```
Occultation of PPM   146634 by   85 Io  (USNO thru 12/9)

Time of minimum geocentric separation:  0:37:56.6 UT on Dec 10,1995
    Minimum radial separation:    3.932 arcsec

Star at  RA:   3 31  1.445
        Dec:   7 11 54.04

Coordinates of equinox 2000.00

Occulting body ephemeris:

    Ephemeris Day/Time              RA                Dec            Rho(AU)

 Dec  9,1995   12: 0: 0.0       3 31 22.718       7 13 45.77      1.693788
 Dec  9,1995   14:24: 0.0       3 31 18.642       7 13 24.99      1.694566
 Dec  9,1995   16:48: 0.0       3 31 14.578       7 13  4.33      1.695347
 Dec  9,1995   19:12: 0.0       3 31 10.527       7 12 43.78      1.696129
 Dec  9,1995   21:36: 0.0       3 31  6.488       7 12 23.34      1.696915
 Dec 10,1995    0: 0: 0.0       3 31  2.461       7 12  3.02      1.697703
 Dec 10,1995    2:24: 0.0       3 30 58.447       7 11 42.81      1.698493
 Dec 10,1995    4:48: 0.0       3 30 54.445       7 11 22.72      1.699285
 Dec 10,1995    7:12: 0.0       3 30 50.456       7 11  2.74      1.700080
 Dec 10,1995    9:36: 0.0       3 30 46.479       7 10 42.87      1.700878
 Dec 10,1995   12: 0: 0.0       3 30 42.515       7 10 23.12      1.701678
 Dec 10,1995   14:24: 0.0       3 30 38.564       7 10  3.49      1.702480
 Dec 10,1995   16:48: 0.0       3 30 34.625       7  9 43.97      1.703284
 Dec 10,1995   19:12: 0.0       3 30 30.699       7  9 24.56      1.704092
 Dec 10,1995   21:36: 0.0       3 30 26.786       7  9  5.27      1.704901

Corrections to ephemeris:
     -0.0130 sec in RA and   0.226 arcsec in Dec

Curves terminated at a sun altitude of   0.0 degrees

Adopted ET/UT correction: 62.14 seconds

Maximum possible occultation duration:    17.5 sec

Adopted radii of occulting body:
    Equatorial:    78.5 km
         Polar:    78.5 km

Position angle of the pole:   0.00 deg

Shadow is retrograde (East to West/right to left)

At time of minimum separation, the Sun is 152.4 degrees from the star

At time of minimum separation the Moon is  92.2% illuminated and is  57.2 degrees from star

Output generated on: Sat Dec  9 13:38:23 1995


                       Northern Limit Curve

                                                          Sun      Star     Moon
      U.T. Day/Time              Lat        Lon        Alt      Alt      Alt
                                (Deg)      (Deg)      (Deg)     (Deg)    (Deg)

 Dec 10,1995    0:30:30.0       69.25      -67.69     -25.8R     2.9S    30.5S
 Dec 10,1995    0:31: 0.0       70.81      -36.22     -35.3R    13.4S    34.9S
 Dec 10,1995    0:31:30.0       70.37      -19.46     -39.5R    18.6S    35.8R
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Dec 10,1995	0:32: 0.0	69.44	-6.94	-42.3R	22.5S	35.7R
Dec 10,1995	0:32:30.0	68.30	3.11	-44.3R	25.6S	35.1R
Dec 10,1995	0:33: 0.0	67.05	11.48	-45.8S	28.2S	34.2R
Dec 10,1995	0:33:30.0	65.74	18.67	-46.8S	30.5S	33.0R
Dec 10,1995	0:34: 0.0	64.40	24.97	-47.4S	32.4S	31.6R
Dec 10,1995	0:34:30.0	63.05	30.61	-47.6S	34.1S	30.0R
Dec 10,1995	0:35: 0.0	61.70	35.72	-47.5S	35.5R	28.4R
Dec 10,1995	0:35:30.0	60.35	40.43	-47.2S	36.6R	26.6R
Dec 10,1995	0:36: 0.0	59.01	44.81	-46.6S	37.6R	24.8R
Dec 10,1995	0:36:30.0	57.68	48.93	-45.8S	38.3R	22.9R
Dec 10,1995	0:37: 0.0	56.35	52.85	-44.8S	38.8R	21.0R
Dec 10,1995	0:37:30.0	55.04	56.60	-43.6S	39.1R	18.9R
Dec 10,1995	0:38: 0.0	53.73	60.22	-42.2S	39.2R	16.9R
Dec 10,1995	0:38:30.0	52.42	63.75	-40.7S	39.1R	14.7R
Dec 10,1995	0:39: 0.0	51.12	67.20	-39.0S	38.8R	12.5R
Dec 10,1995	0:39:30.0	49.83	70.60	-37.2S	38.2R	10.2R
Dec 10,1995	0:40: 0.0	48.53	73.99	-35.2S	37.5R	7.9R
Dec 10,1995	0:40:30.0	47.23	77.38	-33.1S	36.5R	5.5R
Dec 10,1995	0:41: 0.0	45.93	80.79	-30.8S	35.3R	3.0R
Dec 10,1995	0:41:30.0	44.62	84.27	-28.4S	33.9R	0.4R
Dec 10,1995	0:42: 0.0	43.30	87.83	-25.8S	32.2R	-2.4R
Dec 10,1995	0:42:30.0	41.96	91.54	-23.0S	30.2R	-5.3R
Dec 10,1995	0:43: 0.0	40.60	95.45	-19.9S	27.9R	-8.3R
Dec 10,1995	0:43:30.0	39.19	99.65	-16.5S	25.2R	-11.7R
Dec 10,1995	0:44: 0.0	37.73	104.29	-12.7S	22.0R	-15.3R
Dec 10,1995	0:44:30.0	36.17	109.67	-8.2S	18.0R	-19.5R
Dec 10,1995	0:45: 0.0	34.40	116.61	-2.4S	12.5R	-24.8R

Southern Limit Curve

U.T. Day/Time		Lat (Deg)	Lon (Deg)	Sun Alt (Deg)	Star Alt (Deg)	Moon Alt (Deg)
Dec 10,1995	0:30:30.0	68.56	-43.50	-34.3R	11.5S	36.3S
Dec 10,1995	0:31: 0.0	68.46	-26.00	-39.5R	17.6S	37.8S
Dec 10,1995	0:31:30.0	67.75	-13.32	-42.9R	21.9S	38.0R
Dec 10,1995	0:32: 0.0	66.78	-3.18	-45.3R	25.4S	37.6R
Dec 10,1995	0:32:30.0	65.67	5.29	-47.1R	28.3S	36.8R
Dec 10,1995	0:33: 0.0	64.49	12.59	-48.3S	30.7S	35.7R
Dec 10,1995	0:33:30.0	63.26	19.01	-49.2S	32.9S	34.4R
Dec 10,1995	0:34: 0.0	62.00	24.75	-49.6S	34.8S	32.9R
Dec 10,1995	0:34:30.0	60.73	29.97	-49.8S	36.4S	31.3R
Dec 10,1995	0:35: 0.0	59.46	34.76	-49.6S	37.7R	29.6R
Dec 10,1995	0:35:30.0	58.18	39.22	-49.2S	38.9R	27.8R
Dec 10,1995	0:36: 0.0	56.91	43.41	-48.6S	39.8R	25.9R
Dec 10,1995	0:36:30.0	55.65	47.38	-47.7S	40.5R	24.0R
Dec 10,1995	0:37: 0.0	54.38	51.16	-46.6S	41.0R	22.0R
Dec 10,1995	0:37:30.0	53.12	54.80	-45.4S	41.3R	20.0R
Dec 10,1995	0:38: 0.0	51.87	58.33	-43.9S	41.4R	17.9R
Dec 10,1995	0:38:30.0	50.62	61.77	-42.4S	41.3R	15.7R
Dec 10,1995	0:39: 0.0	49.37	65.15	-40.7S	41.0R	13.5R
Dec 10,1995	0:39:30.0	48.12	68.48	-38.8S	40.4R	11.2R
Dec 10,1995	0:40: 0.0	46.87	71.79	-36.8S	39.7R	8.9R
Dec 10,1995	0:40:30.0	45.62	75.10	-34.7S	38.7R	6.5R
Dec 10,1995	0:41: 0.0	44.36	78.43	-32.4S	37.6R	4.0R
Dec 10,1995	0:41:30.0	43.10	81.81	-30.0S	36.2R	1.4R
Dec 10,1995	0:42: 0.0	41.82	85.26	-27.5S	34.5R	-1.3R
Dec 10,1995	0:42:30.0	40.53	88.83	-24.7S	32.6R	-4.1R
Dec 10,1995	0:43: 0.0	39.22	92.56	-21.7S	30.4R	-7.1R
Dec 10,1995	0:43:30.0	37.87	96.53	-18.5S	27.9R	-10.3R
Dec 10,1995	0:44: 0.0	36.48	100.82	-14.9S	24.9R	-13.8R

Dec 10,1995	0:44:30.0	35.02	105.64	-10.9S	21.3R	-17.7R
Dec 10,1995	0:45: 0.0	33.43	111.37	-6.0S	16.8R	-22.2R

Shadow Center Line

U.T. Day/Time		Lat (Deg)	Lon (Deg)	Sun Alt (Deg)	Star Alt (Deg)	Moon Alt (Deg)
Dec 10,1995	0:30:30.0	69.32	-52.02	-31.2R	8.4S	34.1S
Dec 10,1995	0:31: 0.0	69.65	-30.45	-37.5R	15.6S	36.5S
Dec 10,1995	0:31:30.0	69.05	-16.05	-41.2R	20.3S	37.0R
Dec 10,1995	0:32: 0.0	68.09	-4.87	-43.8R	24.0S	36.7R
Dec 10,1995	0:32:30.0	66.96	4.30	-45.7R	27.0S	36.0R
Dec 10,1995	0:33: 0.0	65.75	12.09	-47.1S	29.5S	34.9R
Dec 10,1995	0:33:30.0	64.48	18.86	-48.0S	31.7S	33.7R
Dec 10,1995	0:34: 0.0	63.18	24.86	-48.5S	33.6S	32.2R
Dec 10,1995	0:34:30.0	61.88	30.28	-48.7S	35.2S	30.7R
Dec 10,1995	0:35: 0.0	60.57	35.22	-48.6S	36.6R	29.0R
Dec 10,1995	0:35:30.0	59.26	39.80	-48.2S	37.8R	27.2R
Dec 10,1995	0:36: 0.0	57.95	44.08	-47.6S	38.7R	25.4R
Dec 10,1995	0:36:30.0	56.65	48.13	-46.8S	39.4R	23.5R
Dec 10,1995	0:37: 0.0	55.36	51.98	-45.7S	39.9R	21.5R
Dec 10,1995	0:37:30.0	54.07	55.67	-44.5S	40.2R	19.5R
Dec 10,1995	0:38: 0.0	52.79	59.25	-43.1S	40.3R	17.4R
Dec 10,1995	0:38:30.0	51.51	62.73	-41.5S	40.2R	15.2R
Dec 10,1995	0:39: 0.0	50.24	66.14	-39.9S	39.9R	13.0R
Dec 10,1995	0:39:30.0	48.97	69.51	-38.0S	39.3R	10.7R
Dec 10,1995	0:40: 0.0	47.70	72.85	-36.0S	38.6R	8.4R
Dec 10,1995	0:40:30.0	46.42	76.20	-33.9S	37.6R	6.0R
Dec 10,1995	0:41: 0.0	45.15	79.57	-31.7S	36.5R	3.5R
Dec 10,1995	0:41:30.0	43.86	83.00	-29.2S	35.0R	0.9R
Dec 10,1995	0:42: 0.0	42.56	86.51	-26.6S	33.4R	-1.8R
Dec 10,1995	0:42:30.0	41.25	90.14	-23.9S	31.4R	-4.7R
Dec 10,1995	0:43: 0.0	39.91	93.96	-20.8S	29.2R	-7.7R
Dec 10,1995	0:43:30.0	38.53	98.03	-17.5S	26.6R	-11.0R
Dec 10,1995	0:44: 0.0	37.11	102.48	-13.9S	23.5R	-14.5R
Dec 10,1995	0:44:30.0	35.60	107.55	-9.6S	19.7R	-18.5R
Dec 10,1995	0:45: 0.0	33.94	113.78	-4.3S	14.8R	-23.4R