

**The FREQ Procedure**

<b>eventtype</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Frequency</b>	<b>Cumulative Percent</b>
<b>earthquake</b>	1944	96.81	1944	96.81
<b>outside of network i</b>	52	2.59	1996	99.40
<b>quarry blast</b>	12	0.60	2008	100.00

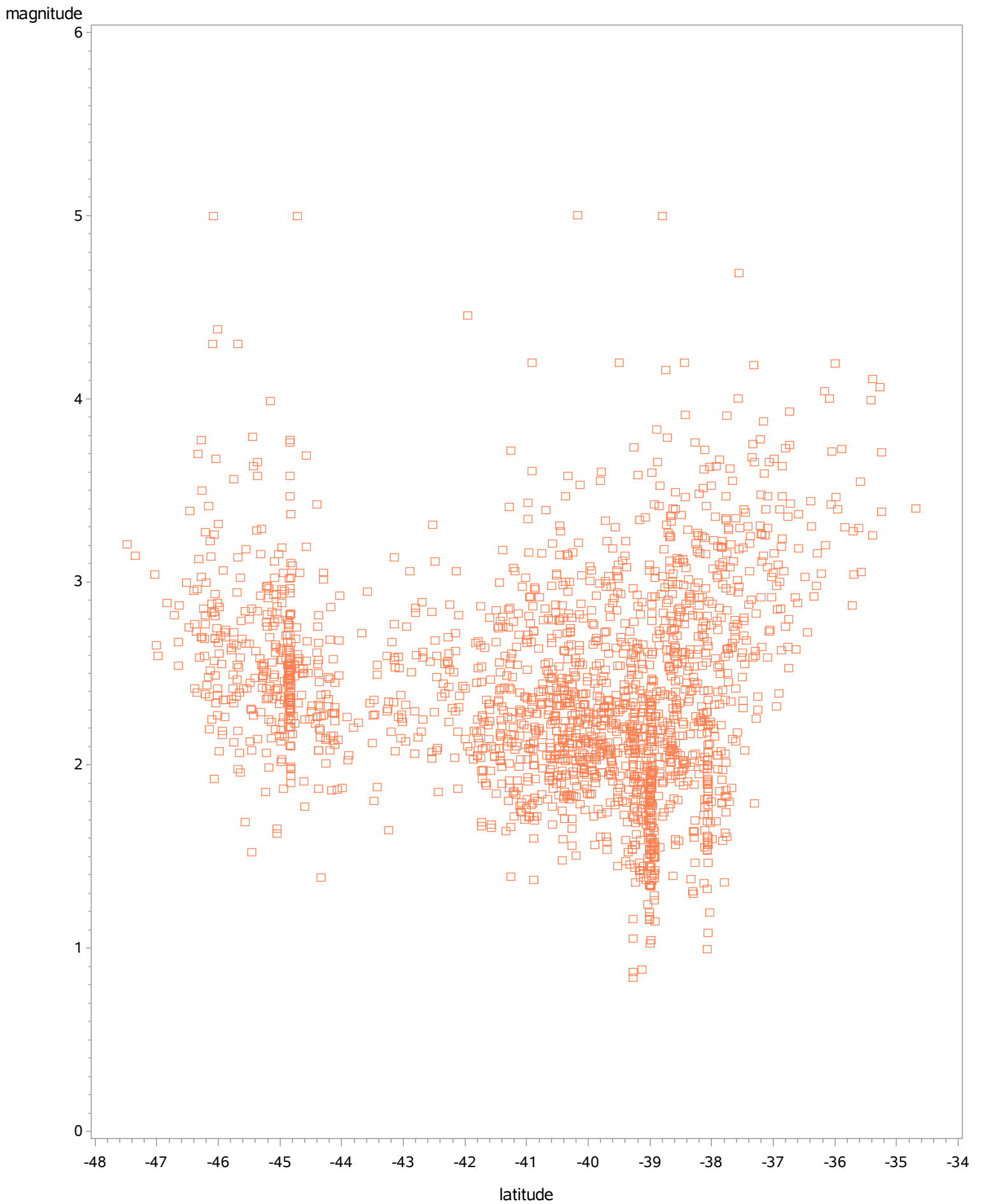
### The CORR Procedure

<b>5 Variables:</b>	time	longitude	latitude	magnitude	depth
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Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
time	1944	18308	8.06873	35591709	18295	18322
longitude	1944	171.85392	29.08272	334084	-179.84770	179.99268
latitude	1944	-40.60999	2.65625	-78946	-47.47882	-34.68739
magnitude	1934	2.41694	0.56108	4674	0.84200	5.00200
depth	1944	43.57194	52.86747	84704	0	321.51710

Pearson Correlation Coefficients Prob >  r  under H0: Rho=0 Number of Observations					
	time	longitude	latitude	magnitude	depth
time	1.00000 1944	-0.02907 0.2001 1944	-0.07470 0.0010 1944	0.08082 0.0004 1934	-0.03309 0.1447 1944
longitude	-0.02907 0.2001 1944	1.00000 1944	0.04093 0.0712 1944	-0.15956 <.0001 1934	0.03990 0.0786 1944
latitude	-0.07470 0.0010 1944	0.04093 0.0712 1944	1.00000 1944	-0.05038 0.0267 1934	0.29988 <.0001 1944
magnitude	0.08082 0.0004 1934	-0.15956 <.0001 1934	-0.05038 0.0267 1934	1.00000 1934	0.50867 <.0001 1934
depth	-0.03309 0.1447 1944	0.03990 0.0786 1944	0.29988 <.0001 1944	0.50867 <.0001 1934	1.00000 1944

## The plot of the latitude against magnitude of the earthquakes



# Pattern in missing data

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Obs	publicid	eventtype	origintime	modificationtime	longitude	latitude	magnitude	depth	time	missing
36	3268673	earthquake	2010-03-01T12:44:14.512Z	2013-07-09	172.301	-41.7016	.	91.260	18322	1
604	3272887	earthquake	2010-02-21T13:04:50.535Z	2013-07-09	172.737	-41.2358	.	156.561	18314	1
997	3261931	earthquake	2010-02-15T17:17:41.027Z	2013-07-09	173.568	-41.1546	.	91.814	18308	1
1084	3269835	earthquake	2010-02-14T12:21:28.955Z	2013-07-09	172.789	-41.1924	.	140.427	18307	1
1163	3260764	earthquake	2010-02-13T06:02:33.416Z	2013-07-09	177.703	-39.1151	.	20.379	18306	1
1167	3260726	earthquake	2010-02-13T04:11:00.416Z	2013-07-10	177.549	-39.1650	.	33.000	18306	1
1252	3259887	earthquake	2010-02-11T12:58:05.955Z	2013-07-09	172.304	-41.8547	.	83.954	18304	1
1477	3254059	earthquake	2010-02-08T16:03:35.251Z	2013-07-09	172.303	-41.7124	.	93.102	18301	1
1578	3253431	earthquake	2010-02-07T09:28:15.551Z	2013-07-09	176.743	-38.0568	.	5.000	18300	1
1795	3251981	earthquake	2010-02-04T10:39:28.271Z	2013-07-09	172.328	-41.6923	.	90.663	18297	1

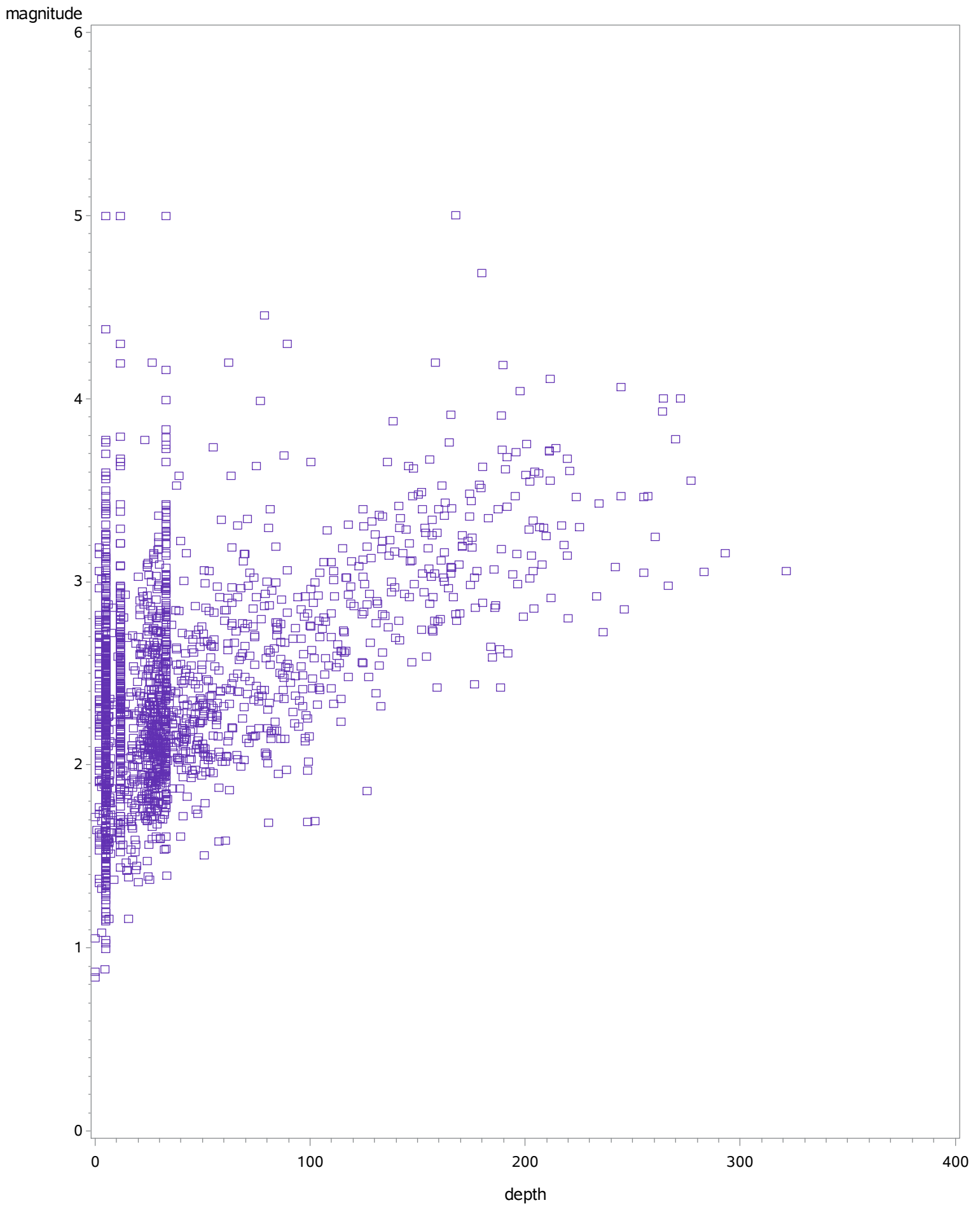
**Number of missing values for variables of interest****The MEANS Procedure**

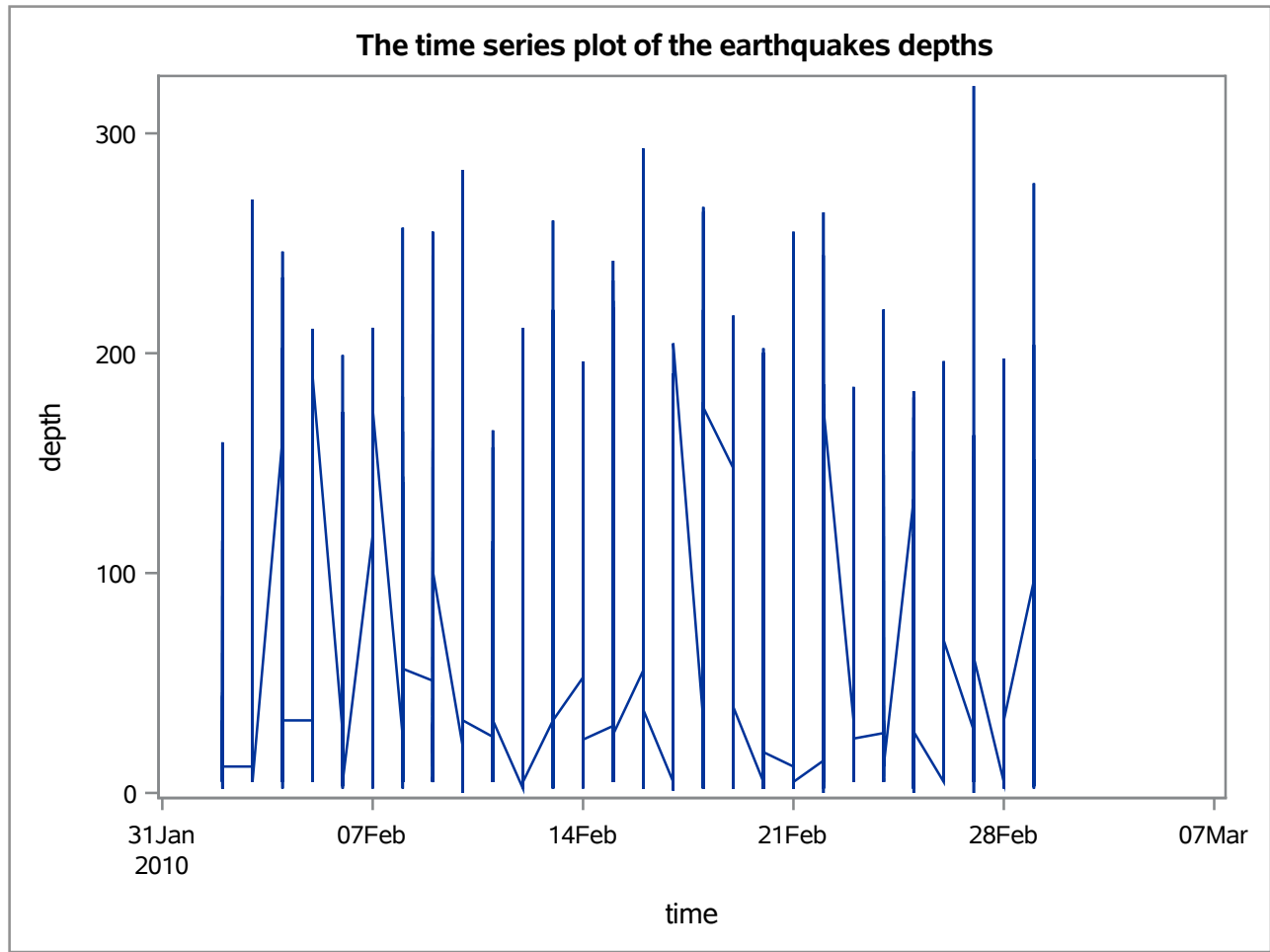
Variable	N	N Miss
longitude	1944	0
latitude	1944	0
magnitude	1934	10
depth	1944	0
time	1944	0

## The numbers of earthquakes on each day and the largest magnitude of the earthquakes that occurred that day

Obs	time	COUNT	magnitude
1	2010-02-02	60	3.776
2	2010-02-03	63	3.780
3	2010-02-04	69	3.657
4	2010-02-05	85	5.000
5	2010-02-06	68	3.693
6	2010-02-07	76	4.108
7	2010-02-08	64	3.658
8	2010-02-09	97	5.000
9	2010-02-10	64	4.002
10	2010-02-11	74	4.194
11	2010-02-12	48	4.200
12	2010-02-13	64	4.300
13	2010-02-14	62	3.914
14	2010-02-15	69	3.711
15	2010-02-16	73	4.200
16	2010-02-17	75	3.671
17	2010-02-18	75	5.002
18	2010-02-19	58	3.702
19	2010-02-20	67	3.738
20	2010-02-21	78	3.908
21	2010-02-22	96	4.066
22	2010-02-23	46	3.836
23	2010-02-24	39	3.675
24	2010-02-25	69	5.000
25	2010-02-26	103	3.752
26	2010-02-27	87	4.383
27	2010-02-28	49	4.300
28	2010-03-01	66	3.552

## The plot of the magnitude against depth of the earthquakes







**First 25 times between successive earthquakes**

Obs	my_time	last_time	diff_time
1	23:51:34	.	.
2	23:03:24	23:51:34	0:48:10
3	22:50:50	23:03:24	0:12:33
4	22:46:48	22:50:50	0:04:03
5	22:46:24	22:46:48	0:00:24
6	22:20:02	22:46:24	0:26:22
7	22:16:46	22:20:02	0:03:16
8	21:40:32	22:16:46	0:36:14
9	21:03:10	21:40:32	0:37:22
10	21:00:11	21:03:10	0:03:00
11	20:57:49	21:00:11	0:02:22
12	20:41:33	20:57:49	0:16:16
13	20:34:33	20:41:33	0:07:00
14	20:17:34	20:34:33	0:16:59
15	19:47:21	20:17:34	0:30:13
16	19:43:13	19:47:21	0:04:08
17	18:26:24	19:43:13	1:16:49
18	18:18:48	18:26:24	0:07:35
19	18:09:48	18:18:48	0:09:01
20	18:03:08	18:09:48	0:06:39
21	17:19:28	18:03:08	0:43:40
22	17:10:52	17:19:28	0:08:36
23	17:01:41	17:10:52	0:09:11
24	16:50:21	17:01:41	0:11:19
25	16:25:02	16:50:21	0:25:19

**Histogram of the times between successive earthquakes**

The UNIVARIATE Procedure

