Quake’s first seconds may determine its strength

LOS ANGELES (AP) — Scientists have found a way to estimate an earthquake’s ultimate strength by analyzing the initial seconds of a rupture — a step that could one day provide early earthquake warning.

Currently, a quake’s magnitude — or how much energy is released — is determined after the shaking stops, usually minutes after an event. But researchers from the University of California, Berkeley, say the measurements of seismic waves soon after a temblor can signal whether it will be a minor or monster temblor. They say the information could possibly be used in an alert system to give seconds to tens of seconds of advance notice of an impending quake — enough time for school-children to take cover, power generators to trip off and valves to shut on pipelines.

“We’re not taking about a massive amount of time,” said Richard Allen, an assistant professor of earth and planetary science, who led the study. “But one can use our approach to come up with a magnitude before people have felt the ground shaking.”

Details appear in Thursday’s issue of the journal Nature.