

## Table of Harmonic Constants and Speeds

No.	Name	Speed (°/hr)	No.	Name	Speed (°/hr)	No.	Name	Speed (°/hr)
1	Sa $\mathcal{P}$	0.0410686	39	MSN <sub>2</sub>	30.5443747	77	2(MN) <sub>6</sub>	84.8476674
2	Ssa	0.0821373	40	KJ <sub>2</sub>	30.6265120	78	3MNS <sub>6</sub>	85.3920422
3	Mm	0.5443747	41	2SM <sub>2</sub>	31.0158958	79	4MK <sub>6</sub>	85.8542795
4	Msf	1.0158958	42	MO <sub>3</sub>	42.9271398	80	4MS <sub>6</sub>	85.9364168
5	Mf	1.0980331	43	M <sub>3</sub>	43.4761563	81	2MSNK <sub>6</sub>	86.3258006
6	2Q <sub>1</sub>	12.8542862	44	SO <sub>3</sub>	43.9430356	82	2MV <sub>6</sub>	86.4807915
7	$\sigma_1$ (sigma)	12.9271398	45	MK <sub>3</sub>	44.0251729	83	3MSK <sub>6</sub>	86.8701754
8	Q <sub>1</sub>	13.3986609	46	SK <sub>3</sub>	45.0410686	84	4MN <sub>6</sub>	87.4966873
9	$\rho_1$ (rho)	13.4715145	47	MN <sub>4</sub>	57.4238337	85	3MSN <sub>6</sub>	88.5125832
10	O <sub>1</sub>	13.9430356	48	M <sub>4</sub>	57.9682084	86	MKL <sub>6</sub>	88.5947204
11	MP <sub>1</sub>	14.0251729	49	SN <sub>4</sub>	58.4397295	87	2(MN) <sub>8</sub>	114.8476674
12	M <sub>1</sub>	14.4920521	50	MS <sub>4</sub>	58.9841042	88	3MN <sub>8</sub>	115.3920422
13	$\chi_1$ (chi)	14.5695476	51	MK <sub>4</sub>	59.0662415	89	M <sub>8</sub>	115.9364168
14	$\pi_1$ (pi)	14.9178647	52	S <sub>4</sub>	60.0000000	90	2MSN <sub>8</sub>	116.4079379
15	P <sub>1</sub>	14.9589314	53	SK <sub>4</sub>	60.0821373	91	3MS <sub>8</sub>	116.9523127
16	S <sub>1</sub>	15.0000000	54	2MN <sub>6</sub>	86.4079380	92	3MK <sub>8</sub>	117.0344500
17	K <sub>1</sub>	15.0410686	55	M <sub>6</sub>	86.9523127	93	MSNK <sub>8</sub>	117.5059710
18	$\psi_1$ (psi)	15.0821353	56	MSN <sub>6</sub>	87.4238337	94	2(MS) <sub>8</sub>	117.9682084
19	$\phi_1$ (phi)	15.1232059	57	2MS <sub>6</sub>	87.9682084	95	2MSK <sub>8</sub>	118.0503457
20	$\theta_1$ (theta)	15.5125897	58	2MK <sub>6</sub>	88.0503457	96	4MS <sub>10</sub>	145.9364168
21	J <sub>1</sub>	15.5854433	59	2SM <sub>6</sub>	88.9841042	97	3M2S <sub>10</sub>	146.9523127
22	SO <sub>1</sub>	16.0569644	60	MSK <sub>6</sub>	89.0662415	98	4MSN <sub>12</sub>	174.3761463
23	OO <sub>1</sub>	16.1391017	61	2MN <sub>2</sub> S <sub>2</sub>	26.4079379	99	5MS <sub>12</sub>	174.9205210
24	OQ <sub>2</sub>	27.3416965	62	3M(SK) <sub>2</sub>	26.8701754	100	4M <sub>2</sub> S <sub>12</sub>	175.9364168
25	MNS <sub>2</sub>	27.4238337	63	3M <sub>2</sub> S <sub>2</sub>	26.9523127	101	MVS <sub>2</sub>	27.4966873
26	2N <sub>2</sub>	27.8953548	64	MNK <sub>2</sub> S <sub>2</sub>	27.5059710	102	2MK <sub>2</sub>	27.8860711
27	$\mu_2$ (mu)	27.9682084	65	SNK <sub>2</sub>	28.3575922	103	MA <sub>2</sub>	28.9430356
28	N <sub>2</sub>	28.4397295	66	2SK <sub>2</sub>	29.9178627	104	MB <sub>2</sub>	29.0251728
29	$\nu_2$ (nu)	28.5125831	67	2MS <sub>2</sub> N <sub>2</sub>	31.0887494	105	MSV <sub>2</sub>	30.4715211
30	OP <sub>2</sub>	28.9019669	68	MQ <sub>3</sub>	42.3827651	106	SKM <sub>2</sub>	31.0980331
31	M <sub>2</sub>	28.9841042	69	2MP <sub>3</sub>	43.0092770	107	2MNS <sub>4</sub>	56.4079379
32	MKS <sub>2</sub>	29.0662415	70	2MQ <sub>3</sub>	44.5695475	108	MV <sub>4</sub>	57.4966873
33	$\lambda_2$	29.4556253	71	3MK <sub>4</sub>	56.8701754	109	3MN <sub>4</sub>	58.5125830
34	L <sub>2</sub>	29.5284789	72	3MS <sub>4</sub>	56.9523127	110	2MSN <sub>4</sub>	59.5284789
35	T <sub>2</sub>	29.9589333	73	2MSK <sub>4</sub>	57.8860711	111	NA <sub>2</sub>	28.3986609
36	S <sub>2</sub>	30.0000000	74	3MK <sub>5</sub>	71.9112441	112	NB <sub>2</sub>	28.4807981
37	R <sub>2</sub>	30.0410667	75	M <sub>5</sub>	72.4602605	113	MSO <sub>5</sub>	72.9271398
38	K <sub>2</sub>	30.0821373	76	3MO <sub>5</sub>	73.0092771	114	MSK <sub>5</sub>	74.0251728

$\mathcal{P}$  Note the harmonic constituent Sa has two different definitions (and therefore different speeds).  
They can't be used interchangeably.