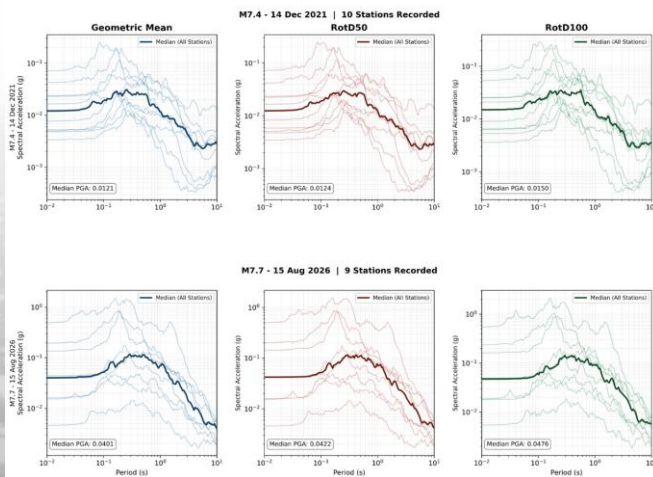
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Spatial Distribution of Seismic Stations and Epicenters Flores Sea Region (2021 vs 2026)



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Combined Horizontal Response Spectra ($S_{a,i}$) Flores Sea Earthquakes: 2021 Mw7.4 vs 2026 Mw7.7

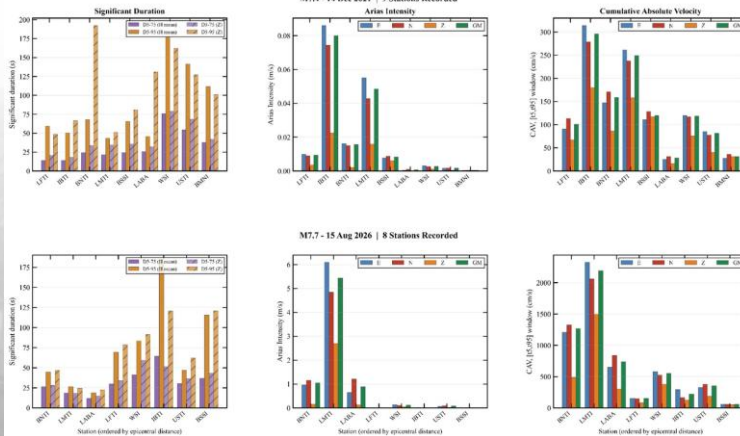


Combined Horizontal Response spectra

Gempa Bumi Flores Mw7,4 tanggal 14 Desember 2021
Gempa Bumi Flores Mw7,7 tanggal 15 Agustus 2026

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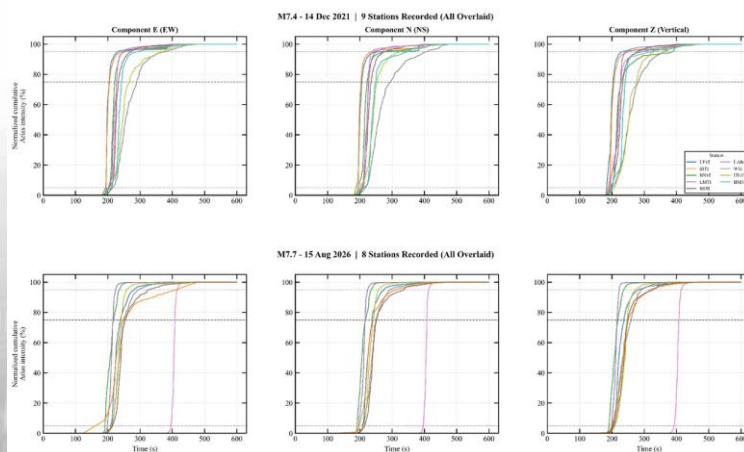
Significant Duration, Arias Intensity and Cumulative Absolute Velocity
(E, N, Z, GM) -- Flores Sea Earthquakes: 2021 Mw7.4 vs 2026 Mw7.7



Significant Duration, Arias Intensity and Cumulative Absolute Velocity

(E, N, Z, GM) -- Flores Sea Earthquakes: 2021 Mw7.4 vs 2026 Mw7.7

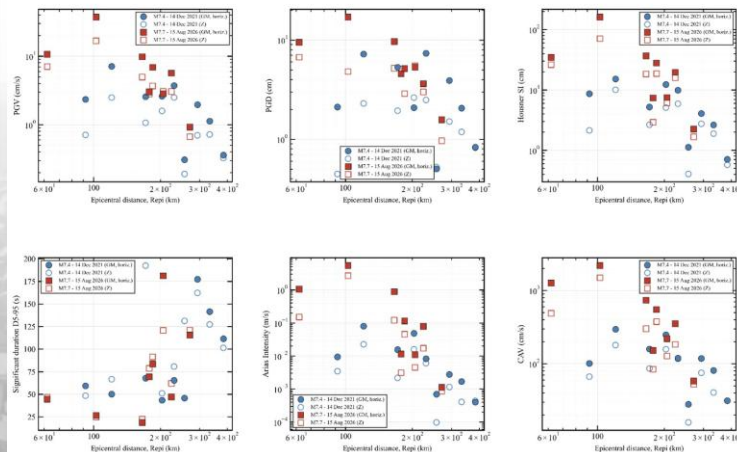
Husid Curves Illustrating the Significant-Duration Definition
(D5-75, D5-95) -- All Stations Combined, Including the Vertical (Z) Component



KURVA ARIAS INTENSITY

Husid Curves Illustrating the Significant-Duration Definition
(D5-75, D5-95) -- All Stations Combined, Including the Vertical (Z) Component

Additional Ground-Motion Intensity Measures versus Epicentral Distance
(Horizontal GM, filled, vs. Vertical Z, open) -- Flores Sea Earthquakes: 2021 Mw7.4 vs 2026 Mw7.7

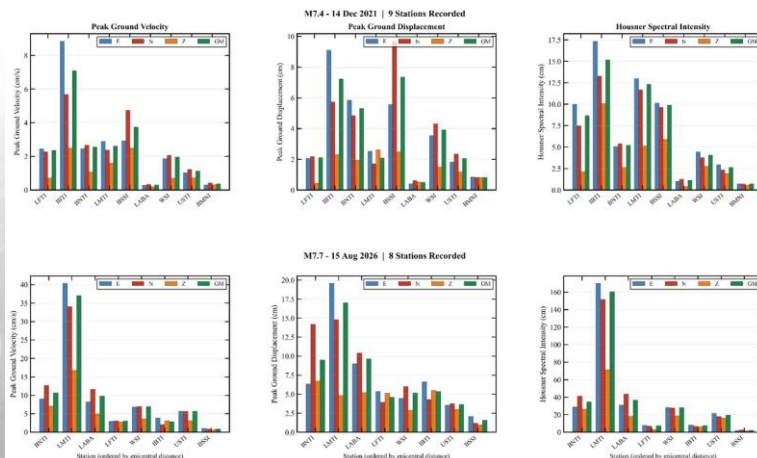


PARAMETER gROUND MOTION TERHADAP JARAK EPICENTER

(Horizontal GM, filled, vs. Vertical Z, open) -- Flores
Sea Earthquakes: 2021 Mw7.4 vs 2026 Mw7.7

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Peak Ground Velocity, Peak Ground Displacement and Housner Spectral
Intensity (E, N, Z, GM) -- Flores Sea Earthquakes: 2021 Mw7.4 vs 2026 Mw7.7

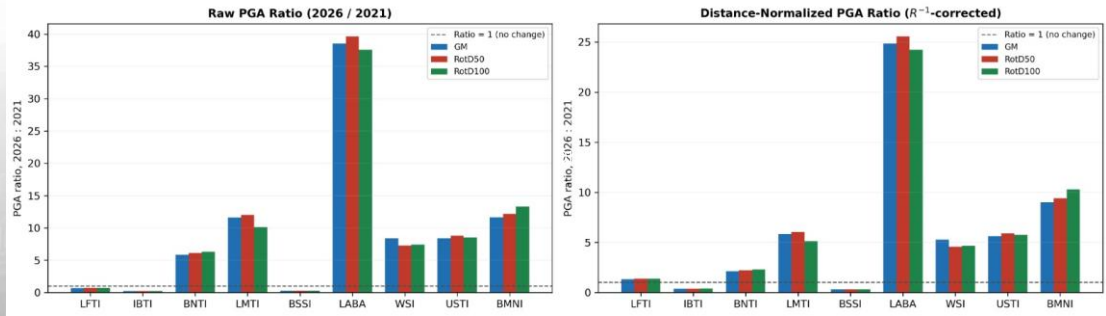


PGV, PGD, & Housner Spectral Intensity

Peak Ground Velocity, Peak Ground
Displacement and Housner Spectral
Intensity (E, N, Z, GM) -- Flores Sea
Earthquakes: 2021 Mw7.4 vs 2026
Mw7.7

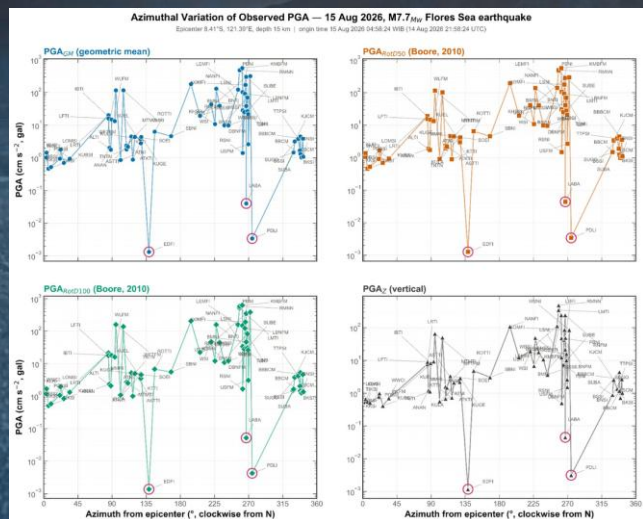
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Station-wise PGA Ratio: 2026 Mw7.7 vs 2021 Mw7.4 (Flores Sea)
Common stations only, ordered left-to-right by 2021 epicentral distance



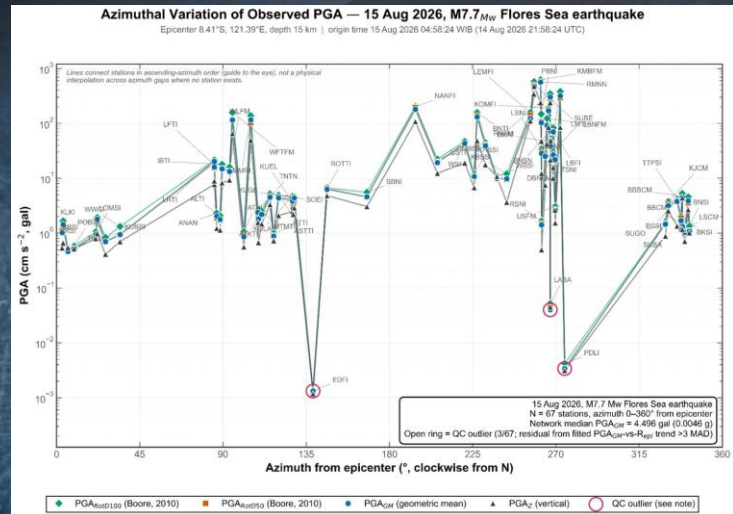
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Azimuthal Variation of Observed PGA —
15 Aug 2026, M7.7Mw Flores Sea earthquake



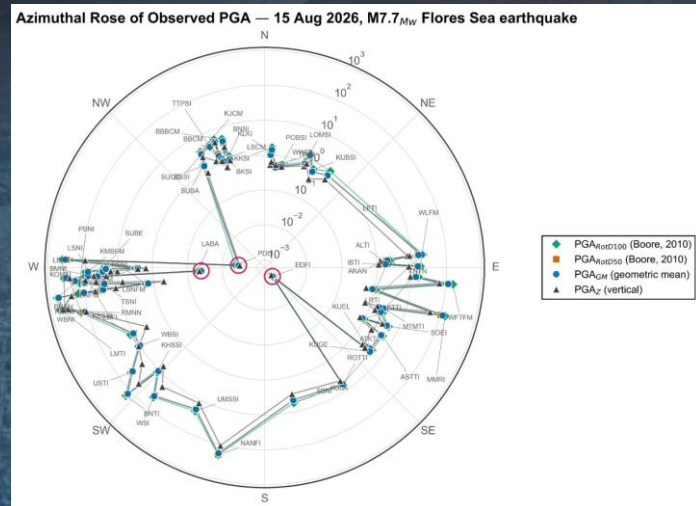
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Azimuthal Variation of Observed PGA — 15 Aug 2026, M7.7 Mw Flores Sea earthquake



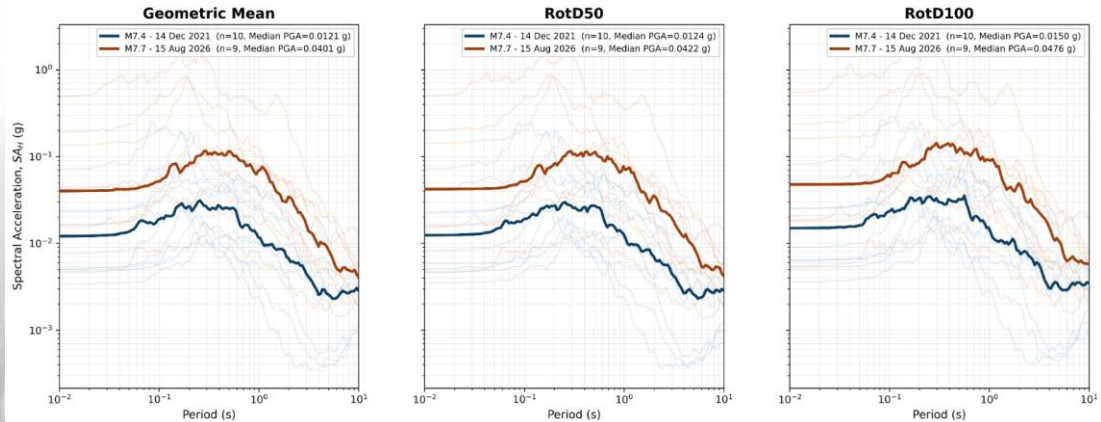
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Azimuthal Rose of Observed PGA — 15 Aug 2026, M7.7 Mw Flores Sea earthquake



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Combined Horizontal Response Spectra (S_{aH})
Flores Sea Earthquakes: 2021 Mw7.4 vs 2026 Mw7.7 -- Direct Comparison



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KESIMPULAN :

1. Setiap Event Gempa bumi menghasilkan karakteristik groundmotion yang akan dipengaruhi oleh mekanisme sumber, penjarangan dan Lokal Site effect medium.
2. Hasil observasi instrumental BMKG menggunakan akselero menunjukkan nilai kluster groundmotion yang relatif tinggi memberikan dampak kerusakan yang signifikan.
3. Parameter groundmotion dalam unit velocity mempunyai peran penting dalam menilai kesesuaian potensi dampak kerusakan yang umumnya direpresentasikan dalam informasi MMI.
4. Arias Intensity dapat memberikan gambaran karakteristik akumulasi energi intensitas shaking terhadap waktu, sehingga dapat bermanfaat sekali dalam mengkaji yang berhubungan dengan sensitivitas getaran.

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TERIMA KASIH