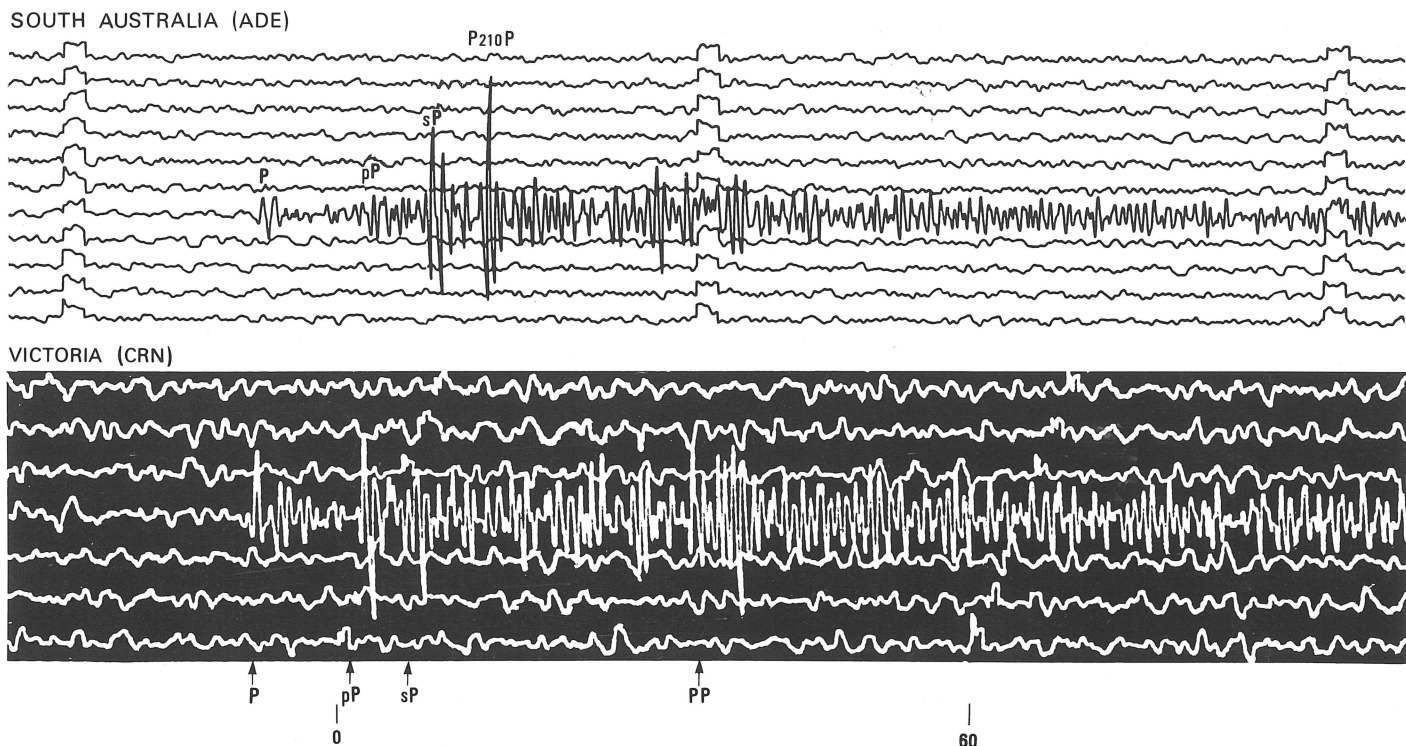


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# SEISMOLOGICAL RESEARCH LETTERS

Volume 64 Number 3-4, July - December 1993



EASTERN SECTION  
SEISMOLOGICAL SOCIETY OF AMERICA

# EASTERN SECTION of the Seismological Society of America

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SEISMOLOGICAL RESEARCH LETTERS is a journal for the seismology of continental interiors. Articles pertaining to eastern North American earthquakes, intraplate seismotectonics and earthquake engineering are particularly encouraged and should be sent to the EDITOR. In addition appropriate review articles and tutorials are also encouraged. Referees opinions are sought on all papers exceeding 4 published pages. Page changes are \$25 for each printed page. The EDITOR may allow exceptions to the page charge under appropriate circumstances.

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# PRELIMINARY DETERMINATION OF EPICENTERS

## MONTHLY LISTING

### U.S. DEPARTMENT OF THE INTERIOR / GEOLOGICAL SURVEY National Earthquake Information Center

OCTOBER 1989

K E Y	DAY	ORIGIN TIME			GEOGRAPHIC COORDINATES		DEPTH	MAGNITUDES		SD	NO. STA USED	REGION, CONTRIBUTED MAGNITUDES AND COMMENTS
		UTC	HR	MN	SEC	LAT		LONG	GS			
	01	00	39	29.2	44.585 N	6.876 E	14			0.3	21	FRANCE. ML 2.1 (LDG).
	01	00	49	52.2*	33.798 S	70.335 W	119 ?			0.3	11	CHILE-ARGENTINA BORDER REGION
	01	01	47	23.1*	6.738 S	147.756 E	33 N	4.6		0.9	6	EAST PAPUA NEW GUINEA REGION
	01	02	27	48.4?	20.56 S	69.28 W	33 N			1.0	6	NORTHERN CHILE
	01	02	59	06.3	30.960 N	51.421 E	42	5.2 4.7		1.0	246	IRAN. At least 300 homes damaged and four landslides blocked roads in the Deh Borzorg-e Sisakht area. Felt in the Yasuj area.
	01	03	16	54.9	6.562 S	130.098 E	155 *	5.3		1.2	59	BANDA SEA
	01	04	20	52.3	42.608 N	18.789 E	10 G			0.6	8	YUGOSLAVIA ML 2.2 (TTG).
	01	05	02	59.9*	10.886 N	62.235 W	33			0.8	9	NEAR COAST OF VENEZUELA. MD 3.6 (TRN).
	01	08	25	27.5&	59.480 N	152.561 W	81				33	SOUTHERN ALASKA. <AGS-P>.
	01	08	41	43.7	44.062 N	8.205 E	10 G			0.3	8	NORTHERN ITALY. ML 2.4 (GEN).
	01	08	42	58.0	8.402 N	82.763 W	35	5.1 4.0		1.2	40	PANAMA-COSTA RICA BORDER REGION. MD 5.1 (UPA), 5.1 (SJR). Felt (IV) at Puerto Armuelles and (III) at Concepcion, David and Boquete, Panama. Also felt (III) at Paso Canoas, Costa Rica.
	01	09	34	04.2	43.987 N	7.575 E	10 G			0.2	9	NEAR SOUTH COAST OF FRANCE. ML 2.5 (GEN).
	01	10	34	06.4?	43.09 N	0.40 W	10 G			0.1	4	PYRENEES. MD 2.6 (STR).
	01	10	58	18.0%	38.348 S	175.568 E	228 *			0.4	20	NORTH ISLAND, NEW ZEALAND
	01	12	30	18.0	39.367 N	25.834 E	10 G			0.6	8	AEGEAN SEA MD 3.4 (ATH).
	01	12	50	46.8*	25.118 N	122.210 E	207	4.2		1.1	17	TAIWAN REGION
	01	13	10	24.7&	38.147 N	121.923 W	18				21	NORTHERN CALIFORNIA. <BRK>. ML 3.0 (BRK). Mo=2.2*10**14 Nm (BRK). Felt at Fairfield.
	01	13	19	27.9&	38.167 N	121.925 W	18				19	NORTHERN CALIFORNIA. <BRK>. ML 3.2 (BRK). Mo=1.7*10**14 Nm (BRK). Felt at Fairfield.
	01	13	27	04.0?	51.69 N	168.58 W	33 N	4.4		1.4	6	FOX ISLANDS, ALEUTIAN ISLANDS
	01	14	16	15.7%	38.128 N	141.692 E	10 G			0.9	7	NEAR EAST COAST OF HONSHU, JAPAN
	01	15	15	48.0	6.064 S	148.615 E	82 *	4.8		1.3	28	NEW BRITAIN REGION
	01	15	57	08.3%	42.628 N	18.770 E	10 G			0.5	6	YUGOSLAVIA. ML 2.2 (TTG).
	01	17	02	23.1?	28.48 N	128.81 E	137 ?	4.2		0.6	9	RYUKYU ISLANDS
	01	18	38	55.2*	34.647 N	33.160 E	33 N			0.9	6	CYPRUS. ML 3.3 (CSS).
	01	19	14	32.1	7.546 S	154.775 E	36 *	5.2		0.9	83	SOLOMON ISLANDS
	01	19	24	33.2	31.072 N	131.435 E	49	5.0 5.0		1.1	72	KYUSHU, JAPAN. Felt (I JMA) at Miyazaki and Kagoshima.
	01	20	33	21.2?	23.91 N	122.89 E	10 G			1.0	5	TAIWAN REGION
	01	21	55	07.0	17.571 S	70.511 W	139 *			0.7	9	NEAR COAST OF PERU
	01	22	08	36.0&	36.555 N	121.177 W	7				17	CENTRAL CALIFORNIA. <BRK>. ML 3.1 (BRK).
	01	22	35	13.6&	42.684 N	111.272 W	0				19	EASTERN IDAHO. <SLC-P>. ML 3.7 (SLC).
	01	23	44	02.9?	30.64 S	179.84 E	33 N	4.7		1.4	7	KERMADEC ISLANDS REGION
	02	01	03	01.0	37.649 N	15.048 E	10 G			0.3	6	SICILY
	02	01	17	29.1	41.789 N	20.395 E	10 G			1.2	6	ALBANIA. ML 3.0 (SKO).
	02	02	52	23.2	41.808 N	32.473 E	10 G			1.3	19	TURKEY
	02	03	06	00.2?	46.24 N	7.38 E	10 G			0.7	5	SWITZERLAND
	02	03	09	21.8*	16.639 N	93.686 W	170 *			1.3	13	CHIAPAS, MEXICO
	02	03	12	05.1	44.555 N	6.859 E	13			0.6	33	FRANCE. ML 2.9 (GEN), 2.8 (LDG), MD 2.1 (STR).
	02	04	19	06.3	42.622 N	18.761 E	10 G			1.0	11	YUGOSLAVIA. ML 2.3 (TTG).
	02	06	02	14.2%	40.829 N	22.960 E	10 G			0.3	5	GREECE
	02	06	04	36.2%	38.143 N	5.867 W	10 G			1.3	5	SPAIN
	02	07	55	40.6	10.531 N	126.918 E	25	5.4 4.5		1.0	128	PHILIPPINE ISLANDS REGION
	02	08	15	42.1*	37.666 N	15.221 E	10 G			0.5	5	SICILY
	02	08	17	05.2	46.653 N	9.824 E	10 G			1.1	13	SWITZERLAND
	02	09	08	39.7	50.749 N	130.029 W	10 G	3.8		1.0	37	VANCOUVER ISLAND REGION
	02	10	00	32.0?	76.46 N	133.41 E	10 G	4.5		1.3	21	LAPTEV SEA
	02	10	33	26.2?	24.43 N	122.37 E	33 N			0.2	5	TAIWAN REGION
	02	10	36	41.3*	8.879 S	124.571 E	33 N	4.8		0.8	10	TIMOR
	02	11	41	55.6	33.646 N	34.819 E	29	3.7		1.0	39	EASTERN MEDITERRANEAN SEA. ML 4.1 (CSS), 3.7 (BHL), MD 4.1 (HLW) Felt at Haifa, Afula, and in other parts of northern Israel
	02	12	19	18.7	52.584 N	169.215 W	33 N	4.8		0.8	22	FOX ISLANDS, ALEUTIAN ISLANDS

# SEISMOLOGICAL RESEARCH LETTERS

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## Volume 64, Number 3-4, July - December 1993

The 4.6 $m_{b,Lg}$ northeastern Kentucky earthquake of September 7, 1988 <i>R. Street, K. Taylor, D. Jones, J. Harris, G. Steiner, A. Zekulin, and D. Zhang</i>	187
Australia's deepest known earthquake <i>K. McCue and M. Michael-Leiba</i>	201
Did (or will) fluid injection cause earthquakes? - Criteria for a rational assessment <i>S. D. Davis and C. Frohlich</i>	207
Seismotectonics of the 1987-1988 Lakeside, Utah, earthquakes <i>J. C. Pechmann, W. J. Arabasz and E. D. Brown</i>	225
Attenuation of multiphase surface waves in the Basin and Range province, Part II: The fundamental mode <i>B. J. Mitchell, J.-K. Xie and W.-J. Lin</i>	239
Program, Abstracts and Minutes of the 64'rd Annual Meeting, Eastern Section, Seismological Society of America.....	251
Treasurer's Report.....	271
Auditing Committee Report.....	273
Monthly Listings - PDE	

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(Inside Back Cover)

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