

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.0 m
 Mooring Number: 3392

File Name: 3392-alh.nc
 nobs = 2682, ngood = 2681, record length (days) = 111.75
 start time: 05-Dec-1989 19:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.31, x trend= 0

var(x)= 45.1719 var(xp)= 37.3466 var(xres)= 7.9676
 percent var predicted/var original= 82.7 %

y0= -0.0292, x trend= 0

var(y)= 10.5078 var(yp)= 0.12686 var(yres)= 10.3792
 percent var predicted/var original= 1.2 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.170	0.639	-0.037	0.53	120.29	81.07	175.96	200.56	0.071
MSF	0.0028219	0.105	0.619	-0.020	0.52	101.93	84.40	142.38	235.16	0.029
ALP1	0.0343966	0.297	0.309	-0.186	0.29	162.00	114.26	47.94	122.61	0.92
2Q1	0.0357064	0.091	0.274	-0.082	0.24	131.88	134.79	249.11	191.00	0.11
Q1	0.0372185	0.126	0.259	0.087	0.22	139.17	113.33	78.78	179.34	0.24
O1	0.0387307	0.422	0.329	-0.049	0.34	22.61	45.45	314.05	58.76	1.6
NO1	0.0402686	0.171	0.267	0.030	0.24	154.23	97.26	168.18	139.45	0.41
*K1	0.0417807	0.594	0.391	0.092	0.31	4.06	34.55	285.05	43.71	2.3
J1	0.0432929	0.121	0.277	0.013	0.24	153.19	109.45	311.65	165.57	0.19
OO1	0.0448308	0.122	0.187	-0.023	0.22	79.76	128.71	233.32	127.02	0.43
UPS1	0.0463430	0.163	0.199	-0.135	0.21	156.58	103.15	119.99	120.32	0.67
EPS2	0.0761773	0.219	0.307	-0.004	0.28	169.83	108.95	305.96	118.77	0.51
MU2	0.0776895	0.179	0.258	-0.077	0.27	148.24	105.57	246.10	140.67	0.48
*N2	0.0789992	1.736	0.369	-0.010	0.33	2.03	11.30	157.71	12.50	22
*M2	0.0805114	8.552	0.380	-0.204	0.38	2.24	2.18	195.93	2.80	5.1e+002
L2	0.0820236	0.465	0.337	-0.038	0.35	171.45	49.59	112.37	57.71	1.9
*S2	0.0833333	1.591	0.331	-0.007	0.36	3.94	13.71	244.97	14.13	23
ETA2	0.0850736	0.094	0.168	-0.062	0.15	52.51	130.48	242.62	154.28	0.31
MO3	0.1192421	0.071	0.100	-0.004	0.10	165.31	116.50	25.15	134.74	0.51
M3	0.1207671	0.047	0.093	-0.006	0.11	166.27	128.68	78.08	164.94	0.26
MK3	0.1222921	0.114	0.112	-0.086	0.11	92.30	101.52	333.40	122.53	1
SK3	0.1251141	0.176	0.130	-0.004	0.13	106.85	44.52	329.06	50.65	1.8
MN4	0.1595106	0.145	0.143	0.001	0.14	174.94	50.52	211.02	61.92	1
*M4	0.1610228	0.447	0.161	0.143	0.14	159.16	22.67	282.16	20.01	7.7
SN4	0.1623326	0.127	0.133	0.017	0.11	144.49	76.39	240.00	74.60	0.9
*MS4	0.1638447	0.219	0.149	0.053	0.13	177.30	39.51	327.62	47.32	2.2
S4	0.1666667	0.041	0.101	-0.034	0.09	163.88	119.72	354.98	162.70	0.16
2MK5	0.2028035	0.064	0.079	-0.040	0.06	10.42	95.66	6.73	110.01	0.66
2SK5	0.2084474	0.081	0.068	-0.029	0.08	88.33	81.80	80.34	83.98	1.4
2MN6	0.2400221	0.124	0.095	0.060	0.08	150.06	62.26	51.22	70.77	1.7
*M6	0.2415342	0.345	0.111	0.100	0.09	23.94	18.92	341.70	21.17	9.7
*2MS6	0.2443561	0.158	0.089	0.076	0.09	54.95	50.21	66.64	47.27	3.2
2SM6	0.2471781	0.020	0.072	0.003	0.08	90.45	164.33	200.07	210.80	0.076
3MK7	0.2833149	0.030	0.057	0.016	0.05	20.73	105.02	176.46	133.57	0.28
*M8	0.3220456	0.097	0.052	0.023	0.06	143.36	41.61	111.98	44.81	3.4

total var= 55.6797 pred var= 37.4734
 percent total var predicted/var original= 67.3 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 15.0 m
 Mooring Number: 3412
 File Name: 3412-alh.nc
 nobs = 2486, ngood = 2485, record length (days) = 103.58
 start time: 29-Mar-1990
 rayleigh criterion = 1.0
 Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.00395, x trend= 0

var(x)= 57.4283 var(xp)= 35.9542 var(xres)= 21.2988
 percent var predicted/var original= 62.6 %

y0= -0.21, x trend= 0

var(y)= 16.5752 var(yp)= 0.80584 var(yres)= 15.7654
 percent var predicted/var original= 4.9 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.227	1.579	-0.121	1.45	126.50	73.44	205.20	100.64	0.6
MSF	0.0028219	1.817	1.808	-0.230	1.86	123.19	64.38	1.96	89.94	1
ALP1	0.0343966	0.383	0.418	-0.119	0.35	159.92	68.09	198.06	85.36	0.84
2Q1	0.0357064	0.347	0.356	-0.133	0.35	17.15	88.37	208.04	101.17	0.95
Q1	0.0372185	0.188	0.343	-0.082	0.34	42.94	117.55	284.34	143.78	0.3
O1	0.0387307	0.547	0.451	-0.020	0.40	171.78	48.62	73.10	58.14	1.5
NO1	0.0402686	0.265	0.478	-0.132	0.38	113.65	133.65	222.80	132.99	0.31
*K1	0.0417807	1.070	0.510	-0.655	0.44	10.47	48.93	312.85	53.32	4.4
J1	0.0432929	0.159	0.318	-0.082	0.34	162.95	108.24	343.22	205.62	0.25
OO1	0.0448308	0.183	0.315	-0.009	0.26	132.29	104.77	326.08	120.63	0.34
UPS1	0.0463430	0.173	0.299	-0.032	0.21	176.97	98.58	67.62	138.79	0.33
EPS2	0.0761773	0.521	0.547	-0.207	0.42	19.73	59.17	32.80	85.59	0.91
MU2	0.0776895	0.765	0.669	-0.456	0.42	173.26	52.46	196.64	86.41	1.3
*N2	0.0789992	2.350	0.750	-0.308	0.44	5.90	11.87	172.70	20.50	9.8
*M2	0.0805114	8.214	0.754	0.134	0.48	6.32	3.34	206.76	5.31	1.2e+002
*L2	0.0820236	0.891	0.581	-0.094	0.40	8.69	27.18	269.06	45.60	2.4
*S2	0.0833333	1.162	0.796	-0.119	0.47	0.08	25.51	208.28	38.54	2.1
ETA2	0.0850736	0.159	0.304	-0.044	0.30	124.95	103.89	218.19	142.24	0.27
MO3	0.1192421	0.183	0.280	-0.040	0.20	171.37	81.35	234.13	102.78	0.43
M3	0.1207671	0.276	0.301	-0.054	0.24	12.32	61.02	276.92	90.61	0.84
MK3	0.1222921	0.291	0.266	-0.023	0.23	31.93	53.04	251.19	75.22	1.2
SK3	0.1251141	0.174	0.230	0.001	0.20	8.86	68.74	242.86	125.58	0.57
MN4	0.1595106	0.275	0.256	-0.139	0.27	146.73	76.87	234.21	101.49	1.2
M4	0.1610228	0.305	0.283	0.027	0.22	155.61	57.11	282.99	71.51	1.2
SN4	0.1623326	0.093	0.197	0.003	0.20	66.20	119.73	69.84	177.46	0.22
MS4	0.1638447	0.260	0.280	-0.020	0.23	0.37	57.57	136.88	88.76	0.86
S4	0.1666667	0.137	0.222	-0.035	0.19	103.31	126.24	107.08	120.25	0.38
2MK5	0.2028035	0.148	0.149	0.013	0.13	151.72	61.51	163.35	82.06	0.99
2SK5	0.2084474	0.095	0.117	-0.052	0.14	72.91	118.66	146.70	134.93	0.66
*2MN6	0.2400221	0.300	0.189	-0.024	0.11	4.49	22.98	279.54	44.54	2.5
*M6	0.2415342	0.424	0.185	0.124	0.14	32.80	22.50	340.35	27.17	5.2
2MS6	0.2443561	0.128	0.147	0.102	0.13	167.96	83.06	150.33	125.95	0.77
2SM6	0.2471781	0.175	0.128	-0.126	0.13	51.14	97.71	128.26	97.35	1.9
3MK7	0.2833149	0.096	0.103	0.013	0.09	1.34	55.40	91.41	85.45	0.86
M8	0.3220456	0.091	0.088	0.004	0.08	34.02	60.74	99.73	64.05	1.1

total var= 74.0035 pred var= 36.76
 percent total var predicted/var original= 49.7 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 23.0 m
 Mooring Number: 3482
 File Name: 3482-alh.nc

nobs = 2512, ngood = 2511, record length (days) = 104.67
 start time: 10-Jul-1990 22:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.676, x trend= 0

var(x)= 91.4366 var(xp)= 65.4547 var(xres)= 26.3004
 percent var predicted/var original= 71.6 %

y0= 0.235, x trend= 0

var(y)= 20.8628 var(yp)= 1.4855 var(yres)= 19.3643
 percent var predicted/var original= 7.1 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.798	1.567	0.114	1.33	153.08	108.16	211.36	162.06	0.26
MSF	0.0028219	0.481	1.310	0.283	1.33	71.68	100.22	29.44	201.00	0.13
ALP1	0.0343966	0.216	0.311	-0.023	0.27	61.26	96.43	54.06	113.89	0.48
2Q1	0.0357064	0.315	0.298	-0.066	0.34	159.07	87.25	32.34	79.27	1.1
Q1	0.0372185	0.324	0.313	-0.246	0.32	147.01	105.34	7.72	100.77	1.1
*O1	0.0387307	0.516	0.362	-0.039	0.40	1.55	60.73	267.31	51.23	2
NO1	0.0402686	0.279	0.426	-0.013	0.43	10.88	136.86	315.44	125.31	0.43
*K1	0.0417807	0.729	0.458	-0.122	0.38	86.86	29.87	3.92	44.02	2.5
J1	0.0432929	0.177	0.278	0.081	0.28	69.93	93.84	315.77	133.10	0.4
OO1	0.0448308	0.382	0.354	-0.033	0.24	112.23	47.73	241.97	64.52	1.2
UPS1	0.0463430	0.188	0.255	0.071	0.24	59.28	90.10	2.61	116.83	0.55
EPS2	0.0761773	0.210	0.595	0.037	0.63	98.31	165.00	35.84	190.85	0.12
MU2	0.0776895	0.389	0.686	-0.265	0.60	176.30	89.03	180.98	137.93	0.32
*N2	0.0789992	2.771	1.145	-0.887	0.87	7.05	18.45	168.45	25.89	5.9
*M2	0.0805114	11.115	1.212	-0.327	0.90	5.81	4.25	202.14	6.29	84
L2	0.0820236	0.966	0.798	-0.220	0.62	7.51	41.78	232.73	57.13	1.5
*S2	0.0833333	1.784	1.153	0.007	0.83	8.86	26.17	226.77	38.14	2.4
ETA2	0.0850736	0.197	0.465	-0.163	0.45	15.72	90.92	119.67	195.96	0.18
MO3	0.1192421	0.240	0.233	-0.113	0.21	145.72	83.78	220.69	93.96	1.1
M3	0.1207671	0.107	0.221	-0.014	0.18	10.03	88.24	300.09	166.35	0.23
MK3	0.1222921	0.184	0.233	0.051	0.18	3.16	63.69	340.04	100.96	0.62
SK3	0.1251141	0.152	0.196	-0.117	0.19	52.32	120.09	236.97	121.36	0.6
MN4	0.1595106	0.444	0.315	-0.362	0.31	38.00	104.09	96.45	111.09	2
M4	0.1610228	0.349	0.322	-0.124	0.31	28.97	66.74	180.88	84.51	1.2
SN4	0.1623326	0.162	0.292	0.011	0.23	18.77	89.13	256.66	125.28	0.31
MS4	0.1638447	0.422	0.344	-0.076	0.29	5.48	48.53	195.77	64.83	1.5
S4	0.1666667	0.150	0.261	-0.073	0.27	7.79	96.68	305.79	120.86	0.33
2MK5	0.2028035	0.081	0.124	0.011	0.11	135.84	106.66	252.01	136.20	0.42
*2SK5	0.2084474	0.181	0.127	-0.017	0.14	33.03	50.16	26.81	61.34	2
2MN6	0.2400221	0.187	0.150	0.059	0.13	165.59	59.49	99.85	77.00	1.6
M6	0.2415342	0.233	0.199	0.039	0.13	18.14	41.02	355.00	54.92	1.4
2MS6	0.2443561	0.162	0.132	0.060	0.15	140.50	67.21	143.64	87.45	1.5
2SM6	0.2471781	0.115	0.151	0.015	0.12	151.73	75.12	163.73	105.35	0.58
3MK7	0.2833149	0.084	0.106	0.036	0.11	75.36	130.08	64.69	89.08	0.62
M8	0.3220456	0.090	0.083	-0.016	0.09	69.33	78.03	120.79	67.10	1.2

total var= 112.2994 pred var= 66.9402
 percent total var predicted/var original= 59.6 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 25.0 m
 Mooring Number: 3752
 File Name: 3752-alh.nc

nobs = 2844, ngood = 2843, record length (days) = 118.50
 start time: 13-Feb-1991 01:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.102, x trend= 0

var(x)= 70.255 var(xp)= 48.7846 var(xres)= 21.5518
 percent var predicted/var original= 69.4 %

y0= -0.458, x trend= 0

var(y)= 22.0762 var(yp)= 1.0195 var(yres)= 21.0375
 percent var predicted/var original= 4.6 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.872	1.100	0.057	1.11	63.86	87.72	304.30	109.91	0.63
MSF	0.0028219	0.746	1.096	-0.300	0.98	145.77	109.06	297.54	140.87	0.46
ALP1	0.0343966	0.250	0.403	-0.120	0.42	95.13	133.10	345.55	134.53	0.38
2Q1	0.0357064	0.506	0.512	-0.208	0.43	130.15	83.19	37.86	83.02	0.98
Q1	0.0372185	0.346	0.481	-0.028	0.38	6.58	93.74	175.72	117.19	0.52
O1	0.0387307	0.471	0.480	0.181	0.53	156.73	81.01	59.28	89.21	0.96
NO1	0.0402686	0.361	0.726	-0.234	0.78	16.75	105.89	112.90	161.29	0.25
*K1	0.0417807	0.994	0.532	-0.491	0.48	20.88	50.24	302.08	48.97	3.5
J1	0.0432929	0.217	0.414	-0.167	0.41	174.92	135.93	154.21	221.52	0.27
OO1	0.0448308	0.234	0.418	-0.097	0.38	1.23	106.39	123.55	140.50	0.31
UPS1	0.0463430	0.424	0.376	-0.275	0.40	152.48	93.26	174.15	107.09	1.3
EPS2	0.0761773	0.104	0.358	-0.064	0.31	29.96	102.79	13.86	198.09	0.084
MU2	0.0776895	0.663	0.476	-0.258	0.40	3.83	41.26	42.38	63.03	1.9
*N2	0.0789992	1.487	0.621	0.283	0.40	0.08	17.29	162.28	28.09	5.7
*M2	0.0805114	9.690	0.664	-0.307	0.48	5.22	2.52	202.64	3.85	2.1e+002
*L2	0.0820236	0.780	0.479	-0.321	0.32	175.09	31.23	70.31	49.66	2.7
*S2	0.0833333	1.709	0.641	-0.445	0.45	14.70	17.67	234.39	21.60	7.1
ETA2	0.0850736	0.073	0.300	0.009	0.27	84.26	148.84	316.20	173.91	0.06
MO3	0.1192421	0.172	0.168	-0.081	0.20	128.17	113.96	279.04	101.96	1
M3	0.1207671	0.098	0.184	-0.066	0.17	1.60	103.35	273.11	145.51	0.28
MK3	0.1222921	0.240	0.219	0.019	0.19	41.26	57.26	292.66	63.99	1.2
SK3	0.1251141	0.201	0.199	-0.081	0.18	160.62	69.99	139.76	82.07	1
MN4	0.1595106	0.219	0.232	-0.089	0.18	0.09	63.34	24.88	81.13	0.89
*M4	0.1610228	0.438	0.252	-0.155	0.23	21.01	34.29	80.22	46.91	3
SN4	0.1623326	0.219	0.218	-0.060	0.18	20.00	62.59	30.60	83.66	1
*MS4	0.1638447	0.325	0.207	-0.171	0.18	22.93	66.70	123.20	74.93	2.5
S4	0.1666667	0.159	0.181	0.032	0.22	88.33	110.97	210.99	86.32	0.77
2MK5	0.2028035	0.132	0.149	-0.014	0.14	176.72	63.70	48.39	74.85	0.79
2SK5	0.2084474	0.100	0.125	0.033	0.12	42.03	95.08	164.06	117.76	0.64
*2MN6	0.2400221	0.265	0.130	-0.009	0.16	40.28	30.73	286.82	33.51	4.1
*M6	0.2415342	0.444	0.144	0.150	0.15	28.98	25.59	323.62	24.65	9.4
2MS6	0.2443561	0.091	0.132	0.047	0.11	22.45	121.74	40.07	125.57	0.47
2SM6	0.2471781	0.070	0.109	0.033	0.09	39.03	117.05	74.74	131.67	0.41
3MK7	0.2833149	0.048	0.078	-0.033	0.07	47.23	132.98	132.46	145.56	0.37
M8	0.3220456	0.062	0.060	-0.026	0.06	111.76	93.35	81.16	92.69	1.1

total var= 92.3312 pred var= 49.804
 percent total var predicted/var original= 53.9 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 25.0 m
 Mooring Number: 3842
 File Name: 3842v-alh.nc

nobs = 2736, ngood = 2735, record length (days) = 114.00
 start time: 11-Jun-1991 22:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.633, x trend= 0

var(x)= 89.849 var(xp)= 66.2113 var(xres)= 23.3872
 percent var predicted/var original= 73.7 %

y0= -0.292, x trend= 0

var(y)= 18.8407 var(yp)= 1.1882 var(yres)= 17.6589
 percent var predicted/var original= 6.3 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.051	1.752	-0.312	1.27	121.77	49.59	235.33	131.59	0.36
MSF	0.0028219	0.695	1.493	-0.596	1.25	107.81	57.47	28.77	175.31	0.22
ALP1	0.0343966	0.224	0.324	-0.099	0.31	49.26	113.04	120.49	117.22	0.48
2Q1	0.0357064	0.210	0.310	-0.023	0.30	161.01	104.15	316.68	99.50	0.46
Q1	0.0372185	0.188	0.267	-0.054	0.27	146.54	112.09	290.90	121.63	0.49
O1	0.0387307	0.343	0.325	-0.163	0.33	12.29	84.62	257.46	85.76	1.1
NO1	0.0402686	0.196	0.388	-0.163	0.44	43.28	125.28	134.18	163.95	0.26
*K1	0.0417807	0.652	0.362	-0.154	0.37	71.39	40.64	344.94	40.16	3.2
J1	0.0432929	0.260	0.347	0.008	0.28	73.15	89.47	29.65	85.84	0.56
OO1	0.0448308	0.234	0.324	-0.088	0.29	138.85	88.50	74.52	111.80	0.52
UPS1	0.0463430	0.262	0.265	-0.161	0.27	116.00	83.78	203.63	110.64	0.98
EPS2	0.0761773	0.584	0.654	-0.297	0.53	148.54	69.11	205.53	109.78	0.8
MU2	0.0776895	0.338	0.551	-0.191	0.53	165.19	86.64	223.04	140.55	0.38
*N2	0.0789992	2.699	1.055	-0.071	0.58	4.10	12.81	167.58	20.75	6.5
*M2	0.0805114	11.068	0.950	-0.581	0.53	5.32	3.13	205.34	5.62	1.4e+002
*L2	0.0820236	0.978	0.597	-0.261	0.43	161.94	32.35	115.14	50.26	2.7
*S2	0.0833333	1.725	0.885	-0.142	0.59	6.42	17.95	245.59	32.35	3.8
ETA2	0.0850736	0.379	0.462	-0.060	0.36	175.53	74.85	217.58	139.41	0.67
MO3	0.1192421	0.150	0.182	-0.081	0.16	7.13	85.73	276.67	119.70	0.68
M3	0.1207671	0.253	0.202	-0.150	0.17	170.92	72.00	92.46	93.08	1.6
MK3	0.1222921	0.181	0.196	0.003	0.15	12.35	62.31	240.44	75.27	0.85
SK3	0.1251141	0.094	0.168	-0.021	0.14	135.49	103.24	272.81	122.77	0.31
MN4	0.1595106	0.413	0.294	-0.011	0.30	41.62	44.99	164.43	48.73	2
*M4	0.1610228	0.551	0.267	0.085	0.33	109.34	42.77	219.97	33.82	4.3
SN4	0.1623326	0.259	0.284	0.014	0.27	141.15	57.14	106.21	83.59	0.83
MS4	0.1638447	0.231	0.263	-0.112	0.30	113.94	107.37	257.89	93.18	0.77
S4	0.1666667	0.084	0.246	-0.038	0.20	119.27	91.42	172.62	180.74	0.12
2MK5	0.2028035	0.140	0.131	-0.020	0.12	44.88	67.64	338.73	69.37	1.1
2SK5	0.2084474	0.148	0.142	0.023	0.10	172.36	45.23	110.95	68.79	1.1
*2MN6	0.2400221	0.394	0.193	-0.043	0.15	28.84	21.56	288.60	26.93	4.2
*M6	0.2415342	0.292	0.182	0.034	0.14	14.98	30.61	348.03	43.68	2.6
2MS6	0.2443561	0.137	0.151	0.022	0.12	21.68	60.96	354.25	80.82	0.82
2SM6	0.2471781	0.037	0.113	-0.003	0.10	111.16	138.33	270.44	183.36	0.1
3MK7	0.2833149	0.087	0.082	0.014	0.10	77.35	113.80	146.99	76.17	1.1
M8	0.3220456	0.080	0.068	-0.004	0.07	44.93	71.53	61.63	77.18	1.4

total var= 108.6897 pred var= 67.3995
 percent total var predicted/var original= 62.0 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 28.4 m
 Mooring Number: 3902

File Name: 3902-alh.nc
 nobs = 2822, ngood = 2821, record length (days) = 117.58
 start time: 17-Oct-1991
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.541, x trend= 0

var(x)= 59.0427 var(xp)= 47.2481 var(xres)= 11.6778
 percent var predicted/var original= 80.0 %

y0= -0.597, x trend= 0

var(y)= 17.4827 var(yp)= 0.35008 var(yres)= 17.1368
 percent var predicted/var original= 2.0 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.797	1.265	-0.586	1.31	5.12	161.10	94.79	132.28	0.4
MSF	0.0028219	0.759	1.264	-0.109	1.22	5.74	156.48	303.14	102.80	0.36
ALP1	0.0343966	0.193	0.300	-0.020	0.25	1.36	102.76	333.44	120.75	0.42
2Q1	0.0357064	0.248	0.300	0.113	0.30	31.20	94.09	249.79	99.41	0.68
Q1	0.0372185	0.268	0.298	-0.026	0.27	77.95	93.18	179.95	86.96	0.81
*O1	0.0387307	0.490	0.342	-0.004	0.35	14.81	48.48	267.98	46.98	2.1
NO1	0.0402686	0.253	0.361	-0.086	0.34	45.43	97.43	227.27	98.52	0.49
*K1	0.0417807	0.582	0.403	-0.075	0.39	9.59	38.95	298.43	45.23	2.1
J1	0.0432929	0.161	0.285	-0.009	0.27	162.71	112.78	1.07	134.69	0.32
OO1	0.0448308	0.174	0.263	-0.116	0.28	64.93	120.96	68.02	128.44	0.44
UPS1	0.0463430	0.087	0.221	-0.073	0.22	78.96	139.82	234.43	171.92	0.15
EPS2	0.0761773	0.163	0.252	-0.056	0.23	23.65	118.75	352.28	128.03	0.42
MU2	0.0776895	0.221	0.275	0.075	0.27	67.96	87.72	167.94	108.21	0.65
*N2	0.0789992	1.997	0.317	0.050	0.39	178.53	10.63	343.54	9.09	40
*M2	0.0805114	9.509	0.321	-0.109	0.40	4.09	2.16	198.61	2.06	8.8e+002
L2	0.0820236	0.337	0.257	0.142	0.29	145.21	72.84	38.86	68.16	1.7
*S2	0.0833333	1.532	0.359	-0.139	0.37	12.34	16.18	232.98	12.64	18
ETA2	0.0850736	0.129	0.226	-0.011	0.20	40.18	115.58	191.57	124.03	0.33
MO3	0.1192421	0.078	0.120	-0.001	0.12	98.33	126.32	247.00	103.97	0.43
M3	0.1207671	0.110	0.137	-0.011	0.12	167.41	72.82	90.68	105.54	0.64
MK3	0.1222921	0.089	0.121	-0.029	0.11	50.65	98.61	45.76	110.53	0.55
SK3	0.1251141	0.073	0.117	-0.014	0.10	45.14	97.64	211.31	132.53	0.38
MN4	0.1595106	0.226	0.160	-0.104	0.14	14.02	54.59	46.66	62.88	2
*M4	0.1610228	0.511	0.179	-0.004	0.15	174.00	16.13	261.72	21.07	8.1
SN4	0.1623326	0.060	0.116	0.019	0.12	60.83	127.87	316.15	156.22	0.27
MS4	0.1638447	0.129	0.132	-0.063	0.12	126.25	100.90	309.96	87.39	0.96
S4	0.1666667	0.072	0.117	-0.067	0.11	101.58	148.34	77.72	139.10	0.38
2MK5	0.2028035	0.064	0.077	-0.015	0.07	14.46	88.91	230.18	89.57	0.69
2SK5	0.2084474	0.031	0.062	-0.009	0.05	5.10	121.40	162.62	163.24	0.25
*2MN6	0.2400221	0.224	0.123	0.081	0.11	32.99	43.94	331.55	41.58	3.3
*M6	0.2415342	0.381	0.129	0.106	0.11	30.30	20.01	349.43	19.66	8.7
2MS6	0.2443561	0.126	0.123	0.002	0.09	24.93	56.52	29.94	68.19	1.1
2SM6	0.2471781	0.065	0.083	0.019	0.10	138.79	102.34	329.15	138.79	0.61
3MK7	0.2833149	0.057	0.072	-0.004	0.07	2.22	80.86	45.63	96.38	0.63
M8	0.3220456	0.036	0.048	-0.003	0.04	157.55	87.08	130.05	103.41	0.57

total var= 76.5254 pred var= 47.5982
 percent total var predicted/var original= 62.2 %

Tidal Analysis of Current at LT-A
Point Current-Meter Observations, 17.0 m
Mooring Number: 3972

File Name: 3972-alh.nc

nobs = 202, ngood = 201, record length (days) = 8.42

start time: 11-Feb-1992 22:00:00

rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.00626, x trend= 0

var(x)= 63.1301 var(xp)= 55.2364 var(xres)= 7.7407

percent var predicted/var original= 87.5 %

y0= 1.57, x trend= 0

var(y)= 12.3585 var(yp)= 2.2119 var(yres)= 10.1644

percent var predicted/var original= 17.9 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
K1	0.0417807	0.950	1.033	0.035	1.03	148.24	79.96	115.63	92.42	0.85
*M2	0.0805114	10.762	2.285	0.225	1.01	11.27	5.46	186.12	12.99	22
M3	0.1207671	0.399	0.510	-0.036	0.34	78.73	53.89	268.62	79.45	0.61
*M4	0.1610228	0.506	0.325	-0.044	0.30	175.47	37.19	285.29	40.70	2.4
2MK5	0.2028035	0.115	0.215	-0.036	0.12	106.92	41.43	136.36	144.24	0.29
2SK5	0.2084474	0.235	0.193	-0.038	0.19	38.28	49.25	232.61	52.44	1.5
M6	0.2415342	0.322	0.266	0.121	0.25	32.85	72.13	302.92	75.83	1.5
3MK7	0.2833149	0.168	0.148	-0.041	0.13	153.11	56.68	309.69	75.27	1.3
M8	0.3220456	0.111	0.120	-0.052	0.10	107.00	124.63	26.17	100.38	0.86

total var= 75.4886 pred var= 57.4483

percent total var predicted/var original= 76.1 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 29.0 m
 Mooring Number: 4012
 File Name: 4012-alh.nc

nobs = 3354, ngood = 3353, record length (days) = 139.75
 start time: 02-Jun-1992 19:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.821, x trend= 0

var(x)= 100.3842 var(xp)= 75.1675 var(xres)= 25.1047
 percent var predicted/var original= 74.9 %

y0= -0.348, x trend= 0

var(y)= 19.4461 var(yp)= 2.217 var(yres)= 17.2035
 percent var predicted/var original= 11.4 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.938	0.782	0.892	0.86	4.02	111.25	27.83	138.69	1.4
MSF	0.0028219	0.205	0.670	-0.079	0.69	134.02	121.96	49.20	231.73	0.093
ALP1	0.0343966	0.219	0.254	0.046	0.23	2.96	89.57	339.25	85.07	0.74
2Q1	0.0357064	0.101	0.204	-0.056	0.19	82.99	119.05	290.52	156.79	0.25
Q1	0.0372185	0.170	0.241	-0.028	0.24	72.11	92.38	298.59	108.56	0.5
*O1	0.0387307	0.607	0.293	-0.057	0.33	6.88	31.30	285.53	32.91	4.3
NO1	0.0402686	0.250	0.212	-0.138	0.19	129.38	78.44	156.69	75.37	1.4
*K1	0.0417807	0.532	0.299	0.083	0.32	62.81	36.38	347.90	38.02	3.2
J1	0.0432929	0.230	0.245	-0.015	0.20	111.02	85.63	46.52	87.59	0.89
OO1	0.0448308	0.292	0.262	-0.017	0.27	140.13	53.05	148.95	51.69	1.2
UPS1	0.0463430	0.233	0.229	-0.101	0.24	145.48	86.74	188.82	93.99	1
EPS2	0.0761773	0.285	0.636	-0.102	0.47	38.66	77.56	336.03	165.47	0.2
MU2	0.0776895	0.262	0.613	-0.197	0.45	101.17	157.45	20.22	172.29	0.18
*N2	0.0789992	3.216	1.040	-0.150	0.54	179.35	11.94	350.58	22.99	9.6
*M2	0.0805114	11.734	1.028	-1.064	0.56	7.97	2.73	211.90	4.86	1.3e+002
L2	0.0820236	1.102	0.899	-0.198	0.64	29.11	40.39	278.33	59.68	1.5
*S2	0.0833333	1.661	1.113	-0.229	0.51	7.01	19.58	252.62	33.83	2.2
ETA2	0.0850736	0.262	0.589	-0.213	0.46	21.88	85.35	184.87	166.55	0.2
MO3	0.1192421	0.160	0.163	-0.005	0.20	77.20	101.61	325.62	83.81	0.96
M3	0.1207671	0.155	0.183	0.093	0.18	33.66	110.12	259.35	121.31	0.71
*MK3	0.1222921	0.480	0.240	-0.199	0.18	8.64	29.76	349.28	37.40	4
SK3	0.1251141	0.239	0.263	-0.052	0.17	164.93	48.80	173.17	71.52	0.83
MN4	0.1595106	0.342	0.248	0.184	0.27	59.86	97.07	150.82	79.45	1.9
*M4	0.1610228	0.549	0.254	0.051	0.35	59.68	39.86	188.43	27.73	4.7
SN4	0.1623326	0.175	0.213	-0.067	0.27	109.38	110.55	154.31	104.71	0.67
MS4	0.1638447	0.267	0.338	0.024	0.18	25.12	39.85	233.45	76.26	0.63
S4	0.1666667	0.177	0.202	-0.050	0.22	59.56	94.14	309.23	115.08	0.77
2MK5	0.2028035	0.083	0.120	-0.007	0.11	129.28	85.73	253.75	109.18	0.48
2SK5	0.2084474	0.081	0.108	-0.039	0.09	145.97	92.26	36.72	121.73	0.56
*2MN6	0.2400221	0.288	0.155	0.075	0.12	24.19	28.16	290.44	40.99	3.5
*M6	0.2415342	0.267	0.154	0.079	0.12	22.28	26.23	358.77	41.52	3
2MS6	0.2443561	0.127	0.126	0.057	0.13	60.48	93.50	75.86	76.13	1
2SM6	0.2471781	0.138	0.149	-0.040	0.12	29.57	57.14	51.66	80.33	0.86
3MK7	0.2833149	0.056	0.078	0.006	0.08	131.97	107.96	280.69	121.77	0.5
*M8	0.3220456	0.115	0.069	0.071	0.06	29.95	62.44	44.28	65.17	2.8

total var= 119.8303 pred var= 77.3845
 percent total var predicted/var original= 64.6 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 18.0 m
 Mooring Number: 4082
 File Name: 4082v-alh.nc

nobs = 1274, ngood = 1273, record length (days) = 53.08
 start time: 20-Oct-1992 22:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -1.08, x trend= 0

var(x)= 53.3316 var(xp)= 43.5673 var(xres)= 10.1783
 percent var predicted/var original= 81.7 %

y0= 1.21, x trend= 0

var(y)= 13.9444 var(yp)= 1.5182 var(yres)= 12.4723
 percent var predicted/var original= 10.9 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.361	1.404	0.103	1.38	130.60	78.40	359.79	73.51	0.94
MSF	0.0028219	1.038	1.291	0.703	1.31	11.99	121.86	98.42	115.40	0.65
ALP1	0.0343966	0.159	0.371	-0.125	0.32	113.61	111.06	201.86	178.92	0.18
2Q1	0.0357064	0.513	0.455	-0.155	0.43	158.68	68.57	31.45	66.56	1.3
*Q1	0.0372185	0.522	0.354	-0.117	0.48	162.28	75.30	91.53	72.59	2.2
O1	0.0387307	0.745	0.551	-0.259	0.48	33.43	50.89	307.89	50.44	1.8
NO1	0.0402686	0.093	0.281	0.024	0.27	131.31	117.78	125.10	196.81	0.11
*K1	0.0417807	1.033	0.508	0.093	0.50	166.76	33.02	83.31	27.82	4.1
J1	0.0432929	0.326	0.412	-0.196	0.37	103.49	101.17	108.78	127.31	0.63
OO1	0.0448308	0.305	0.371	0.143	0.35	145.14	100.66	103.19	112.49	0.68
UPS1	0.0463430	0.142	0.399	-0.005	0.35	24.10	133.50	129.31	157.60	0.13
EPS2	0.0761773	0.294	0.372	-0.065	0.28	18.79	69.05	8.90	119.04	0.62
MU2	0.0776895	0.363	0.392	-0.132	0.30	11.98	61.60	42.30	95.56	0.86
*N2	0.0789992	1.550	0.498	0.360	0.32	14.31	14.15	171.69	22.31	9.7
*M2	0.0805114	9.013	0.480	-0.259	0.40	9.65	2.12	198.94	3.14	3.5e+002
L2	0.0820236	0.537	0.475	-0.249	0.45	135.28	73.88	18.51	79.14	1.3
*S2	0.0833333	1.707	0.535	-0.220	0.32	9.18	11.31	234.11	17.26	10
ETA2	0.0850736	0.295	0.364	0.201	0.33	34.59	92.65	103.08	128.57	0.66
*MO3	0.1192421	0.294	0.204	-0.108	0.21	139.44	51.47	116.14	50.03	2.1
M3	0.1207671	0.100	0.176	-0.005	0.16	22.78	83.49	342.38	122.28	0.32
*MK3	0.1222921	0.360	0.241	-0.070	0.16	9.98	35.07	44.93	46.03	2.2
SK3	0.1251141	0.237	0.187	-0.057	0.18	136.19	63.92	304.43	67.80	1.6
MN4	0.1595106	0.183	0.201	-0.026	0.20	63.32	80.28	281.27	79.72	0.83
*M4	0.1610228	0.325	0.184	-0.166	0.20	174.39	79.71	293.90	85.86	3.1
SN4	0.1623326	0.293	0.216	0.266	0.19	0.33	113.27	53.18	108.84	1.8
MS4	0.1638447	0.283	0.204	0.010	0.21	40.15	53.40	153.69	54.79	1.9
S4	0.1666667	0.103	0.153	0.053	0.15	90.91	100.51	267.12	147.27	0.45
2MK5	0.2028035	0.094	0.120	0.033	0.10	158.56	71.26	43.11	121.31	0.61
2SK5	0.2084474	0.097	0.117	0.000	0.10	18.89	59.90	85.75	97.34	0.69
*2MN6	0.2400221	0.149	0.105	0.031	0.09	38.97	47.69	249.21	56.69	2
*M6	0.2415342	0.441	0.149	0.050	0.12	26.08	16.81	332.38	18.43	8.7
2MS6	0.2443561	0.145	0.105	0.025	0.12	49.92	56.09	14.45	53.14	1.9
2SM6	0.2471781	0.122	0.121	0.009	0.12	157.74	70.31	92.95	68.58	1
3MK7	0.2833149	0.091	0.090	-0.036	0.08	26.14	72.61	310.82	87.78	1
M8	0.3220456	0.062	0.060	-0.054	0.06	165.06	95.07	201.59	125.17	1.1

total var= 67.276 pred var= 45.0855
 percent total var predicted/var original= 67.0 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 29.0 m
 Mooring Number: 4142
 File Name: 4142-alh.nc

nobs = 2634, ngood = 2633, record length (days) = 109.75
 start time: 25-Feb-1993 20:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.968, x trend= 0

var(x)= 97.6237 var(xp)= 60.7994 var(xres)= 36.7637
 percent var predicted/var original= 62.3 %

y0= -0.348, x trend= 0

var(y)= 26.3129 var(yp)= 0.83356 var(yres)= 25.4729
 percent var predicted/var original= 3.2 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	2.369	2.040	0.241	2.17	140.17	63.55	124.37	62.16	1.3
MSF	0.0028219	1.911	1.976	0.086	1.84	142.26	84.61	356.46	86.61	0.94
ALP1	0.0343966	0.125	0.495	-0.058	0.41	66.34	140.77	140.78	194.10	0.064
2Q1	0.0357064	0.325	0.463	-0.011	0.48	101.10	153.29	340.37	123.77	0.49
Q1	0.0372185	0.224	0.505	0.102	0.43	174.14	102.96	78.84	152.37	0.2
O1	0.0387307	0.561	0.586	0.157	0.52	148.39	75.81	34.58	83.67	0.92
NO1	0.0402686	0.392	0.495	-0.062	0.40	7.68	59.77	357.86	88.51	0.63
K1	0.0417807	0.979	0.696	-0.356	0.60	26.03	44.59	300.27	53.90	2
J1	0.0432929	0.171	0.470	0.075	0.48	125.62	130.03	347.76	167.71	0.13
OO1	0.0448308	0.322	0.469	-0.071	0.46	34.79	72.36	318.50	127.80	0.47
UPS1	0.0463430	0.628	0.610	-0.047	0.57	165.67	55.23	273.96	76.15	1.1
EPS2	0.0761773	0.212	0.634	-0.030	0.44	14.22	62.75	162.84	202.90	0.11
MU2	0.0776895	0.295	0.637	0.086	0.49	137.10	64.69	61.19	177.56	0.21
*N2	0.0789992	2.994	1.044	-0.262	0.44	3.95	10.66	166.71	18.74	8.2
*M2	0.0805114	10.292	1.102	0.045	0.58	6.29	3.46	200.79	5.70	87
*L2	0.0820236	2.171	1.376	-0.322	0.67	176.28	17.07	73.72	40.07	2.5
*S2	0.0833333	1.823	0.994	0.109	0.49	0.82	17.52	229.16	29.85	3.4
ETA2	0.0850736	0.429	0.671	0.049	0.55	38.82	66.84	164.40	125.89	0.41
*MO3	0.1192421	0.557	0.384	0.067	0.27	157.25	31.11	156.13	42.81	2.1
M3	0.1207671	0.193	0.270	-0.050	0.24	42.26	86.93	191.60	110.23	0.51
MK3	0.1222921	0.243	0.283	-0.108	0.30	142.24	85.52	205.97	107.44	0.74
SK3	0.1251141	0.155	0.279	-0.056	0.20	161.41	74.66	93.58	138.55	0.31
MN4	0.1595106	0.185	0.210	0.089	0.18	7.16	78.28	5.34	100.65	0.78
*M4	0.1610228	0.537	0.334	0.085	0.20	1.88	26.82	22.76	33.92	2.6
SN4	0.1623326	0.130	0.193	0.021	0.19	142.90	87.81	318.50	141.71	0.45
MS4	0.1638447	0.228	0.196	-0.150	0.24	93.30	121.33	140.20	105.51	1.4
S4	0.1666667	0.161	0.242	0.015	0.19	173.10	75.80	6.96	105.09	0.44
*2MK5	0.2028035	0.216	0.142	0.001	0.15	116.71	44.40	286.21	45.77	2.3
2SK5	0.2084474	0.066	0.123	0.050	0.11	152.79	107.79	323.62	140.11	0.28
*2MN6	0.2400221	0.279	0.193	-0.011	0.15	15.17	33.21	246.55	41.98	2.1
*M6	0.2415342	0.398	0.172	0.073	0.15	34.17	22.52	332.99	23.43	5.4
2MS6	0.2443561	0.202	0.152	0.091	0.13	176.65	59.58	178.31	74.52	1.8
2SM6	0.2471781	0.082	0.127	0.047	0.12	38.04	106.10	21.76	143.09	0.42
3MK7	0.2833149	0.112	0.115	-0.069	0.11	163.63	67.58	181.33	103.67	0.95
M8	0.3220456	0.106	0.079	0.058	0.07	173.54	69.64	151.83	75.46	1.8

total var= 123.9366 pred var= 61.633
 percent total var predicted/var original= 49.7 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 25.0 m
 Mooring Number: 4212
 File Name: 4212-alh.nc

nobs = 2683, ngood = 2683, record length (days) = 111.79
 start time: 15-Jun-1993 19:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.185, x trend= 0

var(x)= 86.2953 var(xp)= 66.1934 var(xres)= 19.8952
 percent var predicted/var original= 76.7 %

y0= 0.532, x trend= 0

var(y)= 12.4096 var(yp)= 0.68513 var(yres)= 11.7387
 percent var predicted/var original= 5.5 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.184	0.850	0.078	0.81	100.96	177.57	327.15	192.55	0.047
MSF	0.0028219	1.066	1.015	-0.269	0.96	140.33	66.66	309.13	67.73	1.1
ALP1	0.0343966	0.302	0.325	-0.039	0.24	159.35	60.67	163.60	83.04	0.86
2Q1	0.0357064	0.220	0.305	-0.091	0.24	25.68	79.71	272.31	116.24	0.52
Q1	0.0372185	0.258	0.298	-0.205	0.27	175.65	125.22	332.74	158.12	0.75
O1	0.0387307	0.324	0.324	0.054	0.32	54.98	68.41	306.17	68.03	1
NO1	0.0402686	0.150	0.209	-0.094	0.18	16.17	72.19	345.94	129.43	0.51
*K1	0.0417807	0.678	0.245	-0.286	0.38	97.62	44.19	336.61	33.15	7.6
J1	0.0432929	0.206	0.269	0.009	0.23	169.13	83.07	10.20	145.08	0.59
OO1	0.0448308	0.376	0.318	-0.158	0.24	168.59	57.27	333.94	75.21	1.4
UPS1	0.0463430	0.249	0.294	-0.053	0.25	37.99	72.40	30.85	88.39	0.72
EPS2	0.0761773	0.345	0.447	-0.132	0.42	126.00	120.37	158.38	101.35	0.59
*MU2	0.0776895	1.261	0.588	-0.414	0.43	160.86	28.59	232.14	35.57	4.6
*N2	0.0789992	2.813	0.742	-0.409	0.47	2.51	9.77	177.89	13.02	14
*M2	0.0805114	10.812	0.638	-0.295	0.47	1.66	2.46	206.95	3.57	2.9e+002
L2	0.0820236	1.098	0.849	-0.236	0.57	167.74	31.15	81.32	40.01	1.7
*S2	0.0833333	1.623	0.649	0.016	0.45	11.97	17.00	258.10	20.67	6.2
ETA2	0.0850736	0.348	0.542	-0.153	0.51	27.27	80.94	225.67	122.34	0.41
MO3	0.1192421	0.230	0.242	-0.029	0.21	168.94	52.95	131.24	96.24	0.9
M3	0.1207671	0.139	0.205	-0.013	0.16	166.43	67.59	32.01	109.08	0.46
MK3	0.1222921	0.298	0.232	0.025	0.19	36.77	37.86	358.02	45.36	1.7
SK3	0.1251141	0.111	0.167	-0.038	0.18	122.15	119.63	43.28	134.78	0.44
MN4	0.1595106	0.292	0.293	-0.043	0.22	155.22	54.42	142.78	65.89	0.99
*M4	0.1610228	0.492	0.299	-0.053	0.24	153.21	34.99	197.88	43.12	2.7
SN4	0.1623326	0.343	0.273	0.049	0.26	170.19	45.56	179.06	74.40	1.6
MS4	0.1638447	0.277	0.238	-0.067	0.29	115.92	75.10	261.31	76.82	1.4
S4	0.1666667	0.108	0.222	0.037	0.19	167.00	103.79	271.67	190.80	0.24
2MK5	0.2028035	0.125	0.118	-0.043	0.11	39.86	75.20	331.81	93.80	1.1
2SK5	0.2084474	0.135	0.138	-0.042	0.11	28.03	84.40	293.86	81.92	0.96
2MN6	0.2400221	0.182	0.161	0.096	0.15	18.41	78.88	281.06	90.13	1.3
*M6	0.2415342	0.371	0.196	0.156	0.16	27.28	34.46	335.14	45.67	3.6
2MS6	0.2443561	0.213	0.183	-0.058	0.15	157.35	51.47	172.92	60.74	1.4
2SM6	0.2471781	0.067	0.123	0.012	0.14	75.05	139.99	330.12	140.54	0.29
3MK7	0.2833149	0.048	0.094	0.023	0.07	23.61	88.10	191.37	164.26	0.26
*M8	0.3220456	0.173	0.088	-0.016	0.06	173.50	24.61	149.73	30.58	3.8

total var= 98.7049 pred var= 66.8785
 percent total var predicted/var original= 67.8 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 25.0 m
 Mooring Number: 4292

File Name: 4292-alh.nc
 nobs = 519, ngood = 519, record length (days) = 21.63
 start time: 05-Oct-1993 18:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.0606, x trend= 0

var(x)= 74.4555 var(xp)= 46.1665 var(xres)= 32.7879
 percent var predicted/var original= 62.0 %

y0= 0.1, x trend= 0

var(y)= 11.7469 var(yp)= 1.0153 var(yres)= 10.9254
 percent var predicted/var original= 8.6 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MSF	0.0028219	1.478	2.218	-0.095	1.24	144.36	35.34	172.67	93.87	0.44
O1	0.0387307	0.947	0.954	-0.175	0.69	161.81	51.19	86.47	74.66	0.99
*K1	0.0417807	1.066	0.718	0.275	0.91	114.30	65.97	38.75	53.18	2.2
*M2	0.0805114	9.461	2.421	0.984	0.90	2.01	5.59	189.07	17.06	15
S2	0.0833333	2.345	2.252	0.223	1.21	19.31	26.36	211.33	66.64	1.1
M3	0.1207671	0.305	0.379	-0.202	0.28	7.22	63.45	16.78	137.12	0.65
SK3	0.1251141	0.514	0.518	-0.017	0.29	21.14	33.64	19.74	71.55	0.99
M4	0.1610228	0.868	0.917	-0.271	0.72	12.00	44.25	72.23	109.08	0.9
MS4	0.1638447	0.564	1.050	-0.389	0.73	39.77	66.73	107.28	148.39	0.29
S4	0.1666667	0.491	0.804	-0.293	0.62	177.90	71.21	73.31	190.24	0.37
2MK5	0.2028035	0.476	0.343	-0.039	0.36	141.79	45.25	77.26	45.30	1.9
2SK5	0.2084474	0.261	0.354	-0.159	0.30	141.46	108.42	211.70	132.52	0.54
M6	0.2415342	0.333	0.434	0.219	0.37	15.02	101.36	289.41	113.47	0.59
2MS6	0.2443561	0.119	0.378	0.050	0.35	94.44	122.05	6.21	156.71	0.099
2SM6	0.2471781	0.138	0.348	-0.059	0.38	176.49	128.68	58.24	224.93	0.16
3MK7	0.2833149	0.149	0.226	-0.101	0.20	70.57	132.10	322.09	149.73	0.44
M8	0.3220456	0.112	0.151	0.071	0.17	178.51	125.98	40.55	206.99	0.55

total var= 86.2024 pred var= 47.1818
 percent total var predicted/var original= 54.7 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 27.0 m
 Mooring Number: 4312
 File Name: 4312v2-alh.nc
 nobs = 546, ngood = 545, record length (days) = 22.75
 start time: 15-May-1994 19:00:00
 rayleigh criterion = 1.0
 Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -1.07, x trend= 0

var(x)= 59.8171 var(xp)= 33.5564 var(xres)= 29.0598
 percent var predicted/var original= 56.1 %

y0= 2.17, x trend= 0

var(y)= 22.0871 var(yp)= 2.4113 var(yres)= 19.6383
 percent var predicted/var original= 10.9 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MSF	0.0028219	2.033	1.610	-0.530	1.60	95.67	54.73	146.28	62.13	1.6
O1	0.0387307	0.985	0.787	-0.281	0.93	106.34	108.05	353.59	60.50	1.6
*K1	0.0417807	1.927	1.313	-0.801	0.78	16.55	38.08	345.22	59.83	2.2
*M2	0.0805114	7.644	3.282	1.813	1.39	1.13	12.60	209.10	26.67	5.4
S2	0.0833333	1.856	2.984	-0.541	1.54	2.46	38.37	273.71	111.94	0.39
M3	0.1207671	0.555	0.575	-0.255	0.44	47.60	81.22	209.67	83.64	0.93
SK3	0.1251141	0.466	0.593	-0.178	0.45	159.43	57.21	206.70	108.81	0.62
*M4	0.1610228	1.628	0.652	-0.467	0.55	177.86	21.62	204.17	25.40	6.2
*MS4	0.1638447	0.938	0.578	-0.468	0.52	148.13	49.48	270.39	55.08	2.6
S4	0.1666667	0.508	0.500	-0.123	0.46	54.58	79.01	56.42	76.55	1
2MK5	0.2028035	0.538	0.479	0.005	0.41	30.18	65.99	344.37	55.71	1.3
2SK5	0.2084474	0.304	0.424	0.032	0.39	158.93	106.94	62.45	128.75	0.52
M6	0.2415342	0.479	0.399	-0.121	0.30	174.37	47.76	168.59	82.76	1.4
2MS6	0.2443561	0.330	0.292	-0.011	0.34	59.63	74.52	317.67	72.57	1.3
2SM6	0.2471781	0.110	0.324	0.038	0.30	66.94	117.29	268.31	179.73	0.12
3MK7	0.2833149	0.270	0.324	-0.074	0.35	92.10	127.75	203.28	92.03	0.69
M8	0.3220456	0.095	0.166	0.042	0.15	105.54	114.72	35.16	115.91	0.33

total var= 81.9043 pred var= 35.9677
 percent total var predicted/var original= 43.9 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 21.5 m
 Mooring Number: 4411

File Name: 4411-alh.nc
 nobs = 2851, ngood = 2851, record length (days) = 118.79
 start time: 07-Jun-1994 18:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.638, x trend= 0

var(x)= 109.0098 var(xp)= 79.636 var(xres)= 29.3008
 percent var predicted/var original= 73.1 %

y0= 0.304, x trend= 0

var(y)= 18.4217 var(yp)= 0.66463 var(yres)= 17.7718
 percent var predicted/var original= 3.6 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.185	1.045	-0.180	1.01	134.40	64.85	37.04	63.97	1.3
MSF	0.0028219	0.650	0.972	0.044	0.80	169.06	79.72	188.78	102.83	0.45
ALP1	0.0343966	0.264	0.316	0.033	0.36	77.50	131.46	310.95	108.53	0.7
2Q1	0.0357064	0.079	0.355	0.063	0.32	151.14	111.91	287.71	183.22	0.05
Q1	0.0372185	0.208	0.333	0.021	0.36	74.73	137.37	1.43	119.15	0.39
O1	0.0387307	0.612	0.493	0.114	0.40	153.29	46.05	83.50	41.58	1.5
NO1	0.0402686	0.198	0.338	-0.052	0.29	5.04	83.58	239.60	144.63	0.34
*K1	0.0417807	0.641	0.371	-0.205	0.44	77.26	58.81	341.15	44.00	3
J1	0.0432929	0.214	0.402	0.001	0.32	168.58	86.41	44.10	134.67	0.28
OO1	0.0448308	0.219	0.468	-0.050	0.40	116.81	138.40	9.98	155.05	0.22
UPS1	0.0463430	0.268	0.502	-0.165	0.50	26.67	97.78	316.71	150.67	0.28
EPS2	0.0761773	0.996	0.956	-0.591	0.67	177.87	65.32	66.09	105.64	1.1
MU2	0.0776895	0.479	0.878	-0.007	0.57	166.27	63.97	134.06	158.93	0.3
*N2	0.0789992	2.035	1.031	0.482	0.68	171.48	21.93	346.29	33.54	3.9
*M2	0.0805114	12.241	1.155	-0.534	0.71	1.07	3.05	204.91	5.10	1.1e+002
L2	0.0820236	0.528	0.606	-0.068	0.67	91.33	154.78	291.12	88.00	0.76
S2	0.0833333	1.024	0.909	0.528	0.73	171.46	74.82	48.05	110.81	1.3
ETA2	0.0850736	0.390	1.140	0.240	0.84	133.31	85.83	176.18	156.93	0.12
MO3	0.1192421	0.240	0.234	-0.094	0.22	175.97	70.79	155.21	87.75	1.1
M3	0.1207671	0.174	0.205	0.024	0.19	154.38	76.70	6.40	91.32	0.72
MK3	0.1222921	0.243	0.205	0.005	0.24	60.08	69.81	342.10	73.00	1.4
SK3	0.1251141	0.182	0.221	-0.063	0.19	23.56	88.76	289.53	106.81	0.67
MN4	0.1595106	0.276	0.254	0.073	0.26	114.46	90.39	166.25	71.86	1.2
*M4	0.1610228	0.385	0.263	0.116	0.28	114.26	72.97	206.41	54.50	2.2
SN4	0.1623326	0.181	0.232	0.094	0.25	107.61	117.35	301.61	103.48	0.61
*MS4	0.1638447	0.426	0.276	-0.147	0.32	134.87	54.13	313.63	55.45	2.4
S4	0.1666667	0.148	0.284	-0.094	0.23	129.21	103.65	206.08	151.87	0.27
2MK5	0.2028035	0.143	0.128	-0.044	0.12	55.65	75.43	39.72	72.58	1.2
2SK5	0.2084474	0.074	0.120	-0.070	0.12	53.14	133.89	298.92	141.78	0.38
2MN6	0.2400221	0.101	0.132	-0.063	0.14	176.47	101.53	171.13	133.74	0.59
*M6	0.2415342	0.268	0.165	-0.067	0.14	34.96	41.13	337.19	44.70	2.6
2MS6	0.2443561	0.093	0.126	-0.040	0.12	97.27	132.89	4.20	105.53	0.55
2SM6	0.2471781	0.142	0.164	-0.043	0.12	12.17	67.71	44.74	96.37	0.76
3MK7	0.2833149	0.027	0.081	-0.013	0.08	25.17	125.67	319.23	189.92	0.11
M8	0.3220456	0.054	0.070	0.045	0.07	151.16	132.98	138.66	144.32	0.6

total var= 127.4314 pred var= 80.3006
 percent total var predicted/var original= 63.0 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 21.5 m
 Mooring Number: 4461

File Name: 4461-alh.nc
 nobs = 3188, ngood = 3187, record length (days) = 132.83
 start time: 04-Oct-1994 19:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.467, x trend= 0

var(x)= 70.5075 var(xp)= 55.8169 var(xres)= 14.7761
 percent var predicted/var original= 79.2 %

y0= 1.31, x trend= 0

var(y)= 17.1563 var(yp)= 0.83788 var(yres)= 16.3138
 percent var predicted/var original= 4.9 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.393	1.491	-0.113	1.34	141.42	72.94	40.18	72.47	0.87
MSF	0.0028219	0.737	1.277	-0.044	1.17	132.95	115.99	23.93	124.37	0.33
ALP1	0.0343966	0.184	0.313	-0.020	0.33	6.04	117.47	58.12	140.31	0.34
2Q1	0.0357064	0.286	0.330	-0.071	0.37	22.06	108.32	274.21	106.18	0.75
Q1	0.0372185	0.292	0.357	0.199	0.37	177.50	125.47	358.49	119.44	0.67
*O1	0.0387307	0.644	0.409	-0.004	0.40	168.47	48.44	109.84	42.14	2.5
NO1	0.0402686	0.454	0.374	-0.187	0.43	113.31	74.42	230.48	76.22	1.5
*K1	0.0417807	0.614	0.434	0.196	0.42	165.21	50.09	61.57	52.83	2
J1	0.0432929	0.277	0.371	-0.153	0.35	115.52	116.47	119.22	111.72	0.56
OO1	0.0448308	0.514	0.663	-0.118	0.59	156.25	89.16	218.62	92.59	0.6
UPS1	0.0463430	0.784	0.680	-0.153	0.65	148.91	57.67	209.50	61.12	1.3
EPS2	0.0761773	0.295	0.315	-0.002	0.27	23.98	78.33	114.81	78.43	0.88
*MU2	0.0776895	0.499	0.352	-0.076	0.25	9.98	41.46	145.62	45.70	2
*N2	0.0789992	2.353	0.375	-0.048	0.30	7.80	6.97	170.40	8.86	39
*M2	0.0805114	9.862	0.349	0.116	0.28	6.48	1.88	196.66	2.04	8e+002
L2	0.0820236	0.345	0.280	0.098	0.25	15.32	60.37	252.59	63.29	1.5
*S2	0.0833333	1.747	0.344	-0.182	0.33	2.52	11.41	234.55	11.01	26
ETA2	0.0850736	0.292	0.391	-0.089	0.39	96.73	114.83	324.72	113.28	0.56
MO3	0.1192421	0.148	0.132	0.020	0.12	142.80	66.77	277.06	68.31	1.3
M3	0.1207671	0.140	0.106	-0.045	0.12	53.89	68.80	140.03	66.57	1.7
MK3	0.1222921	0.080	0.116	0.020	0.13	95.23	122.49	105.86	109.17	0.48
SK3	0.1251141	0.058	0.105	-0.013	0.11	150.31	112.51	263.08	144.93	0.31
MN4	0.1595106	0.079	0.115	-0.033	0.11	165.68	106.55	232.86	117.67	0.47
*M4	0.1610228	0.471	0.151	-0.079	0.13	26.07	18.25	66.55	18.24	9.7
SN4	0.1623326	0.109	0.108	0.019	0.11	35.69	78.41	200.28	78.02	1
MS4	0.1638447	0.134	0.114	-0.035	0.12	28.36	80.62	103.40	80.08	1.4
S4	0.1666667	0.130	0.128	-0.002	0.12	149.56	72.06	312.07	65.87	1
2MK5	0.2028035	0.077	0.068	-0.020	0.08	112.74	85.17	227.45	71.69	1.3
2SK5	0.2084474	0.043	0.067	-0.006	0.06	74.29	122.04	42.15	124.59	0.41
*2MN6	0.2400221	0.206	0.098	0.026	0.09	32.36	26.25	309.04	28.95	4.4
*M6	0.2415342	0.390	0.096	0.004	0.09	29.03	12.37	341.84	15.29	16
2MS6	0.2443561	0.088	0.084	-0.006	0.08	37.84	61.55	12.86	69.85	1.1
2SM6	0.2471781	0.041	0.065	0.012	0.05	177.72	85.79	12.09	128.72	0.39
3MK7	0.2833149	0.052	0.058	0.023	0.05	14.98	90.67	50.17	101.98	0.79
*M8	0.3220456	0.080	0.041	-0.032	0.04	132.92	48.04	175.59	44.72	3.8

total var= 87.6638 pred var= 56.6548
 percent total var predicted/var original= 64.6 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 21.5 m
 Mooring Number: 4524
 File Name: 4524-alh.nc

nobs = 2850, ngood = 2849, record length (days) = 118.75
 start time: 14-Feb-1995 20:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.276, x trend= 0

var(x)= 74.9419 var(xp)= 57.4925 var(xres)= 17.2957
 percent var predicted/var original= 76.7 %

y0= 0.263, x trend= 0

var(y)= 14.2083 var(yp)= 0.62856 var(yres)= 13.5862
 percent var predicted/var original= 4.4 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.150	1.439	-0.222	1.28	65.31	79.95	25.51	94.71	0.64
MSF	0.0028219	0.656	1.228	0.430	1.28	82.57	120.27	9.16	167.26	0.29
ALP1	0.0343966	0.265	0.434	0.018	0.42	140.52	91.78	245.49	129.58	0.37
2Q1	0.0357064	0.561	0.506	-0.200	0.45	130.64	74.64	253.46	68.44	1.2
Q1	0.0372185	0.378	0.498	-0.018	0.40	163.36	76.24	51.31	100.52	0.58
O1	0.0387307	0.659	0.530	-0.065	0.48	17.53	49.32	260.06	56.71	1.5
NO1	0.0402686	0.205	0.426	0.050	0.42	94.13	149.47	2.22	151.40	0.23
*K1	0.0417807	1.297	0.585	-0.764	0.44	176.91	38.47	120.41	47.30	4.9
J1	0.0432929	0.416	0.514	-0.054	0.40	166.99	61.96	126.97	122.87	0.66
OO1	0.0448308	0.301	0.823	-0.062	0.73	46.82	103.78	111.13	150.36	0.13
UPS1	0.0463430	0.769	0.959	-0.351	0.84	149.88	79.41	322.09	97.99	0.64
EPS2	0.0761773	0.297	0.387	-0.210	0.42	80.13	151.90	327.10	127.39	0.59
MU2	0.0776895	0.359	0.441	-0.052	0.32	170.76	61.69	219.48	105.94	0.66
*N2	0.0789992	2.179	0.577	0.151	0.43	173.08	11.79	344.93	13.22	14
*M2	0.0805114	9.905	0.532	0.167	0.42	2.78	2.43	195.02	3.34	3.5e+002
L2	0.0820236	0.447	0.396	-0.210	0.42	42.19	66.29	251.41	87.15	1.3
*S2	0.0833333	1.903	0.600	0.116	0.38	177.82	13.02	54.94	18.36	10
ETA2	0.0850736	0.636	0.731	-0.190	0.55	157.40	68.43	148.47	102.90	0.76
MO3	0.1192421	0.257	0.241	-0.002	0.20	2.97	49.52	73.65	76.90	1.1
M3	0.1207671	0.127	0.199	-0.085	0.17	143.55	101.98	195.62	163.87	0.41
MK3	0.1222921	0.096	0.195	-0.092	0.18	126.57	116.90	120.46	177.90	0.24
SK3	0.1251141	0.124	0.205	-0.066	0.20	13.46	76.61	23.13	146.90	0.37
*MN4	0.1595106	0.307	0.172	-0.221	0.17	54.93	78.12	19.92	75.89	3.2
*M4	0.1610228	0.660	0.204	-0.308	0.19	38.05	21.68	62.00	24.70	10
SN4	0.1623326	0.211	0.173	-0.068	0.16	140.80	59.11	31.44	63.81	1.5
MS4	0.1638447	0.233	0.177	-0.162	0.17	41.55	83.75	56.84	86.62	1.7
S4	0.1666667	0.082	0.173	-0.077	0.15	134.72	123.05	339.70	170.60	0.23
2MK5	0.2028035	0.061	0.101	-0.009	0.09	12.79	76.58	257.57	114.10	0.36
2SK5	0.2084474	0.060	0.106	-0.013	0.10	170.33	90.67	324.32	153.97	0.32
*2MN6	0.2400221	0.225	0.126	0.013	0.11	17.62	32.32	291.16	43.38	3.2
*M6	0.2415342	0.403	0.140	0.003	0.13	19.21	15.77	315.42	23.63	8.3
2MS6	0.2443561	0.126	0.117	-0.024	0.12	60.44	72.55	36.05	72.20	1.2
2SM6	0.2471781	0.044	0.100	-0.003	0.09	8.44	71.45	90.24	237.64	0.19
3MK7	0.2833149	0.076	0.084	0.015	0.08	152.25	76.56	94.90	89.74	0.81
M8	0.3220456	0.039	0.050	-0.026	0.06	111.91	128.68	209.93	121.26	0.6

total var= 89.1502 pred var= 58.121
 percent total var predicted/var original= 65.2 %

Tidal Analysis of Current at LT-A
Point Current-Meter Observations, 21.5 m
Mooring Number: 4592

File Name: 4592-alh.nc

nobs = 2517, ngood = 2517, record length (days) = 104.88

start time: 13-Jun-1995 18:00:00

rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.922, x trend= 0

var(x)= 158.2416 var(xp)= 114.6574 var(xres)= 43.0427

percent var predicted/var original= 72.5 %

y0= -0.0324, x trend= 0

var(y)= 18.4231 var(yp)= 1.1256 var(yres)= 17.3115

percent var predicted/var original= 6.1 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.701	1.007	0.095	1.12	125.60	101.00	200.22	123.46	0.48
MSF	0.0028219	1.701	1.278	-0.032	1.60	117.01	57.96	80.55	51.69	1.8
ALP1	0.0343966	0.280	0.408	-0.174	0.42	123.68	121.93	57.64	129.96	0.47
2Q1	0.0357064	0.247	0.485	0.056	0.37	12.42	87.15	146.11	153.42	0.26
Q1	0.0372185	0.249	0.431	-0.100	0.36	121.71	111.80	197.01	110.64	0.33
O1	0.0387307	0.473	0.481	0.283	0.44	10.67	71.40	257.71	113.23	0.97
NO1	0.0402686	0.459	0.430	-0.290	0.55	92.56	136.17	337.84	84.83	1.1
*K1	0.0417807	1.264	0.406	-0.664	0.59	77.80	47.72	353.09	35.70	9.7
J1	0.0432929	0.426	0.436	-0.244	0.43	149.16	68.30	251.85	107.55	0.95
OO1	0.0448308	0.547	0.802	-0.335	0.71	133.25	77.98	319.40	121.05	0.46
UPS1	0.0463430	0.233	0.776	-0.080	0.57	24.24	76.82	48.42	186.62	0.09
EPS2	0.0761773	0.560	1.161	-0.120	0.80	165.25	53.60	259.34	139.06	0.23
MU2	0.0776895	0.750	1.162	0.138	0.85	170.50	56.53	329.23	129.20	0.42
*N2	0.0789992	3.318	1.762	-0.357	0.77	177.25	13.94	343.35	27.56	3.5
*M2	0.0805114	14.354	1.617	-0.719	0.91	177.90	3.48	23.01	6.44	79
L2	0.0820236	1.057	1.146	-0.116	0.71	164.96	39.27	86.66	84.57	0.85
S2	0.0833333	2.122	1.748	-0.281	0.93	0.29	26.40	247.06	52.16	1.5
ETA2	0.0850736	0.812	1.696	-0.211	1.17	20.06	60.02	257.12	169.89	0.23
MO3	0.1192421	0.260	0.323	-0.138	0.25	1.77	82.82	335.49	124.67	0.65
M3	0.1207671	0.111	0.242	-0.052	0.19	141.17	125.17	191.69	125.50	0.21
MK3	0.1222921	0.218	0.259	-0.005	0.24	58.74	93.18	348.89	94.60	0.7
SK3	0.1251141	0.124	0.257	0.080	0.22	157.52	88.95	289.49	155.13	0.23
MN4	0.1595106	0.140	0.273	0.068	0.24	74.30	118.58	197.87	147.91	0.26
M4	0.1610228	0.445	0.318	-0.107	0.35	58.89	48.39	203.69	50.41	2
SN4	0.1623326	0.130	0.251	-0.081	0.25	166.22	82.65	22.32	190.03	0.27
MS4	0.1638447	0.338	0.330	-0.150	0.24	156.93	60.77	165.75	84.62	1.1
S4	0.1666667	0.205	0.326	-0.027	0.25	167.10	77.96	224.26	159.33	0.4
2MK5	0.2028035	0.044	0.126	-0.006	0.12	133.33	127.52	66.60	182.43	0.12
2SK5	0.2084474	0.106	0.140	-0.011	0.14	23.14	90.39	292.88	121.51	0.57
2MN6	0.2400221	0.059	0.123	-0.029	0.11	62.32	107.52	305.03	144.40	0.23
*M6	0.2415342	0.331	0.156	-0.019	0.11	11.79	18.94	344.03	27.57	4.5
2MS6	0.2443561	0.103	0.112	-0.001	0.13	77.76	126.20	349.51	88.03	0.85
2SM6	0.2471781	0.130	0.143	-0.005	0.11	18.41	50.49	253.84	98.29	0.83
3MK7	0.2833149	0.080	0.102	0.009	0.12	10.78	92.15	21.90	109.56	0.62
M8	0.3220456	0.064	0.068	0.012	0.07	92.95	113.66	82.07	92.41	0.89

total var= 176.6647 pred var= 115.783

percent total var predicted/var original= 65.5 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 21.5 m
 Mooring Number: 4633
 File Name: 4633-alh.nc

nobs = 3382, ngood = 3381, record length (days) = 140.92
 start time: 26-Sep-1995 16:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.481, x trend= 0

var(x)= 63.1285 var(xp)= 48.6886 var(xres)= 14.4358
 percent var predicted/var original= 77.1 %

y0= 0.00397, x trend= 0

var(y)= 23.9051 var(yp)= 2.5591 var(yres)= 21.363
 percent var predicted/var original= 10.7 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.307	0.780	0.072	0.71	42.91	66.79	178.58	176.14	0.16
*MSF	0.0028219	1.723	1.119	0.159	0.84	120.15	24.84	143.62	42.23	2.4
ALP1	0.0343966	0.412	0.430	-0.302	0.42	41.29	102.08	142.05	112.31	0.92
2Q1	0.0357064	0.402	0.417	0.029	0.33	105.42	48.75	336.31	84.66	0.93
Q1	0.0372185	0.355	0.404	-0.035	0.38	144.85	86.61	58.38	75.71	0.77
*O1	0.0387307	0.714	0.365	-0.266	0.39	163.85	57.64	93.63	50.04	3.8
NO1	0.0402686	0.296	0.428	-0.121	0.35	111.71	78.50	348.66	136.32	0.48
K1	0.0417807	0.482	0.390	0.069	0.40	138.77	57.07	89.76	56.66	1.5
J1	0.0432929	0.149	0.369	-0.027	0.27	101.40	92.96	15.75	156.01	0.16
OO1	0.0448308	0.369	0.607	-0.175	0.59	42.76	103.13	197.80	150.83	0.37
UPS1	0.0463430	0.640	0.732	-0.099	0.62	106.11	67.94	334.31	82.22	0.76
EPS2	0.0761773	0.195	0.237	-0.091	0.26	160.13	116.03	156.99	105.29	0.68
*MU2	0.0776895	0.419	0.246	-0.072	0.32	163.09	46.17	276.49	42.50	2.9
*N2	0.0789992	2.107	0.266	-0.115	0.30	12.81	8.33	175.33	6.55	63
*M2	0.0805114	9.207	0.242	-0.142	0.35	9.19	1.90	198.60	1.44	1.4e+003
L2	0.0820236	0.217	0.188	-0.099	0.19	1.50	97.56	220.91	83.48	1.3
*S2	0.0833333	1.661	0.261	-0.262	0.32	9.03	11.75	230.00	8.49	40
ETA2	0.0850736	0.160	0.339	0.030	0.32	96.41	95.70	282.34	155.05	0.22
MO3	0.1192421	0.080	0.125	-0.034	0.12	51.30	107.93	271.33	102.16	0.41
*M3	0.1207671	0.159	0.106	0.015	0.11	133.35	47.53	314.11	44.48	2.2
MK3	0.1222921	0.110	0.114	-0.007	0.11	153.41	80.88	162.81	68.72	0.93
SK3	0.1251141	0.081	0.118	0.052	0.11	22.42	76.59	308.28	135.48	0.47
*MN4	0.1595106	0.254	0.133	0.037	0.11	176.31	28.81	228.31	36.34	3.7
*M4	0.1610228	0.377	0.145	0.046	0.11	166.18	17.79	238.69	25.33	6.8
SN4	0.1623326	0.141	0.129	-0.037	0.12	162.75	51.49	300.47	66.16	1.2
*MS4	0.1638447	0.266	0.125	-0.020	0.11	177.44	26.63	312.64	34.31	4.6
S4	0.1666667	0.146	0.125	-0.041	0.13	147.75	60.33	253.32	64.49	1.4
*2MK5	0.2028035	0.122	0.064	-0.004	0.07	113.64	36.96	241.85	38.76	3.6
2SK5	0.2084474	0.100	0.078	-0.047	0.07	5.05	69.95	105.50	66.73	1.6
*2MN6	0.2400221	0.234	0.101	0.015	0.07	21.58	18.86	303.11	24.93	5.4
*M6	0.2415342	0.324	0.092	0.122	0.07	21.22	16.51	331.85	21.63	12
*2MS6	0.2443561	0.132	0.054	0.097	0.08	86.97	95.04	36.89	76.66	6
*2SM6	0.2471781	0.118	0.081	-0.003	0.11	54.50	48.08	41.89	48.33	2.1
3MK7	0.2833149	0.032	0.047	-0.005	0.04	63.68	110.76	323.39	111.95	0.47
*M8	0.3220456	0.051	0.033	-0.014	0.04	78.95	71.59	211.67	53.12	2.4

total var= 87.0336 pred var= 51.2477
 percent total var predicted/var original= 58.9 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.3 m
 Mooring Number: 4662
 File Name: 4662-alh.nc

nobs = 2828, ngood = 2827, record length (days) = 117.83
 start time: 14-Feb-1996 17:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.374, x trend= 0

var(x)= 68.6864 var(xp)= 51.0379 var(xres)= 17.677
 percent var predicted/var original= 74.3 %

y0= -0.0984, x trend= 0

var(y)= 17.7084 var(yp)= 1.6733 var(yres)= 16.0285
 percent var predicted/var original= 9.4 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.828	1.329	0.045	1.12	125.08	30.83	145.18	42.58	1.9
MSF	0.0028219	0.526	1.016	0.083	0.69	93.13	59.57	267.19	138.52	0.27
ALP1	0.0343966	0.425	0.505	-0.291	0.53	90.66	110.00	336.84	123.59	0.71
2Q1	0.0357064	0.285	0.464	-0.261	0.47	120.92	129.47	205.57	148.08	0.38
Q1	0.0372185	0.321	0.449	-0.125	0.52	119.50	117.41	171.34	145.45	0.51
O1	0.0387307	0.790	0.680	-0.047	0.59	10.50	42.41	270.70	59.46	1.3
NO1	0.0402686	0.236	0.497	-0.114	0.45	117.98	132.34	145.18	169.57	0.23
*K1	0.0417807	0.819	0.517	-0.542	0.48	166.96	79.63	162.36	81.38	2.5
J1	0.0432929	0.307	0.391	-0.068	0.47	117.77	122.47	215.98	131.20	0.62
OO1	0.0448308	0.811	0.958	-0.458	0.95	166.11	98.01	341.11	116.04	0.72
UPS1	0.0463430	0.643	1.021	-0.196	0.83	7.31	90.08	26.21	117.06	0.4
EPS2	0.0761773	0.157	0.359	-0.051	0.30	179.47	122.95	228.27	225.12	0.19
MU2	0.0776895	0.303	0.358	-0.066	0.31	93.94	95.39	194.74	109.67	0.72
*N2	0.0789992	1.854	0.456	-0.234	0.46	12.62	15.73	162.12	14.46	17
*M2	0.0805114	9.461	0.518	-0.151	0.44	9.29	2.81	196.76	2.86	3.3e+002
*L2	0.0820236	0.663	0.373	-0.043	0.39	10.70	37.00	266.77	34.83	3.2
*S2	0.0833333	1.380	0.488	0.130	0.39	12.39	19.55	225.09	19.82	8
*ETA2	0.0850736	1.162	0.622	-0.480	0.67	3.54	47.26	275.66	58.32	3.5
MO3	0.1192421	0.239	0.251	0.007	0.20	0.11	61.81	43.50	76.19	0.91
M3	0.1207671	0.087	0.173	-0.056	0.16	116.75	126.50	345.66	146.80	0.25
MK3	0.1222921	0.168	0.195	0.031	0.23	67.46	102.27	291.00	93.48	0.74
SK3	0.1251141	0.186	0.227	-0.105	0.21	35.13	101.00	102.65	117.05	0.67
MN4	0.1595106	0.299	0.246	0.105	0.18	172.93	44.05	260.87	59.38	1.5
*M4	0.1610228	0.592	0.246	-0.186	0.19	171.98	20.89	270.37	25.04	5.8
SN4	0.1623326	0.162	0.172	-0.069	0.16	24.09	75.12	181.70	115.04	0.88
MS4	0.1638447	0.175	0.191	-0.128	0.17	147.89	94.90	305.52	112.47	0.84
S4	0.1666667	0.094	0.165	0.019	0.15	40.43	98.73	125.79	157.77	0.32
2MK5	0.2028035	0.096	0.144	-0.033	0.12	168.17	80.70	135.54	111.13	0.45
2SK5	0.2084474	0.065	0.114	0.049	0.13	115.19	126.67	326.34	140.86	0.33
2MN6	0.2400221	0.091	0.101	0.039	0.10	49.08	98.79	304.89	85.83	0.82
*M6	0.2415342	0.416	0.133	0.152	0.11	17.42	20.74	318.35	22.39	9.8
2MS6	0.2443561	0.118	0.120	-0.024	0.10	1.69	56.41	38.90	93.45	0.96
2SM6	0.2471781	0.149	0.127	-0.053	0.10	0.52	51.75	225.29	70.13	1.4
3MK7	0.2833149	0.056	0.092	-0.009	0.08	111.11	123.40	0.32	134.75	0.38
M8	0.3220456	0.027	0.047	-0.004	0.05	51.73	101.04	202.55	126.31	0.34

total var= 86.3948 pred var= 52.7112
 percent total var predicted/var original= 61.0 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.5 m
 Mooring Number: 4683
 File Name: 4683-alh.nc
 nobs = 2682, ngood = 2681, record length (days) = 111.75
 start time: 11-Jun-1996 19:00:00
 rayleigh criterion = 1.0
 Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.906, x trend= 0

var(x)= 102.5188 var(xp)= 75.803 var(xres)= 27.2374
 percent var predicted/var original= 73.9 %

y0= -0.0434, x trend= 0

var(y)= 29.4884 var(yp)= 3.1516 var(yres)= 26.3495
 percent var predicted/var original= 10.7 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.445	1.199	-0.624	1.10	116.46	56.32	205.42	70.44	1.5
MSF	0.0028219	1.401	1.100	-0.251	1.17	145.51	59.42	301.17	56.67	1.6
ALP1	0.0343966	0.369	0.470	0.036	0.48	74.90	95.31	318.20	109.13	0.62
2Q1	0.0357064	0.517	0.516	-0.197	0.44	17.51	81.51	63.62	82.63	1
Q1	0.0372185	0.189	0.425	0.079	0.43	138.83	123.75	104.54	182.39	0.2
*O1	0.0387307	0.980	0.612	-0.375	0.56	23.64	45.83	260.55	47.33	2.6
NO1	0.0402686	0.556	0.444	-0.373	0.48	145.85	82.12	12.84	86.33	1.6
*K1	0.0417807	0.842	0.526	-0.316	0.47	63.29	50.85	356.29	50.03	2.6
J1	0.0432929	0.538	0.432	-0.379	0.50	129.11	103.89	7.97	97.90	1.5
OO1	0.0448308	1.026	0.880	-0.922	0.90	153.43	119.17	116.22	126.85	1.4
UPS1	0.0463430	0.443	0.784	-0.095	0.69	110.09	120.35	294.70	125.21	0.32
EPS2	0.0761773	0.534	0.791	-0.104	0.51	2.75	62.15	317.00	115.99	0.46
MU2	0.0776895	0.687	0.726	-0.281	0.55	2.37	64.09	32.87	96.89	0.9
*N2	0.0789992	2.348	0.862	0.037	0.62	7.97	16.64	160.16	24.08	7.4
*M2	0.0805114	11.517	0.991	-1.047	0.57	9.40	3.46	205.93	4.42	1.4e+002
L2	0.0820236	0.970	0.705	-0.113	0.61	154.64	43.14	49.77	49.78	1.9
*S2	0.0833333	2.046	1.007	-0.214	0.73	13.13	20.70	251.56	27.75	4.1
ETA2	0.0850736	0.985	1.120	-0.719	1.16	110.14	109.67	90.24	98.58	0.77
MO3	0.1192421	0.227	0.277	0.025	0.22	176.27	62.57	121.21	117.48	0.67
M3	0.1207671	0.208	0.216	0.037	0.18	161.66	58.28	210.79	86.33	0.92
MK3	0.1222921	0.192	0.244	-0.103	0.23	29.66	87.80	320.78	125.14	0.62
SK3	0.1251141	0.240	0.227	-0.066	0.24	49.73	78.98	2.89	77.28	1.1
MN4	0.1595106	0.213	0.224	0.009	0.22	43.11	80.57	71.33	78.40	0.91
*M4	0.1610228	0.476	0.221	0.191	0.25	152.29	39.13	259.40	41.48	4.7
SN4	0.1623326	0.215	0.223	-0.151	0.23	108.53	132.73	143.48	110.71	0.93
*MS4	0.1638447	0.289	0.190	0.175	0.24	76.49	85.80	202.40	70.12	2.3
S4	0.1666667	0.160	0.226	-0.063	0.21	32.30	85.68	198.07	114.75	0.5
*2MK5	0.2028035	0.220	0.145	-0.089	0.17	138.52	51.97	282.25	59.82	2.3
2SK5	0.2084474	0.167	0.176	0.007	0.14	159.50	53.55	181.29	82.31	0.9
*2MN6	0.2400221	0.222	0.138	-0.033	0.14	40.54	47.93	311.99	40.87	2.6
*M6	0.2415342	0.325	0.162	0.068	0.16	25.56	30.53	348.10	32.98	4
2MS6	0.2443561	0.115	0.131	0.008	0.13	20.58	83.65	34.49	95.01	0.76
2SM6	0.2471781	0.124	0.139	0.085	0.13	172.25	100.83	209.80	111.55	0.79
3MK7	0.2833149	0.022	0.086	0.007	0.07	48.72	108.31	218.83	204.60	0.064
*M8	0.3220456	0.148	0.068	0.072	0.08	73.77	45.52	81.85	38.15	4.8

total var= 132.0072 pred var= 78.9546
 percent total var predicted/var original= 59.8 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 21.5 m
 Mooring Number: 4781

File Name: 4781-alh_dl.nc
 nobs = 3212, ngood = 3211, record length (days) = 133.83
 start time: 01-Oct-1996 18:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.265, x trend= 0

var(x)= 67.9157 var(xp)= 50.4306 var(xres)= 17.3893
 percent var predicted/var original= 74.3 %

y0= 0.88, x trend= 0

var(y)= 20.0839 var(yp)= 0.82617 var(yres)= 19.2737
 percent var predicted/var original= 4.1 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	2.034	1.819	-0.225	1.76	130.06	63.42	181.37	53.69	1.3
MSF	0.0028219	1.403	1.486	-0.332	1.51	141.83	83.76	321.06	108.79	0.89
ALP1	0.0343966	0.477	0.520	-0.043	0.49	6.26	92.14	7.13	76.75	0.84
2Q1	0.0357064	0.211	0.435	-0.150	0.48	139.55	115.21	136.40	169.42	0.24
Q1	0.0372185	0.128	0.480	0.011	0.39	85.85	115.05	333.66	180.61	0.071
O1	0.0387307	0.278	0.433	0.051	0.43	139.63	120.52	6.81	135.21	0.41
NO1	0.0402686	0.170	0.337	-0.052	0.35	124.78	114.63	335.73	173.18	0.25
K1	0.0417807	0.534	0.450	-0.016	0.48	36.24	73.00	315.26	60.34	1.4
J1	0.0432929	0.570	0.519	-0.324	0.55	144.16	84.57	148.57	84.38	1.2
OO1	0.0448308	0.411	0.618	-0.083	0.73	51.85	97.97	117.97	136.68	0.44
UPS1	0.0463430	0.431	0.767	0.054	0.61	47.54	105.69	226.43	137.49	0.32
EPS2	0.0761773	0.248	0.333	0.109	0.29	100.87	89.23	187.67	122.12	0.55
MU2	0.0776895	0.270	0.315	-0.075	0.28	132.47	92.44	282.75	93.78	0.74
*N2	0.0789992	2.109	0.406	-0.158	0.44	15.65	11.52	166.45	10.16	27
*M2	0.0805114	9.395	0.392	-0.213	0.44	6.08	2.62	195.43	2.32	5.8e+002
L2	0.0820236	0.260	0.316	0.030	0.30	155.63	96.61	65.82	92.26	0.67
*S2	0.0833333	1.616	0.381	-0.152	0.45	6.96	16.54	230.85	14.25	18
ETA2	0.0850736	0.291	0.500	-0.265	0.51	102.69	133.53	343.34	170.40	0.34
MO3	0.1192421	0.162	0.191	-0.075	0.21	44.58	97.12	280.55	118.71	0.72
M3	0.1207671	0.048	0.157	0.010	0.13	25.80	93.92	177.93	207.77	0.094
MK3	0.1222921	0.091	0.170	0.028	0.15	138.42	111.60	308.90	153.87	0.29
SK3	0.1251141	0.222	0.228	0.019	0.19	0.84	66.51	132.96	93.88	0.94
MN4	0.1595106	0.167	0.147	0.050	0.14	12.09	61.11	90.03	63.53	1.3
*M4	0.1610228	0.494	0.159	-0.124	0.14	176.55	19.63	248.88	21.56	9.7
SN4	0.1623326	0.102	0.123	0.022	0.14	67.33	105.58	322.04	107.40	0.69
MS4	0.1638447	0.190	0.144	-0.027	0.13	173.42	57.80	258.99	70.50	1.7
S4	0.1666667	0.100	0.128	-0.083	0.13	154.25	122.53	148.33	143.68	0.6
2MK5	0.2028035	0.105	0.111	-0.004	0.11	169.31	80.98	168.13	116.48	0.9
2SK5	0.2084474	0.126	0.118	-0.010	0.13	24.90	74.22	359.22	80.89	1.2
*2MN6	0.2400221	0.145	0.092	0.080	0.11	45.57	72.68	307.45	68.99	2.5
*M6	0.2415342	0.463	0.105	0.157	0.11	30.59	16.63	339.80	15.94	19
2MS6	0.2443561	0.116	0.104	-0.031	0.09	51.64	65.13	39.85	73.89	1.2
2SM6	0.2471781	0.041	0.094	-0.016	0.09	143.10	120.41	338.86	178.97	0.19
3MK7	0.2833149	0.084	0.070	0.031	0.08	51.61	79.76	316.16	77.73	1.4
M8	0.3220456	0.068	0.052	0.015	0.05	115.25	58.75	102.84	51.72	1.7

total var= 87.9996 pred var= 51.2567
 percent total var predicted/var original= 58.2 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.4 m
 Mooring Number: 4962

File Name: 4962-alh_dl.nc
 nobs = 2830, ngood = 2829, record length (days) = 117.92
 start time: 12-Feb-1997 16:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.295, x trend= 0

var(x)= 69.763 var(xp)= 49.0002 var(xres)= 20.6425
 percent var predicted/var original= 70.2 %

y0= -0.453, x trend= 0

var(y)= 21.183 var(yp)= 3.9332 var(yres)= 17.2703
 percent var predicted/var original= 18.6 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.773	1.289	0.091	1.31	166.38	109.03	142.07	159.47	0.36
MSF	0.0028219	0.806	1.388	0.076	1.34	138.50	117.62	156.79	154.63	0.34
ALP1	0.0343966	0.441	0.447	-0.069	0.45	144.71	88.19	257.90	91.25	0.97
2Q1	0.0357064	0.279	0.410	-0.129	0.44	84.16	123.22	133.58	134.26	0.46
Q1	0.0372185	0.563	0.534	-0.258	0.50	102.71	79.87	128.23	77.05	1.1
*O1	0.0387307	0.822	0.534	-0.436	0.50	177.70	69.35	83.18	66.30	2.4
NO1	0.0402686	0.322	0.400	-0.026	0.35	72.66	85.95	271.01	81.20	0.65
*K1	0.0417807	1.126	0.443	-0.737	0.44	25.09	57.31	290.01	51.17	6.5
J1	0.0432929	0.377	0.434	0.190	0.46	145.25	96.12	300.14	114.52	0.75
OO1	0.0448308	0.341	0.658	-0.153	0.52	22.41	118.79	109.52	139.36	0.27
UPS1	0.0463430	1.000	0.811	-0.386	0.74	119.13	59.08	226.07	67.28	1.5
EPS2	0.0761773	0.171	0.316	-0.094	0.31	20.19	103.85	304.50	154.29	0.29
MU2	0.0776895	0.489	0.366	-0.245	0.37	141.24	71.58	7.98	70.51	1.8
*N2	0.0789992	1.904	0.446	-0.244	0.37	15.31	11.29	159.12	13.56	18
*M2	0.0805114	9.403	0.496	-0.091	0.41	14.70	2.17	197.43	3.10	3.6e+002
L2	0.0820236	0.495	0.370	-0.235	0.42	103.56	93.60	42.65	63.68	1.8
*S2	0.0833333	1.822	0.488	-0.156	0.36	20.20	11.50	228.15	14.43	14
ETA2	0.0850736	0.771	0.667	-0.347	0.61	24.77	75.35	149.42	82.28	1.3
MO3	0.1192421	0.216	0.183	0.063	0.21	112.20	81.42	217.21	70.77	1.4
M3	0.1207671	0.148	0.166	0.078	0.15	123.21	93.04	65.46	101.66	0.8
MK3	0.1222921	0.161	0.159	0.024	0.16	84.22	84.17	282.02	88.25	1
SK3	0.1251141	0.113	0.190	0.028	0.17	95.48	117.53	329.87	124.24	0.35
*MN4	0.1595106	0.222	0.152	-0.061	0.17	179.49	49.65	230.98	51.58	2.1
*M4	0.1610228	0.429	0.160	0.015	0.17	167.98	26.42	245.20	24.89	7.2
*SN4	0.1623326	0.209	0.145	-0.122	0.14	76.77	69.64	65.50	77.05	2.1
*MS4	0.1638447	0.303	0.174	-0.007	0.15	172.30	30.63	288.66	30.75	3
S4	0.1666667	0.153	0.149	-0.062	0.16	1.16	71.65	14.48	84.46	1.1
2MK5	0.2028035	0.098	0.111	-0.061	0.11	139.69	103.85	235.66	111.38	0.78
2SK5	0.2084474	0.062	0.107	-0.015	0.09	51.30	124.57	162.89	129.57	0.33
*2MN6	0.2400221	0.165	0.098	0.142	0.09	65.14	110.01	327.94	99.09	2.8
*M6	0.2415342	0.362	0.097	0.169	0.11	54.97	27.48	347.96	26.25	14
*2MS6	0.2443561	0.158	0.095	-0.029	0.11	89.27	47.61	82.75	48.33	2.8
2SM6	0.2471781	0.049	0.093	0.001	0.08	47.98	115.38	78.67	153.80	0.27
3MK7	0.2833149	0.070	0.080	0.018	0.07	160.69	73.48	192.84	98.04	0.76
M8	0.3220456	0.051	0.051	0.005	0.04	6.65	61.44	336.25	71.77	1

total var= 90.9461 pred var= 52.9334
 percent total var predicted/var original= 58.2 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.4 m
 Mooring Number: 5022
 File Name: 5022-alh_dl.nc
 nobs = 2518, ngood = 2517, record length (days) = 104.92
 start time: 10-Jun-1997 17:00:00
 rayleigh criterion = 1.0
 Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 1.07, x trend= 0

var(x)= 108.7059 var(xp)= 83.1188 var(xres)= 25.2568
 percent var predicted/var original= 76.5 %

y0= -0.52, x trend= 0

var(y)= 20.161 var(yp)= 0.94481 var(yres)= 19.2299
 percent var predicted/var original= 4.7 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.432	0.971	-0.212	0.93	102.57	92.52	203.66	186.26	0.2
MSF	0.0028219	0.607	1.013	-0.256	0.94	126.27	103.41	10.02	156.60	0.36
ALP1	0.0343966	0.180	0.406	0.009	0.36	47.95	131.72	339.55	172.97	0.2
2Q1	0.0357064	0.304	0.427	-0.211	0.44	4.84	127.94	183.36	136.08	0.51
Q1	0.0372185	0.516	0.508	-0.255	0.49	10.82	66.69	197.61	82.21	1
O1	0.0387307	0.391	0.457	-0.038	0.47	164.37	82.27	65.55	96.09	0.73
NO1	0.0402686	0.093	0.273	-0.007	0.32	51.11	126.56	314.00	187.08	0.12
*K1	0.0417807	1.143	0.548	-0.350	0.53	40.81	28.83	356.33	30.91	4.4
J1	0.0432929	0.418	0.455	-0.239	0.44	34.66	110.75	166.54	118.55	0.84
OO1	0.0448308	0.452	0.576	-0.193	0.58	156.76	98.75	319.21	111.49	0.61
UPS1	0.0463430	0.807	0.709	0.028	0.69	168.00	58.44	347.71	72.89	1.3
EPS2	0.0761773	1.010	1.127	-0.626	0.88	169.82	88.54	33.22	129.76	0.8
MU2	0.0776895	1.201	1.147	-0.782	0.82	177.83	135.60	205.76	145.00	1.1
*N2	0.0789992	2.046	1.255	0.035	0.94	9.84	26.33	177.90	43.64	2.7
*M2	0.0805114	12.241	1.397	-0.730	0.94	3.60	4.42	204.59	5.94	77
L2	0.0820236	1.180	1.276	-0.342	0.99	7.68	51.34	272.34	87.38	0.86
S2	0.0833333	1.648	1.172	-0.620	0.92	5.15	44.20	238.05	57.51	2
ETA2	0.0850736	0.946	1.528	-0.530	1.31	18.98	89.13	9.71	148.89	0.38
MO3	0.1192421	0.167	0.268	-0.003	0.19	12.11	71.46	309.55	140.87	0.39
M3	0.1207671	0.113	0.210	-0.059	0.18	7.17	79.85	288.11	142.96	0.29
MK3	0.1222921	0.296	0.318	0.007	0.22	13.88	39.57	304.52	64.78	0.87
SK3	0.1251141	0.198	0.253	-0.111	0.23	159.46	79.34	215.15	110.40	0.61
MN4	0.1595106	0.347	0.249	-0.178	0.28	20.77	67.57	141.79	78.25	1.9
M4	0.1610228	0.388	0.307	0.070	0.26	169.15	48.52	305.07	53.42	1.6
SN4	0.1623326	0.257	0.268	-0.180	0.26	144.62	89.09	134.70	86.84	0.93
MS4	0.1638447	0.336	0.317	-0.100	0.24	7.14	59.44	112.56	69.11	1.1
S4	0.1666667	0.155	0.252	0.101	0.24	13.58	100.30	216.13	149.15	0.38
2MK5	0.2028035	0.099	0.148	-0.029	0.14	161.77	103.67	172.63	165.07	0.45
2SK5	0.2084474	0.064	0.164	0.021	0.15	144.15	129.21	266.08	168.94	0.15
2MN6	0.2400221	0.146	0.149	0.017	0.13	176.58	71.48	88.47	92.49	0.96
*M6	0.2415342	0.283	0.155	-0.026	0.17	32.55	36.46	349.97	42.17	3.3
2MS6	0.2443561	0.076	0.140	-0.020	0.12	135.70	119.05	96.79	166.23	0.3
2SM6	0.2471781	0.101	0.150	0.062	0.15	7.81	102.07	314.60	121.58	0.46
3MK7	0.2833149	0.109	0.106	-0.017	0.11	67.89	94.74	8.70	70.40	1.1
M8	0.3220456	0.072	0.069	0.033	0.06	152.68	87.93	95.46	89.72	1.1

total var= 128.8668 pred var= 84.0636
 percent total var predicted/var original= 65.2 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 21.5 m
 Mooring Number: 5294

File Name: 5294-alh_dl.nc
 nobs = 2513, ngood = 2513, record length (days) = 104.71
 start time: 17-Jun-1998 20:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 1.18, x trend= 0

var(x)= 128.5571 var(xp)= 105.1439 var(xres)= 23.4182
 percent var predicted/var original= 81.8 %

y0= -0.708, x trend= 0

var(y)= 16.2091 var(yp)= 2.4682 var(yres)= 13.7423
 percent var predicted/var original= 15.2 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.049	0.912	0.317	0.88	120.25	64.71	196.23	66.75	1.3
MSF	0.0028219	0.912	0.788	0.118	0.84	23.94	72.14	73.53	77.01	1.3
ALP1	0.0343966	0.263	0.288	-0.124	0.24	16.52	70.10	95.55	96.57	0.84
2Q1	0.0357064	0.125	0.231	-0.052	0.21	151.28	115.94	320.91	180.47	0.29
Q1	0.0372185	0.231	0.263	0.068	0.24	52.46	94.90	106.92	91.09	0.77
O1	0.0387307	0.404	0.307	-0.092	0.29	50.50	59.93	294.75	57.87	1.7
NO1	0.0402686	0.179	0.195	0.048	0.19	135.40	84.63	159.50	89.32	0.85
*K1	0.0417807	0.870	0.291	0.005	0.33	57.49	24.22	353.26	20.02	8.9
J1	0.0432929	0.122	0.266	-0.070	0.22	157.53	108.55	265.30	157.76	0.21
OO1	0.0448308	0.370	0.374	-0.128	0.34	14.33	74.07	319.49	92.77	0.98
UPS1	0.0463430	0.227	0.359	0.155	0.34	157.77	119.71	354.29	134.64	0.4
EPS2	0.0761773	0.261	0.744	-0.086	0.59	143.75	80.14	219.26	193.57	0.12
MU2	0.0776895	0.401	0.848	-0.198	0.71	62.01	126.86	212.46	151.17	0.22
*N2	0.0789992	2.957	1.199	-0.614	0.74	176.42	16.02	338.40	26.45	6.1
*M2	0.0805114	13.334	1.260	-1.396	0.69	179.12	3.59	17.35	5.59	1.1e+002
*L2	0.0820236	2.164	1.264	-1.106	0.93	159.37	40.00	50.22	51.81	2.9
*S2	0.0833333	2.738	1.308	-0.620	0.87	176.43	18.27	53.60	28.82	4.4
ETA2	0.0850736	0.297	0.960	-0.187	0.97	137.99	88.48	179.10	169.80	0.096
MO3	0.1192421	0.221	0.245	-0.068	0.17	24.11	57.97	244.11	94.86	0.81
M3	0.1207671	0.211	0.165	-0.129	0.20	98.14	104.71	165.34	74.53	1.6
MK3	0.1222921	0.212	0.210	-0.007	0.16	179.00	43.05	174.42	78.94	1
SK3	0.1251141	0.177	0.193	-0.101	0.21	83.77	117.50	275.31	82.44	0.84
MN4	0.1595106	0.098	0.282	-0.026	0.15	34.63	50.85	21.16	173.84	0.12
M4	0.1610228	0.476	0.412	-0.278	0.20	9.44	43.43	125.76	80.40	1.3
SN4	0.1623326	0.185	0.286	-0.015	0.20	146.51	49.98	307.38	127.97	0.42
*MS4	0.1638447	0.648	0.421	-0.214	0.18	175.41	22.29	308.10	54.76	2.4
S4	0.1666667	0.157	0.297	-0.047	0.21	47.57	74.17	110.06	125.57	0.28
2MK5	0.2028035	0.131	0.136	0.046	0.15	141.16	91.21	224.18	101.05	0.93
2SK5	0.2084474	0.241	0.174	-0.062	0.18	30.97	53.40	316.98	56.84	1.9
2MN6	0.2400221	0.192	0.150	-0.031	0.13	12.06	42.85	358.41	58.88	1.6
*M6	0.2415342	0.339	0.170	-0.078	0.17	39.32	31.08	3.79	37.90	4
2MS6	0.2443561	0.231	0.173	-0.013	0.17	42.16	42.29	44.39	48.15	1.8
2SM6	0.2471781	0.100	0.156	-0.033	0.13	178.13	81.50	134.55	130.71	0.41
3MK7	0.2833149	0.128	0.122	0.015	0.09	175.16	44.81	207.93	71.65	1.1
M8	0.3220456	0.074	0.059	0.013	0.08	92.98	83.21	87.60	54.77	1.6

total var= 144.7662 pred var= 107.6121
 percent total var predicted/var original= 74.3 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 21.0 m
 Mooring Number: 5414

File Name: 5414-alh_dl.nc
 nobs = 2977, ngood = 2977, record length (days) = 124.04
 start time: 30-Sep-1998 16:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.922, x trend= 0

var(x)= 73.6068 var(xp)= 51.4347 var(xres)= 22.1651
 percent var predicted/var original= 69.9 %

y0= 1.56, x trend= 0

var(y)= 20.6768 var(yp)= 0.60827 var(yres)= 20.0726
 percent var predicted/var original= 2.9 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.812	1.474	-0.134	1.35	129.78	49.20	244.57	61.82	1.5
MSF	0.0028219	0.944	1.084	0.139	1.00	123.04	74.52	257.64	104.65	0.76
ALP1	0.0343966	0.415	0.456	-0.271	0.48	58.67	123.38	243.46	106.84	0.83
2Q1	0.0357064	0.194	0.465	0.061	0.37	161.60	105.96	332.25	210.25	0.17
Q1	0.0372185	0.436	0.522	-0.350	0.50	115.26	137.59	194.88	127.94	0.7
*O1	0.0387307	0.777	0.538	0.086	0.58	141.66	49.63	36.76	50.32	2.1
NO1	0.0402686	0.440	0.404	-0.234	0.39	9.97	72.50	285.09	93.05	1.2
K1	0.0417807	0.698	0.570	-0.049	0.47	7.42	41.51	288.91	54.78	1.5
J1	0.0432929	0.293	0.448	-0.114	0.43	162.34	79.29	341.20	125.11	0.43
OO1	0.0448308	0.619	0.771	-0.318	0.62	165.34	114.69	303.52	142.43	0.64
UPS1	0.0463430	0.385	0.690	0.263	0.60	109.42	132.02	343.58	146.85	0.31
EPS2	0.0761773	0.175	0.272	0.164	0.32	147.80	159.16	13.99	161.76	0.42
MU2	0.0776895	0.313	0.291	-0.052	0.33	90.44	82.27	248.96	87.30	1.2
*N2	0.0789992	2.244	0.411	-0.202	0.40	9.28	11.12	160.00	10.37	30
*M2	0.0805114	9.286	0.402	-0.238	0.39	3.63	2.52	196.54	2.64	5.3e+002
*L2	0.0820236	0.829	0.439	-0.105	0.40	154.34	29.01	88.19	34.19	3.6
*S2	0.0833333	1.410	0.402	0.114	0.44	2.27	18.70	219.13	17.22	12
*ETA2	0.0850736	0.622	0.432	-0.137	0.46	130.63	53.16	275.00	57.37	2.1
MO3	0.1192421	0.105	0.190	0.060	0.16	59.65	122.67	84.35	145.62	0.31
M3	0.1207671	0.093	0.143	-0.011	0.15	53.88	118.10	87.71	138.16	0.43
MK3	0.1222921	0.186	0.182	-0.083	0.20	57.50	91.52	243.35	89.48	1
SK3	0.1251141	0.278	0.225	-0.103	0.22	42.50	58.68	178.94	59.94	1.5
MN4	0.1595106	0.204	0.187	-0.064	0.19	162.39	57.87	208.51	67.01	1.2
*M4	0.1610228	0.415	0.209	-0.143	0.19	178.30	33.88	246.58	38.08	3.9
*SN4	0.1623326	0.289	0.187	-0.161	0.20	37.08	73.88	121.08	72.35	2.4
*MS4	0.1638447	0.320	0.195	-0.072	0.17	0.55	39.29	131.21	48.98	2.7
S4	0.1666667	0.074	0.164	-0.035	0.17	16.72	122.42	204.97	159.37	0.21
2MK5	0.2028035	0.109	0.126	0.065	0.12	88.88	100.12	129.53	118.42	0.75
2SK5	0.2084474	0.090	0.126	0.005	0.13	7.29	97.56	48.32	118.83	0.51
*2MN6	0.2400221	0.243	0.131	0.015	0.12	23.56	27.43	275.33	32.70	3.4
*M6	0.2415342	0.363	0.146	0.064	0.13	35.36	21.21	328.11	22.41	6.2
2MS6	0.2443561	0.136	0.111	0.038	0.10	34.98	62.69	28.13	66.60	1.5
2SM6	0.2471781	0.094	0.115	-0.014	0.12	52.77	89.34	47.12	83.49	0.66
3MK7	0.2833149	0.049	0.076	0.002	0.07	37.43	91.31	89.88	118.28	0.41
*M8	0.3220456	0.082	0.053	0.005	0.07	75.87	52.17	110.99	45.88	2.4

total var= 94.2836 pred var= 52.043
 percent total var predicted/var original= 55.2 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.0 m
 Mooring Number: 5513

File Name: 5513-alh_dl.nc
 nobs = 2156, ngood = 2155, record length (days) = 89.83
 start time: 10-Feb-1999 17:00:00
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.265, x trend= 0

var(x)= 67.9428 var(xp)= 42.7079 var(xres)= 25.0892
 percent var predicted/var original= 62.9 %

y0= 0.429, x trend= 0

var(y)= 26.1839 var(yp)= 1.5203 var(yres)= 24.5811
 percent var predicted/var original= 5.8 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.375	1.301	0.052	1.14	11.76	140.16	149.26	188.07	0.083
MSF	0.0028219	0.783	1.279	0.245	1.38	175.78	172.17	19.33	128.01	0.37
ALP1	0.0343966	0.657	0.617	-0.349	0.58	37.22	86.17	345.49	86.54	1.1
2Q1	0.0357064	0.441	0.506	-0.010	0.45	154.88	88.05	237.36	99.87	0.76
*Q1	0.0372185	1.059	0.587	-0.548	0.60	146.75	63.22	86.77	65.06	3.2
O1	0.0387307	0.547	0.587	-0.097	0.57	146.40	79.94	57.58	81.21	0.87
NO1	0.0402686	0.793	0.606	-0.137	0.68	124.17	60.47	238.71	56.18	1.7
*K1	0.0417807	1.872	0.657	-0.891	0.62	158.39	26.28	133.07	28.79	8.1
J1	0.0432929	0.415	0.591	-0.147	0.51	40.13	106.15	210.91	107.42	0.49
OO1	0.0448308	0.367	0.646	-0.205	0.72	49.63	142.32	358.74	159.01	0.32
UPS1	0.0463430	0.583	0.752	-0.218	0.74	6.43	95.28	82.48	123.64	0.6
EPS2	0.0761773	0.402	0.503	-0.184	0.53	49.84	109.23	94.60	106.99	0.64
MU2	0.0776895	0.483	0.508	-0.181	0.47	22.23	80.70	11.64	85.76	0.91
*N2	0.0789992	1.791	0.692	-0.252	0.58	4.57	17.81	174.40	25.45	6.7
*M2	0.0805114	8.517	0.700	0.202	0.55	7.35	3.70	201.79	5.07	1.5e+002
*L2	0.0820236	0.963	0.645	-0.072	0.54	177.32	42.52	57.24	73.02	2.2
*S2	0.0833333	1.321	0.682	0.314	0.58	178.80	30.46	43.20	44.51	3.7
ETA2	0.0850736	0.430	0.632	0.196	0.57	45.35	115.06	207.54	104.46	0.46
MO3	0.1192421	0.335	0.344	0.015	0.24	166.58	54.76	284.32	64.99	0.95
M3	0.1207671	0.207	0.251	0.061	0.18	8.63	66.22	248.60	87.46	0.68
MK3	0.1222921	0.312	0.236	0.080	0.27	100.15	67.27	261.59	55.77	1.7
SK3	0.1251141	0.234	0.249	-0.054	0.22	172.91	67.54	224.62	101.36	0.88
MN4	0.1595106	0.319	0.231	-0.059	0.24	155.15	53.82	266.92	57.53	1.9
*M4	0.1610228	0.735	0.231	-0.289	0.25	163.53	25.12	240.53	25.82	10
SN4	0.1623326	0.243	0.212	-0.123	0.23	136.64	74.56	337.88	71.20	1.3
*MS4	0.1638447	0.370	0.229	-0.040	0.24	172.36	39.23	296.09	37.69	2.6
S4	0.1666667	0.133	0.199	-0.020	0.20	24.34	105.54	145.38	118.32	0.45
2MK5	0.2028035	0.150	0.204	0.061	0.14	179.43	75.20	154.36	106.33	0.54
2SK5	0.2084474	0.140	0.161	-0.014	0.16	58.90	92.85	171.02	102.16	0.76
*2MN6	0.2400221	0.239	0.148	-0.002	0.15	34.10	35.97	291.62	36.22	2.6
*M6	0.2415342	0.452	0.162	0.039	0.13	28.78	17.39	340.16	19.73	7.8
2MS6	0.2443561	0.200	0.144	0.002	0.14	77.06	56.73	74.64	45.25	1.9
2SM6	0.2471781	0.066	0.117	0.010	0.12	78.83	124.89	34.91	124.14	0.32
3MK7	0.2833149	0.118	0.119	-0.028	0.10	36.91	64.19	254.52	55.35	0.98
M8	0.3220456	0.068	0.073	0.034	0.06	54.31	93.69	12.26	89.17	0.86

total var= 94.1268 pred var= 44.2282
 percent total var predicted/var original= 47.0 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 20.5 m
 Mooring Number: 5704

File Name: 5704-alh_dl.nc
 nobs = 3189, ngood = 3188, record length (days) = 132.88
 start time: 11-May-1999 15:58:08
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.555, x trend= 0

var(x)= 98.2245 var(xp)= 76.6599 var(xres)= 21.8838
 percent var predicted/var original= 78.0 %

y0= -0.02, x trend= 0

var(y)= 14.7324 var(yp)= 1.9376 var(yres)= 12.8125
 percent var predicted/var original= 13.2 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.956	0.774	0.029	0.79	115.26	64.67	1.73	54.34	1.5
MSF	0.0028219	0.061	0.579	-0.031	0.55	176.44	100.61	17.60	256.96	0.011
ALP1	0.0343966	0.279	0.277	-0.159	0.28	171.48	99.11	141.95	103.06	1
2Q1	0.0357064	0.203	0.234	-0.073	0.24	159.57	89.91	38.61	103.60	0.75
Q1	0.0372185	0.334	0.272	-0.141	0.29	107.21	78.10	6.14	76.31	1.5
*O1	0.0387307	0.515	0.341	-0.032	0.31	1.53	38.47	275.01	40.27	2.3
NO1	0.0402686	0.353	0.324	-0.169	0.30	99.61	85.82	244.63	85.01	1.2
*K1	0.0417807	1.191	0.315	-0.271	0.33	30.94	16.21	322.50	16.90	14
J1	0.0432929	0.150	0.221	-0.117	0.24	10.48	121.42	10.54	144.65	0.46
OO1	0.0448308	0.351	0.418	-0.051	0.40	149.52	73.77	258.82	97.81	0.7
UPS1	0.0463430	0.233	0.366	-0.080	0.31	177.69	115.61	271.96	190.59	0.41
EPS2	0.0761773	0.205	0.405	0.009	0.35	8.81	70.25	246.52	185.25	0.26
MU2	0.0776895	0.185	0.441	-0.065	0.39	72.19	123.23	131.27	152.87	0.18
*N2	0.0789992	1.964	0.652	0.184	0.42	7.74	12.46	161.84	19.89	9.1
*M2	0.0805114	11.785	0.677	-0.803	0.43	7.30	2.30	204.91	3.58	3e+002
L2	0.0820236	0.671	0.615	-0.134	0.43	7.78	36.09	255.82	58.70	1.2
*S2	0.0833333	1.626	0.692	-0.161	0.44	13.21	17.26	233.67	27.84	5.5
ETA2	0.0850736	0.472	0.659	-0.292	0.58	48.25	110.70	74.77	134.68	0.51
MO3	0.1192421	0.242	0.220	-0.156	0.19	25.74	79.53	316.17	131.21	1.2
M3	0.1207671	0.120	0.173	-0.056	0.16	40.87	73.71	295.44	132.48	0.48
*MK3	0.1222921	0.459	0.298	-0.015	0.15	7.18	22.95	297.81	47.03	2.4
SK3	0.1251141	0.161	0.223	-0.052	0.15	5.38	57.44	23.71	114.07	0.52
MN4	0.1595106	0.184	0.250	-0.018	0.18	154.47	52.82	263.49	102.03	0.54
M4	0.1610228	0.441	0.324	0.040	0.22	24.02	25.62	113.26	40.26	1.9
SN4	0.1623326	0.188	0.271	-0.102	0.19	164.16	65.20	203.27	121.41	0.48
MS4	0.1638447	0.147	0.230	-0.043	0.17	4.74	49.83	118.99	133.62	0.41
S4	0.1666667	0.201	0.304	-0.082	0.17	170.83	52.86	358.09	114.99	0.44
2MK5	0.2028035	0.113	0.122	-0.009	0.13	66.30	101.93	102.96	78.79	0.87
2SK5	0.2084474	0.110	0.136	-0.084	0.12	51.53	109.17	226.37	117.57	0.66
*2MN6	0.2400221	0.207	0.122	0.036	0.11	33.50	37.18	314.35	44.11	2.9
*M6	0.2415342	0.520	0.134	-0.075	0.13	45.96	14.86	1.55	14.26	15
*2MS6	0.2443561	0.253	0.157	-0.090	0.10	22.70	30.28	69.86	41.37	2.6
2SM6	0.2471781	0.044	0.110	0.014	0.08	143.30	97.56	142.25	167.50	0.16
3MK7	0.2833149	0.081	0.072	-0.075	0.07	140.05	119.89	41.70	132.58	1.2
*M8	0.3220456	0.094	0.055	-0.014	0.06	61.26	50.05	73.62	34.80	2.9

total var= 112.9569 pred var= 78.5975
 percent total var predicted/var original= 69.6 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 24.0 m
 Mooring Number: 5904

File Name: 5904vm-alh.nc
 nobs = 3369, ngood = 3369, record length (days) = 140.38
 start time: 21-Sep-1999 15:58:08
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -1.32, x trend= 0

var(x)= 64.7647 var(xp)= 46.1713 var(xres)= 18.4793
 percent var predicted/var original= 71.3 %

y0= 0.765, x trend= 0

var(y)= 19.7131 var(yp)= 1.568 var(yres)= 18.1444
 percent var predicted/var original= 8.0 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.445	1.063	-0.035	1.16	128.96	58.14	226.42	68.19	1.8
MSF	0.0028219	0.532	0.857	-0.034	0.90	148.88	126.41	43.90	128.44	0.38
ALP1	0.0343966	0.250	0.300	0.194	0.32	147.38	127.49	344.02	137.37	0.69
2Q1	0.0357064	0.339	0.322	-0.079	0.32	170.82	70.96	229.05	79.94	1.1
Q1	0.0372185	0.227	0.314	-0.023	0.32	62.26	96.83	339.37	116.09	0.52
O1	0.0387307	0.385	0.326	0.220	0.37	2.20	79.52	255.06	89.08	1.4
NO1	0.0402686	0.399	0.506	0.109	0.46	95.89	97.63	313.00	102.38	0.62
K1	0.0417807	0.289	0.297	0.183	0.32	31.27	102.70	335.68	120.30	0.95
J1	0.0432929	0.373	0.294	-0.296	0.32	179.77	96.69	153.60	103.68	1.6
OO1	0.0448308	0.474	0.530	-0.039	0.52	150.47	75.99	347.62	85.68	0.8
UPS1	0.0463430	0.274	0.393	-0.138	0.43	169.45	98.20	114.30	120.64	0.49
EPS2	0.0761773	0.200	0.322	-0.123	0.28	150.36	83.45	20.37	151.10	0.39
MU2	0.0776895	0.212	0.348	0.142	0.28	152.73	82.44	250.08	143.90	0.37
*N2	0.0789992	2.136	0.541	0.205	0.34	6.91	8.34	160.32	12.47	16
*M2	0.0805114	9.175	0.489	0.013	0.32	10.27	1.92	196.59	2.91	3.5e+002
L2	0.0820236	0.418	0.338	-0.294	0.28	167.26	77.06	87.68	94.68	1.5
*S2	0.0833333	1.367	0.536	0.130	0.36	4.75	12.72	225.55	21.70	6.5
ETA2	0.0850736	0.181	0.320	-0.085	0.31	147.57	83.59	1.23	167.61	0.32
MO3	0.1192421	0.094	0.124	0.044	0.13	26.51	99.33	55.90	113.65	0.57
M3	0.1207671	0.089	0.114	-0.057	0.10	28.14	110.61	181.97	122.21	0.6
MK3	0.1222921	0.174	0.132	0.088	0.14	119.71	72.36	308.84	68.60	1.7
SK3	0.1251141	0.070	0.116	-0.016	0.11	117.90	113.05	89.03	134.83	0.37
MN4	0.1595106	0.171	0.151	-0.023	0.14	121.80	59.28	226.46	57.43	1.3
*M4	0.1610228	0.343	0.146	0.006	0.15	122.03	26.67	240.65	28.27	5.5
SN4	0.1623326	0.156	0.145	0.042	0.12	9.39	67.68	107.21	63.53	1.2
*MS4	0.1638447	0.382	0.192	-0.016	0.16	148.94	22.00	285.64	28.09	3.9
S4	0.1666667	0.106	0.139	0.024	0.12	12.63	84.48	151.07	94.90	0.58
2MK5	0.2028035	0.035	0.078	-0.025	0.08	170.96	128.35	204.31	149.79	0.2
2SK5	0.2084474	0.085	0.110	-0.051	0.10	176.88	103.13	252.91	118.97	0.6
*2MN6	0.2400221	0.212	0.089	0.004	0.09	37.35	24.42	311.30	24.55	5.7
*M6	0.2415342	0.372	0.113	0.118	0.08	22.62	16.55	329.45	18.75	11
2MS6	0.2443561	0.135	0.105	0.031	0.07	17.79	41.71	17.16	56.43	1.7
2SM6	0.2471781	0.087	0.094	0.010	0.08	177.26	60.87	147.73	105.31	0.86
3MK7	0.2833149	0.019	0.060	0.002	0.06	41.90	141.77	228.93	202.63	0.1
M8	0.3220456	0.062	0.053	0.015	0.04	175.63	52.74	143.37	67.47	1.4

total var= 84.4778 pred var= 47.7393
 percent total var predicted/var original= 56.5 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 24.0 m
 Mooring Number: 6123

File Name: 6123-alh.nc
 nobs = 2013, ngood = 2013, record length (days) = 83.88
 start time: 15-Feb-2000 16:58:07
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.046, x trend= 0

var(x)= 65.3148 var(xp)= 47.2429 var(xres)= 18.3907
 percent var predicted/var original= 72.3 %

y0= -0.678, x trend= 0

var(y)= 17.7545 var(yp)= 4.3748 var(yres)= 13.4879
 percent var predicted/var original= 24.6 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
*MM	0.0015122	3.540	1.635	0.002	1.43	132.58	25.95	333.15	25.01	4.7
MSF	0.0028219	0.895	1.149	0.013	1.10	153.78	81.80	180.88	123.76	0.61
ALP1	0.0343966	0.216	0.560	-0.129	0.59	95.51	129.31	251.85	161.98	0.15
2Q1	0.0357064	0.440	0.636	-0.355	0.55	42.39	128.69	100.71	140.81	0.48
Q1	0.0372185	0.169	0.572	-0.035	0.60	37.37	124.33	355.91	188.24	0.087
O1	0.0387307	0.336	0.543	0.148	0.56	24.06	127.42	304.89	152.61	0.38
NO1	0.0402686	0.984	1.249	-0.255	1.26	44.87	100.63	199.32	106.38	0.62
K1	0.0417807	0.914	0.652	-0.429	0.67	178.76	67.50	120.56	70.82	2
J1	0.0432929	0.306	0.534	0.029	0.53	147.81	112.77	255.13	143.47	0.33
OO1	0.0448308	0.811	0.861	-0.129	0.99	174.41	84.90	229.59	92.75	0.89
UPS1	0.0463430	0.582	0.740	-0.111	0.75	150.38	103.93	221.03	107.88	0.62
EPS2	0.0761773	0.339	0.381	0.074	0.32	175.36	81.72	131.12	105.96	0.8
MU2	0.0776895	0.340	0.356	-0.007	0.37	59.62	95.75	209.17	88.33	0.91
*N2	0.0789992	1.585	0.511	-0.056	0.44	0.34	17.03	140.12	21.14	9.6
*M2	0.0805114	8.837	0.562	0.477	0.47	7.17	2.46	196.91	3.33	2.5e+002
L2	0.0820236	0.298	0.343	-0.021	0.31	155.32	79.87	336.04	103.03	0.75
*S2	0.0833333	2.037	0.495	0.032	0.49	15.18	14.04	245.67	15.81	17
ETA2	0.0850736	0.278	0.388	-0.041	0.36	54.71	120.63	174.69	115.08	0.51
MO3	0.1192421	0.267	0.296	-0.110	0.24	138.25	71.23	273.29	92.60	0.81
M3	0.1207671	0.033	0.256	0.010	0.17	132.42	77.81	166.75	219.77	0.017
MK3	0.1222921	0.269	0.253	-0.029	0.32	103.82	121.90	286.87	79.92	1.1
SK3	0.1251141	0.120	0.245	-0.007	0.21	4.54	62.04	12.80	171.18	0.24
MN4	0.1595106	0.242	0.211	-0.052	0.19	11.48	67.68	9.15	63.63	1.3
*M4	0.1610228	0.594	0.221	-0.129	0.22	172.79	27.31	241.03	21.88	7.2
SN4	0.1623326	0.279	0.237	-0.005	0.22	22.19	60.03	47.77	55.19	1.4
MS4	0.1638447	0.219	0.186	-0.060	0.19	154.15	74.99	272.42	76.33	1.4
S4	0.1666667	0.096	0.188	-0.010	0.18	114.22	117.08	227.15	134.88	0.26
2MK5	0.2028035	0.107	0.144	-0.032	0.15	89.44	108.76	342.47	97.47	0.55
2SK5	0.2084474	0.104	0.150	-0.062	0.14	11.03	105.06	224.70	120.01	0.48
2MN6	0.2400221	0.184	0.136	0.079	0.16	69.45	74.89	296.56	60.71	1.8
*M6	0.2415342	0.351	0.170	0.020	0.16	35.11	28.14	337.17	32.61	4.3
*2MS6	0.2443561	0.209	0.141	0.080	0.14	22.98	56.60	25.37	57.58	2.2
2SM6	0.2471781	0.148	0.137	-0.034	0.13	32.98	73.71	296.16	81.42	1.2
3MK7	0.2833149	0.069	0.093	-0.005	0.09	133.50	83.63	50.89	105.84	0.55
M8	0.3220456	0.077	0.063	-0.018	0.07	63.97	72.87	120.26	77.19	1.5

total var= 83.0692 pred var= 51.6177
 percent total var predicted/var original= 62.1 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.6 m
 Mooring Number: 6244

File Name: 6244-alh.nc
 nobs = 2510, ngood = 2509, record length (days) = 104.58
 start time: 09-May-2000 16:58:07
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.496, x trend= 0

var(x)= 104.8981 var(xp)= 77.2015 var(xres)= 27.6396
 percent var predicted/var original= 73.6 %

y0= -0.047, x trend= 0

var(y)= 27.2488 var(yp)= 3.4935 var(yres)= 23.7512
 percent var predicted/var original= 12.8 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.791	1.686	0.364	1.60	143.03	70.86	179.10	72.82	1.1
MSF	0.0028219	0.660	1.346	-0.242	1.31	108.03	101.63	12.07	153.75	0.24
ALP1	0.0343966	0.324	0.324	-0.024	0.29	158.02	72.96	151.67	72.33	1
2Q1	0.0357064	0.339	0.268	-0.100	0.31	91.21	89.71	309.87	60.32	1.6
Q1	0.0372185	0.349	0.331	-0.163	0.28	154.01	76.17	43.95	84.76	1.1
O1	0.0387307	0.435	0.418	0.123	0.27	10.13	56.25	283.95	62.69	1.1
*NO1	0.0402686	1.002	0.688	-0.832	0.75	46.31	109.91	78.69	103.25	2.1
*K1	0.0417807	1.169	0.411	-0.335	0.40	29.59	18.58	315.82	19.53	8.1
J1	0.0432929	0.308	0.297	-0.105	0.28	7.35	71.68	318.25	89.69	1.1
OO1	0.0448308	0.486	0.451	-0.329	0.40	34.48	93.89	344.76	106.17	1.2
*UPS1	0.0463430	0.622	0.396	-0.405	0.41	29.78	78.09	105.20	86.76	2.5
EPS2	0.0761773	0.197	0.451	0.035	0.40	39.35	89.27	66.17	177.23	0.19
MU2	0.0776895	0.930	0.736	-0.305	0.50	177.42	38.52	260.85	59.43	1.6
*N2	0.0789992	3.004	0.727	-0.310	0.60	13.66	10.66	172.67	18.45	17
*M2	0.0805114	12.037	0.840	-0.927	0.53	10.23	2.89	206.38	4.12	2.1e+002
L2	0.0820236	0.954	0.681	0.036	0.40	21.68	29.70	278.60	42.98	2
*S2	0.0833333	1.204	0.748	0.251	0.49	13.44	31.72	258.04	43.86	2.6
ETA2	0.0850736	0.463	0.575	-0.068	0.51	135.82	90.33	207.63	95.72	0.65
MO3	0.1192421	0.447	0.355	-0.125	0.20	14.85	38.16	338.87	52.67	1.6
M3	0.1207671	0.187	0.258	-0.003	0.18	4.47	63.57	324.37	113.62	0.52
*MK3	0.1222921	0.545	0.370	-0.121	0.20	2.90	25.61	290.83	40.73	2.2
SK3	0.1251141	0.179	0.250	-0.162	0.23	24.49	107.38	342.18	155.66	0.51
MN4	0.1595106	0.330	0.309	0.006	0.30	43.24	72.02	113.70	67.91	1.1
M4	0.1610228	0.432	0.341	0.048	0.27	6.33	37.04	138.83	52.99	1.6
SN4	0.1623326	0.366	0.340	-0.086	0.29	32.54	54.03	179.02	74.46	1.2
MS4	0.1638447	0.158	0.278	-0.112	0.23	131.85	103.29	331.76	152.49	0.32
S4	0.1666667	0.116	0.233	0.044	0.23	76.01	149.39	66.97	146.53	0.25
2MK5	0.2028035	0.134	0.159	0.065	0.13	166.56	56.76	168.67	111.75	0.71
2SK5	0.2084474	0.053	0.150	-0.015	0.12	77.10	150.45	323.94	150.08	0.13
2MN6	0.2400221	0.157	0.157	0.071	0.15	50.96	68.28	317.70	80.28	0.99
*M6	0.2415342	0.337	0.181	-0.080	0.20	44.16	33.36	354.66	40.17	3.5
2MS6	0.2443561	0.174	0.134	-0.056	0.18	83.83	112.78	47.07	77.04	1.7
2SM6	0.2471781	0.037	0.165	-0.005	0.11	72.66	113.37	51.10	190.33	0.051
3MK7	0.2833149	0.123	0.105	0.017	0.11	126.75	66.36	332.02	66.46	1.4
*M8	0.3220456	0.244	0.088	0.014	0.08	33.18	18.08	48.55	20.30	7.7

total var= 132.1469 pred var= 80.695
 percent total var predicted/var original= 61.1 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.0 m
 Mooring Number: 6314
 File Name: 6314-alh.nc
 nobs = 3355, ngood = 3355, record length (days) = 139.79
 start time: 26-Sep-2000 18:58:08
 rayleigh criterion = 1.0
 Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.207, x trend= 0

var(x)= 63.6846 var(xp)= 48.0167 var(xres)= 15.743
 percent var predicted/var original= 75.4 %

y0= 1.03, x trend= 0

var(y)= 14.1438 var(yp)= 1.0829 var(yres)= 13.0501
 percent var predicted/var original= 7.7 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.241	0.666	0.015	0.56	4.07	100.12	282.51	208.31	0.13
MSF	0.0028219	0.466	0.800	-0.355	0.73	10.87	104.66	262.19	161.62	0.34
ALP1	0.0343966	0.086	0.255	0.023	0.24	20.44	132.72	18.96	179.93	0.11
2Q1	0.0357064	0.286	0.308	-0.152	0.29	13.91	96.56	326.79	77.63	0.86
Q1	0.0372185	0.170	0.254	-0.036	0.25	152.60	123.82	350.52	146.19	0.45
*O1	0.0387307	0.498	0.324	-0.170	0.39	8.05	59.94	279.52	52.26	2.4
NO1	0.0402686	0.479	0.523	-0.268	0.45	133.60	94.95	328.16	115.40	0.84
*K1	0.0417807	0.509	0.314	0.132	0.37	167.98	54.21	102.39	53.07	2.6
J1	0.0432929	0.157	0.224	-0.003	0.27	29.25	126.23	285.49	130.38	0.49
OO1	0.0448308	0.244	0.346	-0.003	0.34	28.88	116.71	199.47	124.43	0.5
UPS1	0.0463430	0.327	0.315	-0.187	0.33	31.78	101.31	224.25	96.85	1.1
EPS2	0.0761773	0.217	0.247	0.169	0.26	152.38	126.85	44.27	138.73	0.77
MU2	0.0776895	0.311	0.295	-0.014	0.30	56.72	77.22	88.31	77.05	1.1
*N2	0.0789992	2.262	0.365	-0.220	0.36	2.96	9.94	166.33	9.70	38
*M2	0.0805114	9.257	0.416	-0.415	0.33	7.21	2.15	202.11	2.39	5e+002
*L2	0.0820236	0.644	0.281	-0.012	0.32	1.82	28.65	255.63	30.24	5.3
*S2	0.0833333	1.392	0.383	0.093	0.38	11.91	15.96	225.75	16.05	13
ETA2	0.0850736	0.292	0.268	-0.245	0.28	123.72	114.67	355.91	135.11	1.2
*MO3	0.1192421	0.274	0.165	-0.033	0.17	89.59	43.91	268.20	48.43	2.7
M3	0.1207671	0.202	0.161	0.014	0.18	171.44	54.77	101.02	57.01	1.6
MK3	0.1222921	0.150	0.156	0.009	0.15	46.86	75.87	21.19	80.70	0.92
SK3	0.1251141	0.170	0.149	-0.055	0.16	150.64	78.88	247.67	64.90	1.3
MN4	0.1595106	0.254	0.207	-0.068	0.21	44.65	62.17	13.10	53.21	1.5
*M4	0.1610228	0.556	0.211	-0.409	0.19	145.92	50.57	284.64	57.21	7
SN4	0.1623326	0.181	0.175	0.021	0.19	156.70	68.49	316.94	99.91	1.1
MS4	0.1638447	0.199	0.209	0.015	0.20	121.14	63.53	309.68	68.32	0.91
S4	0.1666667	0.152	0.212	-0.132	0.18	169.78	121.51	157.70	141.50	0.51
2MK5	0.2028035	0.105	0.112	-0.001	0.09	171.81	50.21	112.23	82.61	0.89
2SK5	0.2084474	0.042	0.090	-0.000	0.08	22.10	89.40	152.35	133.49	0.21
*2MN6	0.2400221	0.259	0.147	0.071	0.09	13.66	28.02	270.94	38.44	3.1
*M6	0.2415342	0.459	0.112	0.213	0.10	4.46	18.19	291.30	23.34	17
2MS6	0.2443561	0.164	0.122	0.087	0.10	39.12	58.35	352.48	70.15	1.8
2SM6	0.2471781	0.042	0.089	-0.013	0.09	114.96	118.55	80.69	144.78	0.22
3MK7	0.2833149	0.041	0.060	-0.014	0.06	112.55	110.95	88.52	117.44	0.48
*M8	0.3220456	0.105	0.055	-0.067	0.06	63.28	63.37	236.86	60.65	3.6

total var= 77.8284 pred var= 49.0997
 percent total var predicted/var original= 63.1 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.0 m
 Mooring Number: 6444

File Name: 6444vm-alh.nc
 nobs = 3492, ngood = 3491, record length (days) = 145.50
 start time: 23-May-2001 15:59:15
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.125, x trend= 0

var(x)= 89.1921 var(xp)= 66.5752 var(xres)= 22.7119
 percent var predicted/var original= 74.6 %

y0= -0.372, x trend= 0

var(y)= 20.5011 var(yp)= 3.7171 var(yres)= 16.7824
 percent var predicted/var original= 18.1 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.395	1.010	-0.169	0.87	138.43	47.01	292.10	49.61	1.9
MSF	0.0028219	1.107	0.894	-0.650	0.85	139.76	81.66	139.62	81.80	1.5
ALP1	0.0343966	0.203	0.233	-0.089	0.26	120.07	118.10	233.01	110.73	0.76
2Q1	0.0357064	0.219	0.239	-0.055	0.21	141.15	84.38	352.54	92.32	0.84
Q1	0.0372185	0.157	0.220	0.013	0.22	119.98	110.83	216.71	105.05	0.51
O1	0.0387307	0.279	0.250	0.247	0.22	170.36	114.99	77.87	122.52	1.2
NO1	0.0402686	0.177	0.224	0.029	0.23	7.40	78.51	6.85	109.80	0.63
*K1	0.0417807	0.624	0.273	0.091	0.30	44.16	30.48	322.39	28.84	5.2
J1	0.0432929	0.276	0.268	-0.134	0.24	12.55	82.28	79.25	88.65	1.1
OO1	0.0448308	0.257	0.244	-0.073	0.23	156.39	72.85	292.55	82.07	1.1
*UPS1	0.0463430	0.373	0.248	-0.183	0.30	124.58	68.20	220.21	61.33	2.3
EPS2	0.0761773	0.360	0.529	0.025	0.38	24.32	64.26	49.07	101.41	0.46
MU2	0.0776895	0.767	0.584	-0.214	0.58	47.48	49.67	91.53	54.10	1.7
*N2	0.0789992	3.039	0.781	-0.277	0.50	6.91	8.20	163.06	14.07	15
*M2	0.0805114	11.158	0.801	-0.840	0.45	11.86	2.53	211.68	3.65	1.9e+002
*L2	0.0820236	1.020	0.614	-0.396	0.47	12.31	38.10	254.89	52.54	2.8
*S2	0.0833333	1.269	0.636	0.148	0.51	26.90	27.06	239.31	31.47	4
ETA2	0.0850736	0.315	0.514	-0.165	0.37	173.32	84.37	144.17	111.72	0.38
MO3	0.1192421	0.240	0.212	-0.029	0.17	15.67	39.60	278.05	64.32	1.3
M3	0.1207671	0.088	0.160	0.005	0.14	9.95	88.97	143.68	150.52	0.3
*MK3	0.1222921	0.663	0.229	-0.124	0.17	19.33	19.81	323.97	21.74	8.4
SK3	0.1251141	0.177	0.225	-0.050	0.15	7.81	58.27	18.40	80.21	0.61
MN4	0.1595106	0.322	0.233	0.106	0.24	36.38	46.75	112.40	62.81	1.9
*M4	0.1610228	0.517	0.183	0.327	0.27	70.10	63.93	222.19	42.43	8
*SN4	0.1623326	0.372	0.179	-0.120	0.29	103.34	71.41	183.97	39.22	4.3
MS4	0.1638447	0.191	0.177	0.057	0.22	60.29	92.62	237.55	97.53	1.2
S4	0.1666667	0.096	0.203	-0.020	0.17	126.02	74.64	20.68	138.47	0.22
2MK5	0.2028035	0.158	0.135	-0.054	0.16	50.97	69.66	6.70	68.69	1.4
2SK5	0.2084474	0.111	0.136	-0.018	0.11	8.01	54.65	278.53	100.04	0.67
2MN6	0.2400221	0.195	0.142	0.034	0.15	47.54	54.16	274.33	55.13	1.9
*M6	0.2415342	0.374	0.203	0.034	0.15	28.90	26.46	319.64	28.79	3.4
2MS6	0.2443561	0.125	0.126	-0.022	0.13	73.74	101.30	64.62	79.69	0.98
2SM6	0.2471781	0.086	0.133	0.008	0.11	51.28	95.90	157.74	113.75	0.42
3MK7	0.2833149	0.068	0.097	0.017	0.07	2.52	65.48	18.93	114.20	0.49
M8	0.3220456	0.072	0.056	0.035	0.06	90.81	88.99	85.22	81.53	1.7

total var= 109.6931 pred var= 70.2923
 percent total var predicted/var original= 64.1 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 23.0 m
 Mooring Number: 6644

File Name: 6644vm-alh.nc
 nobs = 2539, ngood = 2539, record length (days) = 105.79
 start time: 23-Oct-2001 19:58:07
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.373, x trend= 0

var(x)= 54.3733 var(xp)= 42.3544 var(xres)= 11.8969
 percent var predicted/var original= 77.9 %

y0= 1.52, x trend= 0

var(y)= 11.5877 var(yp)= 1.7266 var(yres)= 9.8616
 percent var predicted/var original= 14.9 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	0.642	0.897	-0.382	0.88	1.60	120.96	332.51	129.98	0.51
MSF	0.0028219	0.408	0.837	-0.193	0.87	31.24	146.26	298.19	170.07	0.24
ALP1	0.0343966	0.344	0.342	-0.118	0.28	2.92	58.00	55.62	79.51	1
2Q1	0.0357064	0.331	0.322	-0.125	0.27	20.70	61.32	313.03	87.16	1.1
Q1	0.0372185	0.196	0.251	-0.025	0.26	162.58	86.02	58.96	122.14	0.61
*O1	0.0387307	0.750	0.413	0.049	0.36	7.85	25.08	258.64	31.32	3.3
NO1	0.0402686	0.215	0.226	-0.033	0.24	106.41	100.43	162.28	86.11	0.9
*K1	0.0417807	0.599	0.385	-0.021	0.30	176.13	30.29	115.54	43.81	2.4
J1	0.0432929	0.218	0.274	-0.101	0.23	145.12	100.52	316.26	109.31	0.63
OO1	0.0448308	0.264	0.253	-0.016	0.24	130.21	68.99	163.30	70.84	1.1
UPS1	0.0463430	0.286	0.256	-0.134	0.29	127.84	80.99	197.98	82.94	1.2
EPS2	0.0761773	0.257	0.295	0.061	0.29	123.10	73.78	129.62	94.87	0.76
MU2	0.0776895	0.379	0.319	0.061	0.35	6.19	78.38	60.01	63.88	1.4
*N2	0.0789992	2.098	0.320	-0.269	0.43	10.68	11.60	172.35	11.04	43
*M2	0.0805114	8.958	0.319	-0.266	0.40	10.67	2.93	200.21	2.21	7.9e+002
*L2	0.0820236	0.628	0.348	-0.264	0.42	10.41	60.46	254.49	42.13	3.3
*S2	0.0833333	1.310	0.329	-0.002	0.44	7.20	18.67	227.20	12.81	16
ETA2	0.0850736	0.124	0.245	-0.000	0.23	175.59	163.74	129.71	147.53	0.26
MO3	0.1192421	0.025	0.129	-0.017	0.11	154.53	89.26	329.79	222.51	0.038
M3	0.1207671	0.129	0.158	-0.014	0.15	156.59	67.00	45.68	86.41	0.67
MK3	0.1222921	0.259	0.202	-0.017	0.14	22.88	34.60	82.72	44.71	1.6
SK3	0.1251141	0.123	0.153	0.052	0.12	160.33	83.36	332.98	111.08	0.65
*MN4	0.1595106	0.297	0.175	-0.096	0.17	157.11	38.97	247.63	46.96	2.9
*M4	0.1610228	0.656	0.191	-0.405	0.16	152.92	26.28	277.66	29.89	12
SN4	0.1623326	0.146	0.150	0.013	0.14	25.05	69.61	149.16	73.41	0.94
MS4	0.1638447	0.223	0.163	-0.182	0.15	43.50	95.29	87.54	104.64	1.9
S4	0.1666667	0.155	0.148	-0.030	0.14	32.72	75.16	276.77	88.10	1.1
2MK5	0.2028035	0.146	0.122	-0.015	0.10	152.17	50.16	126.22	55.64	1.4
*2SK5	0.2084474	0.128	0.088	-0.054	0.10	52.07	69.47	85.36	66.27	2.1
*2MN6	0.2400221	0.318	0.132	0.064	0.10	7.50	19.28	266.53	28.15	5.8
*M6	0.2415342	0.477	0.125	0.234	0.12	37.97	21.38	322.24	23.82	15
*2MS6	0.2443561	0.154	0.099	0.092	0.11	126.41	75.72	94.17	61.49	2.4
2SM6	0.2471781	0.046	0.095	-0.004	0.09	159.95	80.78	113.48	175.41	0.23
3MK7	0.2833149	0.050	0.068	0.019	0.07	40.34	84.04	326.51	108.96	0.54
M8	0.3220456	0.082	0.060	0.046	0.05	33.87	74.82	192.36	77.01	1.9

total var= 65.9611 pred var= 44.0811
 percent total var predicted/var original= 66.8 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 26.0 m
 Mooring Number: 6824

File Name: 6824Bvm-alh.nc

nobs = 545, ngood = 545, record length (days) = 22.71

start time: 28-Apr-2002 20:58:07

rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -1.12, x trend= 0

var(x)= 72.4135 var(xp)= 38.9959 var(xres)= 33.46

percent var predicted/var original= 53.9 %

y0= 1.2, x trend= 0

var(y)= 27.7114 var(yp)= 7.3712 var(yres)= 20.5135

percent var predicted/var original= 26.6 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
*MSF	0.0028219	3.871	1.341	0.015	1.23	136.98	16.40	225.89	20.33	8.3
O1	0.0387307	1.130	1.386	0.014	1.21	152.01	65.21	28.59	102.26	0.66
*K1	0.0417807	2.096	1.439	-1.861	1.44	72.86	119.81	260.60	100.66	2.1
*M2	0.0805114	7.945	1.804	0.287	0.72	4.09	5.00	202.02	12.48	19
*S2	0.0833333	2.392	1.516	0.051	1.25	40.55	29.26	254.90	30.75	2.5
M3	0.1207671	0.330	0.520	0.089	0.39	157.32	83.65	99.25	162.35	0.4
SK3	0.1251141	0.648	0.542	-0.167	0.60	148.33	57.62	136.90	69.67	1.4
M4	0.1610228	0.400	0.547	-0.043	0.39	11.03	48.00	57.19	114.36	0.53
MS4	0.1638447	0.812	0.641	-0.234	0.40	171.49	26.82	230.83	63.88	1.6
S4	0.1666667	0.581	0.517	-0.396	0.49	142.33	74.05	217.12	99.35	1.3
*2MK5	0.2028035	0.327	0.226	-0.079	0.29	95.56	63.70	102.96	52.68	2.1
2SK5	0.2084474	0.239	0.264	-0.036	0.21	164.49	70.95	136.51	108.74	0.82
*M6	0.2415342	0.502	0.320	0.037	0.20	9.99	23.63	12.17	35.94	2.5
2MS6	0.2443561	0.223	0.242	0.079	0.21	0.88	63.42	344.88	97.58	0.85
2SM6	0.2471781	0.131	0.228	-0.026	0.18	147.79	73.46	73.18	124.34	0.33
3MK7	0.2833149	0.214	0.197	-0.000	0.21	5.50	77.44	189.70	74.30	1.2
M8	0.3220456	0.033	0.144	-0.001	0.12	6.53	137.44	217.22	197.44	0.054

total var= 100.1249 pred var= 46.3671

percent total var predicted/var original= 46.3 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 20.9 m
 Mooring Number: 6894

File Name: 6894vm-alh.nc
 nobs = 3455, ngood = 3455, record length (days) = 143.96
 start time: 21-May-2002 17:58:07
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= 0.321, x trend= 0

var(x)= 82.1192 var(xp)= 54.0386 var(xres)= 28.2711
 percent var predicted/var original= 65.8 %

y0= 0.416, x trend= 0

var(y)= 23.5323 var(yp)= 2.6606 var(yres)= 20.8602
 percent var predicted/var original= 11.3 %

ellipse parameters with 95% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
*MM	0.0015122	2.311	1.628	-0.287	1.55	139.47	47.56	69.87	46.04	2
MSF	0.0028219	1.591	1.438	-0.002	1.35	97.68	63.73	336.64	74.27	1.2
ALP1	0.0343966	0.190	0.218	-0.101	0.25	124.17	113.07	118.96	94.36	0.76
2Q1	0.0357064	0.272	0.232	-0.024	0.25	103.00	81.39	302.20	59.14	1.4
Q1	0.0372185	0.115	0.223	-0.031	0.19	60.81	124.42	310.05	152.10	0.27
O1	0.0387307	0.248	0.235	0.116	0.26	79.83	108.31	333.46	87.52	1.1
NO1	0.0402686	0.201	0.168	-0.182	0.18	9.63	122.04	245.67	130.86	1.4
*K1	0.0417807	0.704	0.272	-0.231	0.31	60.24	28.35	339.02	25.45	6.7
J1	0.0432929	0.312	0.233	-0.116	0.23	59.79	74.24	289.61	72.93	1.8
OO1	0.0448308	0.210	0.190	-0.182	0.18	53.76	124.24	329.85	116.69	1.2
UPS1	0.0463430	0.169	0.190	-0.054	0.18	169.70	81.09	309.89	98.09	0.79
EPS2	0.0761773	0.518	0.619	-0.399	0.51	162.54	90.11	185.85	127.57	0.7
MU2	0.0776895	0.690	0.687	-0.302	0.49	24.12	60.54	34.72	82.64	1
*N2	0.0789992	1.968	0.771	-0.060	0.51	17.73	16.02	187.50	22.95	6.5
*M2	0.0805114	9.950	0.779	-0.513	0.52	7.50	2.88	206.01	4.28	1.6e+002
*L2	0.0820236	2.561	1.009	-0.592	0.67	0.16	20.46	252.84	26.98	6.4
*S2	0.0833333	1.424	0.763	0.026	0.53	4.43	20.54	250.16	34.66	3.5
ETA2	0.0850736	0.242	0.460	-0.028	0.39	125.55	106.29	207.67	143.92	0.28
MO3	0.1192421	0.066	0.185	0.009	0.13	178.51	65.02	276.73	170.68	0.13
M3	0.1207671	0.235	0.260	0.061	0.18	177.66	43.74	349.62	87.85	0.82
MK3	0.1222921	0.311	0.254	-0.050	0.16	178.93	33.64	80.77	61.00	1.5
SK3	0.1251141	0.184	0.227	-0.020	0.16	29.48	52.50	6.91	82.22	0.66
MN4	0.1595106	0.407	0.310	0.052	0.21	163.70	29.17	232.69	53.32	1.7
*M4	0.1610228	0.550	0.339	0.123	0.24	158.85	27.62	271.53	39.75	2.6
SN4	0.1623326	0.229	0.273	-0.132	0.23	162.64	69.08	113.55	125.48	0.71
MS4	0.1638447	0.267	0.240	0.028	0.23	134.49	72.28	232.07	69.03	1.2
S4	0.1666667	0.164	0.262	-0.011	0.19	23.31	63.69	104.66	107.31	0.39
2MK5	0.2028035	0.106	0.117	-0.016	0.11	143.59	74.92	115.77	93.33	0.81
2SK5	0.2084474	0.112	0.109	-0.057	0.12	59.00	99.60	278.63	101.01	1.1
2MN6	0.2400221	0.244	0.174	0.078	0.13	173.58	43.29	67.64	55.11	2
*M6	0.2415342	0.358	0.157	0.144	0.15	30.02	29.26	312.54	35.89	5.2
2MS6	0.2443561	0.118	0.133	0.051	0.11	124.08	94.51	77.50	89.47	0.79
2SM6	0.2471781	0.050	0.102	-0.000	0.10	134.03	111.96	78.97	139.19	0.24
3MK7	0.2833149	0.057	0.092	-0.004	0.08	176.06	76.53	186.53	109.28	0.38
M8	0.3220456	0.094	0.086	-0.003	0.07	6.28	50.02	5.32	57.57	1.2

total var= 105.6515 pred var= 56.6991
 percent total var predicted/var original= 53.7 %

Tidal Analysis of Current at LT-A
 Point Current-Meter Observations, 22.9 m
 Mooring Number: 6964

File Name: 6964vm-alh.nc
 nobs = 2650, ngood = 2649, record length (days) = 110.42
 start time: 24-Oct-2002 15:58:08
 rayleigh criterion = 1.0

Greenwich phase computed with nodal corrections applied to amplitude and phase relative to center time

x0= -0.229, x trend= 0

var(x)= 59.3281 var(xp)= 44.9133 var(xres)= 14.4183
 percent var predicted/var original= 75.7 %

y0= 1.11, x trend= 0

var(y)= 19.5135 var(yp)= 1.368 var(yres)= 18.1576
 percent var predicted/var original= 7.0 %

ellipse parameters with 95%% CI estimates

tide	freq	major	emaj	minor	emin	inc	einc	pha	epha	snr
MM	0.0015122	1.679	1.246	0.416	1.44	141.33	57.04	267.33	56.09	1.8
MSF	0.0028219	0.891	1.555	-0.284	1.07	115.12	71.91	206.24	127.39	0.33
ALP1	0.0343966	0.298	0.294	0.035	0.37	124.83	100.28	33.94	94.41	1
2Q1	0.0357064	0.178	0.330	0.002	0.32	18.80	100.38	165.39	132.08	0.29
Q1	0.0372185	0.338	0.339	-0.230	0.35	104.32	119.87	217.72	96.08	0.99
O1	0.0387307	0.345	0.399	-0.223	0.30	35.55	97.72	241.20	105.82	0.75
NO1	0.0402686	0.297	0.285	0.041	0.30	126.61	70.89	242.13	64.29	1.1
*K1	0.0417807	0.705	0.489	0.126	0.37	12.48	37.93	319.25	48.88	2.1
J1	0.0432929	0.118	0.322	0.068	0.29	87.61	160.83	232.01	176.10	0.13
OO1	0.0448308	0.163	0.252	0.017	0.24	106.79	136.27	208.85	129.23	0.42
UPS1	0.0463430	0.094	0.248	0.047	0.22	2.00	100.45	347.97	160.70	0.14
EPS2	0.0761773	0.432	0.306	0.090	0.33	21.67	68.44	98.18	49.67	2
MU2	0.0776895	0.241	0.300	-0.135	0.31	37.14	105.05	241.02	121.43	0.64
*N2	0.0789992	2.203	0.344	-0.057	0.48	11.59	11.95	157.80	9.01	41
*M2	0.0805114	9.295	0.355	-0.538	0.43	8.11	2.67	205.17	2.46	6.9e+002
L2	0.0820236	0.678	0.507	-0.054	0.58	161.63	55.25	64.45	48.01	1.8
*S2	0.0833333	1.703	0.374	0.297	0.43	10.77	15.25	231.21	12.80	21
ETA2	0.0850736	0.208	0.288	-0.064	0.25	179.93	130.52	30.36	111.99	0.52
MO3	0.1192421	0.160	0.171	-0.057	0.16	2.39	76.14	357.80	95.22	0.88
M3	0.1207671	0.232	0.201	-0.109	0.18	46.15	80.87	167.16	68.97	1.3
MK3	0.1222921	0.096	0.159	0.005	0.13	145.80	94.79	81.12	132.94	0.36
SK3	0.1251141	0.172	0.162	-0.050	0.17	92.16	93.71	112.10	82.64	1.1
MN4	0.1595106	0.290	0.214	-0.129	0.18	157.51	62.54	236.02	83.00	1.8
*M4	0.1610228	0.644	0.242	-0.261	0.23	125.40	28.13	324.79	29.91	7.1
SN4	0.1623326	0.153	0.171	0.041	0.19	111.69	102.00	82.01	96.50	0.8
MS4	0.1638447	0.260	0.209	-0.053	0.22	125.43	67.01	340.50	66.74	1.5
S4	0.1666667	0.142	0.210	-0.007	0.17	35.73	72.75	42.67	105.24	0.46
2MK5	0.2028035	0.131	0.109	0.017	0.12	47.84	69.15	349.69	64.10	1.4
2SK5	0.2084474	0.061	0.092	-0.002	0.09	23.76	101.08	306.75	129.80	0.44
2MN6	0.2400221	0.236	0.179	0.048	0.13	8.18	36.90	265.12	59.49	1.7
*M6	0.2415342	0.514	0.195	0.265	0.14	3.65	26.40	286.03	34.99	6.9
2MS6	0.2443561	0.124	0.132	0.044	0.12	14.06	69.57	314.18	101.47	0.88
2SM6	0.2471781	0.107	0.135	-0.076	0.11	137.78	108.11	195.04	113.76	0.63
3MK7	0.2833149	0.029	0.071	-0.004	0.07	92.75	127.82	300.59	165.08	0.16
*M8	0.3220456	0.130	0.082	-0.037	0.07	5.69	41.83	254.05	46.79	2.5

total var= 78.8416 pred var= 46.2813
 percent total var predicted/var original= 58.7 %