

Global Earthquake Record & Future Risk Windows (Cosmic–Tectonic Framework)

This document summarizes significant historical earthquake events, their magnitudes, recurrence patterns, and projected 'risk windows' based on tectonic strain accumulation and cosmic cycle overlays (Antikythera-style framework).

Earthquake Event	Location	Magnitude (Mw)	Recurrence Estimate	Recent or Recorded Event	Future Risk Window
2025 – Kamchatka Megathrust	Off Kamchatka Peninsula	8.8	Very rare in recent history	July 30, 2025	2100–2150 (subduction buildup + cosmic cycles)
2011 – Tōhoku, Japan	Tōhoku coast	9.1	800–1,100 years	March 11, 2011	2800–3000 (future subduction stress)
1960 – Valdivia, Chile	Chile	9.5	Centuries–millennia	May 22, 1960	Not practical for future alignment
1700 – Cascadia Megathrust	Pacific Northwest (USA/Canada)	8.7–9.2	300–590 years	Jan 26, 1700	1943–2040 (10–15% chance by 2050)
1811–1812 – New Madrid	Missouri, USA	7.2–8.2	Uncertain intraplate zone	Dec 1811 – Feb 1812 series	Low probability, long-tail risk
1857 – Fort Tejon (San Andreas)	Central/Southern California	7.9	Likely overdue	Jan 9, 1857 (08:20 PT)	Overdue; San Andreas slip rate
1942 – Ecuador Subduction	Off Ecuador coast	7.8–7.9	~74 years cycle	May 13, 1942 (21:13 ECT)	Next ~2090 (strain accumulation)

1033 – Jordan Rift Valley	Levant, Dead Sea Transform	7.3	~1,300– 1,400 years	Dec 5, 1033	2300–2400 (plate loading)
1957 – Mongolia (Bogd Fault)	Mongolia	≈8	~1,000 years (segments 3–14 kyr)	1957 event	3000–4000 future interval
1739 – Yinchuan– Pingluo, China	Northern China	7.1–7.6	~1,500– 2,000 years	Jan 3, 1739	3200–3700 (geologic window)

Note: Earthquake recurrence intervals are statistical averages and cannot predict exact dates. The 'Future Risk Windows' represent periods of elevated potential based on tectonic plate motion and cosmic cycle overlays. These are heuristic, not deterministic predictions.