

Oscar To OsTrax

Orbiting Satellite Tracking for the Next Generation

Jim McCullers

WA4CWI

WA4CWI

Jim McCullers

SigTrax



FD-3 Form 600 Rev. June 1960 UNITED STATES OF AMERICA
STATION CALL SIGN FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D. C.
WA4CWI AMATEUR RADIO LICENSE 9-15-62

Fixed transmitter location: (and remote control station when authorized)

SAME AS BELOW

Licensee and P. O. Address:
JAMES E. MCCULLERS
ROUTE 1
TITUS, ALA.

(This license issued pursuant to regulations of the Federal Communications Commission)

Operator Privileges: NOVICE
Class: NOVICE
Class: NOVICE

Expiry Date: 9-15-61

SEE UPPER RIGHT CORNER FOR EXPIRATION DATE

Card May Be Trained On Border Line

NOT TRANSFERABLE

Cancelled

Licensed September 15, 1961



Courtesy worldradiohistory.com

Oscar 1 Launched December 12, 1961

Early Satellite Tracking Programs



TLE (Two Line Elements) 60s and 70s

OSCAR LOCATOR

SATRAK

QUICKTRAK

Satellabe

AMSAT-80

Perpetual Orbit Predictor

OSCAR For Simple Minded BASICS

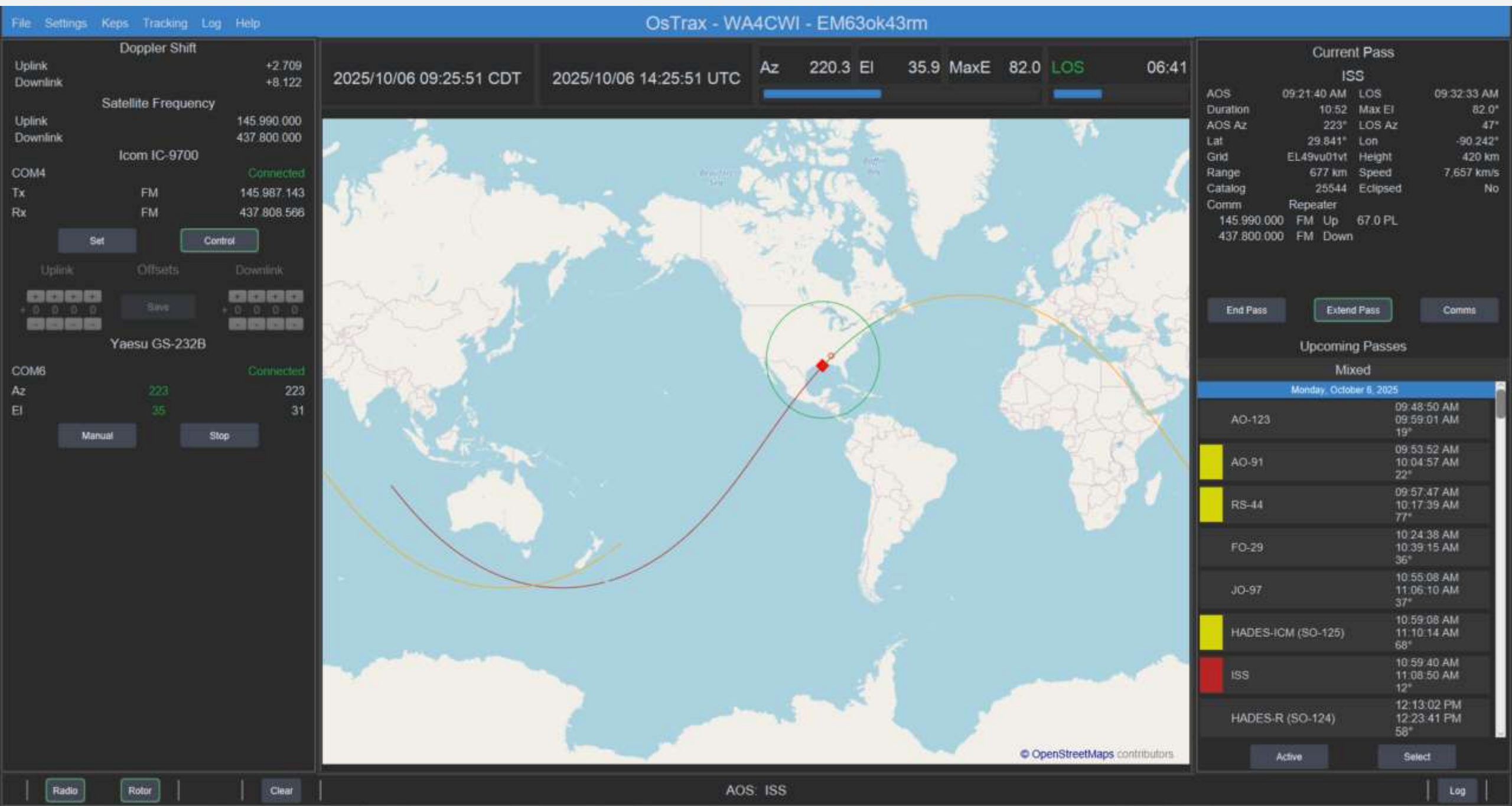
Satellite Tracking Requirements

- Information
- Operation
- Communication

Introducing



Orbiting Satellite Tracking for the Next Generation



Tracking Information Sources

Keplerian Elements (Keps)

AMSAT

CelesTrak

User Defined

Automatic Update Required Notification

Set in Preferences

Time Interval

Manual or Automatic Updates

Satellite Profiles

OsTrax Repository

User Defined

Same Update Process as Keps

Doppler Shift
Uplink +2.709
Downlink +8.122

Satellite Frequency
Uplink 145.990.000
Downlink 437.800.000

Icom IC-9700
COM4
Tx FM 145.987.143
Rx FM 437.808.588

Set Control
Uplink Offsets Downlink
+ 0 0 0 0 Save + 0 0 0 0

Yaesu GS-232B
COM6
Az 223
El 35

Manual Stop
Radio Rotor Clear

2025/10/06 09:25:51 CDT 2025/10/06 14:25:51 UTC
Az 220.3 El 35.9 MaxE 82.0 LOS 06:41



Current Pass
ISS
AOS 09:21:40 AM LOS 09:32:33 AM
Duration 10:52 Max El 82.0°
AOS Az 223° LOS Az 47°
Lat 29.841° Lon -90.242°
Grid EL49vu01vt Height 420 km
Range 677 km Speed 7.657 km/s
Catalog 25544 Eclipsed No
Comm Repeater
145.990.000 FM Up 67.0 PL
437.800.000 FM Down

End Pass Extend Pass Comms

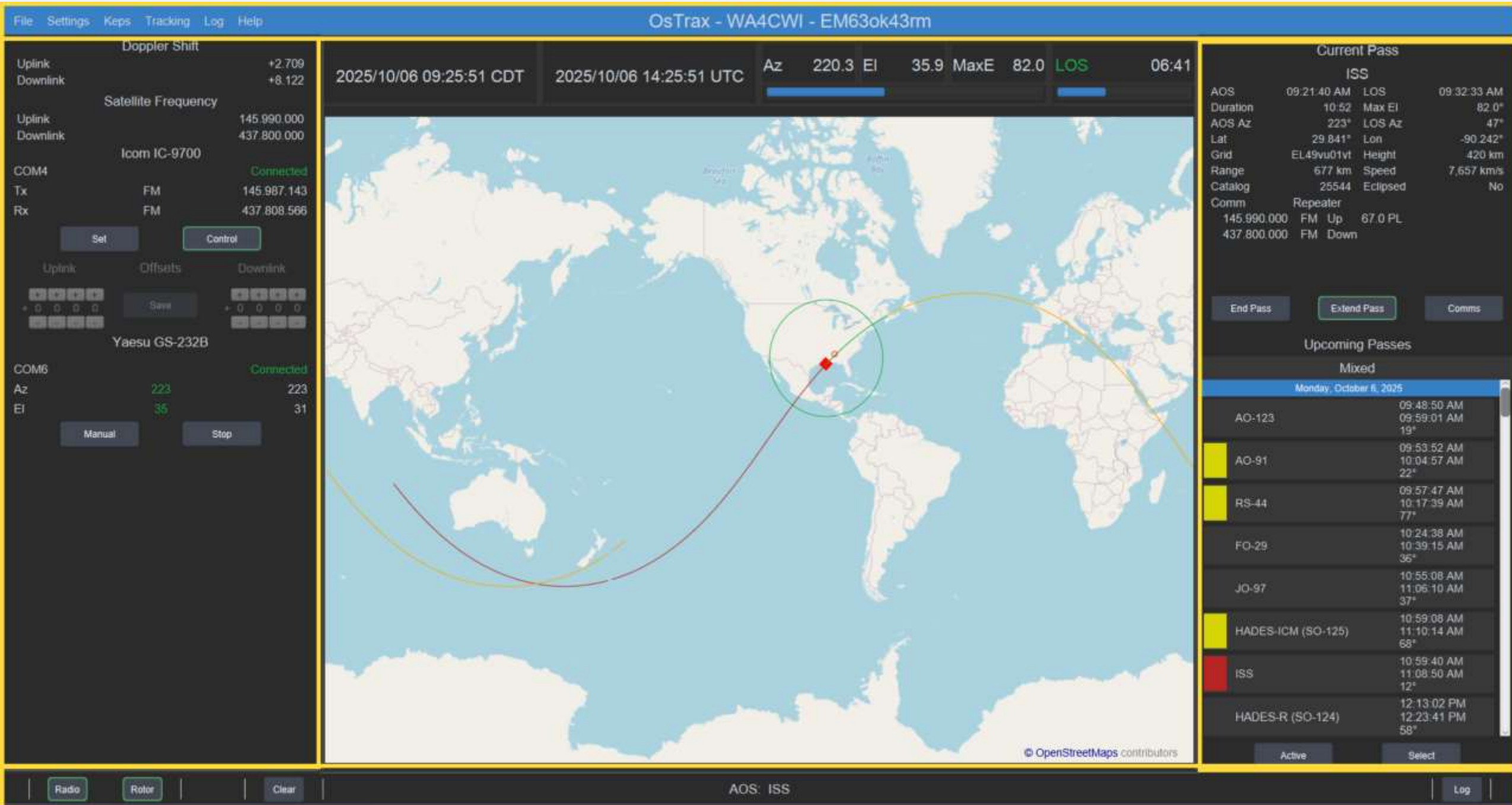
Upcoming Passes

Mixed	
Monday, October 6, 2025	
AO-123	09:48:50 AM 09:59:01 AM 19°
AO-91	09:53:52 AM 10:04:57 AM 22°
RS-44	09:57:47 AM 10:17:39 AM 77°
FO-29	10:24:38 AM 10:39:15 AM 36°
JO-97	10:55:08 AM 11:06:10 AM 37°
HADES-ICM (SO-125)	10:59:08 AM 11:10:14 AM 68°
ISS	10:59:40 AM 11:08:50 AM 12°
HADES-R (SO-124)	12:13:02 PM 12:23:41 PM 58°

Active Select

AOS: ISS

Log



Doppler Shift

Uplink +2.709

Downlink +8.122

Satellite Frequency

Uplink 145.990.000

Downlink 437.800.000

Icom IC-9700

COM4 Connected

Tx FM 145.987.143

Rx FM 437.808.566

Set

Control

Offsets

Uplink

Downlink

Save

Yaesu GS-232B

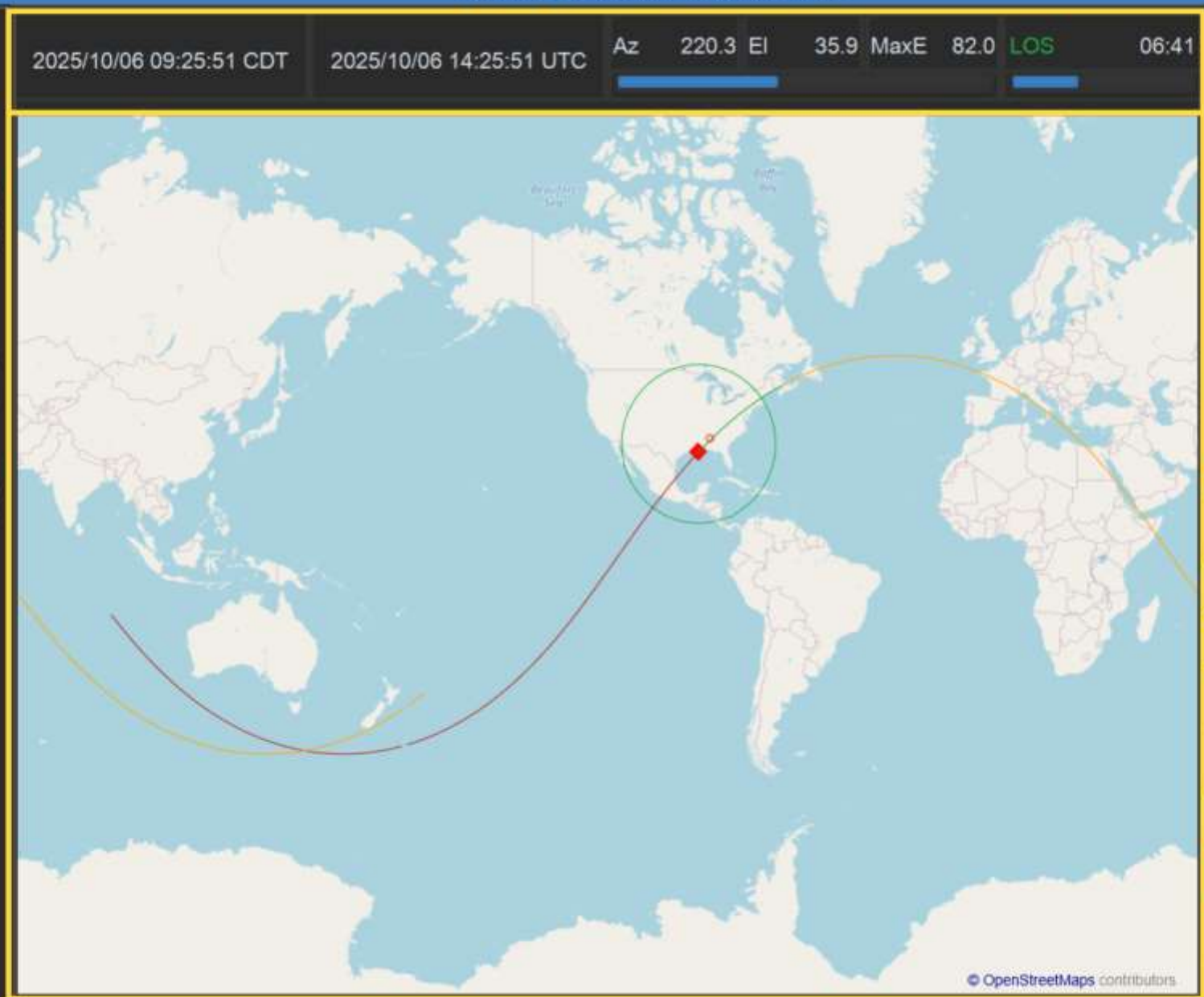
COM6 Connected

Az 223 223

EI 35 31

Manual

Stop



Current Pass

ISS

AOS	09:21:40 AM	LOS	09:32:33 AM
Duration	10:52	Max EI	82.0°
AOS Az	223°	LOS Az	47°
Lat	29.841°	Lon	-90.242°
Grid	EL49vu01vt	Height	420 km
Range	677 km	Speed	7.657 km/s
Catalog	25544	Eclipsed	No
Comm	Repeater		
145.990.000	FM Up	67.0 PL	
437.800.000	FM Down		

End Pass Extend Pass Comms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123	09:48:50 AM 09:59:01 AM 19°
AO-91	09:53:52 AM 10:04:57 AM 22°
RS-44	09:57:47 AM 10:17:39 AM 77°
FO-29	10:24:36 AM 10:39:15 AM 36°
JO-97	10:55:08 AM 11:06:10 AM 37°
HADES-ICM (SO-125)	10:59:06 AM 11:10:14 AM 68°
ISS	10:59:40 AM 11:08:50 AM 12°
HADES-R (SO-124)	12:13:02 PM 12:23:41 PM 58°

Active Select

Doppler Shift

Uplink +2.709

Downlink +8.122

Satellite Frequency

Uplink 145.990.000

Downlink 437.800.000

Icom IC-9700

COM4 Connected

Tx FM 145.987.143

Rx FM 437.808.566

Set

Control

Offsets

Uplink

Downlink

Save

Yaesu GS-232B

COM6 Connected

Az 223 223

EI 35 31

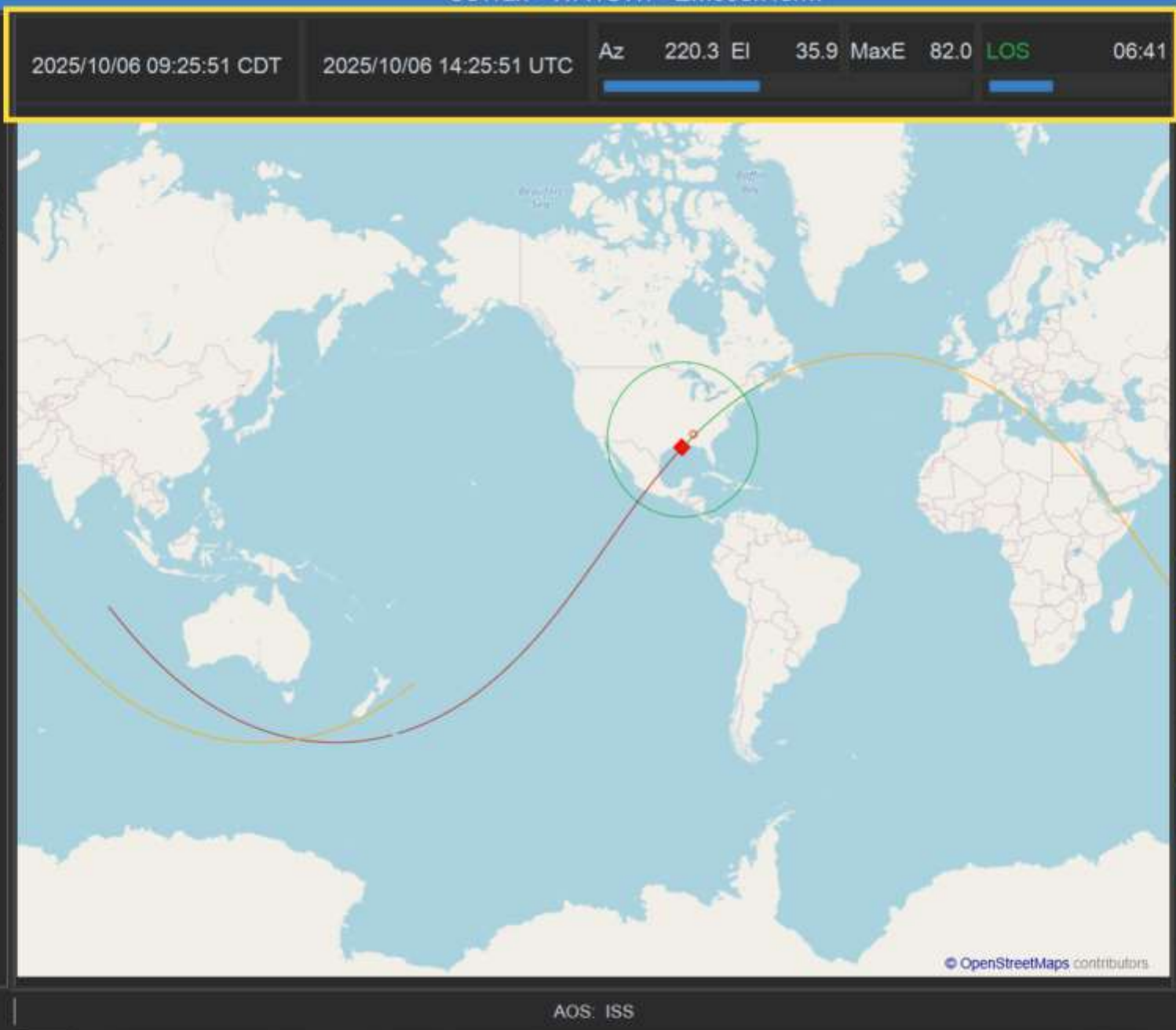
Manual

Stop

Radio

Rotor

Clear



Current Pass

ISS

AOS 09:21:40 AM LOS 09:32:33 AM

Duration 10:52 Max EI 82.0°

AOS Az 223° LOS Az 47°

Lat 29.841° Lon -90.242°

Grid EL49vu01vt Height 420 km

Range 677 km Speed 7.657 km/s

Catalog 25544 Eclipsed No

Comm Repeater

145.990.000 FM Up 67.0 PL

437.800.000 FM Down

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123	09:48:50 AM
	09:59:01 AM
	19°
AO-91	09:53:52 AM
	10:04:57 AM
	22°
RS-44	09:57:47 AM
	10:17:39 AM
	77°
FO-29	10:24:38 AM
	10:39:15 AM
	36°
JO-97	10:55:08 AM
	11:06:10 AM
	37°
HADES-ICM (SO-125)	10:59:08 AM
	11:10:14 AM
	68°
ISS	10:59:40 AM
	11:08:50 AM
	12°
HADES-R (SO-124)	12:13:02 PM
	12:23:41 PM
	58°

Active

Select

AOS: ISS

Log

FileSettingsKeysTrackingLogHelp

Doppler Shift

Uplink
Downlink

+2.709
+8.122

Satellite Frequency

Uplink
Downlink

145.990.000
437.800.000

Icom IC-9700

COM4

Tx
Rx

FM
FM

145.987.143
437.808.566

Set

Control

Uplink

Offsets

Downlink

0000

0000

Save

0000

0000

Yaesu GS-232B

COM6

Az
Ei

223
35

223
31

Manual

Stop

2025/10/06 09:25:51 CDT

2025/10/06 14:25:51 UTC

Az

220.3

Ei

35.9

MaxE

82.0

LOS

06:41

Current Pass

ISS

AOS09:21:40 AM

Duration10:52

AOS Az223°

Lat29.841°

GridEL49vu01vt

Range677 km

Catalog25544

Comm145.990.000

RepeaterFM Up

LOS09:32:33 AM

Max Ei82.0°

LOS Az47°

Lon-90.242

Height420 km

Speed7,657 km/s

EclipsedNo

67.0 PL

FM Down

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123

09:48:50 AM

09:59:01 AM

19°

AO-91

09:53:52 AM

10:04:57 AM

22°

RS-44

09:57:47 AM

10:17:39 AM

77°

FO-29

10:24:38 AM

10:39:15 AM

36°

JO-97

10:55:08 AM

11:06:10 AM

37°

HADES-ICM (SO-125)

10:59:08 AM

11:10:14 AM

68°

ISS

10:59:40 AM

11:08:50 AM

12°

HADES-R (SO-124)

12:13:02 PM

12:23:41 PM

58°

Active

Select

Radio

Rotor

Clear

AOS: ISS

Log

2025/10/06 09:25:51 CDT

2025/10/06 14:25:51 UTC

Az

220.3

Ei

35.9

MaxE

82.0

LOS

06:41



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FileSettingsKeysTrackingLogHelp

Uplink
Downlink

Uplink
Downlink

COM4
Tx
Rx

COM6
Az
EI

Preferences
Ground Stations
Radio Selection
Rotor Selection
Satellite Groups
Transverters

Site Frequency
145.990.000
437.800.000
m IC-9700
FM
FM

SetControl

Uplink
Offsets
Downlink

Yaesu GS-232B

Connected
223
35

ManualStop

2025/10/06 09:25:51 CDT2025/10/06 14:25:51 UTC

Az220.3EI35.9MaxE82.0LOS06:41

Map

Preferences

GeneralMapPassRadioRotorDoppler

Map ImageBlue

Center MapLongitude

Map Center Longitude-118Degrees

Pass Path WidthNarrow

Satellite FootprintSatellite

FootprintsFootprints

Day-Night TerminatorOff

SetCancel

Current Pass

ISS

AOS09:21:40 AMLOS09:32:33 AM

Duration10:52MaxEI82.0°

AOS Az223°LOS Az47°

Lat29.841°Lon-90.242°

GridEL49vu01vtHeight420 km

Range677 kmSpeed7.657 km/s

Catalog25544EclipsedNo

CommRepeater

145.990.000 FM Up67.0 PL

437.800.000 FM Down

End PassExtend PassComms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-12309:48:50 AM09:59:01 AM19°

AO-9109:53:52 AM10:04:57 AM22°

RS-4409:57:47 AM10:17:39 AM77°

FO-2910:24:38 AM10:39:15 AM36°

JO-9710:55:08 AM11:06:10 AM37°

HADES-ICM (SO-125)10:59:08 AM11:10:14 AM68°

ISS10:59:40 AM11:08:50 AM12°

HADES-R (SO-124)12:13:02 PM12:23:41 PM58°

ActiveSelect

RadioRotorClear

AOS: ISS

Log

Uplink	-2.910
Downlink	-8.729

Uplink	145.990.000
Downlink	437.800.000

COM4		Connected
Tx	FM	145.992.828
Rx	FM	437.791.517

Control

+	+	+	+
+ 0	0	0	0
-	-	-	-

+	+	+	+
+	0	0	0
-	-	-	-

COM6 Connected

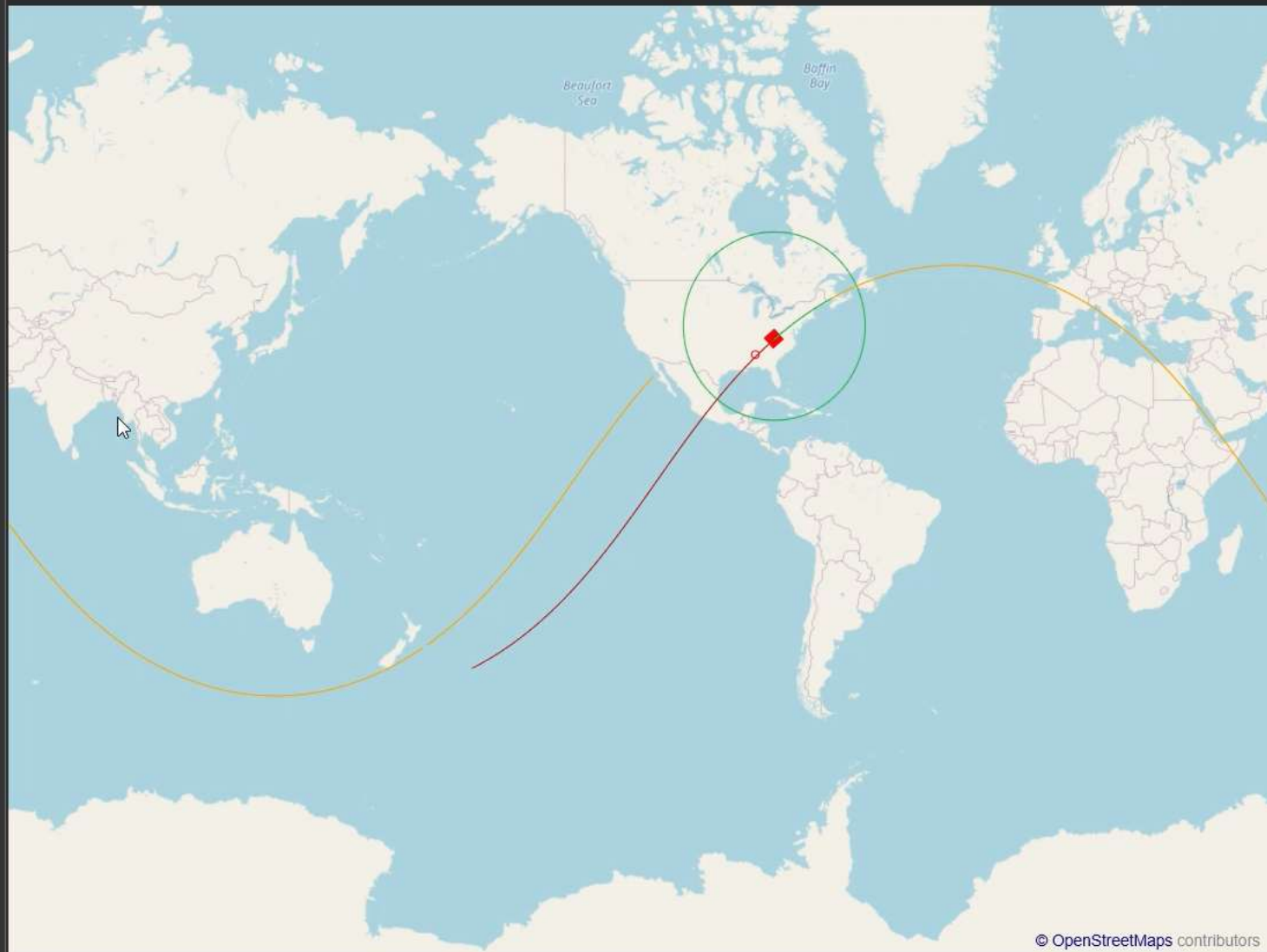
Manual

Stop

2025/10/06 09:28:36 CDT

2025/10/06 14:28:36 UTC

Az	49.6	El	30.1	MaxE	82.0	LOS	03:56
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ISS

AOS	09:21:40 AM	LOS	09:32:33 AM
Duration	10:52	Max EI	82.0°
AOS Az	223°	LOS Az	47°
Lat	36.985°	Lon	-81.424°
Grid	EM96gx96ci	Height	421 km
Range	773 km	Speed	7,657 km/s
Catalog	25544	Eclipsed	No
Comm	Repeater		
145.990.000	FM Up	67.0 PL	
437.800.000	FM Down		

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123	09:48:50 AM 09:59:01 AM 19°
AO-91	09:53:52 AM 10:04:57 AM 22°
RS-44	09:57:47 AM 10:17:39 AM 77°
FO-29	10:24:38 AM 10:39:15 AM 36°
JO-97	10:55:08 AM 11:06:10 AM 37°
HADES-ICM (SO-125)	10:59:08 AM 11:10:14 AM 68°
ISS	10:59:40 AM 11:08:50 AM 12°
HADES-R (SO-124)	12:13:02 PM 12:23:41 PM 58°

Active

Select

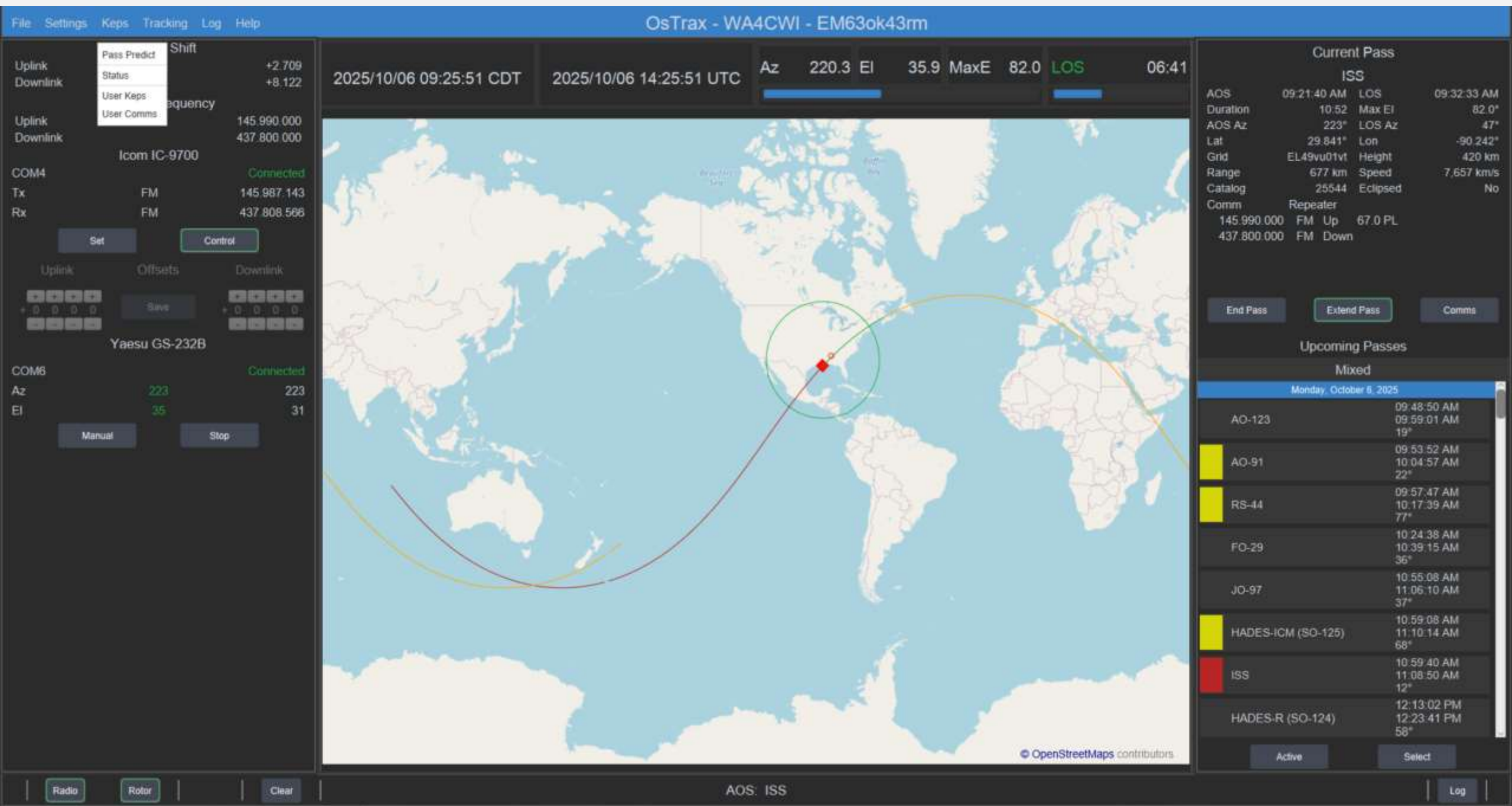
Radio

Rotor

Clear

AOS ISS

Log



Doppler Shift

Uplink
Downlink

Satellite Frequency

Uplink
Downlink

Icom IC-9700

COM4

Tx

Fm

145.850.000

Rx

Fm

436.795.000

Set

Control

Uplink

Offsets

Downlink

+ 0 0 0 0

Save

+ 0 0 0 0

Yaesu GS-232B

COM6

Az

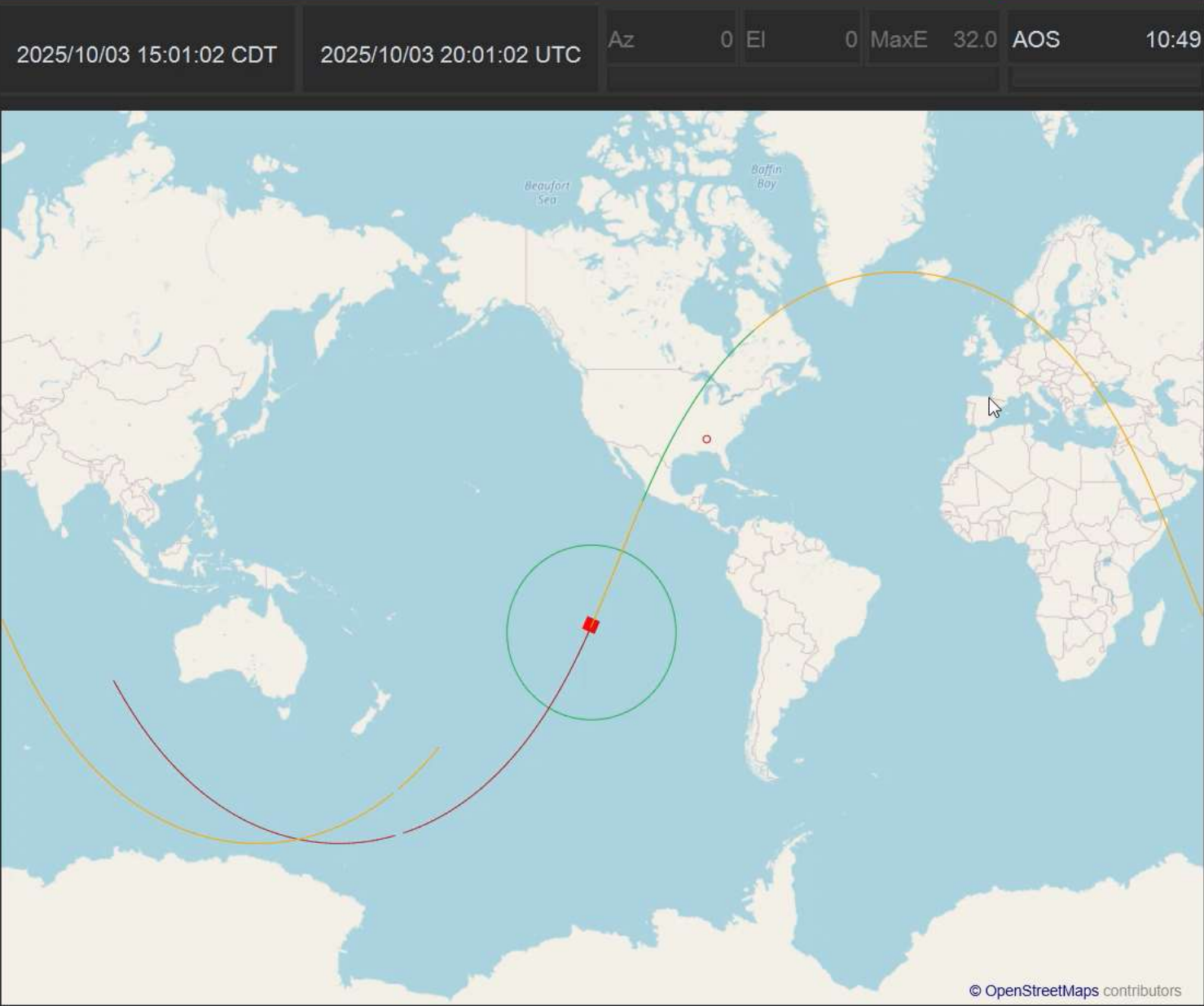
269

EI

2

Manual

Stop



Current Pass

SO-50

AOS 03:11:51 PM LOS 03:24:54 PM

Duration 13:02 Max EI 32.0°

AOS Az 230° LOS Az 19°

Lat -19.895° Lon -121.304

Grid CH90ic35mh Height 588 km

Range 6,930 km Speed 7,564 km/s

Catalog 27607 Eclipsed No

Comm Repeater

145.850.000 FM Up 67.0 PL

436.795.000 FM Down

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Friday, October 3, 2025

AO-73 03:25:48 PM 03:37:41 PM 86°

AO-07 04:36:56 PM 04:56:34 PM 26°

ISS 04:41:45 PM 04:50:51 PM 12°

ISS 06:18:02 PM 06:28:53 PM 85°

AO-07 06:27:46 PM 06:49:55 PM 64°

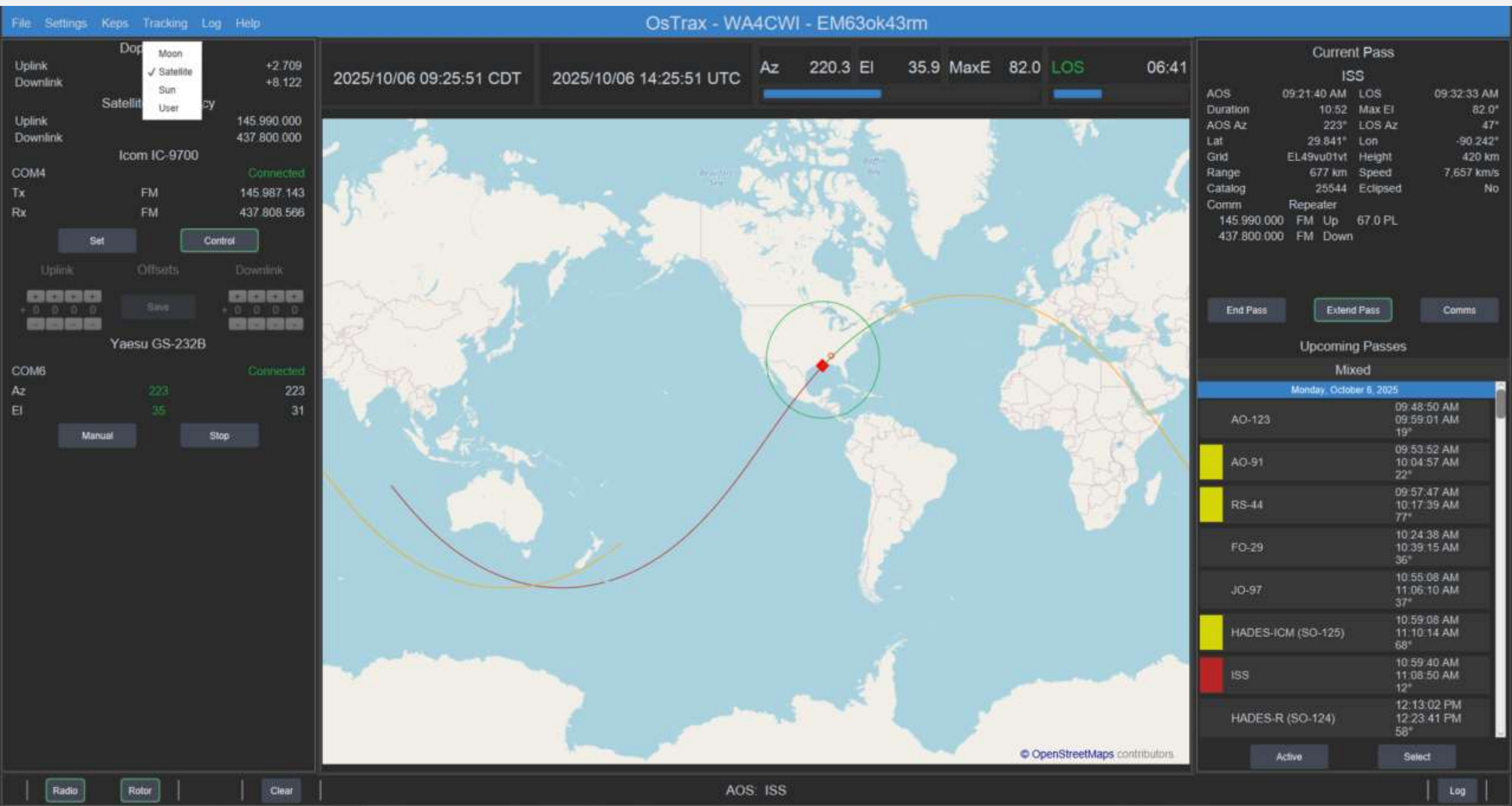
PO-101 06:51:02 PM 07:03:23 PM 67°

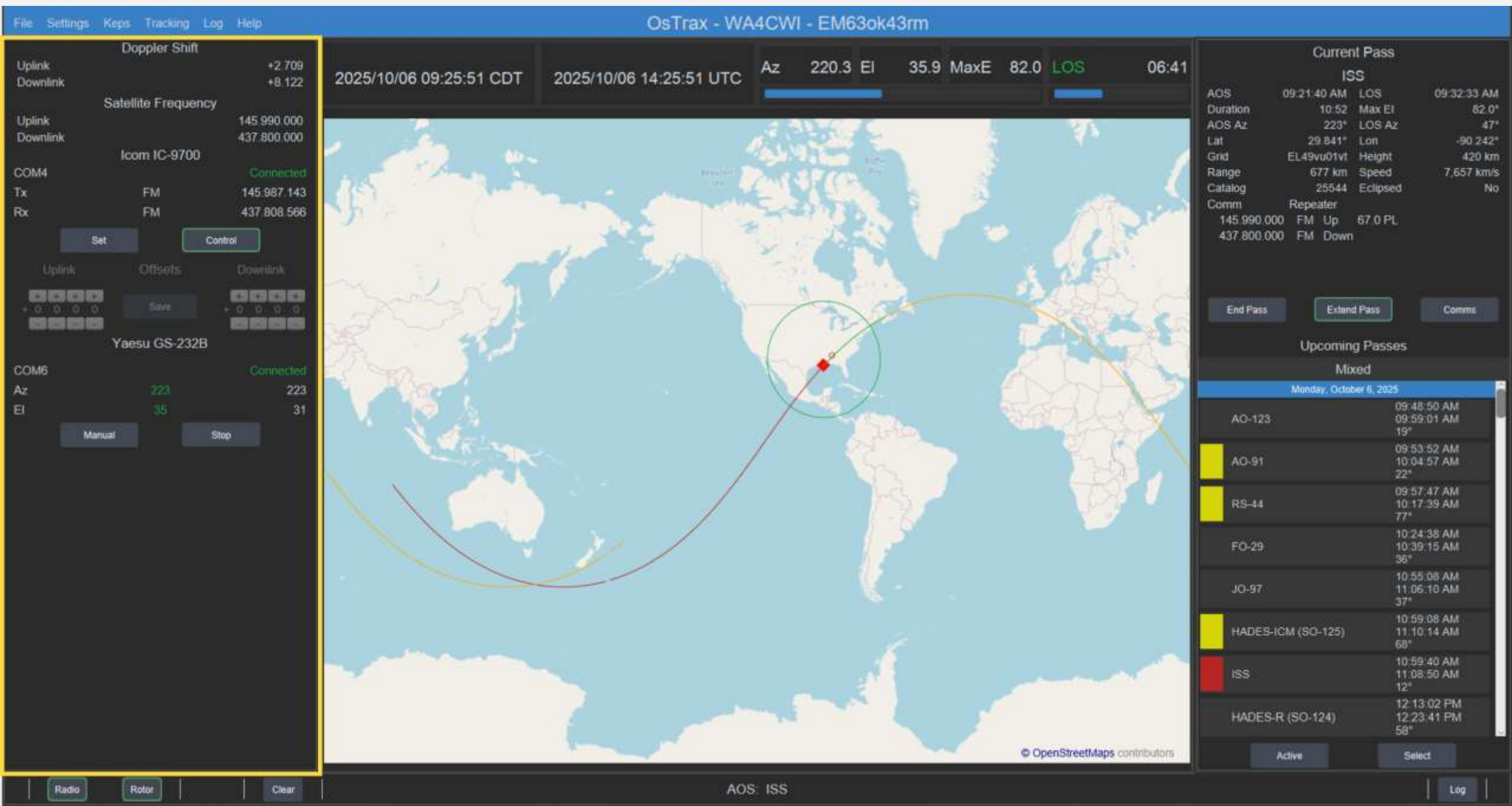
MO-122 08:14:52 PM 08:25:14 PM 34°

RS-44 08:36:01 PM 08:57:59 PM 45°

Active

Select





FileSettingsKeysTrackingLogHelp

Uplink
Down

Uplink
Down

COM4
Tx
Rx

COM6
Az
EI

Preferences
Ground Stations
Radio Selection
Rotor Selection
Satellite Groups
Transverters

Frequency
145.990.000
437.800.000
m IC-9700
FM
FM
145.987.143
437.808.566
Yaesu GS-232B
Connected
223
35

SetControl
Save
ManualStop

2025/10/06 09:25:51 CDT2025/10/06 14:25:51 UTC

Az220.3EI35.9MaxE82.0LOS06:41

Radio 1 Selection

Radio	Capability	Address	Selected
Icom IC-9700	☐ Rx ☐ Tx	60	☐
Icom IC-2730	☐ Rx ☐ Tx	90	☐
Icom ID-5100	☐ Rx ☐ Tx	8C	☐
Icom IC-7000	☐ Rx ☐ Tx	70	☐
Icom IC-9100	☐ Rx ☐ Tx	7C	☐
Icom IC-9700	☒ Rx ☒ Tx	A2	☒
Kenwood TS-790	☐ Rx ☐ Tx		☐
Kenwood TS-2000	☐ Rx ☐ Tx		☐
SDR#	☐ Rx ☐ Tx		☐
Yaesu FT-736R	☐ Rx ☐ Tx		☐

Com PortCOM4Baud Rate19200

SelectCancel

Current Pass

ISS

AOS	09:21:40 AM	LOS	09:32:33 AM
Duration	10:52	Max EI	82.0°
AOS Az	223°	LOS Az	47°
Lat	29.841°	Lon	-90.242°
Grid	EL49vu01vt	Height	420 km
Range	677 km	Speed	7.657 km/s
Catalog	25544	Eclipsed	No
Comm	Repeater		
145.990.000	FM Up	67.0 PL	
437.800.000	FM Down		

End PassExtend PassComms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123	09:48:50 AM 09:59:01 AM 19°
AO-91	09:53:52 AM 10:04:57 AM 22°
RS-44	09:57:47 AM 10:17:39 AM 77°
FO-29	10:24:38 AM 10:39:15 AM 36°
JO-97	10:55:08 AM 11:06:10 AM 37°
HADES-ICM (SO-125)	10:59:08 AM 11:10:14 AM 68°
ISS	10:59:40 AM 11:08:50 AM 12°
HADES-R (SO-124)	12:13:02 PM 12:23:41 PM 58°

ActiveSelect

RadioRotorClear

AOS: ISS

Log

OpenStreetMaps contributors

Radios

Icom

IC-705 IC-706 IC-746 IC-820 IC-821 IC-910
IC-2730 IC-5100 IC-7000 IC-7001 IC-9100 IC-9700

Kenwood

TS-790 TS-2000

SDR

OsTrax SDR# Plug-In

Yaesu

FT-736 FT-847 FT-857 FT-897 FT-991

Radios without satellite mode are selected as receive or transmit only

Rotor Controllers

AlfaSpid

Rot2Prog

AlfaSpidMD

EasyComm 3

GreenHeron

RT23

Yaesu

GS-232

GS-232A

GS-232B

Yaesu Clones

LVB Tracker

Fox Delta

Stop

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Select

Log

Doppler Shift

Uplink +2.709

Downlink +8.122

Satellite Frequency

Uplink 145.990.000

Downlink 437.800.000

Icom IC-9700

COM4 Connected

Tx FM 145.987.143

Rx FM 437.808.566

Set

Control

Offsets

Uplink

Downlink

Save

Yaesu GS-232B

COM6 Connected

Az 223 223

EI 35 31

Manual

Stop

2025/10/06 09:25:51 CDT

2025/10/06 14:25:51 UTC

Az 220.3

EI 35.9

MaxE 82.0

LOS

06:41



Current Pass

ISS

AOS	09:21:40 AM	LOS	09:32:33 AM
Duration	10:52	Max EI	82.0°
AOS Az	223°	LOS Az	47°
Lat	29.841°	Lon	-90.242°
Grid	EL49vu01vt	Height	420 km
Range	677 km	Speed	7.657 km/s
Catalog	25544	Eclipsed	No
Comm	Repeater		
145.990.000	FM Up	67.0 PL	
437.800.000	FM Down		

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123	09:48:50 AM 09:59:01 AM 19°
AO-91	09:53:52 AM 10:04:57 AM 22°
RS-44	09:57:47 AM 10:17:39 AM 77°
FO-29	10:24:38 AM 10:39:15 AM 36°
JO-97	10:55:08 AM 11:06:10 AM 37°
HADES-ICM (SO-125)	10:59:08 AM 11:10:14 AM 68°
ISS	10:59:40 AM 11:08:50 AM 12°
HADES-R (SO-124)	12:13:02 PM 12:23:41 PM 58°

Active

Select

Doppler Shift

Uplink
Downlink

Satellite Frequency

Uplink
Downlink

Icom IC-9700

COM4

Tx

Rx

LSB

USB

432.150.000

145.950.000

Connected

Set

Control

Offsets

Uplink

Downlink

Save

Yaesu GS-232B

COM6

Az

EI

269

2

Manual

Stop

2025/10/03 16:34:50 CDT

2025/10/03 21:34:50 UTC

Az

0

EI

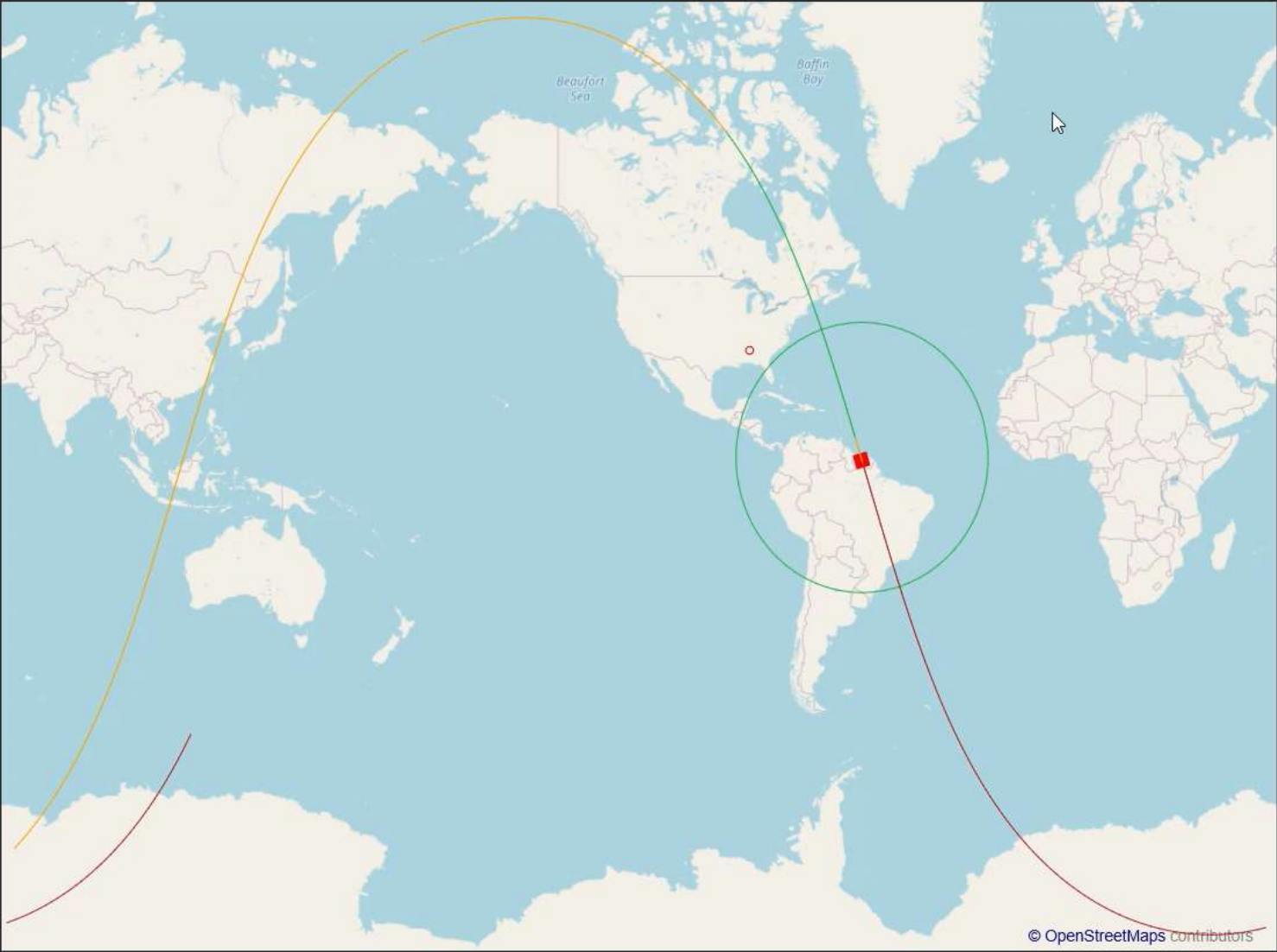
0

MaxE

26.2

AOS

02:06



Current Pass

AO-07

AOS

04:36:56 PM

LOS

04:56:34 PM

Duration

19:37

Max EI

26.2°

AOS Az

122°

LOS Az

356°

Lat

4.300°

Lon

-55.041°

Grid

GJ24lh51ax

Height

1,453 km

Range

5,204 km

Speed

7,134 km/s

Catalog

07530

Eclipsed

No

Comm

Transponder Inverted

432.125.000 - 432.175.000

LSB Up

145.925.000 - 145.975.000

USB Down

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Friday, October 3, 2025

ISS

04:41:45 PM

04:50:51 PM

12°

ISS

06:18:02 PM

06:28:53 PM

85°

AO-07

06:27:46 PM

06:49:55 PM

64°

PO-101

06:51:02 PM

07:03:23 PM

67°

MO-122

08:14:52 PM

08:25:14 PM

34°

RS-44

08:36:01 PM

08:57:59 PM

45°

FO-29

08:52:04 PM

09:06:52 PM

13°

JO-97

08:59:37 PM

09:09:34 PM

17°

Active

Select

Doppler Shift

Uplink

Downlink

-3.361

-10.081

Satellite Frequency

Uplink

Downlink

145.990.000

437.800.000

Icom IC-9700

COM4

Tx

Rx

Connected

FM

FM

145.993.208

437.790.379

Set

Control

Uplink

Offsets

Downlink

+

+

+

+

0

0

0

0

-

-

-

-

Save

+

+

+

+

0

0

0

0

-

-

-

-

Yaesu GS-232B

COM6

Az

EI

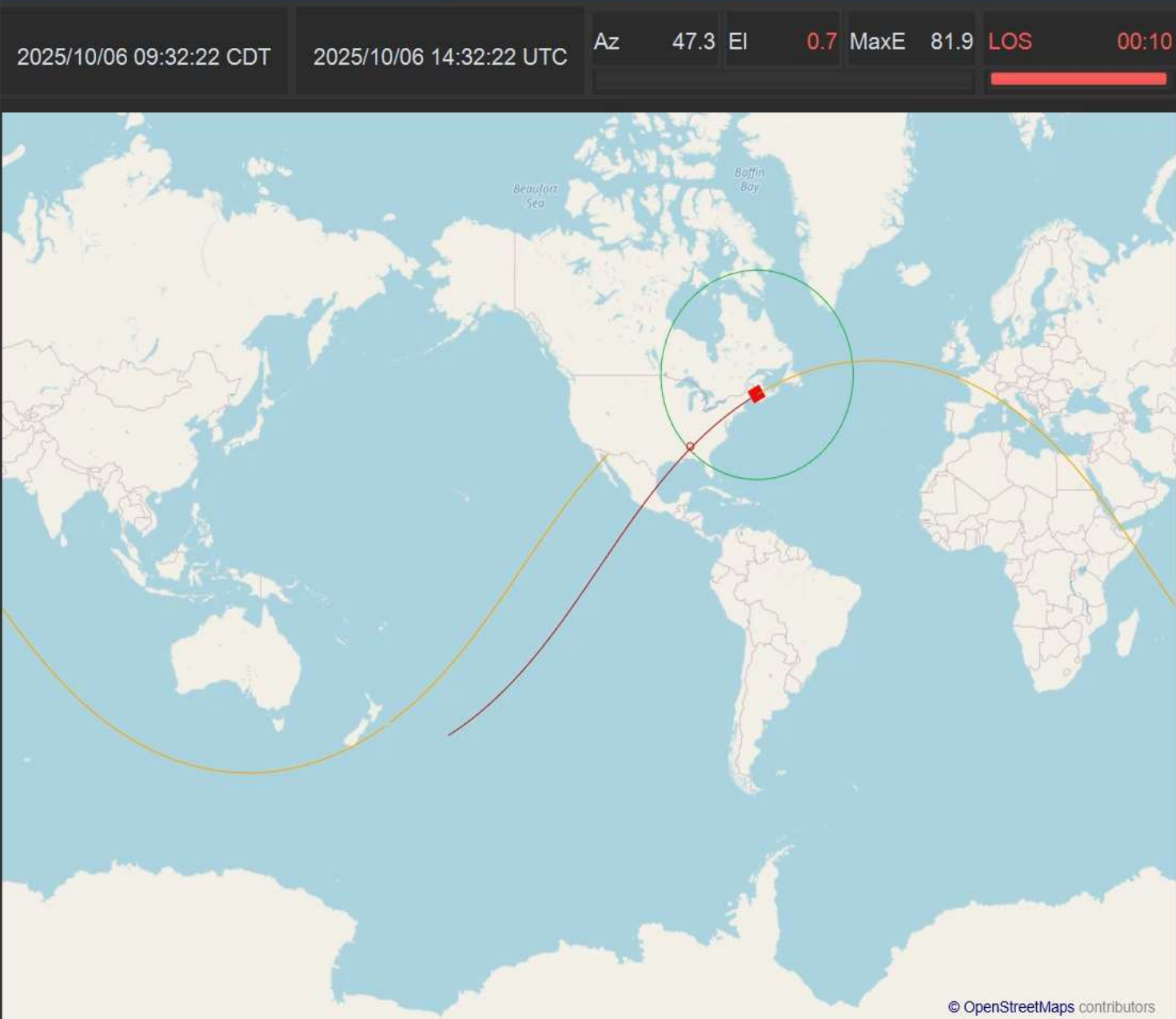
Connected

49

5

Manual

Stop



Current Pass

ISS

AOS

09:21:40 AM

LOS

09:32:32 AM

Duration

10:52

Max EI

82.0°

AOS Az

223°

LOS Az

47°

Lat

45.199°

Lon

-66.302°

Grid

FN65ue37tt

Height

423 km

Range

2,287 km

Speed

7,656 km/s

Catalog

25544

Eclipsed

No

Comm

Repeater

145.990.000

FM Up

67.0 PL

437.800.000

FM Down

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123

09:48:49 AM

09:59:01 AM

19°

AO-91

09:53:52 AM

10:04:57 AM

22°

RS-44

09:57:47 AM

10:17:39 AM

77°

FO-29

10:24:38 AM

10:39:15 AM

36°

JO-97

10:55:08 AM

11:06:10 AM

37°

HADES-ICM (SO-125)

10:59:08 AM

11:10:13 AM

68°

ISS

10:59:40 AM

11:08:50 AM

12°

HADES-R (SO-124)

12:13:01 PM

12:23:40 PM

58°

Active

Select

Doppler Shift

Uplink
Downlink

+0.444
+0.149

Satellite Frequency

Uplink
Downlink

432.150.000
145.950.000

Icom IC-9700

COM4
Tx
Rx

LSB
USB

432.149.545
145.950.153

Connected

Set
Control

Offsets

Uplink
Downlink

+ + + +
+ 0 0 0 0
- - - -

Save

+ + + +
+ 0 0 0 0
- - - -

Yaesu GS-232B

COM6
Az
EI

245
155

Connected

Manual
Stop

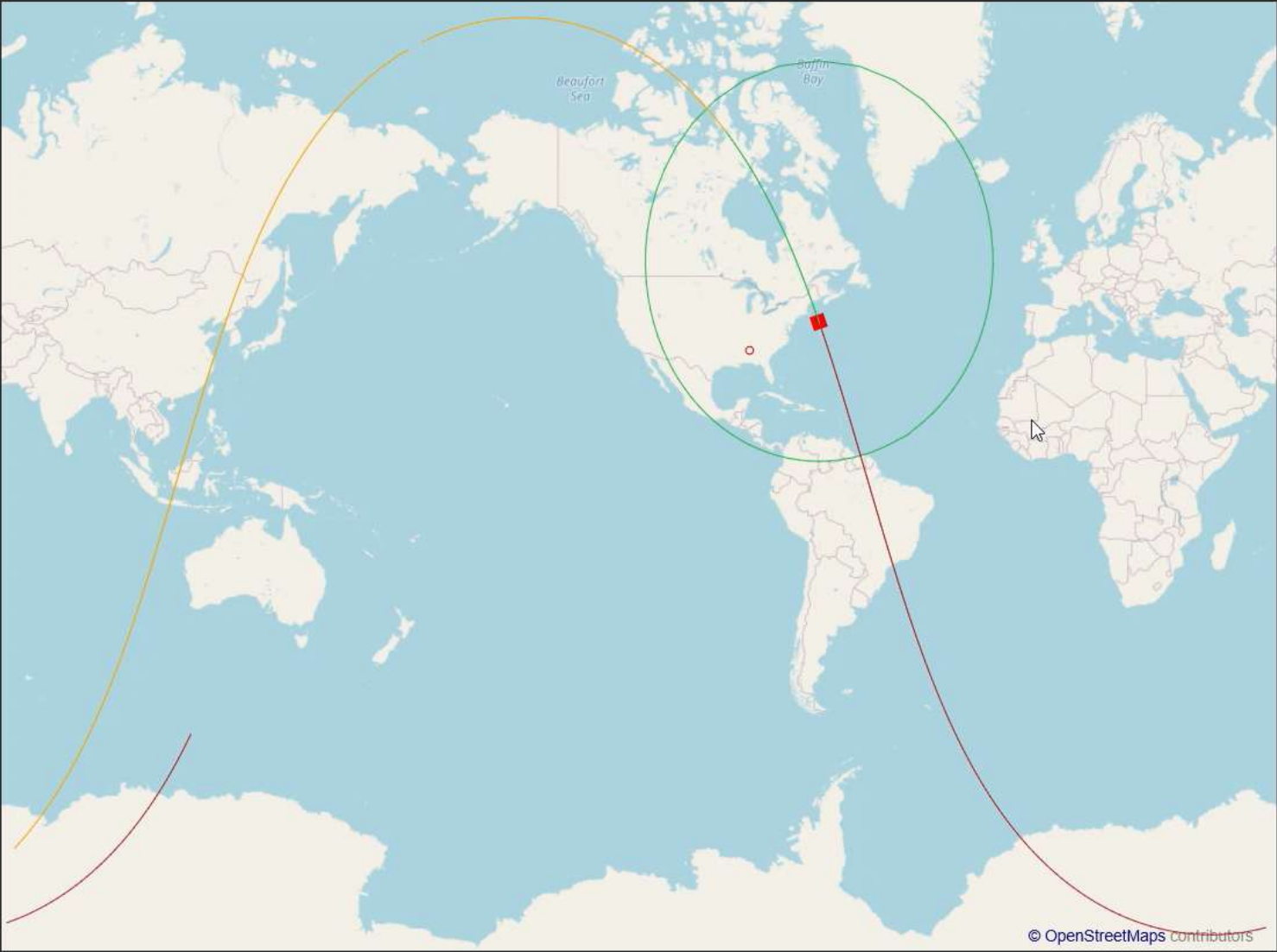
2025/10/03 16:46:25 CDT

2025/10/03 21:46:25 UTC

Az 62.6 EI 26.1 MaxE 26.2

LOS

10:08



Current Pass

AO-07

AOS 04:36:56 PM LOS 04:56:34 PM

Duration 19:37 Max EI 26.2°

AOS Az 122° LOS Az 356°

Lat 39.733° Lon -67.151°

Grid FM69kr15wv Height 1,462 km

Range 2,546 km Speed 7,130 km/s

Catalog 07530 Eclipsed No

Comm Transponder Inverted

432.125.000 - 432.175.000 LSB Up

145.925.000 - 145.975.000 USB Down

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Friday, October 3, 2025

ISS

04:41:45 PM
04:50:51 PM
12°

ISS

06:18:02 PM
06:28:53 PM
85°

AO-07

06:27:46 PM
06:49:55 PM
64°

PO-101

06:51:02 PM
07:03:23 PM
67°

MO-122

08:14:52 PM
08:25:14 PM
34°

RS-44

08:36:01 PM
08:57:59 PM
45°

FO-29

08:52:04 PM
09:06:52 PM
13°

JO-97

08:59:37 PM
09:09:34 PM
17°

Active

Select

Doppler Shift
Uplink +2.709
Downlink +8.122

Satellite Frequency
Uplink 145.990.000
Downlink 437.800.000

Icom IC-9700
COM4 Connected
Tx FM 145.987.143
Rx FM 437.808.566
Set Control

Offsets
Uplink + 0 0 0 0
Downlink + 0 0 0 0
Save

Yaesu GS-232B
COM6 Connected
Az 223
El 35
Manual Stop

2025/10/06 09:25:51 CDT

2025/10/06 14:25:51 UTC

Az 220.3 El 35.9 MaxE 82.0 LOS 06:41



Current Pass

ISS

AOS	09:21:40 AM	LOS	09:32:33 AM
Duration	10:52	Max El	82.0°
AOS Az	223°	LOS Az	47°
Lat	29.841°	Lon	-90.242°
Grid	EL49vu01vt	Height	420 km
Range	677 km	Speed	7,657 km/s
Catalog	25544	Eclipsed	No
Comm	Repeater		
145.990.000	FM Up	67.0 PL	
437.800.000	FM Down		

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123	09:48:50 AM 09:59:01 AM 19°
AO-91	09:53:52 AM 10:04:57 AM 22°
RS-44	09:57:47 AM 10:17:39 AM 77°
FO-29	10:24:38 AM 10:39:15 AM 36°
JO-97	10:55:08 AM 11:06:10 AM 37°
HADES-ICM (SO-125)	10:59:08 AM 11:10:14 AM 66°
ISS	10:59:40 AM 11:08:50 AM 12°
HADES-R (SO-124)	12:13:02 PM 12:23:41 PM 58°

Active

Select

Radio

Rotor

Clear

AOS: ISS

Log

FileSettingsKeysTrackingLogHelp

Doppler Shift

Uplink+2.709

Downlink+8.122

Satellite Frequency

Uplink145.990.000

Downlink437.800.000

Icom IC-9700

COM4Connected

TxFM145.987.143

RxFM437.808.566

SetControl

Offsets

Uplink

Downlink

Save

Yaesu GS-232B

COM6Connected

Az223223

EI3531

ManualStop

2025/10/06 09:25:51 CDT

2025/10/06 14:25:51 UTC

Az220.3

EI35.9

MaxE82.0

LOS

06:41

Ground Stations

Name	Latitude	Longitude	HASL
Default	39.8283°	-98.5795°	0.0
N8MH	35.4330°	-78.6936°	100.0
WA4CWI	33.4314°	-86.7940°	275.0

NewSelectCancel

Satellite Groups - WA4CWI

Default

Stress Test

MO-122

PO-101

Mixed

Add GroupSelectCancel

Current Pass

ISS

AOS	09:21:40 AM	LOS	09:32:33 AM
Duration	10:52	Max EI	82.0°
AOS Az	223°	LOS Az	47°
Lat	29.841°	Lon	-90.242°
Grid	EL49vu01vt	Height	420 km
Range	677 km	Speed	7.657 km/s
Catalog	25544	Eclipsed	No
Comm	Repeater		
145.990.000	FM Up	67.0 PL	
437.800.000	FM Down		

End PassExtend PassComms

Upcoming Passes

Mixed

Monday, October 6, 2025

AO-123	09:48:50 AM 09:59:01 AM 19°
AO-91	09:53:52 AM 10:04:57 AM 22°
RS-44	09:57:47 AM 10:17:39 AM 77°
FO-29	10:24:38 AM 10:39:15 AM 36°
JO-97	10:55:08 AM 11:06:10 AM 37°
HADES-ICM (SO-125)	10:59:08 AM 11:10:14 AM 68°
ISS	10:59:40 AM 11:08:50 AM 12°
HADES-R (SO-124)	12:13:02 PM 12:23:41 PM 58°

ActiveSelect

RadioRotorClear

AOS: ISS

Log

Doppler Shift

Uplink
Downlink

Satellite Frequency

Uplink
Downlink

Icom IC-9700

COM4

Tx

Rx

FM

FM

145.850.000

436.795.000

Set

Control

Uplink

Offsets

Downlink

+ 0 0 0 0

Save

+ 0 0 0 0

Yaesu GS-232B

COM6

Az

EI

269

2

Manual

Stop

2025/10/03 14:37:24 CDT

2025/10/03 19:37:24 UTC

Az

0

EI

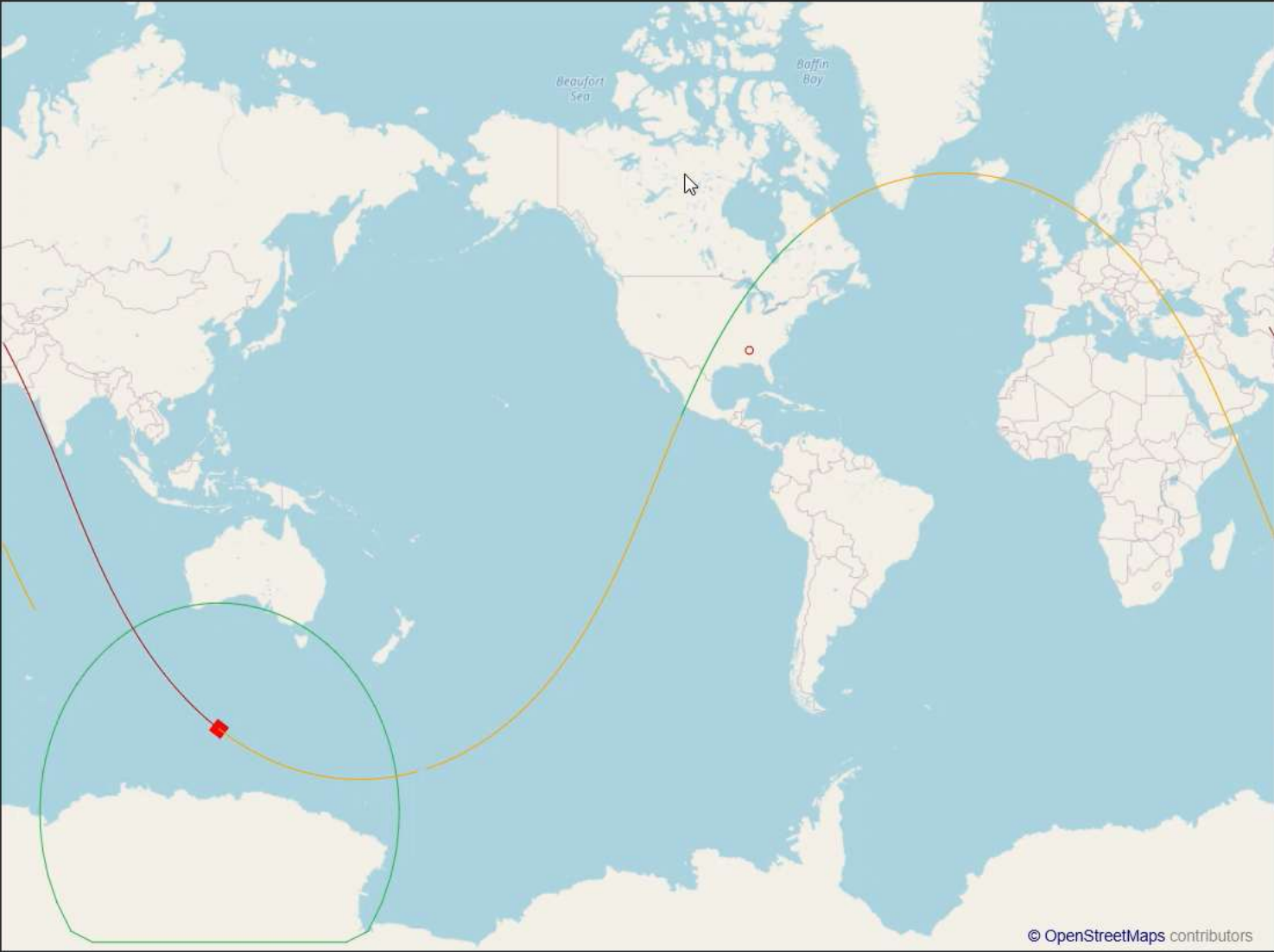
0

MaxE

32.0

AOS

34:27



Current Pass

SO-50

AOS

03:11:51 PM

LOS

03:24:54 PM

Duration

13:03

Max EI

32.0°

AOS Az

230°

LOS Az

19°

Lat

-57.928°

Lon

123.579°

Grid

PD12sb97kg

Height

621 km

Range

12,841 km

Speed

7,546 km/s

Catalog

27607

Eclipsed

No

Comm

Repeater

145.850.000 FM Up 67.0 PL

436.795.000 FM Down

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

FO-29

10:54:31 PM

84°

AO-123

10:39:47 PM

10:49:03 PM

14°

HADES-R (SO-124)

10:57:05 PM

11:07:28 PM

34°

SO-50

11:43:56 PM

11:58:03 PM

68°

HADES-ICM (SO-125)

11:50:11 PM

12:01:12 AM

44°

CAS-4A

11:55:08 PM

12:02:27 AM

16°

Saturday, October 4, 2025

FO-29

12:22:20 AM

12:35:51 AM

12°

SO-50

01:25:06 AM

01:35:45 AM

11°

01:28:27 AM

Active

Select

Doppler Shift

Uplink
Downlink

Satellite Frequency

Uplink
Downlink

Icom IC-9700

COM4

Tx

Fm

145.850.000

Rx

Fm

436.795.000

Set

Control

Uplink

Offsets

Downlink

+ 0 0 0 0

Save

+ 0 0 0 0

Yaesu GS-232B

COM6

Az

269

EI

2

Manual

Stop

2025/10/03 15:03:53 CDT

2025/10/03 20:03:53 UTC

Az

0

EI

0

MaxE

32.0

AOS

07:58



Current Pass

SO-50

AOS

03:11:51 PM

LOS

03:24:54 PM

Duration

13:03

Max EI

32.0°

AOS Az

230°

LOS Az

19°

Lat

-10.289°

Lon

-117.092°

Grid

DH19kr90ar

Height

590 km

Range

5,891 km

Speed

7,563 km/s

Catalog

27607

Eclipsed

No

Comm

Repeater

145.850.000

FM

Up

67.0 PL

436.795.000

FM

Down

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Friday, October 3, 2025

AO-73

03:25:48 PM

03:37:41 PM

86°

AO-07

04:36:56 PM

04:56:34 PM

26°

ISS

04:41:45 PM

04:50:51 PM

12°

ISS

06:18:02 PM

06:28:53 PM

85°

AO-07

06:27:46 PM

06:49:55 PM

64°

PO-101

06:51:02 PM

07:03:23 PM

67°

MO-122

08:14:52 PM

08:25:14 PM

34°

RS-44

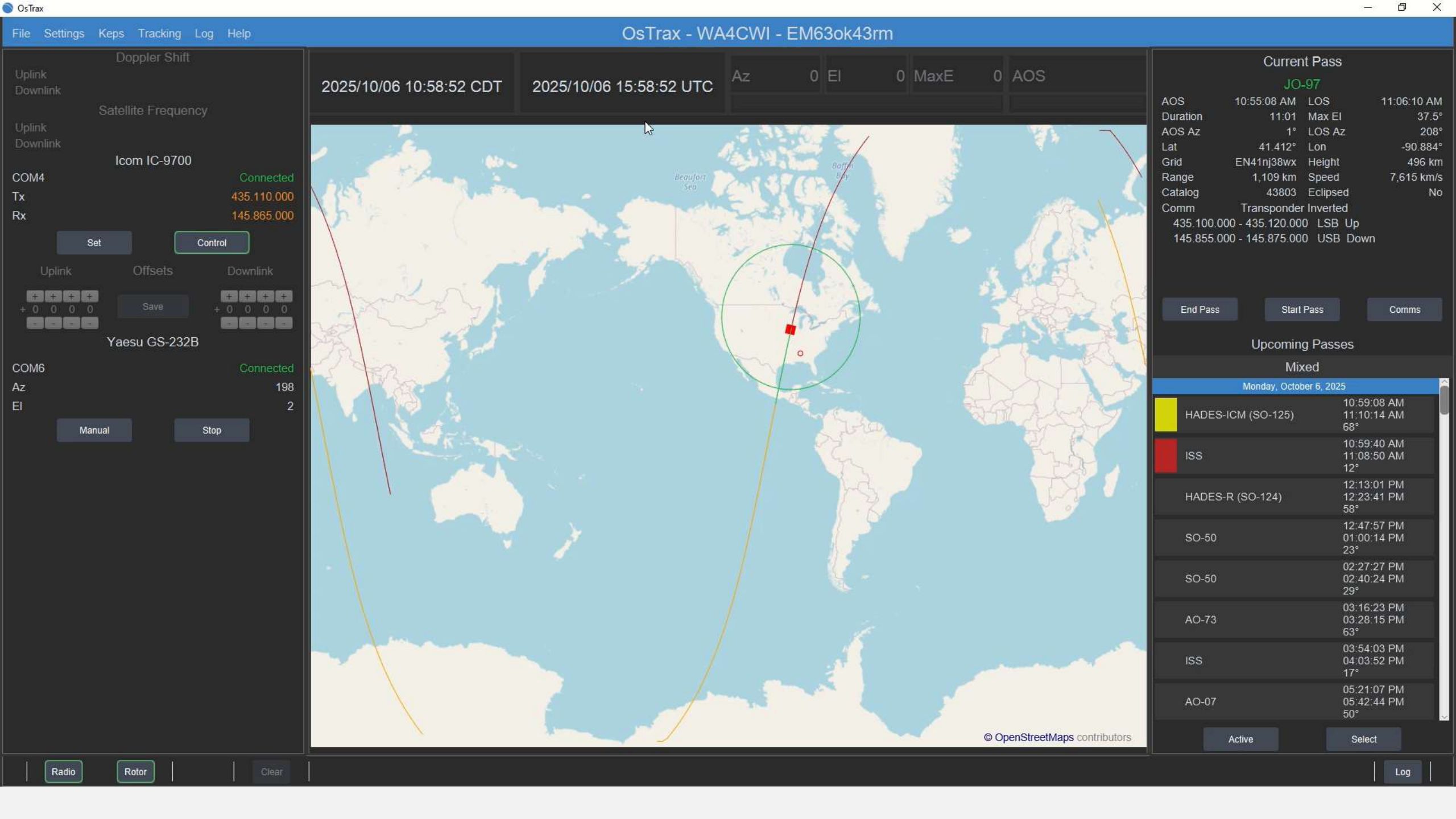
08:36:01 PM

08:57:59 PM

45°

Active

Select



Stop

1



Select

Log

Additional Features

Contact Logging

Create Contact Log With Satellite Pass Information – Export ADIF 2 or 3 Format

Footprints

Defined Map Coordinate Points Showing Contact Possibilities in Location or NASA Style

Instances

Run multiple, independent OsTrax Instances on Same Machine

Pass Predict

Satellite Pass Predictions Based on Location and Time

User Pass Tracking

User Controlled Satellite Pass Evaluation

Doppler Shift

Uplink

Downlink

+2.878

+8.618

Satellite Frequency

Uplink

Downlink

145.850.000

436.795.000

Icom IC-9700

COM4

Tx

Rx

Connected

FM

FM

145.847.103

436.803.674

Set

Control

Uplink

Offsets

Downlink

+ 0 0 0 0

- 0 0 0 0

Save

+ 0 0 0 0

- 0 0 0 0

Yaesu GS-232B

COM6

Az

EI

Connected

190

21

Manual

Stop

2025/10/07 13:09:27 CDT

2025/10/07 18:09:27 UTC

Az

186.5

EI

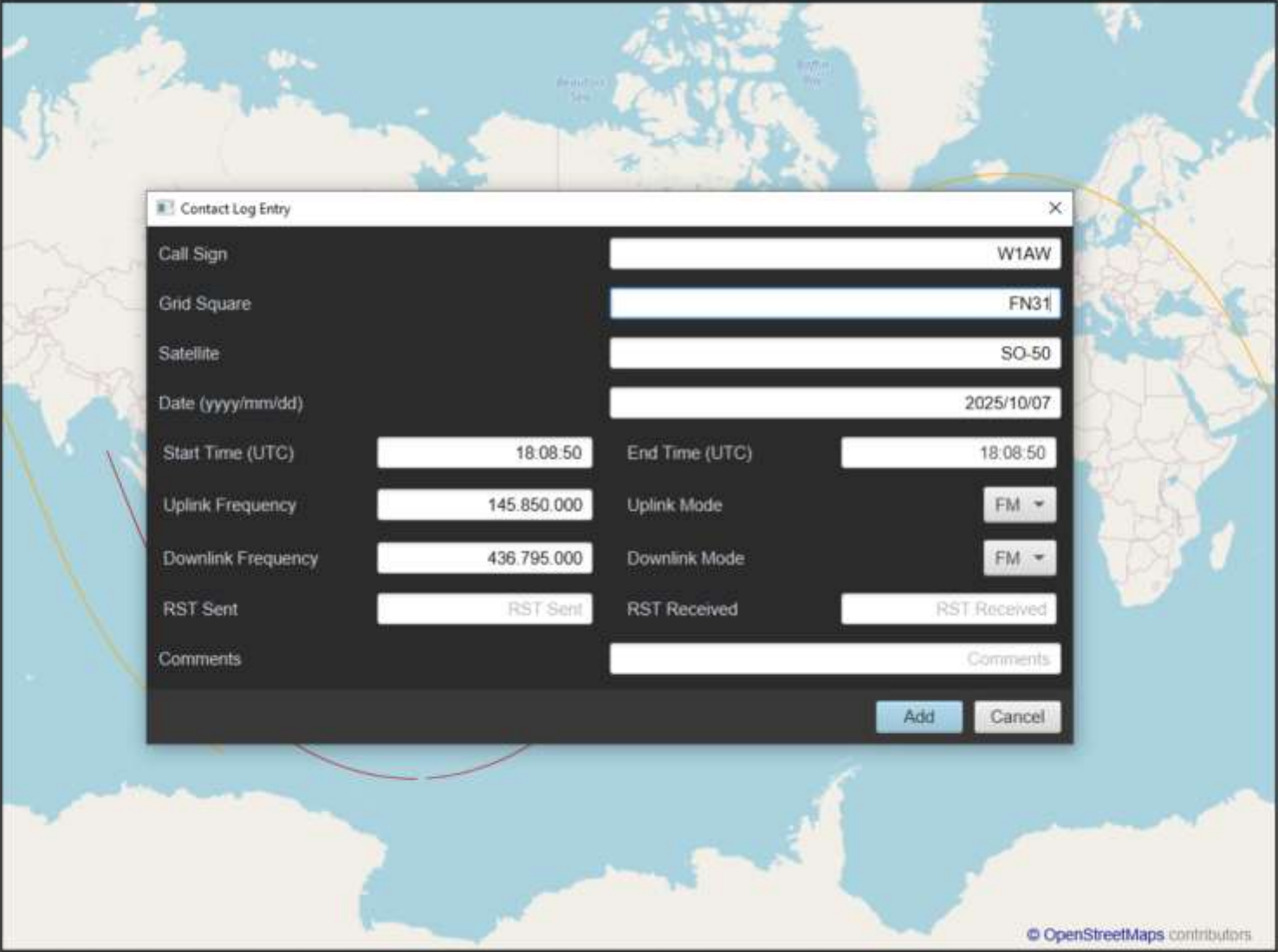
20.7

MaxE

55.3

LOS

09:37



Contact Log Entry

Call Sign

W1AW

Grid Square

FN31

Satellite

SO-50

Date (yyyy/mm/dd)

2025/10/07

Start Time (UTC)

18:08:50

End Time (UTC)

18:08:50

Uplink Frequency

145.850.000

Uplink Mode

FM

Downlink Frequency

436.795.000

Downlink Mode

FM

RST Sent

RST Sent

RST Received

RST Received

Comments

Comments

Add

Cancel

Current Pass

SO-50

AOS	01:05:43 PM	LOS	01:19:04 PM
Duration	13:21	Max EI	55.3°
AOS Az	196°	LOS Az	34°
Lat	22.738°	Lon	-88.092°
Grid	EL52wr97af	Height	613 km
Range	1,389 km	Speed	7,551 km/s
Catalog	27507	Eclipsed	No
Comm	Repeater		
145.850.000	FM Up	67.0 PL	
436.795.000	FM Down		

End Pass

Extend Pass

Comms

Upcoming Passes

Mixed

Tuesday, October 7, 2025

SO-50	02:46:56 PM 02:58:30 PM 15°
ISS	03:06:06 PM 03:15:08 PM 11°
AO-73	03:13:13 PM 03:25:03 PM 56°
AO-07	04:23:24 PM 04:42:05 PM 21°
ISS	04:42:22 PM 04:53:14 PM 87°
AO-07	06:13:25 PM 06:35:43 PM 78°
PO-101	06:58:41 PM 07:10:55 PM 54°
AO-07	08:10:09 PM 08:26:20 PM 11°

Active

Select

FileSettingsKeysTrackingLogHelp

Doppler Shift

Uplink+2.709

Downlink+8.122

Satellite Frequency

Uplink145.990.000

Downlink437.800.000

Icom IC-9700

COM4Connected

TxFM145.987.143

RxFM437.808.568

SetControl

Offsets

Uplink

Downlink

Save

Yaesu GS-232B

COM6Connected

Az223

EI35

ManualStop

2025/10/06 09:25:51 CDT

2025/10/06 14:25:51 UTC

Az220.3

EI35.9

MaxE82.0

LOS

06:41

Current Pass

ISS

AOS09:21:40 AM

Duration10:52

AOS Az223°

Lat29.841°

GridEL49vu01vt

Range677 km

Catalog25544

Comm145.990.000

RepeaterFM Up

LOS09:32:33 AM

Max EI82.0°

LOS Az47°

Lon-90.242°

Height420 km

Speed7.657 km/s

EclipsedNo

67.0 PL

FM Down

Extend Pass

Comms

Upcoming Passes

Mixed

Monday, October 6, 2025

O-12309:48:50 AM

O-9109:59:01 AM

O-9109:53:52 AM

O-9110:04:57 AM

O-9110:17:39 AM

O-9110:24:38 AM

O-9110:39:15 AM

O-9110:55:08 AM

O-9111:06:10 AM

O-9111:09:08 AM

O-9111:10:14 AM

O-9111:10:58 AM

O-9111:23:41 PM

O-9112:13:02 PM

O-9112:23:41 PM

HADES-R (SO-124)

Active

Select

Pass Predict - ISS/25544

SatelliteISSorCatalog Number

AMSAT

☒ AMSAT

Celestrak

☐ Amateur

☐ CubeSat

☐ GEO

☐ Intelsat

☐ New

☐ NOAA

☐ Weather

USER

☐ User

Start10/17/2025

End10/19/2025

Ground StationWA4CWI

33.4314

-86.7940

Min Elevation10Degrees

TLE

AOSAOSAOS AzMax EILOSLOS AzDuration

Friday, October 17, 2025

05:21:23 AM232°60.5°05:32:13 AM43°10:50

11:53:35 AM324°23.0°12:03:49 PM105°10:14

01:30:16 PM302°27.7°01:40:35 PM157°10:19

Saturday, October 18, 2025

04:33:03 AM219°65.8°04:43:53 AM49°10:49

06:10:48 AM269°13.7°06:20:13 AM30°09:24

11:05:23 AM328°14.9°11:14:58 AM93°09:34

12:41:46 PM309°56.1°12:52:33 PM143°10:46

Sunday, October 19, 2025

03:44:57 AM205°31.7°03:55:24 AM56°10:27

05:21:53 AM258°20.9°05:32:01 AM34°10:07

11:53:23 AM315°70.1°12:04:15 PM130°10:51

CopyPredictDone

Radio

Rotor

Clear

AOS: ISS

Log

Satellite

ISS 25544

Select Satellite

Oct 17, 2025, 1:30 PM

Orbits 1 Min Elevation 10

Step Value 30 s

Step Rate ☒ Second ☐ Minute

<< < > >>

2025/10/06 15:26:15 CDT

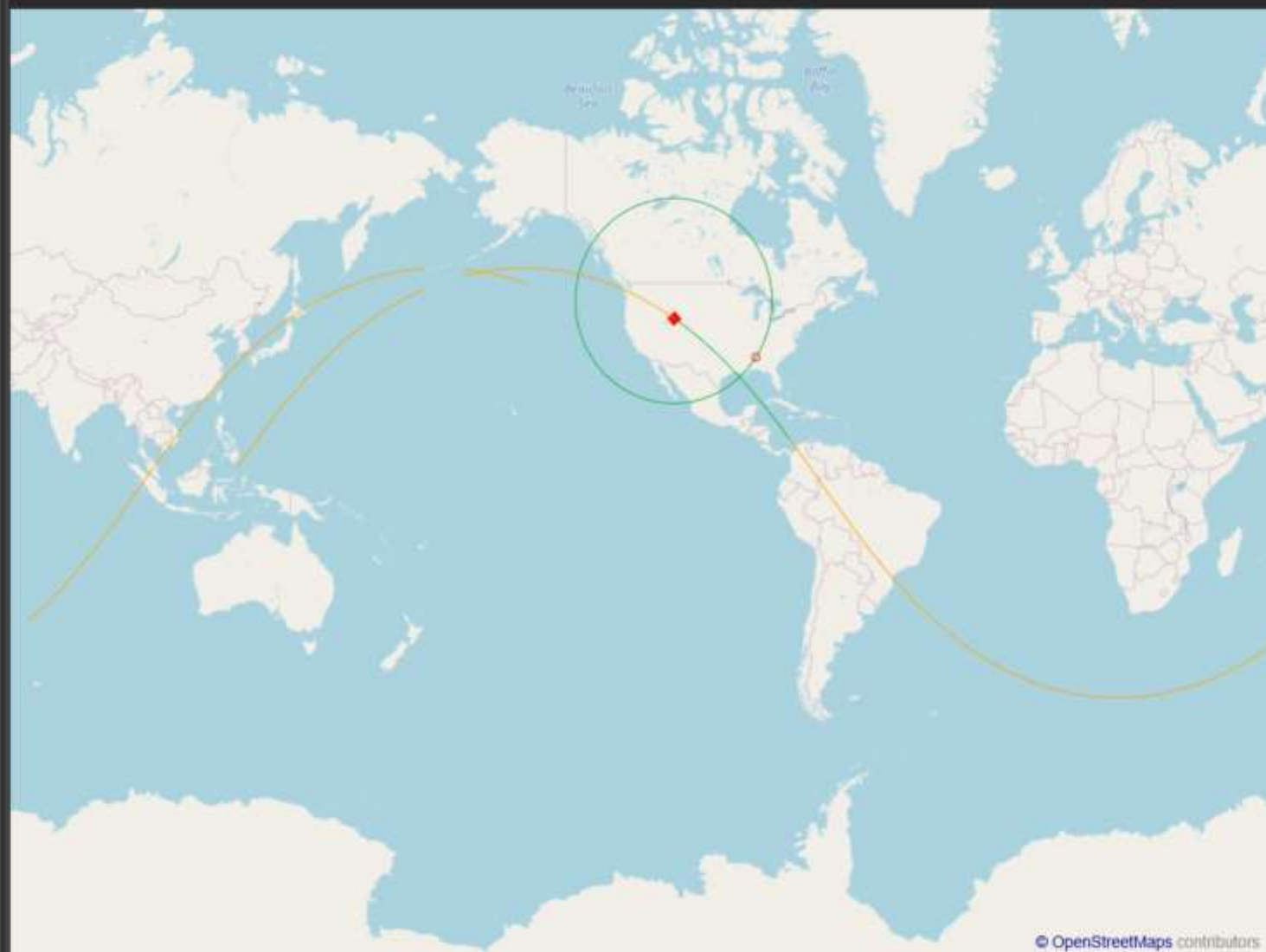
2025/10/06 20:26:15 UTC

Az 0 El 0 MaxE 0 AOS

Current Pass

ISS - 25544

Pass	2025/10/17 13:30:16		
Lat	42.162°	Lon	-110.031°
Az	302.216°	El	0.014°
Grid	DN42xd68gt	Height	421 km
Range	2,354 km	Speed	7,656 km/s
Eclipsed	No		



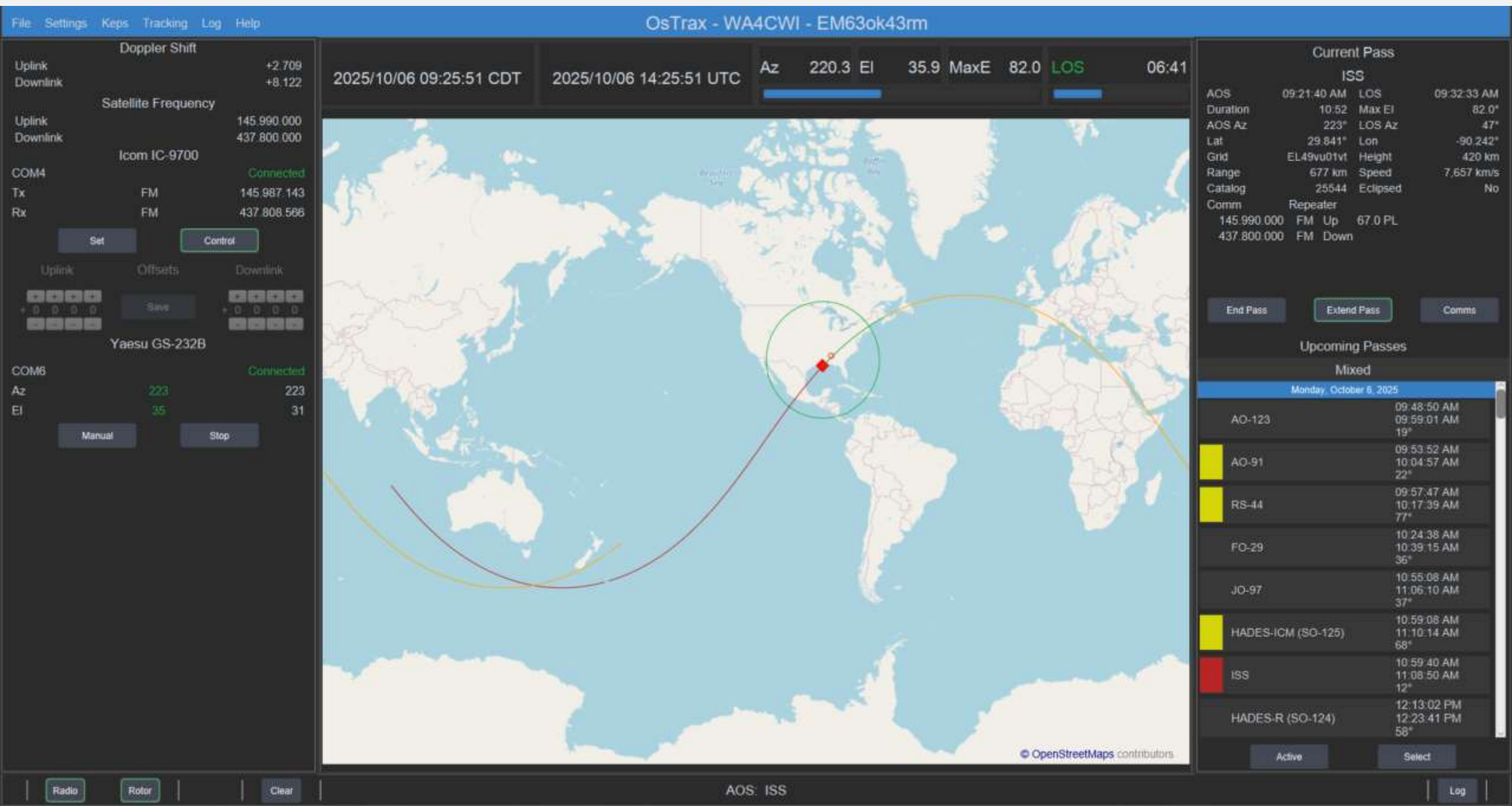
© OpenStreetMaps contributors

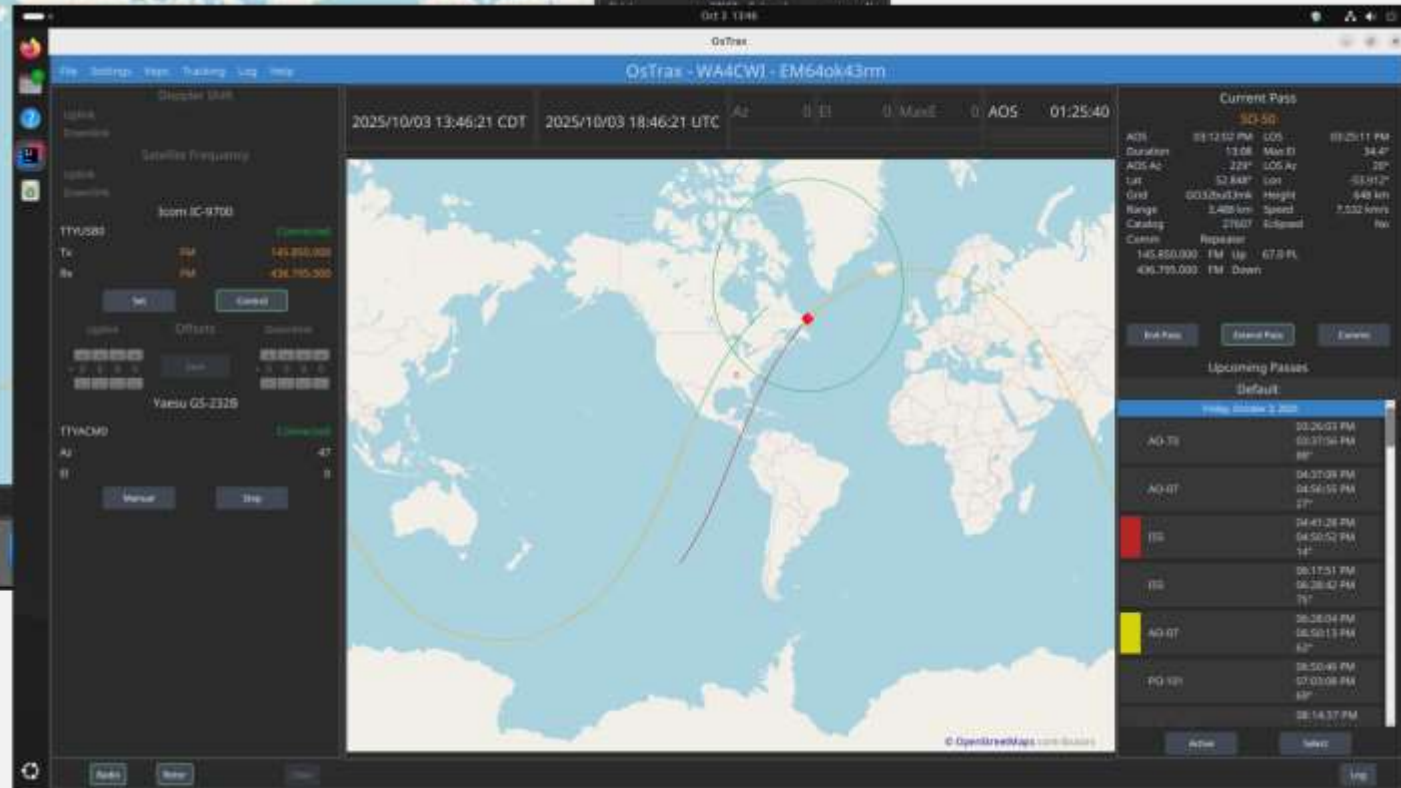
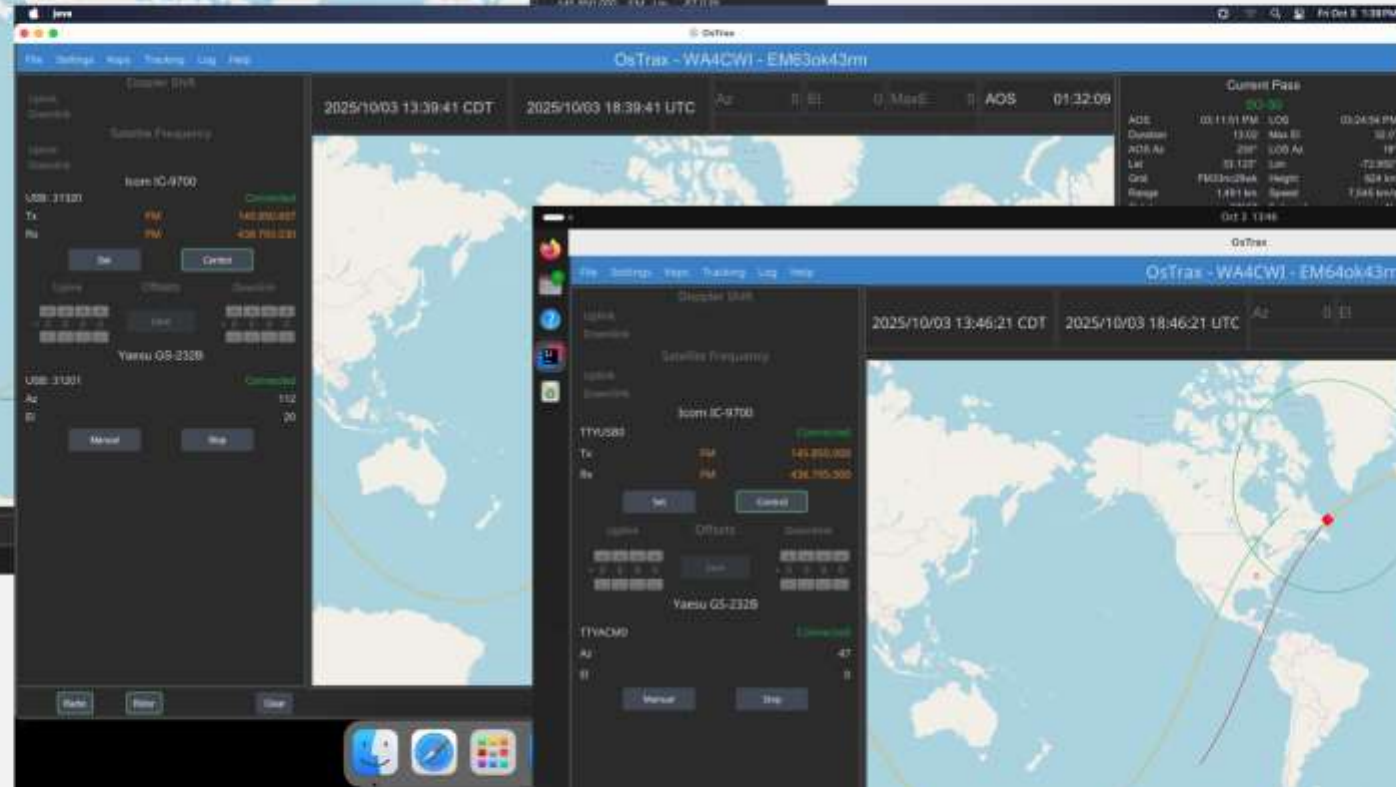
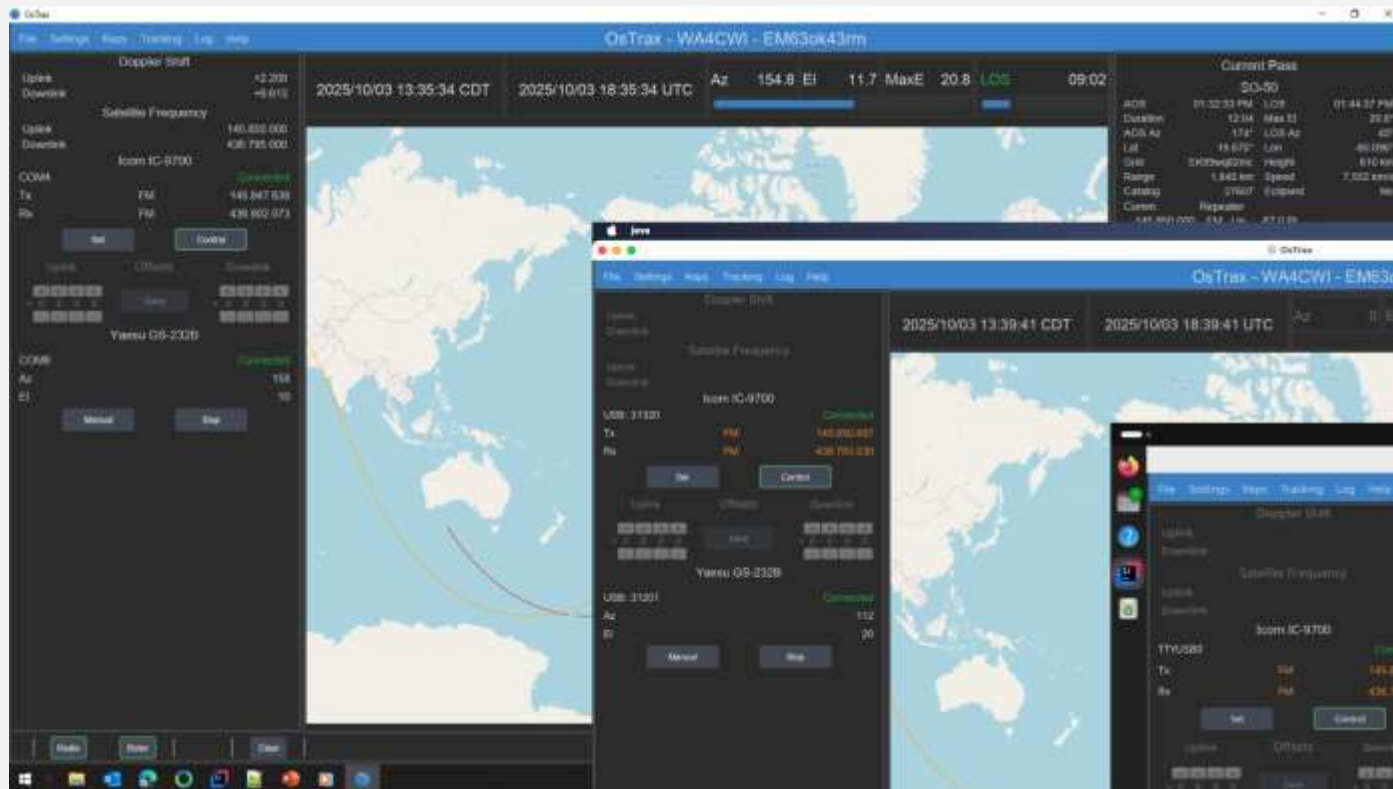
Radio

Rotor

Clear

Log





Windows - macOS - Ubuntu



Orbiting Satellite Tracking for the Next Generation

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<http://www.ostrax.com>



THANKS!

BETA

?

wa4cwi@bellsouth.net