

Best Upcoming Asteroidal Events for North America

Steve Preston

Jul 17, 2021

Date			U.T.		Diameter		Durn	Star	Mag	Star	Planet
y	m	d	h	m	km	"	sec/m	mag	V		
2021	Jul	26	5	35.7	199	0.218	18.3s	8.2	0.8	HIP 95949	6 Hebe
2021	Sep	7	11	56.7	101	0.081	10.7s	8.7	4.3	HIP 3957	191 Kolga
2021	Sep	20	9	15.7	140	0.063	5.4s	7.1	6.9	HIP 34733	762 Pulcova #1
2021	Dec	14	9	26.2	169	0.136	14.7s	10.7	0.6	TYC 2441-00670-1	22 Kalliope #1
2022	Jan	1	2	58.4	97	0.075	9.7s	9.1	3.8	TYC 2389-01033-1	162 Laurentia
2022	Mar	2	2	28.1	177	0.111	26.8s	10.0	1.7	TYC 2432-00369-1	22 Kalliope #1
2022	Mar	12	4	0.2	57	0.030	6.8s	9.1	6.5	TYC 0750-01420-1	874 Rotraut
2022	Mar	21	6	50.3	59	0.032	3.9s	9.1	6.1	TYC 6114-00304-1	1005 Arago
2022	Mar	28	8	15.5	222	0.168	18.3s	9.2	1.1	TYC 1347-00941-1	7 Iris
2022	Apr	12	4	21.5	163	0.074	4.4s	7.7	5.5	TYC 0106-00124-1	185 Eunike
2022	Aug	19	2	53.4	59	0.045	5.2s	9.0	3.6	TYC 1099-00683-1	480 Hansa
2022	Sep	15	4	49.7	76	0.055	6.2s	9.3	4.4	HIP 116107	664 Judith
2022	Sep	30	4	23.8	98	0.098	10.0s	9.5	1.5	TYC 6891-02231-1	192 Nausikaa
2022	Oct	4	2	37.5	104	0.079	7.9s	6.7	4.4	HIP 4031	23 Thalia
2022	Oct	10	5	15.3	80	0.077	13.6s	9.6	3.4	TYC 1160-01079-1	972 Cohnia
2022	Oct	19	2	51.5	81	0.037	4.1s	9.7	5.6	TYC 5140-00567-1	568 Cheruskia
2022	Oct	24	9	17.8	40	0.027	6.1s	9.9	4.0	UCAC4 569-011074	208 Lacrimosa
2022	Oct	28	1	50.6	82	0.049	7.4s	8.7	5.5	TYC 6351-01171-1	160 Una
2022	Nov	17	2	15.5	123	0.083	9.6s	9.9	3.2	TYC 1825-00541-1	388 Charybdis
2022	Dec	14	12	51.4	49	0.030	3.3s	9.9	3.6	TYC 2417-00677-1	312 Pierretta

6 Hebe occults HIP 95949 on 2021 Jul 26 from 5h 28m to 5h 43m UT

Star: (Dia < 0.1 mas)

Mv 8.2

RA = 19 30 44.3918 (astrometric)

Dec = -11 51 35.914

[of Date: 19 31 57, -11 48 50]

Prediction of 2021 May 29.0

Reliable not available

Max Duration = 18.3 secs

Mag Drop = 0.8 (0.0r)

Sun : Dist = 166°

Moon: Dist = 41°

: illum = 94 %

Error 33.3x16.0 mas in PA 93°

Asteroid: (in DAMIT, ISAM)

Mag = 8.4

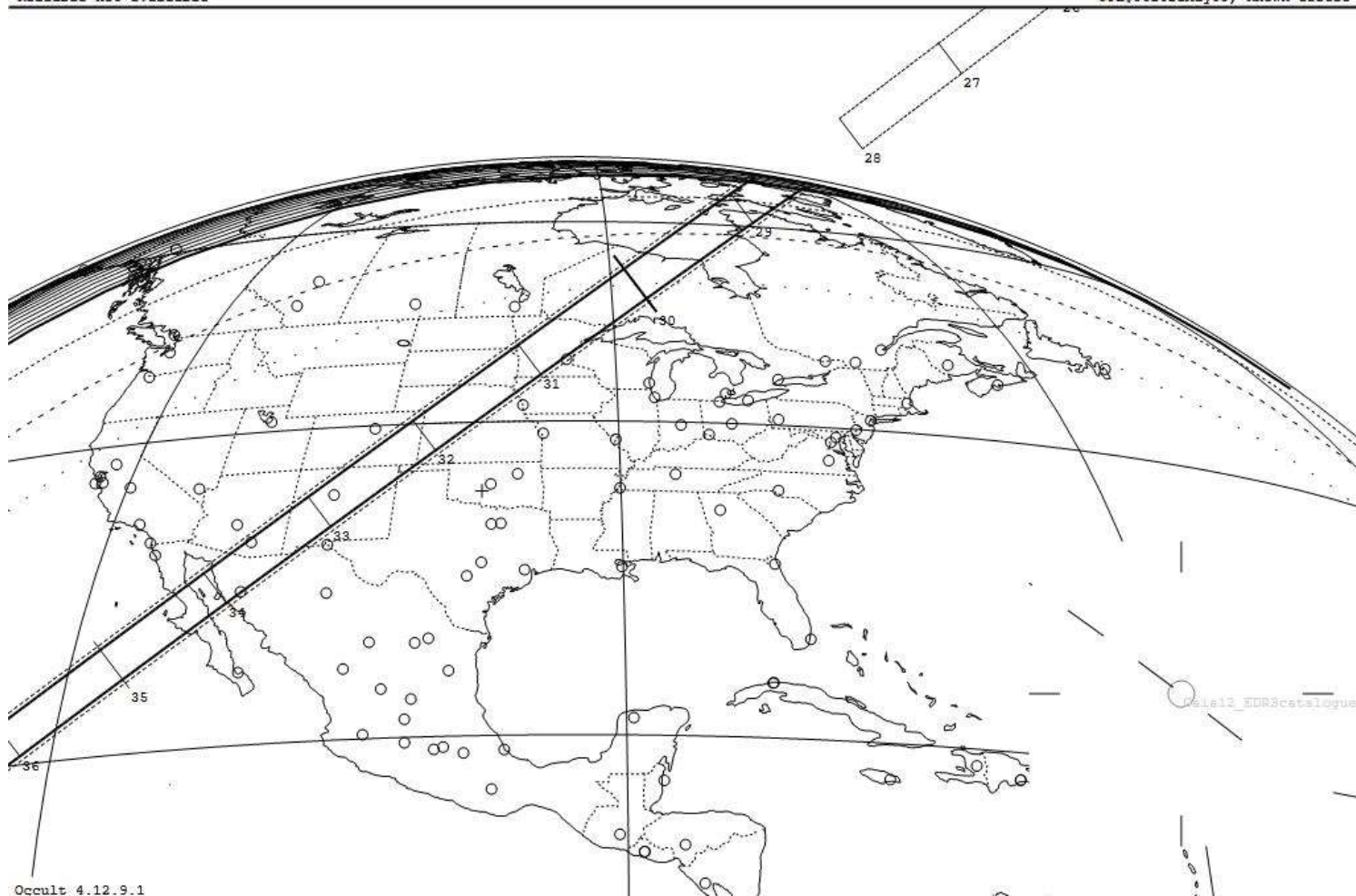
Dia = 199 ±10km, 218 mas

Parallax = 6.977"

Hourly dRA = -2.323s

dDec = -25.91"

JPL#952021May03, Known errors

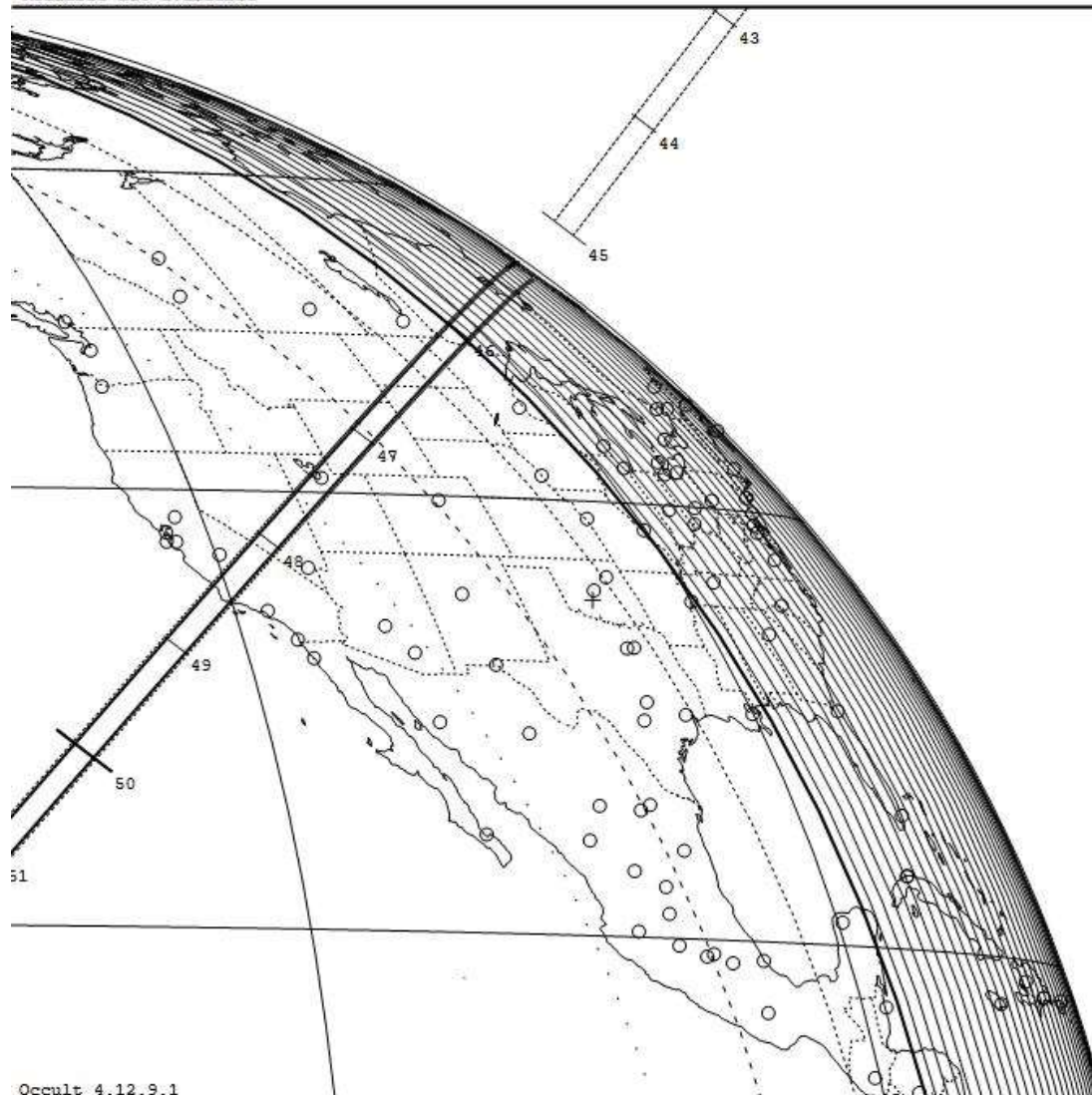


191 Kolga occults HIP 3957 on 2021 Sep 7 from 11h 45m to 12h 8m UT

Star: (Dia < 0.1 mas)
 Mv 8.7; Mb 9.5; Mr 8.3
 RA = 0 50 47.5461 (astrometric)
 Dec = - 1 55 20.662
 [of Date: 0 51 54, - 1 48 14]
 Prediction of 2020 Mar 7.0
 Reliable not available

Max Duration = 10.7 secs
 Mag Drop = 4.3 (4.3r)
 Sun : Dist = 153°
 Moon: Dist = 160°
 : illum = 0 %
 Error 19.7x3.6 mas in PA 14°

Asteroid: (in DAMIT)
 Mag = 13.0
 Dia = 101 ±10km, 81 mas
 Parallax = 5.111"
 Hourly dRA = -1.101s
 dDec = -21.60"
 JPL#1022020Feb03, Known errors



762 Pulcova #1 occults HIP 34733 on 2021 Sep 20 from 9h 12m to 9h 20m UT

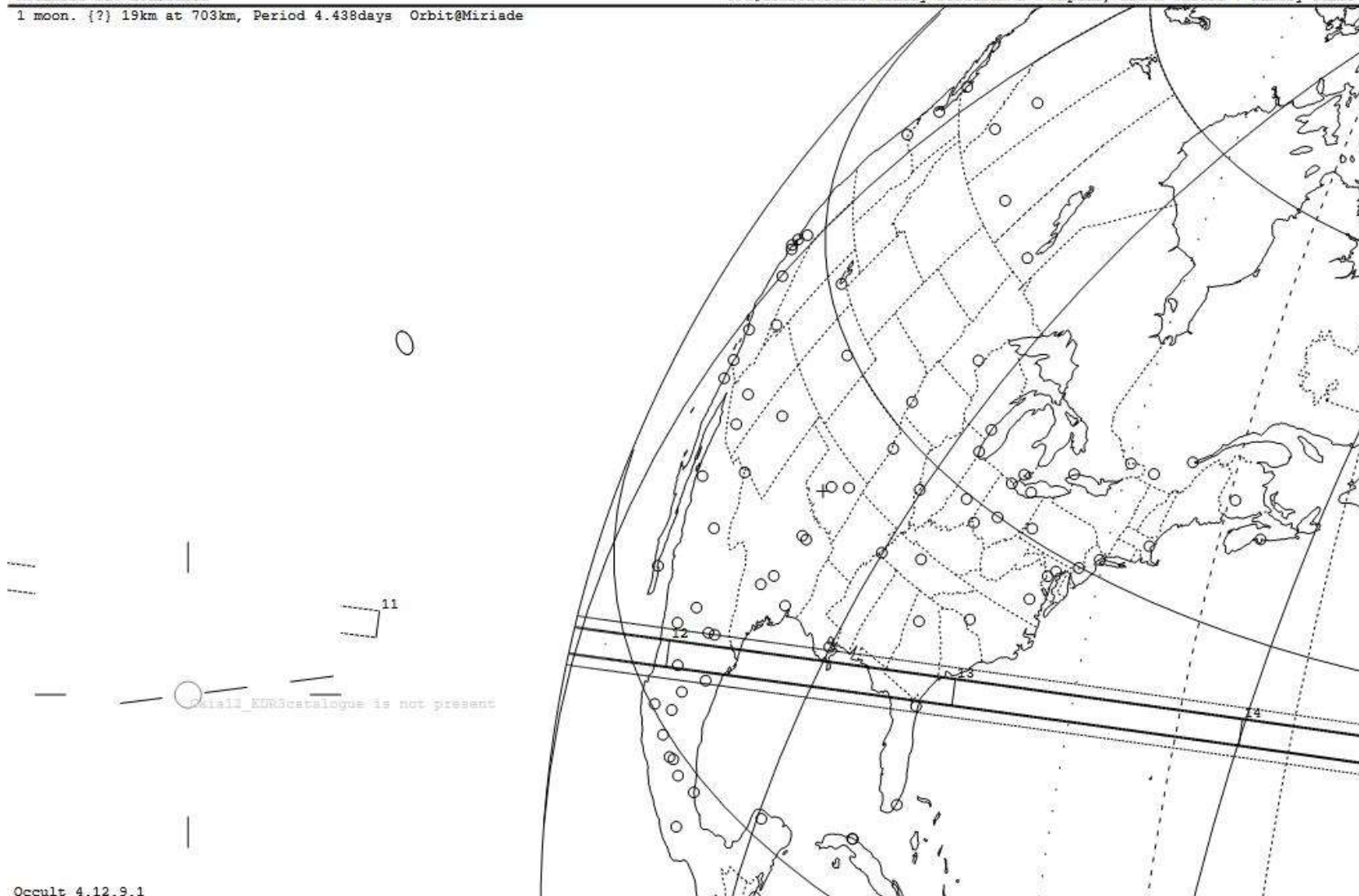
Star: (Dia < 0.1 mas)
 Mv 7.1
 RA = 7 11 28.9188 (astrometric)
 Dec = 30 28 21.501
 [of Date: 7 12 50, 30 26 11]
 Prediction of 2020 Mar 7.0
 Reliable not available

Max Duration = 5.4 secs
 Mag Drop = 6.9 (0.0r)
 Sun : Dist = 72°
 Moon: Dist = 116°
 : illum = 99 %
 Error 28.7x17.6 mas in PA 157°

Asteroid: (in DAMIT, ISAM)
 Mag = 14.0
 Dia = 140 ±14km, 63 mas
 Parallax = 2.871"
 Hourly dRA = 3.211s
 dDec = -5.35"

JPL#1022020Feb22 Binary solution 1 : Kepler, Known errors + binary orbit

1 moon. (?) 19km at 703km, Period 4.438days Orbit@Miriade



22 Kalliope #1 occults TYC 2441-00670-1 on 2021 Dec 14 from 9h 17m to 9h 35m UT

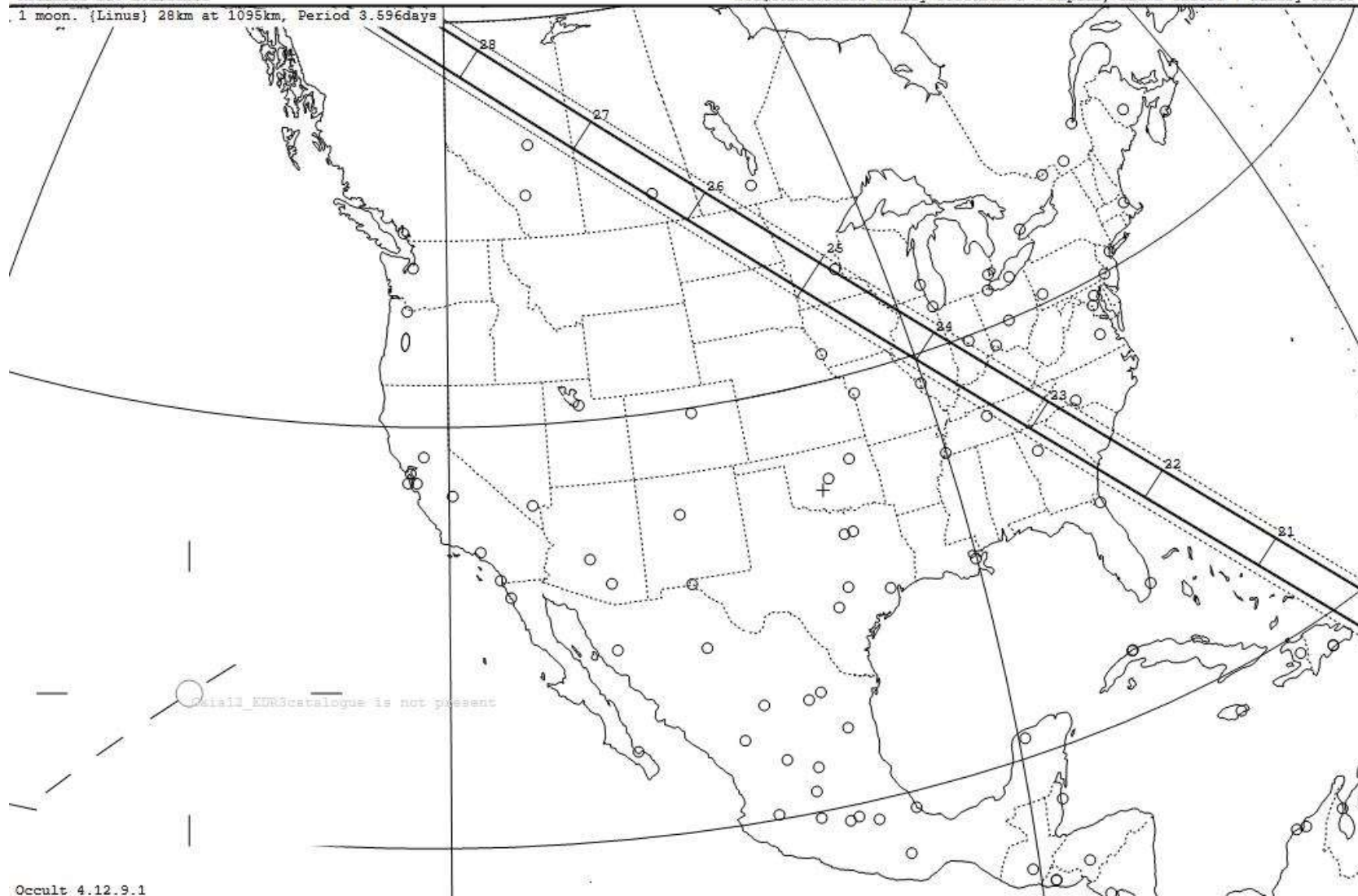
Star: (Dia < 0.1 mas)
 Mv 10.7
 RA = 6 54 11.9970 (astrometric)
 Dec = 33 10 59.290
 [of Date: 6 55 39, 33 9 17]
 Prediction of 2020 Mar 7.0
 Reliable not available

Max Duration = 14.7 secs
 Mag Drop = 0.6 (0.0r)
 Sun : Dist = 158°
 Moon: Dist = 72°
 : illum = 81 %
 Error 37.3x16.2 mas in PA 5°

Asteroid: (in DAMIT, ISAM)
 Mag = 10.3
 Dia = 169 ±17km, 136 mas
 Parallax = 5.114"
 Hourly dRA = -2.222s
 dDec = 17.90"

JPL#982020Feb22 Binary solution 1 : Kepler, Known errors + binary orbit

1 moon. {Linus} 28km at 1095km, Period 3.596days

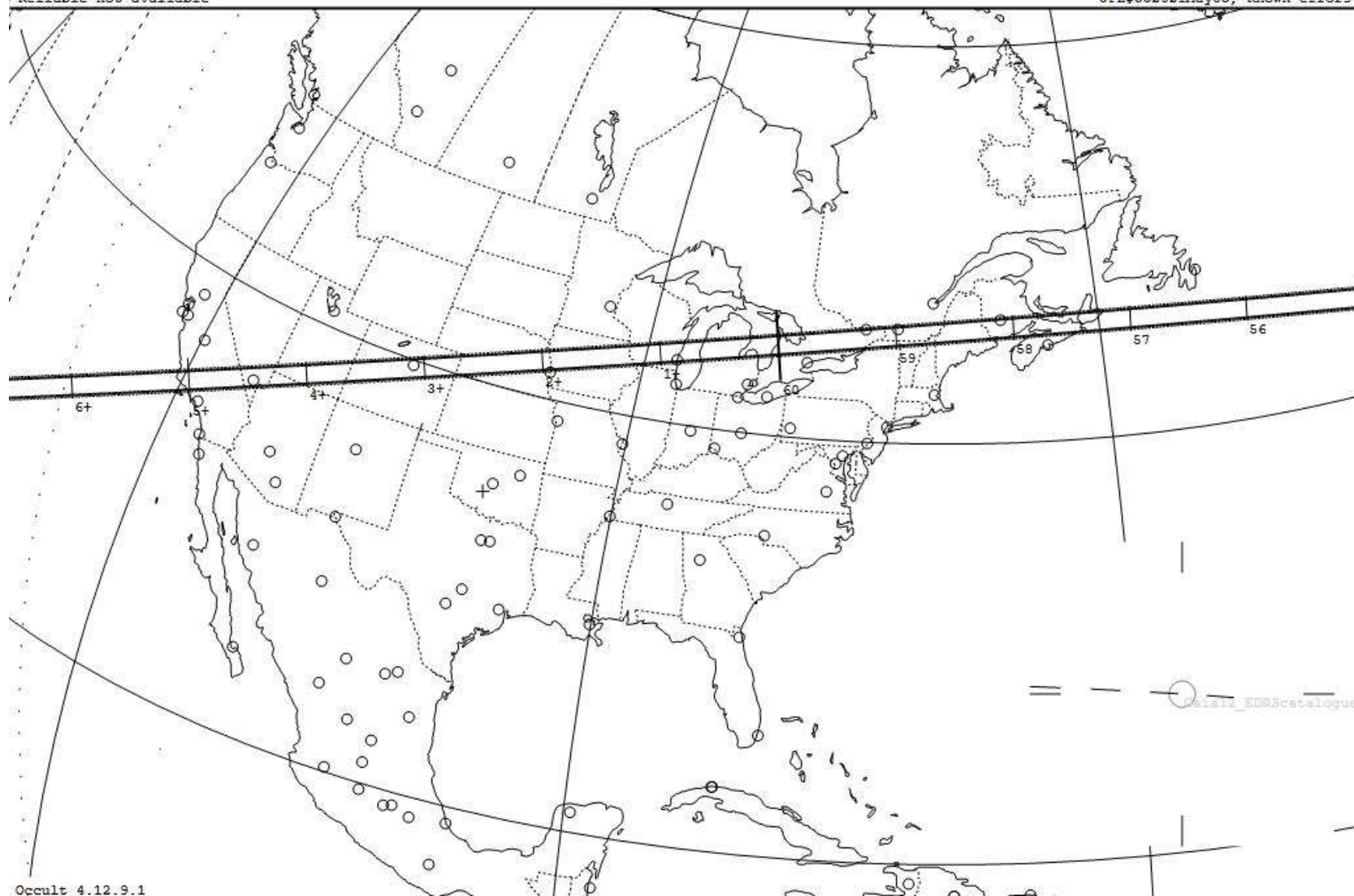


162 Laurentia occults TYC 2389-01033-1 on 2022 Jan 1 from 2h 48m to 3h 9m UT

Star: (Dia < 0.1 mas)
Mv 9.1
RA = 5 7 52.2716 (astrometric)
Dec = 30 10 30.643
[of Date: 5 9 17, 30 12 14]
Prediction of 2021 Jun 12.0
Reliable not available

Max Duration = 9.7 secs
Mag Drop = 3.8 (0.0r)
Sun : Dist = 157°
Moon: Dist = 174°
: illum = 4 %
Error 24.3x7.0 mas in PA 76°

Asteroid: (in DAMIT, ISAM)
Mag = 12.9
Dia = 97 ±10km, 75 mas
Parallax = 4.964"
Hourly dRA = -2.147s
dDec = -1.68"
JPL#532021May03, Known errors



22 Kalliope #1 occults TYC 2432-00369-1 on 2022 Mar 2 from 2h 12m to 2h 44m UT

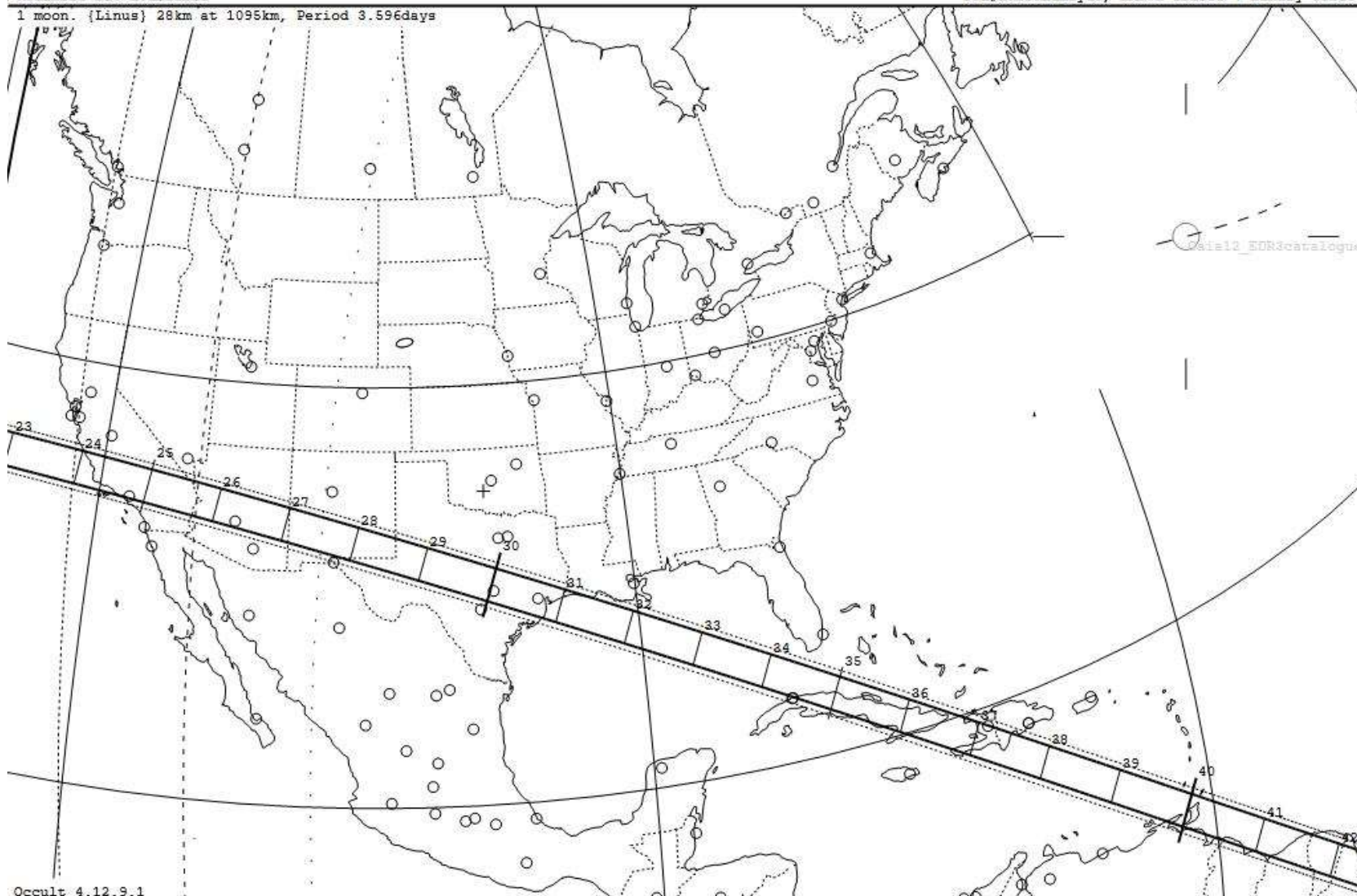
Star: (Dia < 0.1 mas)
Mv 10.0
RA = 6 10 6.8962 (astrometric)
Dec = 35 47 16.291
[of Date: 6 11 36, 35 47 5]
Prediction of 2021 Jun 12.0
Reliable not available

Max Duration = 26.8 secs
Mag Drop = 1.7 (0.0r)
Sun : Dist = 110°
Moon: Dist = 119°
: illum = 1 %
Error 27.6x13.4 mas in PA 77°

Asteroid: (in DAMIT, ISAM)
Mag = 11.4
Dia = 177 ±18km, 111 mas
Parallax = 3.998"
Hourly dRA = 1.181s
dDec = -3.94"

JPL#1062021May03, Known errors + binary orbit

1 moon. {Linus} 28km at 1095km, Period 3.596days



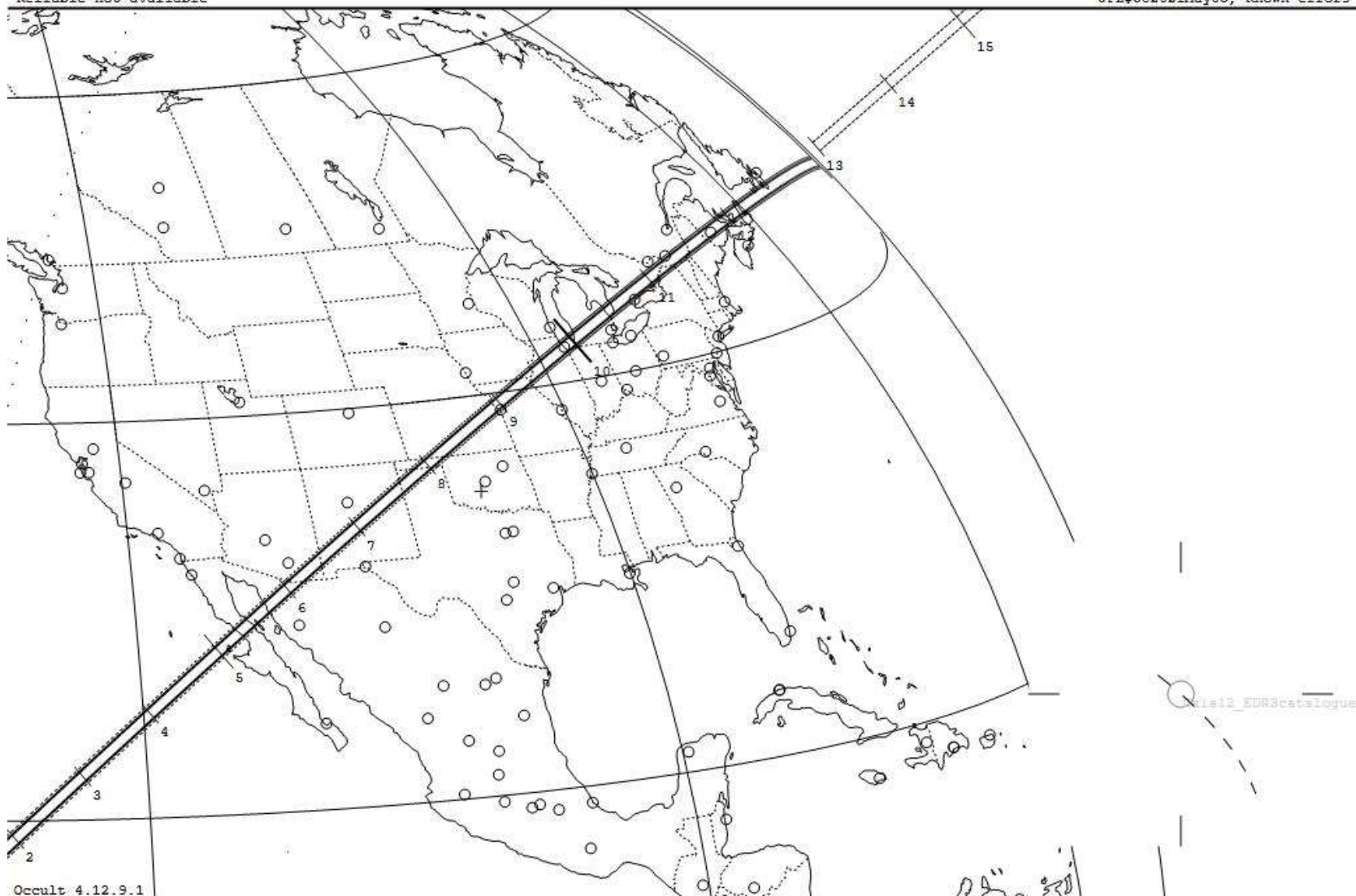
Occult 4.12.9.1

874 Rotraut occults TYC 0750-01420-1 on 2022 Mar 12 from 3h 47m to 4h 13m UT

Star: (Dia < 0.1 mas)
Mv 9.1
RA = 6 38 33.2892 (astrometric)
Dec = 10 35 59.031
[of Date: 6 39 47, 10 34 45]
Prediction of 2021 Jun 12.0
Reliable not available

Max Duration = 6.8 secs
Mag Drop = 6.5 (0.0r)
Sun : Dist = 108°
Moon: Dist = 16°
: illum = 66 %
Error 10.3x1.3 mas in PA 93°

Asteroid: (in DAMIT, ISAM)
Mag = 15.7
Dia = 57 ±6km, 30 mas
Parallax = 3.324"
Hourly dRA = 0.800s
dDec = 10.31"
JPL#582021May03, Known errors

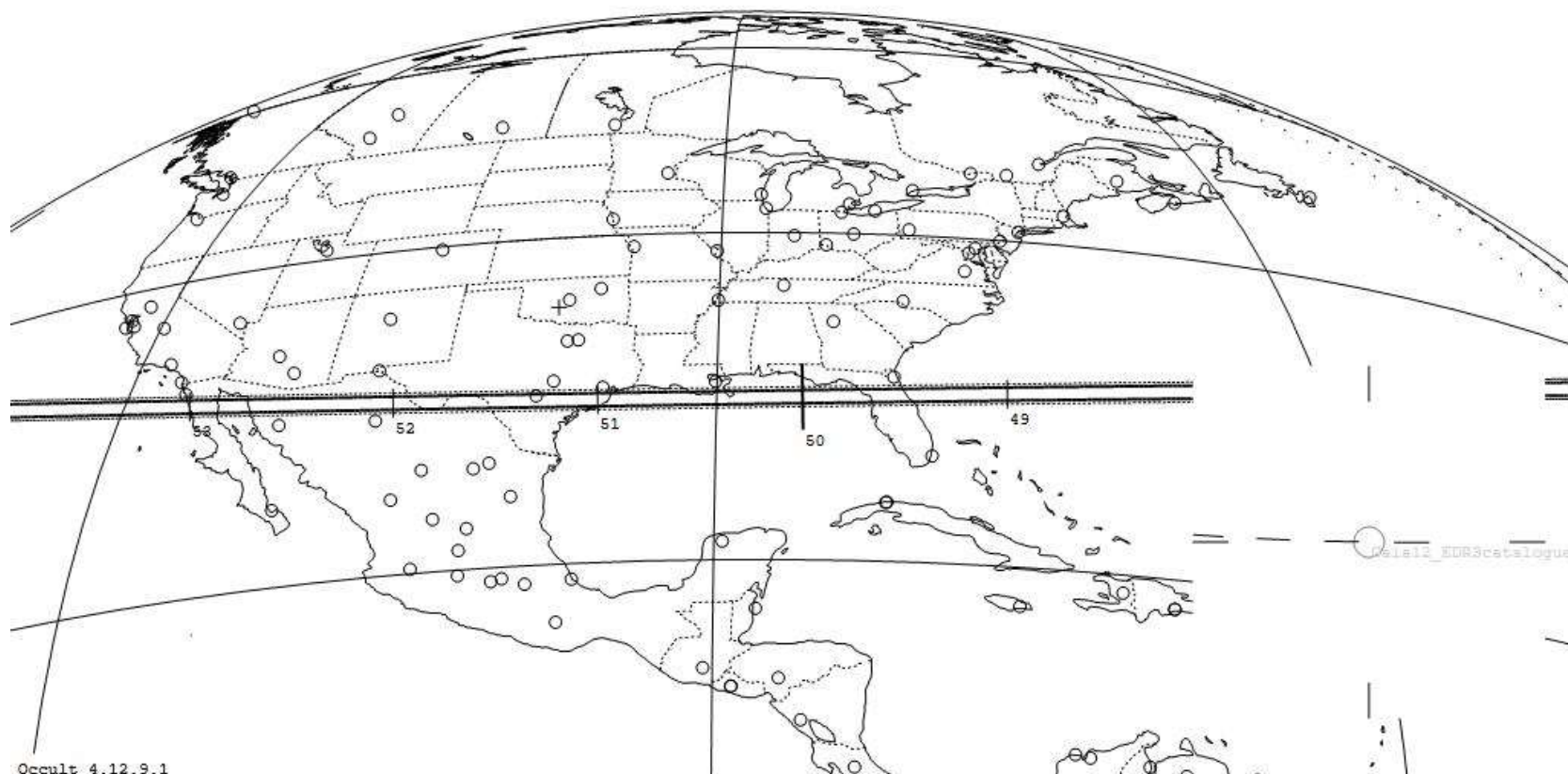


1005 Arago occults TYC 6114-00304-1 on 2022 Mar 21 from 6h 45m to 6h 55m UT

Star: (Dia < 0.1 mas)
Mv 9.1
RA = 12 52 9.1398 (astrometric)
Dec = -17 48 17.127
[of Date: 12 53 20, -17 55 33]
Prediction of 2021 Jun 12.0
Reliable not available

Max Duration = 3.9 secs
Mag Drop = 6.1 (0.0r)
Sun : Dist = 158°
Moon: Dist = 23°
: illum = 89 %
Error 12.7x5.3 mas in PA 125°

Asteroid:
Mag = 15.2
Dia = 59 ±6km, 32 mas
Parallax = 3.498"
Hourly dRA = -2.083s
dDec = -0.43"
JPL#492021May03, Known errors

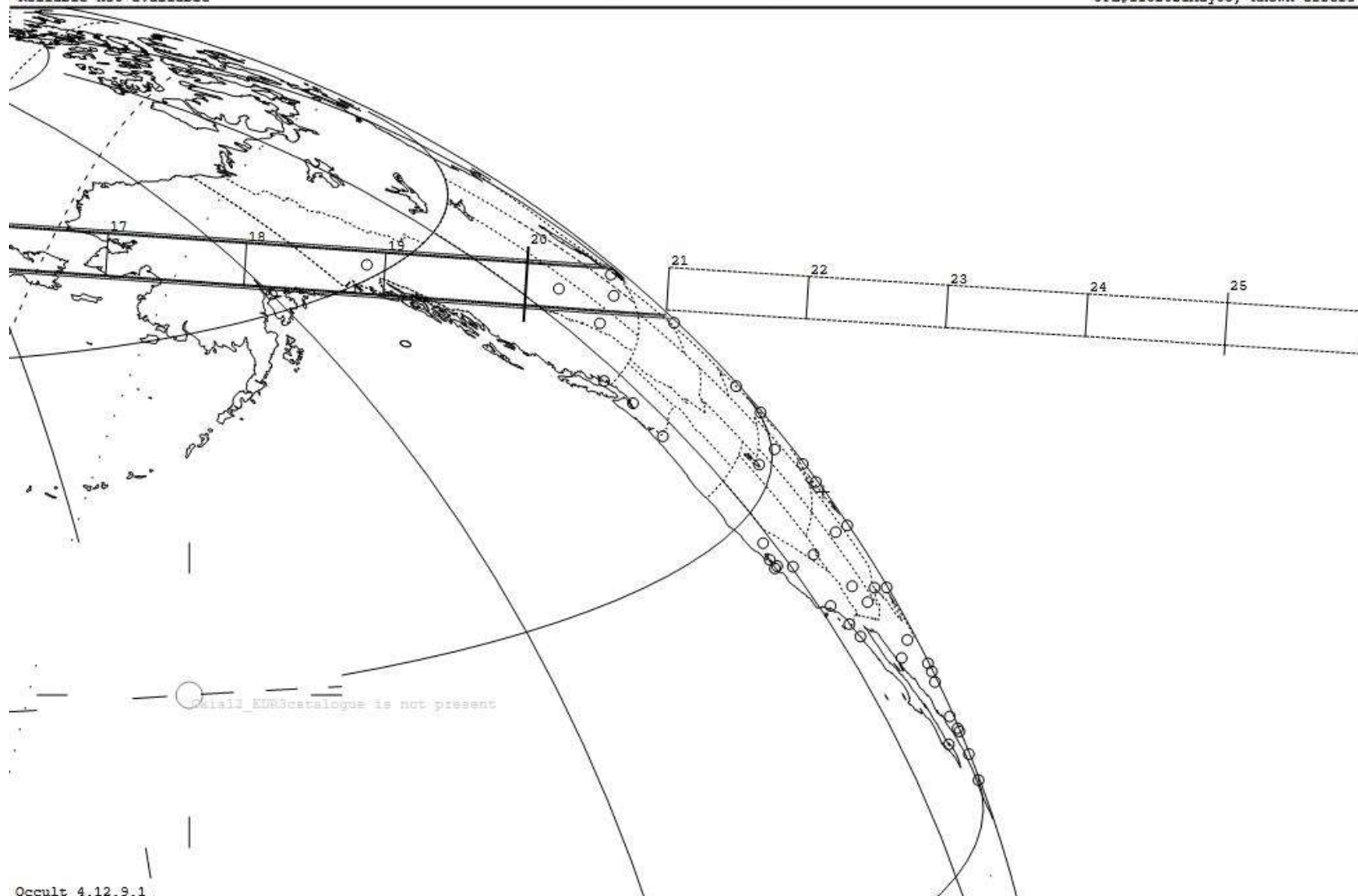


7 Iris occults TYC 1347-00941-1 on 2022 Mar 28 from 8h 10m to 8h 21m UT

Star: (Dia < 0.1 mas)
Mv 9.2
RA = 7 27 2.9612 (astrometric)
Dec = 16 5 57.992
[of Date: 7 28 19, 16 3 16]
Prediction of 2021 Jun 12.1
Reliable not available

Max Duration = 18.3 secs
Mag Drop = 1.1 (0.0r)
Sun : Dist = 104°
Moon: Dist = 151°
: illum = 18 %
Error 21.0x10.7 mas in PA 104°

Asteroid: (in DAMIT, ISAM)
Mag = 9.8
Dia = 222 ±22km, 168 mas
Parallax = 4.823"
Hourly dRA = 2.297s
dDec = -2.09"
JPL#1152021May03, Known errors

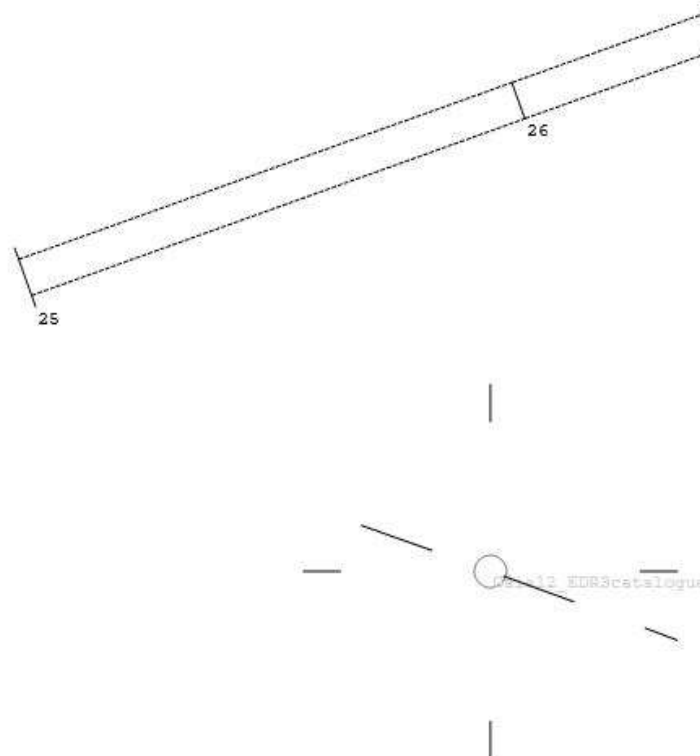
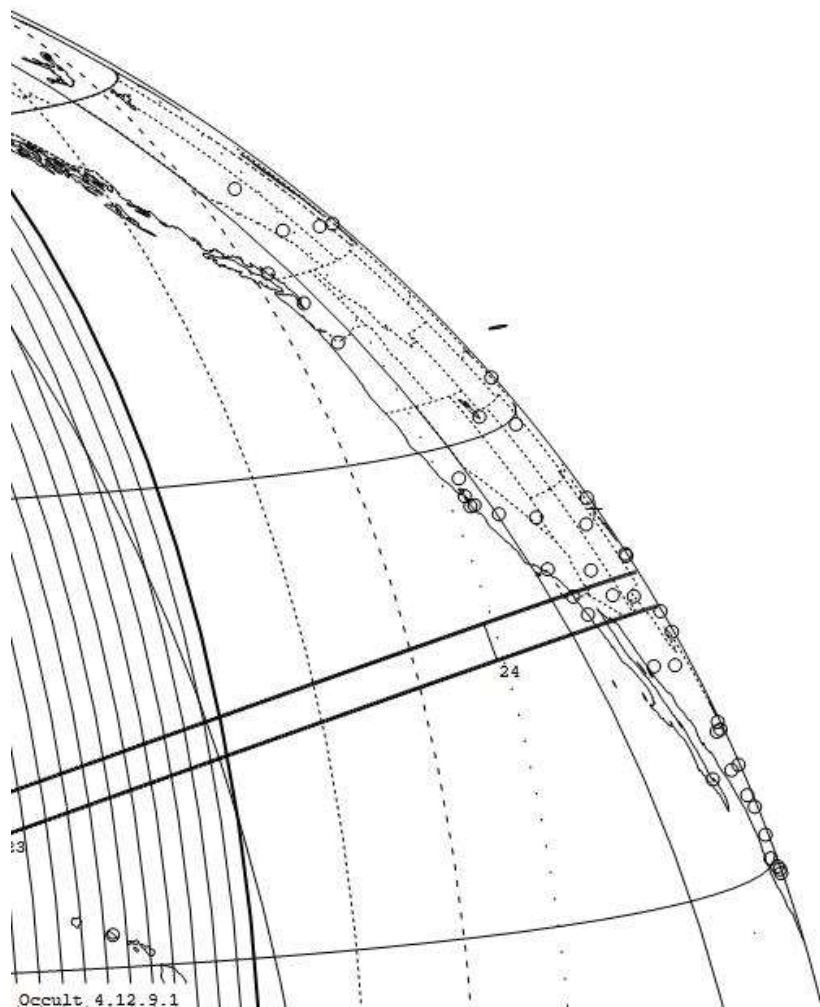


185 Eunike occults TYC 0106-00124-1 on 2022 Apr 12 from 4h 19m to 4h 24m UT

Star: (Dia < 0.1 mas)
Mv 7.7
RA = 5 1 9.2537 (astrometric)
Dec = 5 20 17.956
[of Date: 5 2 19, 5 22 8]
Prediction of 2021 Jun 12.2
Reliable not available

Max Duration = 4.4 secs
Mag Drop = 5.5 (0.0r)
Sun : Dist = 55°
Moon: Dist = 73°
: illum = 77 %
Error 17.0x1.8 mas in PA 79°

Asteroid:
Mag = 13.1
Dia = 163 ±16km, 74 mas
Parallax = 2.882"
Hourly dRA = 3.812s
dDec = 20.41"
JPL#932021May03, Known errors

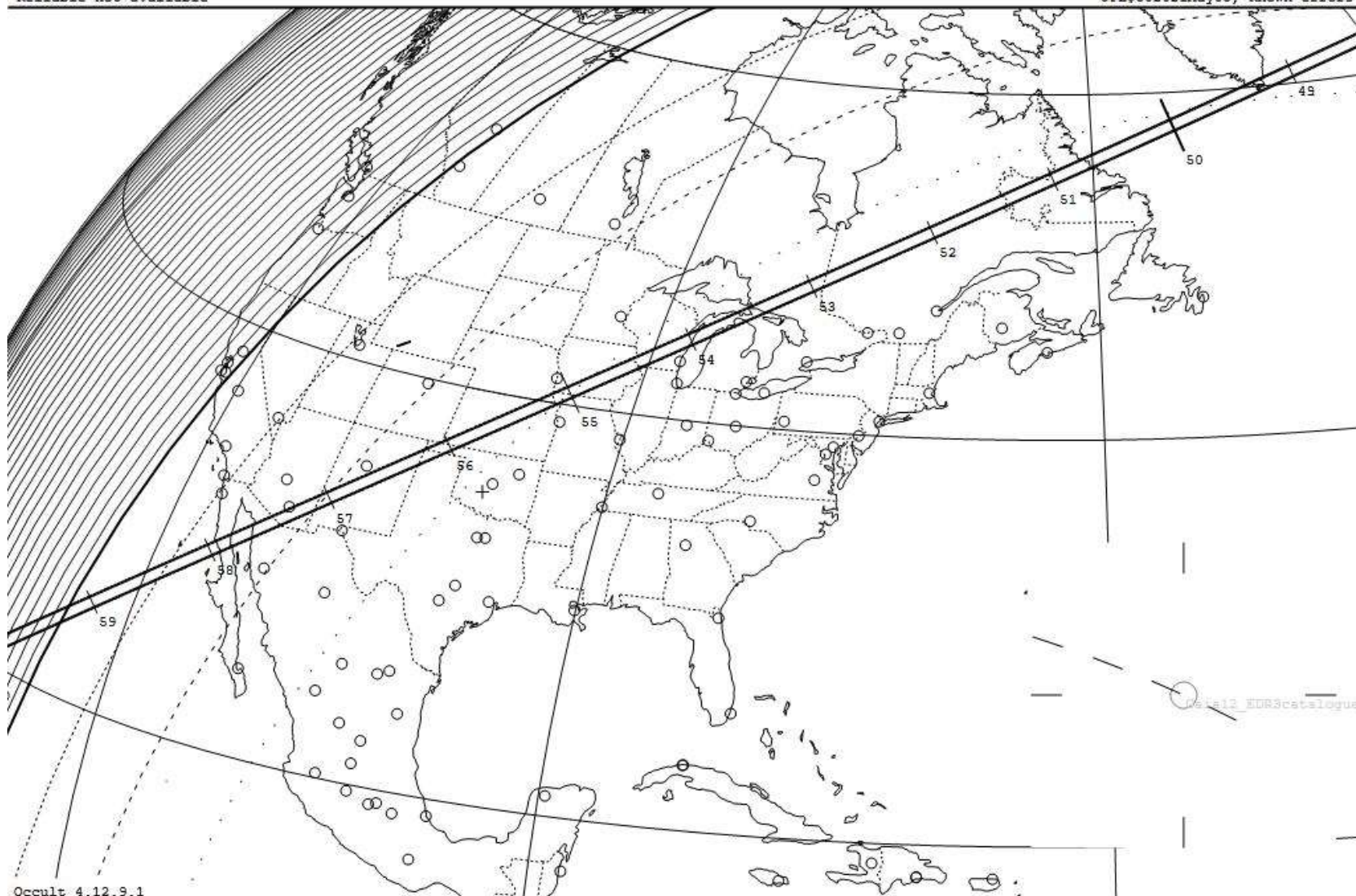


480 Hansa occults G203045.8+144241 on 2022 Aug 19 from 2h 46m to 3h 1m UT

Star: (Dia < 0.1 mas)
Mv 9.0
RA = 20 30 45.8414 (astrometric)
Dec = 14 42 38.195
[of Date: 20 31 50, 14 47 16]
Prediction of 2021 Jun 12.6
Reliable not available

Max Duration = 5.2 secs
Mag Drop = 3.6 (0.0r)
Sun : Dist = 146°
Moon: Dist = 98°
: illum = 51 %
Error 27.7x2.3 mas in PA 71°

Asteroid: (in DAMIT, ISAM)
Mag = 12.5
Dia = 59 ±6km, 45 mas
Parallax = 4.825"
Hourly dRA = -1.922s
dDec = -12.72"
JPL#502021May03, Known errors



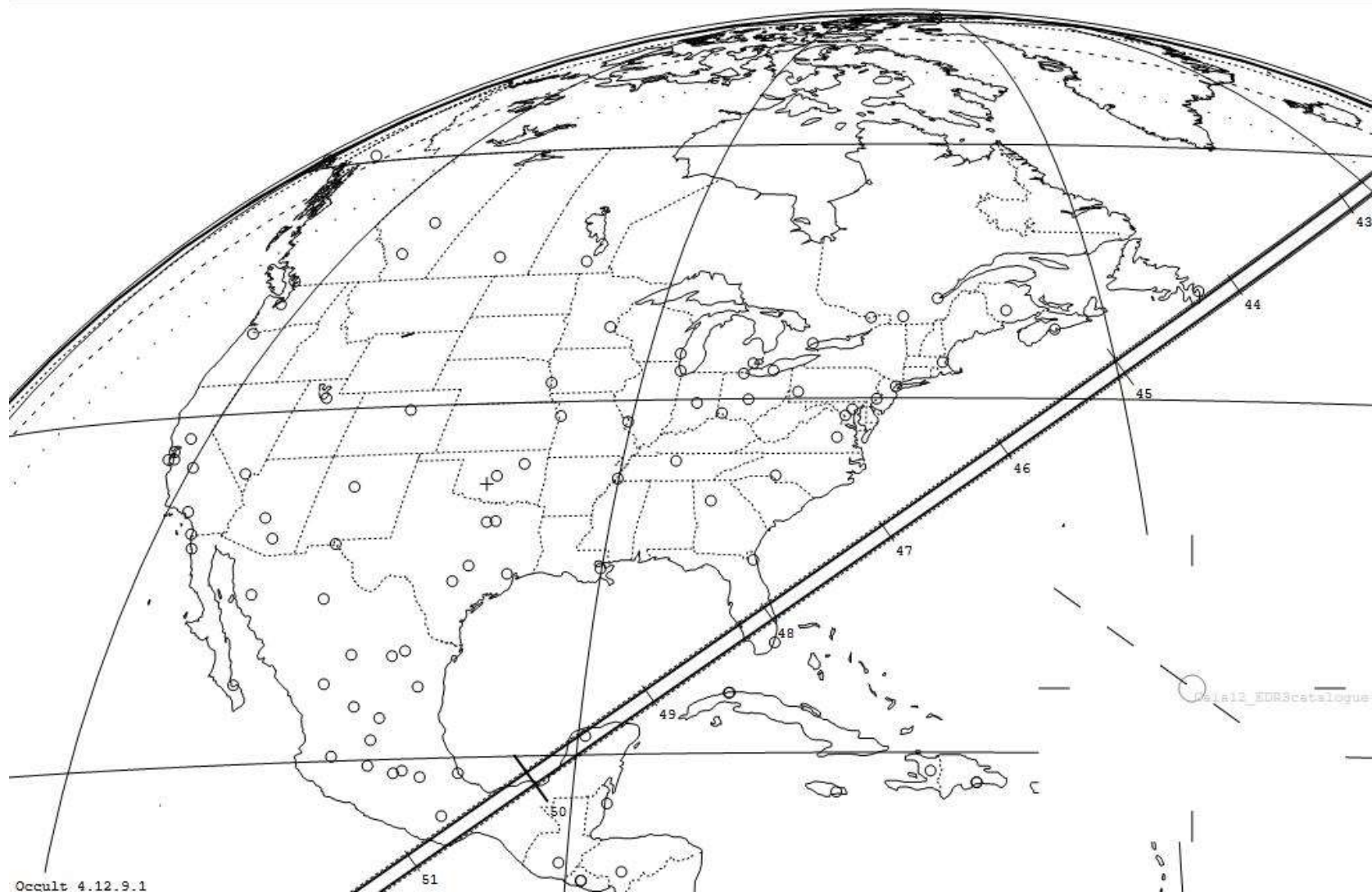
Occult 4.12.9.1

664 Judith occults HIP 116107 on 2022 Sep 15 from 4h 42m to 4h 57m UT

Star: (Dia < 0.1 mas)
Mv 9.3
RA = 23 31 32.4314 (astrometric)
Dec = - 3 22 24.747
[of Date: 23 32 43, - 3 14 51]
Prediction of 2021 Jun 12.8
Reliable not available

Max Duration = 6.2 secs
Mag Drop = 4.4 (0.0r)
Sun : Dist = 180°
Moon: Dist = 60°
: illum = 75 %
Error 23.3x1.3 mas in PA 74°

Asteroid:
Mag = 13.7
Dia = 76 ± 8 km, 55 mas
Parallax = 4.660"
Hourly dRA = -1.735s
dDec = -18.79"
JPL#472021May03, Known errors

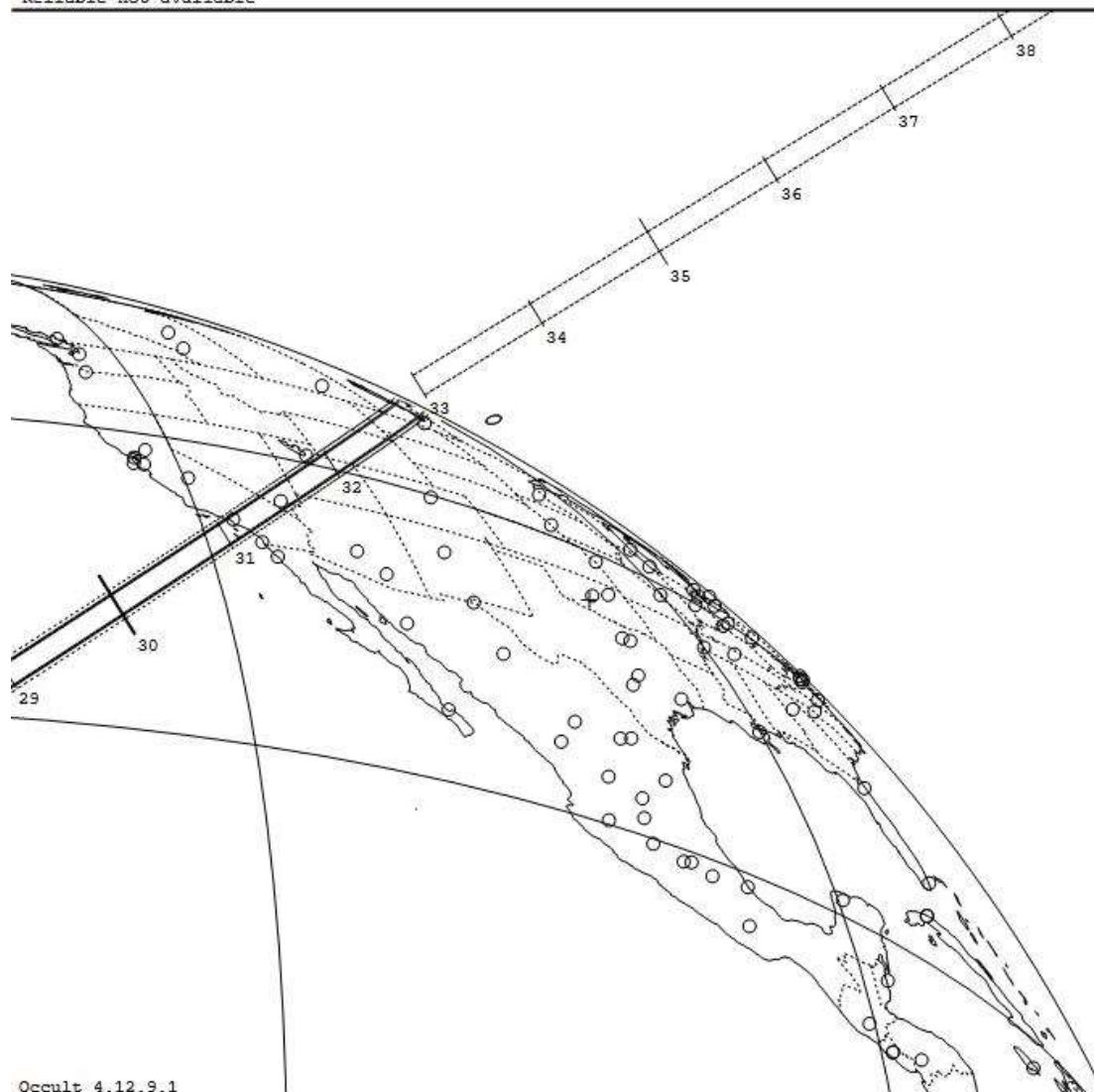


192 Nausikaa occults TYC 6891-02231-1 on 2022 Sep 30 from 4h 15m to 4h 33m UT

Star: (Dia < 0.1 mas)
Mv 9.5
RA = 19 51 8.3446 (astrometric)
Dec = -24 7 5.780
[of Date: 19 52 30, -24 3 41]
Prediction of 2021 Jun 12.8
Reliable not available

Max Duration = 10.0 secs
Mag Drop = 1.5 (0.0r)
Sun : Dist = 108°
Moon: Dist = 55°
: illum = 20 %
Error 33.0x17.0 mas in PA 73°

Asteroid: (in DAMIT, ISAM)
Mag = 10.8
Dia = 98 ±10km, 98 mas
Parallax = 6.370"
Hourly dRA = 2.204s
dDec = 18.47"
JPL#1122021May03, Known errors



Occult 4.12.9.1

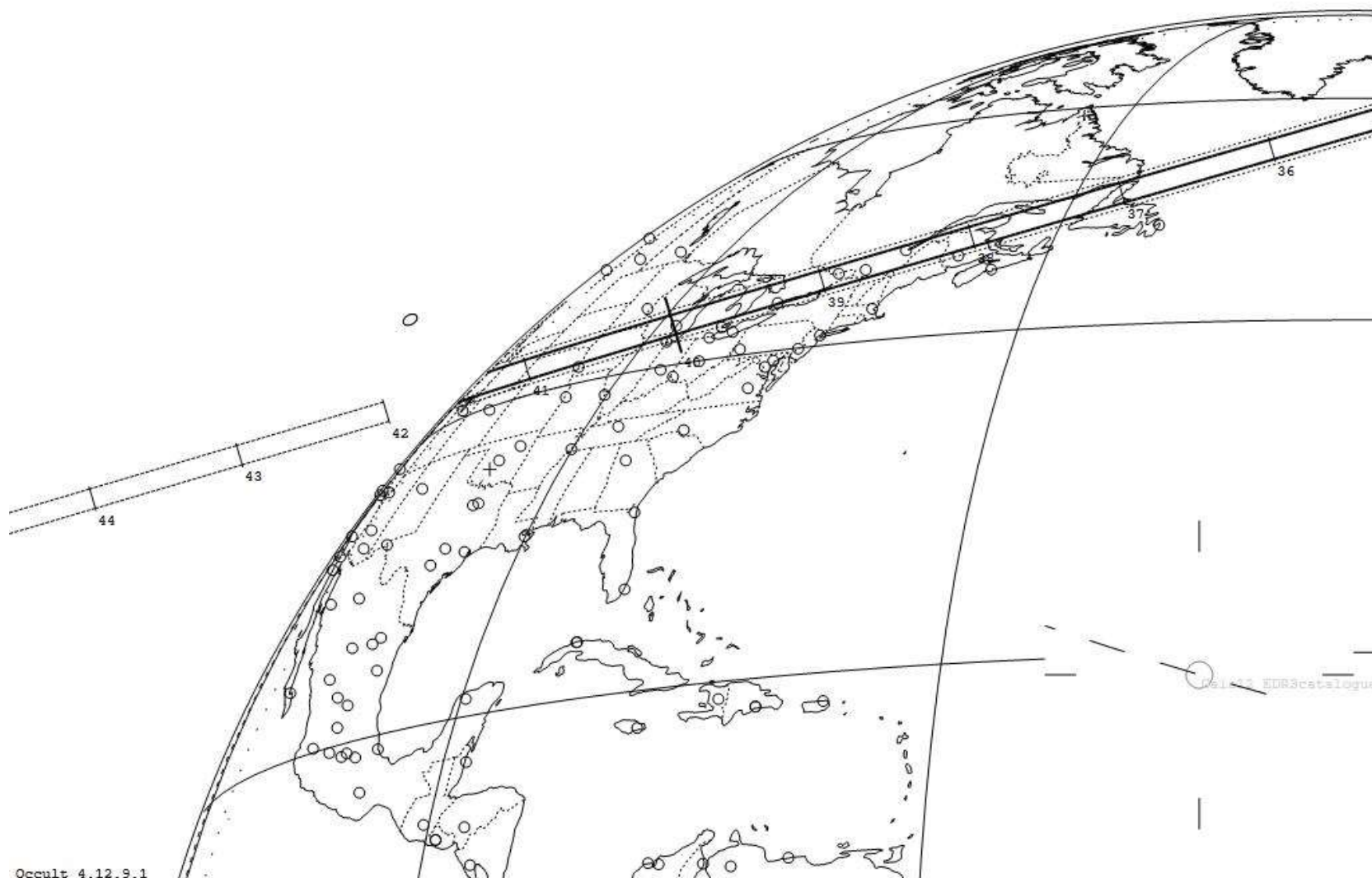
Star: (Dia < 0.1 mas)
Mv 6.7
RA = 0 51 37.3656 (astrometric)
Dec = - 8 49 5.962
[of Date: 0 52 47, - 8 41 37]
Prediction of 2021 Jun 12.8
Reliable not available

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Max Duration = 7.9 secs
Mag Drop = 4.4 (0.0r)
Sun : Dist = 167°
Moon: Dist = 73°
      : illum = 63 %
Error 29.3x19.0 mas in PA 61°

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Asteroid: (in DAMIT, ISAM)
Mag = 11.1
Dia = 104 ±10km, 79 mas
Parallax = 4.826"
Hourly dRA = -2.323s
dDec = -10.20s
JPL#1002021May03, Known errors
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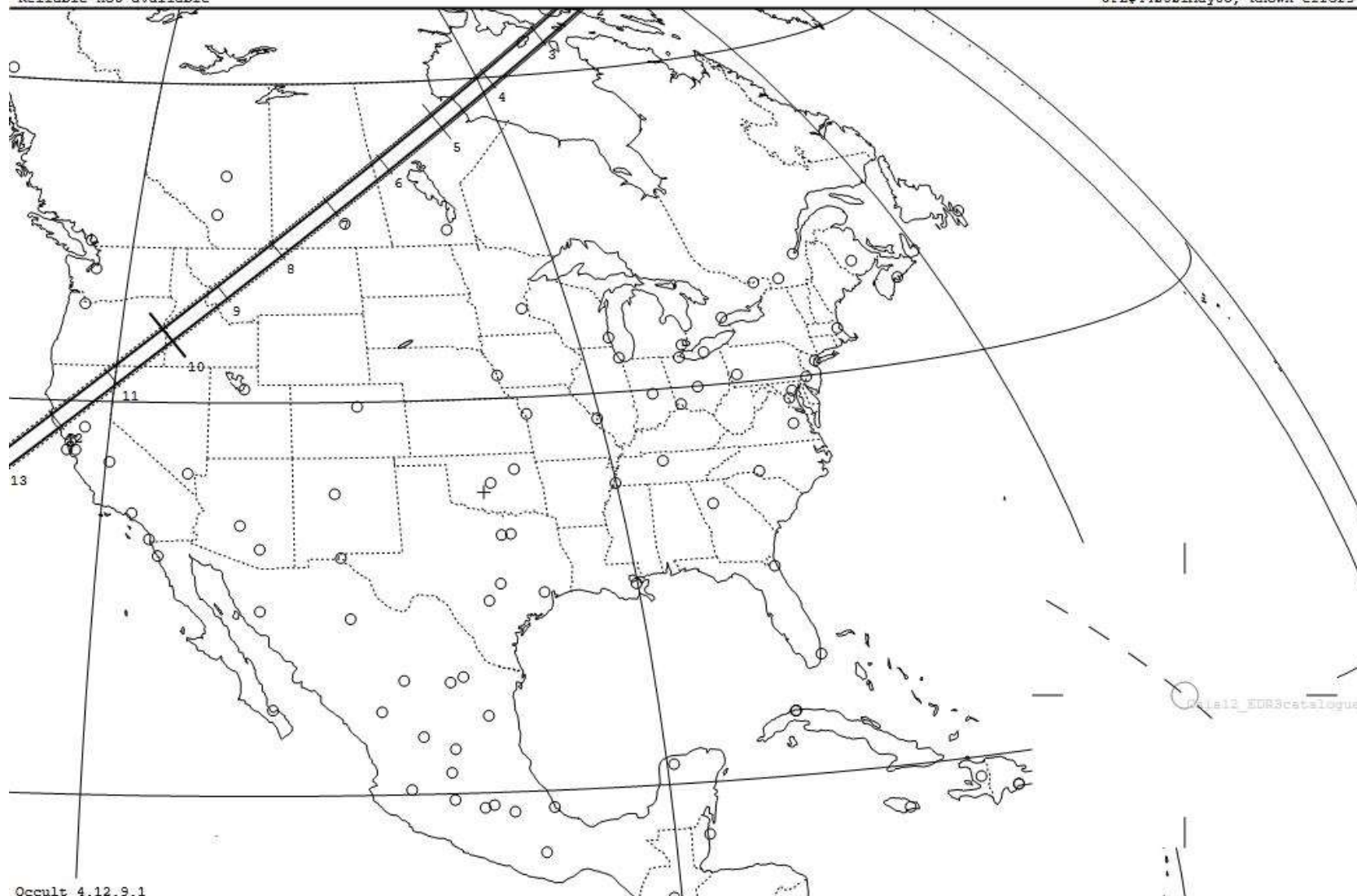
Occult 4.12.9.1

972 Cohnia occults TYC 1160-01079-1 on 2022 Oct 10 from 4h 59m to 5h 31m UT

Star: (Dia < 0.1 mas)
 Mv 9.6
 RA = 23 4 32.4584 (astrometric)
 Dec = 8 55 14.083
 [of Date: 23 5 42, 9 2 40]
 Prediction of 2021 Jun 12.8
 Reliable not available

Max Duration = 13.6 secs
 Mag Drop = 3.4 (0.0r)
 Sun : Dist = 151°
 Moon: Dist = 34°
 : illum = 100 %
 Error 40.3x8.0 mas in PA 62°

Asteroid:
 Mag = 13.0
 Dia = 80 ± 8 km, 77 mas
 Parallax = 6.177"
 Hourly dRA = -1.068s
 dDec = -12.92"
 JPL#442021May03, Known errors

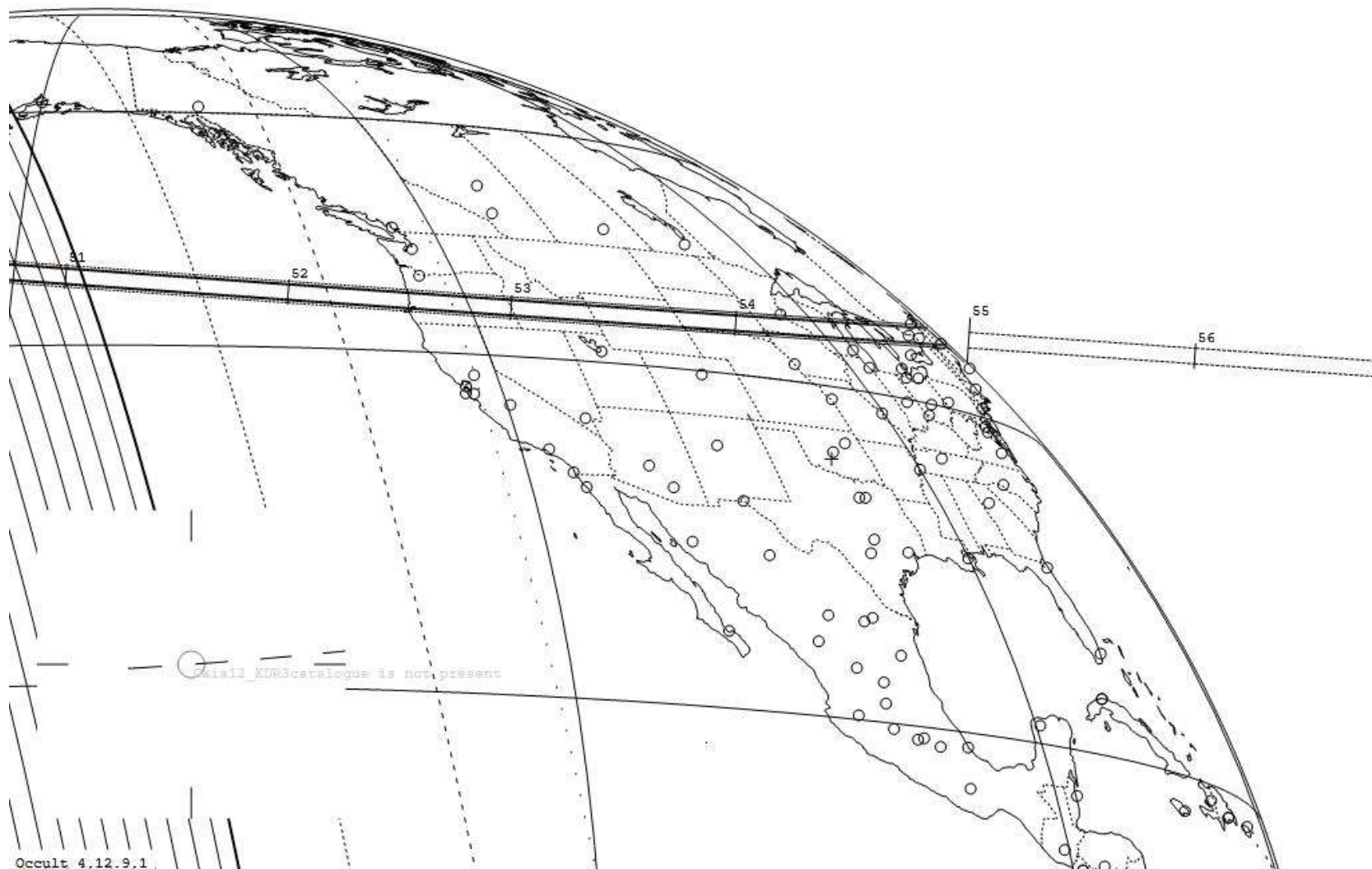


568 Cheruskia occults TYC 5140-00567-1 on 2022 Oct 19 from 2h 48m to 2h 55m UT

Star: (Dia < 0.1 mas)
 Mv 9.7
 RA = 19 4 7.6670 (astrometric)
 Dec = - 6 55 35.658
 [of Date: 19 5 20, - 6 53 31]
 Prediction of 2021 Jun 12.8
 Reliable not available

Max Duration = 4.1 secs
 Mag Drop = 5.6 (0.0r)
 Sun : Dist = 81°
 Moon: Dist = 148°
 : illum = 37 %
 Error 14.0x3.2 mas in PA 66°

Asteroid: (in DAMIT, ISAM)
 Mag = 15.3
 Dia = 81 ± 8km, 37 mas
 Parallax = 2.927"
 Hourly dRA = 2.164s
 dDec = -2.26"
 JPL#802021May03, Known errors

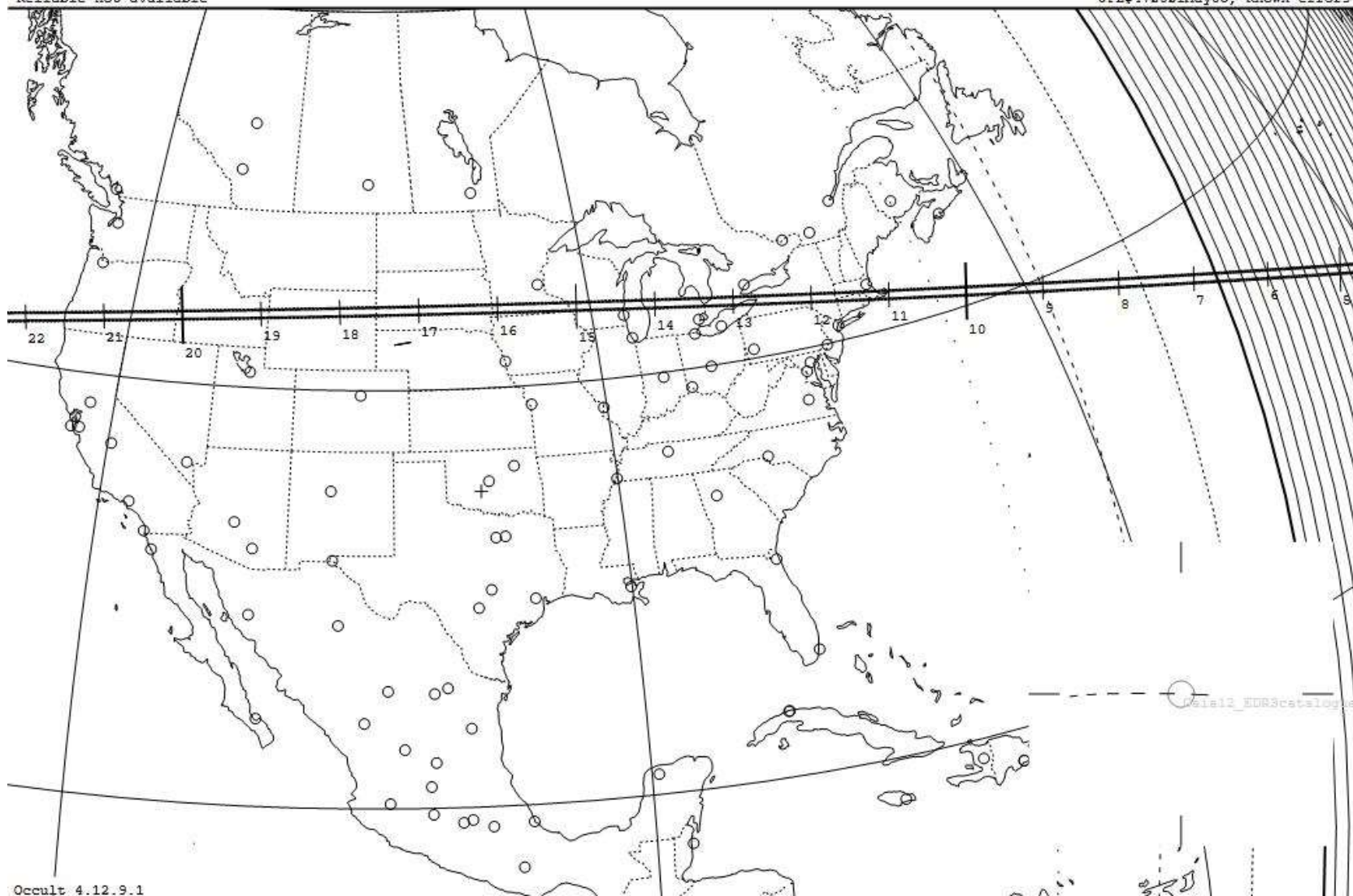


208 Lacrimosa occults UCAC4 569-011074 on 2022 Oct 24 from 9h 2m to 9h 33m UT

Star: (Dia < 0.1 mas)
Mv 9.9
RA = 4 29 1.5589 (astrometric)
Dec = 23 46 48.517
[of Date: 4 30 24, 23 49 50]
Prediction of 2021 Jun 12.8
Reliable not available

Max Duration = 6.1 secs
Mag Drop = 4.0 (0.0r)
Sun : Dist = 141°
Moon: Dist = 128°
: illum = 1 %
Error 29.0x0.7 mas in PA 80°

Asteroid: (in DAMIT, ISAM)
Mag = 13.8
Dia = 40 ±4km, 27 mas
Parallax = 4.313"
Hourly dRA = -1.162s
dDec = -0.42"
JPL#472021May03, Known errors

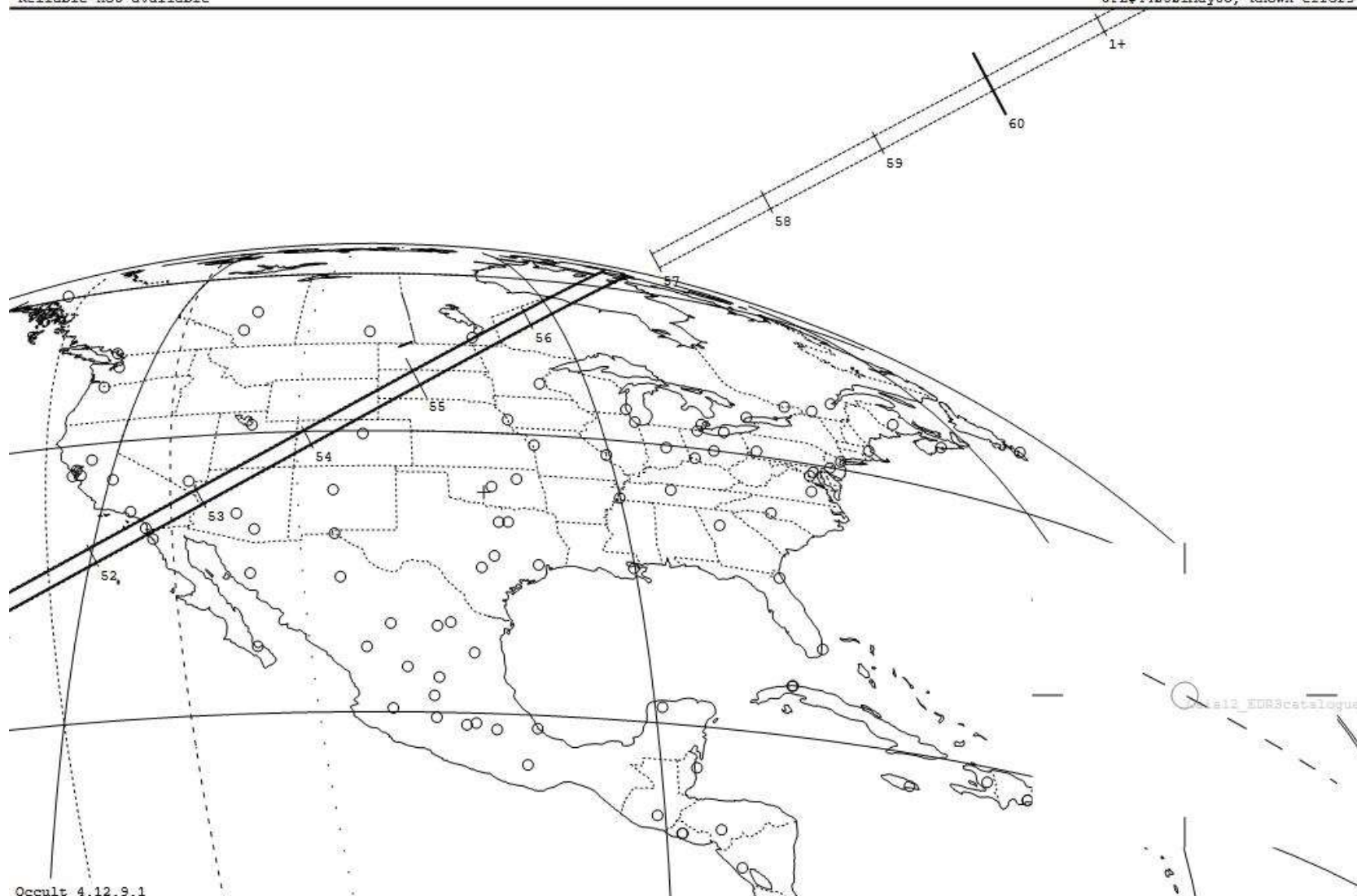


160 Una occults TYC 6351-01171-1 on 2022 Oct 28 from 1h 44m to 1h 57m UT

Star: (Dia < 0.1 mas)
Mv 8.7
RA = 21 17 44.1025 (astrometric)
Dec = -18 10 22.335
[of Date: 21 19 0, -18 4 42]
Prediction of 2021 Jun 12.8
Reliable not available

Max Duration = 7.4 secs
Mag Drop = 5.5 (0.0r)
Sun : Dist = 102°
Moon: Dist = 68°
: illum = 9 %
Error 23.0x1.6 mas in PA 69°

Asteroid: (in DAMIT, ISAM)
Mag = 14.1
Dia = 82 ±8km, 49 mas
Parallax = 3.816"
Hourly dRA = 1.467s
dDec = 11.10"
JPL#442021May03, Known errors

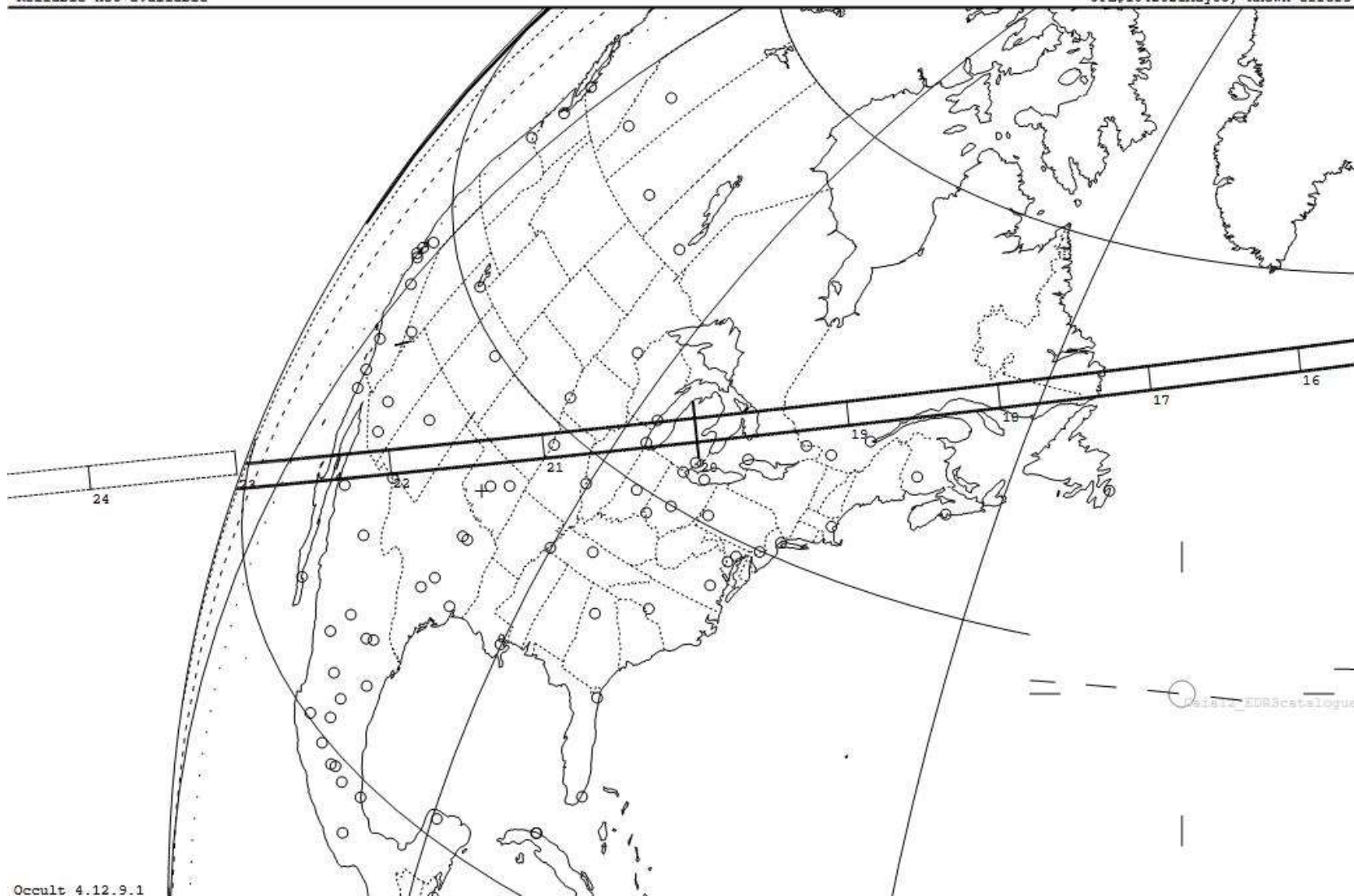


388 Charybdis occults TYC 1825-00541-1 on 2022 Nov 17 from 2h 8m to 2h 23m UT

Star: (Dia < 0.1 mas)
 Mv 9.9
 RA = 3 59 48.0125 (astrometric)
 Dec = 29 30 35.210
 [of Date: 4 1 14, 29 34 30]
 Prediction of 2021 Jun 12.8
 Reliable not available

Max Duration = 9.6 secs
 Mag Drop = 3.2 (0.0r)
 Sun : Dist = 167°
 Moon: Dist = 86°
 : illum = 45 %
 Error 28.3x1.3 mas in PA 76°

Asteroid: (in DAMIT)
 Mag = 13.0
 Dia = 123 ±12km, 83 mas
 Parallax = 4.305"
 Hourly dRA = -2.380s
 dDec = -3.18"
 JPL#1042021May03, Known errors



312 Pierretta occults TYC 2417-00677-1 on 2022 Dec 14 from 12h 45m to 12h 58m UT

Star: (Dia < 0.1 mas)
 Mv 9.9
 RA = 5 50 55.9685 (astrometric)
 Dec = 36 10 33.210
 [of Date: 5 52 30, 36 10 56]
 Prediction of 2021 Jun 12.8
 Reliable not available

Max Duration = 3.3 secs
 Mag Drop = 3.6 (0.0r)
 Sun: Dist = 166°
 Moon: Dist = 63°
 : illum = 67 %
 Error 23.0x2.9 mas in PA 87°

Asteroid: (in DAMIT, ISAM)
 Mag = 13.5
 Dia = 49 ±5km, 30 mas
 Parallax = 3.887"
 Hourly dRA = -2.706s
 dDec = 1.65"
 JPL#522021May03, Known errors

