

Phi (deg)																																					
Theta (deg)		0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350
-90	-21.00	-19.97	-25.24	-19.85	-19.10	-18.14	-14.50	-12.83	-21.12	-17.90	-24.22	-25.65	-18.96	-18.16	-14.04	-19.00	-13.95	-19.02	-18.21	-30.38	-23.06	-19.08	-26.79	-15.61	-16.70	-14.43	-19.33	-21.29	-18.67	-25.81	-27.97	-24.94	-27.97	-14.00	-16.60	-14.37	-22.65
-88	-18.15	-22.36	-20.52	-19.90	-18.47	-15.86	-12.84	-11.06	-21.12	-17.10	-26.44	-22.62	-18.57	-16.39	-13.22	-16.45	-12.28	-18.89	-18.95	-25.64	-22.42	-20.23	-27.49	-13.78	-14.36	-12.85	-19.89	-16.85	-25.03	-27.34	-28.74	-25.45	-13.45	-11.57	-12.27	-27.13	
-86	-16.28	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	-17.06	
-84	-15.12	-22.12	-16.39	-19.93	-17.72	-12.75	-11.65	-9.44	-18.11	-14.86	-21.78	-23.32	-18.53	-14.79	-12.81	-10.38	-10.78	-19.22	-14.89	-18.66	-20.40	-24.71	-32.25	-11.31	-12.18	-10.96	-15.07	-14.50	-21.58	-35.60	-32.66	-22.96	-13.11	-12.95	-8.99	-19.32	
-82	-14.52	-21.21	-16.15	-20.17	-17.94	-11.79	-12.08	-9.46	-15.72	-13.46	-19.38	-21.91	-19.07	-14.96	-12.52	-12.56	-11.13	-17.74	-14.47	-16.71	-25.28	-32.27	-38.85	-10.75	-12.41	-11.42	-13.26	-13.51	-21.09	-49.59	-35.93	-21.86	-12.70	-12.63	-10.27	-19.76	
-80	-14.26	-17.16	-16.31	-20.90	-19.02	-11.41	-13.46	-10.50	-13.89	-12.60	-17.98	-19.76	-20.39	-16.35	-12.15	-13.59	-13.13	-15.41	-15.53	-23.86	-35.31	-38.93	-11.15	-14.01	-13.35	-12.49	-12.07	-21.09	-36.20	-41.61	-22.27	-12.12	-13.74	-12.10	-11.90		
-78	-14.42	-15.53	-16.42	-21.59	-20.63	-11.31	-16.36	-13.27	-12.18	-12.45	-17.31	-21.56	-23.14	-19.35	-11.68	-12.67	-16.87	-13.30	-15.41	-22.52	-22.58	-26.62	-30.62	-12.96	-18.09	-16.00	-12.34	-17.16	-20.99	-30.46	-42.94	-25.73	-13.76	-11.76	-15.99	-16.64	-10.38
-76	-15.50	-16.61	-16.53	-21.46	-20.76	-11.08	-17.58	-20.34	-10.56	-13.12	-17.63	-24.31	-28.73	-20.34	-11.40	-16.59	-16.17	-12.25	-16.00	-27.10	-21.15	-23.65	-25.16	-16.44	-19.91	-15.73	-12.35	-12.44	-21.30	-25.09	-61.99	-35.90	-11.74	-16.43	-28.48	-9.92	
-74	-15.95	-16.95	-16.95	-21.46	-20.76	-11.08	-17.58	-20.34	-10.56	-13.12	-17.63	-24.31	-28.73	-20.34	-11.40	-16.59	-16.17	-12.25	-16.00	-27.10	-21.15	-23.65	-25.16	-16.44	-19.91	-15.73	-12.35	-12.44	-21.30	-25.09	-61.99	-35.90	-11.74	-16.43	-28.48	-9.92	
-72	-17.65	-15.74	-15.68	-22.27	-21.52	-7.76	-71.87	-11.94	-89.27	-101.11	-78.78	-25.64	-32.21	-10.38	-10.18	-7.67	-7.69	-12.25	-14.08	-16.23	-18.98	-16.06	-13.66	-17.79	-15.25	-12.13	-12.47	-24.44	-17.85	-21.93	-18.17	-11.12	-7.30	-10.17	-12.30		
-70	-21.46	-19.54	-15.92	-24.69	-22.58	-8.82	-5.24	-7.3	-8.3	-8.3	-34.68	-21.24	-24.51	-27.93	-10.40	-8.59	-5.12	-5.39	-12.56	-38.93	-16.02	-20.75	-19.89	-12.50	-8.53	-4.62	-4.82	-10.88	-29.30	-24.95	-16.70	-20.14	-14.86	-9.38	-4.61	-7.24	-12.23
-68	-31.78	-20.40	-16.94	-30.32	-11.77	-7.90	-4.15	-5.16	-8.61	-19.65	-20.60	-23.34	-26.13	-9.27	-6.70	-4.09	-4.04	-12.13	-20.84	-15.88	-20.43	-18.48	-11.24	-5.91	-3.82	-3.44	-9.50	-22.55	-20.07	-16.35	-18.85	-13.03	-7.55	-3.41	-5.69	-9.74	
-66	-25.04	-24.97	-18.49	-34.85	-19.08	-7.05	-4.41	-4.36	-8.36	-13.59	-18.13	-22.84	-24.75	-9.53	-5.39	-4.11	-3.36	-11.10	-15.54	-16.29	-23.43	-18.31	-11.34	-4.89	-4.32	-3.16	-8.80	-13.74	-18.36	-16.59	-18.69	-12.45	-6.78	-3.69	-4.71	-7.69	
-64	-16.82	-17.27	-18.99	-33.31	-12.19	-6.55	-6.21	-4.55	-8.18	-10.25	-16.93	-22.27	-23.73	-14.12	-5.17	-5.18	-3.31	-11.74	-12.60	-17.57	-26.92	-16.61	-11.67	-5.42	-6.00	-3.77	-9.25	-9.59	-19.20	-18.68	-20.75	-12.73	-7.24	-5.57	-3.95	-7.41	
-62	-15.25	-16.25	-16.30	-26.36	-14.96	-6.67	-6.91	-4.84	-8.67	-11.78	-17.63	-23.67	-24.69	-11.47	-5.18	-5.18	-3.30	-10.89	-11.33	-20.46	-19.28	-16.02	-11.77	-7.91	-8.34	-6.12	-10.84	-8.12	-21.46	-22.07	-27.36	-14.52	-8.65	-3.37	-4.86	-7.30	
-60	-15.25	-15.38	-16.06	-24.07	-16.36	-10.00	-3.47	-8.32	-10.71	-13.00	-20.19	-20.29	-20.29	-9.51	-9.07	-2.43	-2.36	-12.20	-18.95	-15.36	-17.62	-22.22	-10.81	-3.32	-3.17	-2.77	-3.32	-11.77	-17.80	-17.80	-12.11	-11.50	-8.44	-3.36	-4.65	-7.10	
-58	-16.19	-16.93	-12.98	-15.74	-18.65	-7.70	-5.62	-1.86	-8.19	-9.90	-28.81	-16.75	-16.84	-13.51	-10.18	-6.29	-5.09	-6.22	-18.83	-20.66	-13.06	-17.22	-24.10	-3.00	-4.85	-2.10	-9.16	-14.44	-25.99	-13.92	-21.29	-22.95	-12.02	-5.11	-1.41	-11.30	
-56	-17.48	-22.86	-12.96	-14.31	-12.29	-6.65	-2.90	-0.80	-7.56	-11.63	-23.31	-14.64	-15.05	-8.29	-6.93	-3.67	-0.77	-4.59	-31.52	-25.29	-12.96	-16.73	-12.27	-8.47	-2.65	-0.78	-6.35	-15.85	-26.85	-13.20	-17.53	-12.04	-9.61	-3.12	-0.65	-6.15	
-54	-12.54	-22.13	-14.14	-13.55	-9.25	-5.19	-2.03	-0.69	-6.35	-10.46	-21.30	-14.78	-14.74	-5.31	-4.93	-2.95	-0.96	-3.19	-14.18	-27.36	-14.91	-17.07	-6.77	-7.65	-2.18	-0.21	-1.48	-15.62	-31.32	-15.52	-15.05	-8.15	-7.28	-2.90	-0.37	-4.03	
-52	-8.93	-18.33	-15.13	-14.74	-7.54	-4.13	-2.54	-1.04	-6.05	-7.43	-19.03	-18.41	-17.11	-3.63	-4.43	-3.77	-0.09	-2.30	-8.54	-23.69	-18.11	-18.88	-6.21	-7.19	-3.24	-0.62	-2.51	-9.30	-18.29	-22.66	-15.62	-6.66	-5.70	-3.97	-0.43	-3.32	
-50	-6.57	-18.21	-20.51	-16.44	-4.74	-4.13	-2.54	-1.04	-6.05	-5.43	-17.31	-18.84	-25.27	-8.45	-4.51	-5.34	-1.66	-0.54	-23.69	-16.54	-19.21	-6.57	-5.89	-3.24	-0.26	-1.67	-4.45	-14.05	-21.75	-18.10	-6.47	-4.61	-3.69	-0.75	-3.12		
-48	-11.26	-11.26	-13.22	-7.00	-4.80	-4.00	-2.80	-1.40	-5.80	-4.40	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00	-16.00		
-46	-5.01	-17.49	-4.73	-7.62	-8.50	-3.29	-6.60	-4.57	-3.69	-6.01	-15.16	-3.68	-8.49	-3.59	-3.63	-7.25	-1.90	-4.22	-7.30	-21.08	-4.45	-7.31	-9.50	-27.99	-8.18	-4.54	-3.09	-4.44	-14.05	-5.47	-6.27	-7.75	-3.87	-7.43	-2.08	-3.68	
-44	-5.79	-16.25	-1.22	-3.46	-10.78	-2.48	-5.96	-3.46	-4.45	-7.35	-15.26	-0.64	-4.69	-4.82	-3.21	-7.05	-1.11	-5.90	-3.28	-20.83	-0.89	-3.84	-10.45	-2.61	-7.67	-3.10	-4.32	-5.05	-14.13	-1.76	-3.74	-8.82	-3.88	-6.41	-1.73	-4.84	
-42	-5.22	-16.54	0.74	-1.03	-12.27	-0.49	-1.63	-6.09	-5.94	-16.74	1.29	-2.67	-6.00	-3.11	-6.09	-0.01	-5.85	-3.35	-21.65	-1.12	-1.63	-9.51	-2.93	-6.88	-1.22	-5.29	-3.99	-15.84	-0.76	-2.36	-3.35	-9.83	-3.81	-5.09	-4.01	-6.89	
-40	-2.86	-17.76	2.07	1.11	-8.78	-1.86	-3.74	-0.07	-8.52	-2.84	-20.29	2.42	-1.44	-0.07	-2.82	-5.00	1.14	-5.31	-1.97	-21.00	2.20	-0.07	-6.98	-2.67	-6.09	-0.08	-6.05	-1.77	-29.78	2.26	-1.06	10.03	-3.41	-4.08	1.09	-7.94	
-38	-0.99	-15.77	3.05	0.67	-4.45	-1.55	-3.62	-0.78	-9.50	-0.26	-18.08	2.87	-0.41	-5.28	-1.84	-4.57	1.97	-6.46	-10.40	-16.94	2.54	0.99	-5.09	-1.56	-5.53	0.69	-6.35	0.23	-16.66	2.82	1.06	13.88	-9.47	-2.51	-3.69	-2.77	
-36	1.19	-11.09	3.49	0.51	-3.45	-1.29	-2.84	-0.21	-10.34	-0.22	-21.12	3.19	-0.46	-5.12	-1.99	-2.40	1.12	-5.46	-11.21	-16.16	2.12	0.12	-1.56	-2.12	-1.56	-2.12	0.12	-1.56	-2.12	-1.56	-2.12	0.12	-1.56	-2.12	0.12	-1.56	
-34	1.19	-6.70	2.79	0.26	-3.07	-0.27	-6.62	0.27	-5.53	2.82	-7.06	1.27	-0.41	-0.07	-0.14	-8.67	1.14	-6.51	-3.42	-7.88	0.70	-0.10	-4.16	-0.67	-8.33	0.15	-6.73	2.24	-7.62	1.45	0.91	-6.05	-4.02	-5.86	1.93	-6.80	
-32	2.09	-4.05	0.94	-1.83	-1.37	0.58	-10.90	-1.23	-5.14	3.71	-1.32	-1.26	-2.40	-2.18	0.19	-17.96	-1.07	-5.30	-4.09	-3.85	-2.23	-2.64	-2.79	-1.18	-15.16	-1.68	-0.76	2.72	-0.52	-0.54	-1.08	-0.32	-0.40	-9.70	-1.10	-12.47	
-30	2.72	-2.20	-1.88	-0.40	0.20	1.53	-18.82	-4.33	-5.15	-4.23	-0.63	-4.66	-5.20	0.19	1.38	-13.55	-5.67	-4.82	4.62	0.89	-5.64	-5.21	-0.44	1.66	-18.03	-5.96	6.06	3.20	-2.19	-2.95	-3.87	-0.26	1.17	-14.01	-3.64	-8.77	
-28	2.95	-0.81	-3.45	-4.69	1.24	2.08	-13.12	-9.05	-4.40	4.07	0.50	-5.46	-5.11	1.50	2.53	-6.06	-14.43	-3.13	4.87	0.64	-5.85	-3.69	1.36	1.87	-8.77	-12.82	-4.43	3.35	-0.08	-3.21	-3.76	1.12	1.46	-9.43	-6.43	-4.07	
-26	2.40	-0.29	-2.05	-2.71	1.93	1.61	-0.89	-9.14	-3.82	2.80	0.29	-2.64	-2.27	1.45	2.32	-4.24	-10.10	-1.93	4.22	0.58	-3.13	0.86	-1.77	-0.07	-1.51	-7.65	-4.04	2.62	0.07	-0.68	-1.15	1.09	-5.09	-4.03	-2.51		
-24	1.19	0.19	1.31	0.34	-0.12	0.34	-2.12	-0.84	-1.21	0.34	-2.12	-0.84	-1.21	0.34	-2.12	-0.84	-1.21	0.34	-2.12	-0.84	-1.21	0.34	-2.12	-0.84	-1.21	0.34	-2.12	-0.84	-1.21	0.34	-2.12	-0.84	-1.21	0.34	-2.12		
-22	3.06	3.88	5.08	4.42	2.83	2.50	1.19	3																													