

**TABLE 2.15**  
**LOCAL CIRCUMSTANCES FOR CHINA, NORTH AND SOUTH KOREA**  
**ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15**

Location Name	Latitude	Longitude	Elev. m	First Contact			Second Contact			Third Contact			Fourth Contact			Maximum Eclipse				Eclip. Mag.	Eclip. Obs.	Umbral Depth	Umbral Durat.			
				U.T.	P	V Alt	U.T.	P	V	U.T.	P	V	U.T.	P	V Alt	U.T.	P	V Alt	Azm							
				h m s	°	°	h m s	°	°	h m s	°	°	h m s	°	°	h m s	°	°	°							
<b>CHINA</b>																										
Baoshan	25°09'N	099°09'E	—	07:05:08.7	237	210	39	08:39:20.5	232	186	08:47:35.0	63	15	10:05:54.6	60	1	9	08:43:28.3	148	100	25	229	0.912	0.831	0.905	08m14s
Beijing	39°55'N	116°25'E	—	07:32:48.0	234	198	15	—	—	—	—	—	—	—	—	—	—	08:52:28.4	153	108	3	239	0.823	0.743	—	—
Changchun	43°53'N	125°19'E	—	07:37:11.8	235	197	7	—	—	—	—	—	—	—	—	—	—	08:24	Set	—	—	0	241	0.568	0.453	—
Chengdu	30°39'N	104°04'E	—	07:17:24.1	235	204	30	—	—	—	—	—	10:06:53.2	65	9	3	08:48:50.3	150	103	17	232	0.895	0.819	—	—	
Chongqing	29°34'N	106°35'E	261	07:20:53.1	239	204	29	08:46:47.9	239	191	08:54:37.4	60	10	10:07:28.2	61	4	1	08:50:43.1	150	101	15	234	0.910	0.827	0.994	07m50s
Chuxiong	25°02'N	101°30'E	—	07:09:48.9	239	209	37	08:43:13.7	289	240	08:48:22.6	8	318	10:06:30.6	58	358	7	08:45:48.0	328	279	23	231	0.911	0.830	0.226	05m09s
Dongchuan	26°10'N	103°01'E	—	07:13:23.6	239	207	35	08:44:33.0	281	232	08:50:27.5	16	326	10:06:58.7	58	359	6	08:47:30.3	329	279	21	232	0.911	0.829	0.323	05m59s
Dukou	26°40'N	101°39'E	—	07:11:07.4	237	207	35	08:42:19.4	236	189	08:50:25.8	61	12	10:06:45.2	60	2	6	08:46:23.1	148	100	21	231	0.911	0.830	0.963	08m06s
Enshi	30°17'N	109°19'E	—	07:25:05.8	240	203	27	08:48:57.3	265	215	08:55:57.4	36	345	—	—	—	—	08:52:27.6	330	280	13	236	0.909	0.826	0.588	07m00s
Fuling	29°42'N	107°21'E	—	07:22:05.4	239	204	29	08:47:23.0	249	200	08:55:04.7	51	1	10:07:30.5	61	3	1	08:51:14.2	330	280	15	235	0.909	0.827	0.848	07m42s
Guanghua	32°25'N	111°36'E	—	07:28:21.0	240	202	23	08:49:39.7	236	187	08:57:12.7	66	16	—	—	—	—	08:53:26.6	151	101	10	237	0.908	0.825	0.910	07m33s
Guangzhou	23°06'N	113°16'E	18	07:31:06.3	254	207	29	—	—	—	—	—	—	—	—	—	—	08:53:56.2	330	271	13	240	0.706	0.610	—	—
Harbin	45°45'N	126°41'E	145	07:36:57.9	234	197	5	—	—	—	—	—	—	—	—	—	—	08:13	Set	—	—	0	240	0.432	0.308	—
Heze	35°17'N	115°27'E	—	07:32:32.9	239	201	19	08:51:23.5	204	155	08:57:14.3	100	51	—	—	—	—	08:54:19.0	152	103	5	239	0.907	0.823	0.384	05m51s
Jinan	36°40'N	116°57'E	—	07:33:46.4	239	200	17	08:53:35.7	163	115	08:54:58.8	142	93	—	—	—	—	08:54:16.9	153	104	4	240	0.907	0.822	0.018	01m23s
Jingmen	31°00'N	112°09'E	—	07:29:00.2	242	203	24	08:51:44.6	295	245	08:56:07.8	7	315	—	—	—	—	08:53:56.0	331	280	10	238	0.908	0.825	0.186	04m23s
Junxian	32°31'N	111°30'E	—	07:28:13.9	239	202	23	08:49:37.8	231	182	08:57:06.4	71	21	—	—	—	—	08:53:22.4	151	102	10	237	0.908	0.825	0.830	07m29s
Kaifeng	34°51'N	114°21'E	—	07:31:27.7	239	201	20	08:51:14.6	200	152	08:56:50.9	103	54	—	—	—	—	08:54:02.8	152	103	7	239	0.907	0.823	0.339	05m36s
Laiwu	36°12'N	117°42'E	—	07:34:32.4	240	200	16	08:51:40.0	208	159	08:57:44.2	97	47	—	—	—	—	08:54:42.2	153	103	3	241	0.907	0.822	0.438	07m00s
Leshan	29°34'N	103°45'E	—	07:16:23.3	236	205	31	08:46:38.3	178	131	08:50:32.0	120	72	10:07:03.0	63	6	3	08:48:34.9	149	102	18	232	0.910	0.828	0.127	03m54s
Lianyungang	34°39'N	119°16'E	—	07:36:20.7	243	201	16	08:52:52.8	281	230	08:58:32.8	24	332	—	—	—	—	08:55:42.8	333	281	3	242	0.906	0.822	0.374	05m40s
Lüda	38°53'N	121°35'E	—	07:36:55.5	239	199	12	—	—	—	—	—	—	—	—	—	—	08:54	Set	—	—	0	243	0.900	0.818	—
Luzhou	28°54'N	105°27'E	—	07:18:51.6	238	205	31	08:45:55.3	240	191	08:53:48.5	59	10	10:07:24.3	61	3	2	08:49:52.4	329	280	17	233	0.910	0.828	0.998	07m53s
Nanjing	32°03'N	118°47'E	—	07:36:36.0	246	202	18	—	—	—	—	—	—	—	—	—	—	08:56:18.6	332	279	4	242	0.864	0.787	—	—
Nanyang	33°00'N	112°32'E	—	07:29:29.8	240	202	22	08:50:02.4	233	183	08:57:29.7	70	20	—	—	—	—	08:53:46.4	151	102	9	238	0.908	0.824	0.849	07m27s
Neijiang	29°35'N	105°03'E	—	07:18:29.1	237	204	31	08:46:07.4	211	163	08:53:03.9	88	39	10:07:16.8	62	5	2	08:49:35.8	150	101	17	233	0.910	0.828	0.521	06m56s
Pingdingshan	33°45'N	113°17'E	—	07:30:21.4	239	201	21	08:50:24.6	221	172	08:57:26.3	82	32	—	—	—	—	08:53:55.7	152	102	8	238	0.908	0.824	0.648	07m02s
Puyang	35°42'N	114°59'E	—	07:32:02.3	238	200	19	08:52:49.6	170	122	08:55:10.3	134	85	—	—	—	—	08:53:59.6	152	104	6	239	0.907	0.823	0.051	02m21s
Qingdao	36°06'N	120°19'E	—	07:36:50.5	242	201	15	08:51:48.4	248	198	08:59:00.9	58	7	—	—	—	—	08:55:25.0	333	283	2	242	0.906	0.821	0.913	07m13s
Rizhao	35°27'N	119°29'E	—	07:36:19.0	242	201	16	08:51:57.3	257	207	08:58:59.7	49	358	—	—	—	—	08:55:28.8	333	282	2	242	0.906	0.821	0.754	07m02s
Shanghai	31°14'N	121°28'E	5	07:39:36.2	250	203	16	—	—	—	—	—	—	—	—	—	—	08:57:08.3	333	277	3	243	0.813	0.732	—	—
Shenyang	41°48'N	123°27'E	42	07:37:04.2	237	198	9	—	—	—	—	—	—	—	—	—	—	08:38	Set	—	—	0	242	0.731	0.638	—
Shuicheng	26°41'N	104°50'E	—	07:16:56.4	240	206	33	08:48:30.3	320	269	08:49:46.8	338	288	10:07:16.8	58	358	4	08:49:08.1	329	279	19	234	0.910	0.829	0.013	01m17s
Suining	30°31'N	105°34'E	—	07:19:38.9	236	204	29	08:47:39.8	186	138	08:52:17.5	114	66	10:07:11.6	63	7	2	08:49:58.5	150	102	16	233	0.910	0.827	0.191	04m38s
Tai'an	36°12'N	117°07'E	—	07:34:00.5	239	200	17	08:51:53.6	198	149	08:57:09.7	107	58	—	—	—	—	08:54:31.6	152	104	4	240	0.907	0.822	0.302	05m16s
Taiyuan	37°55'N	112°30'E	—	07:29:30.8	233	199	19	—	—	—	—	—	—	—	—	—	—	08:52:03.2	152	107	6	237	0.828	0.749	—	—
Tianjin	39°08'N	117°12'E	4	07:33:33.1	236	199	15	—	—	—	—	—	—	—	—	—	—	08:53:09.3	153	107	3	240	0.850	0.773	—	—
Wanxian	30°52'N	108°22'E	—	07:23:51.4	239	203	27	08:48:01.4	231	182	08:55:38.8	70	20	—	—	—	—	08:51:50.5	150	101	13	235	0.909	0.826	0.831	07m37s
Weifang	36°42'N	119°04'E	—	07:35:37.2	240	200	15	08:51:43.9	212	163	08:57:59.7	94	44	—	—	—	—	08:54:51.9	153	104	2	242	0.906	0.821	0.489	06m16s
Wuhan	30°36'N	114°17'E	23	07:31:44.1	244	203	23	—	—	—	—	—	—	—	—	—	—	08:54:57.8	331	279	9	239	0.880	0.805	—	—
Xiaguan	25°34'N	100°14'E	—	07:07:39.1	237	209	37	08:40:37.3	242	194	08:48:48.7	55	6	10:06:17.4	59	1	8	08:44:43.5	328	280	23	230	0.911	0.831	0.938	08m11s
Xi'an	34°15'N	108°52'E	—	07:25:11.8	235	201	24	—	—	—	—	—	—	—	—	—	—	08:51:33.7	151	104	11	235	0.872	0.797	—	—
Xiangfan	32°03'N	112°01'E	—	07:28:51.3	240	202	23	08:50:01.1	254	204	08:57:24.0	49	358	—	—	—	—	08:53:42.9	331	281	10	238	0.908	0.825	0.784	07m23s
Xintai	35°54'N	117°44'E	—	07:34:38.0	240	200	17</																			