UAT-WP-11-15
4 March 2002

RTCA Special Committee 186, Working Group 5
ADS-B UAT MOPS
Meeting #11

Multi-Aircraft UAT Simulator Results for LA Basin

Prepared by

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Michael Castle

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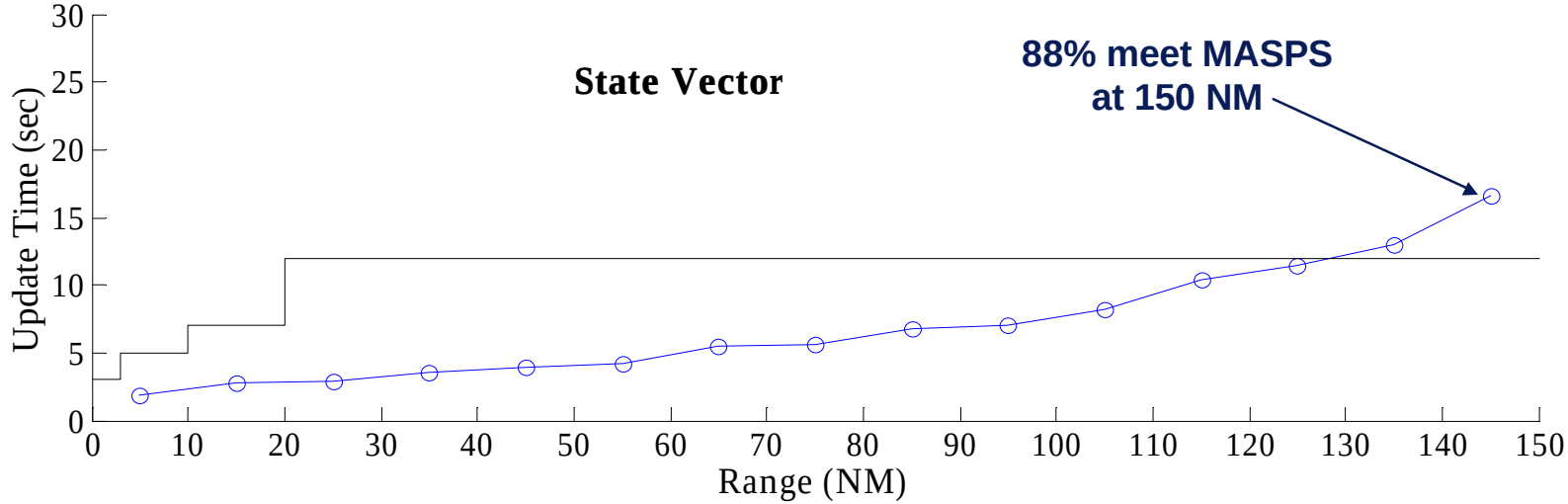
SUMMARY

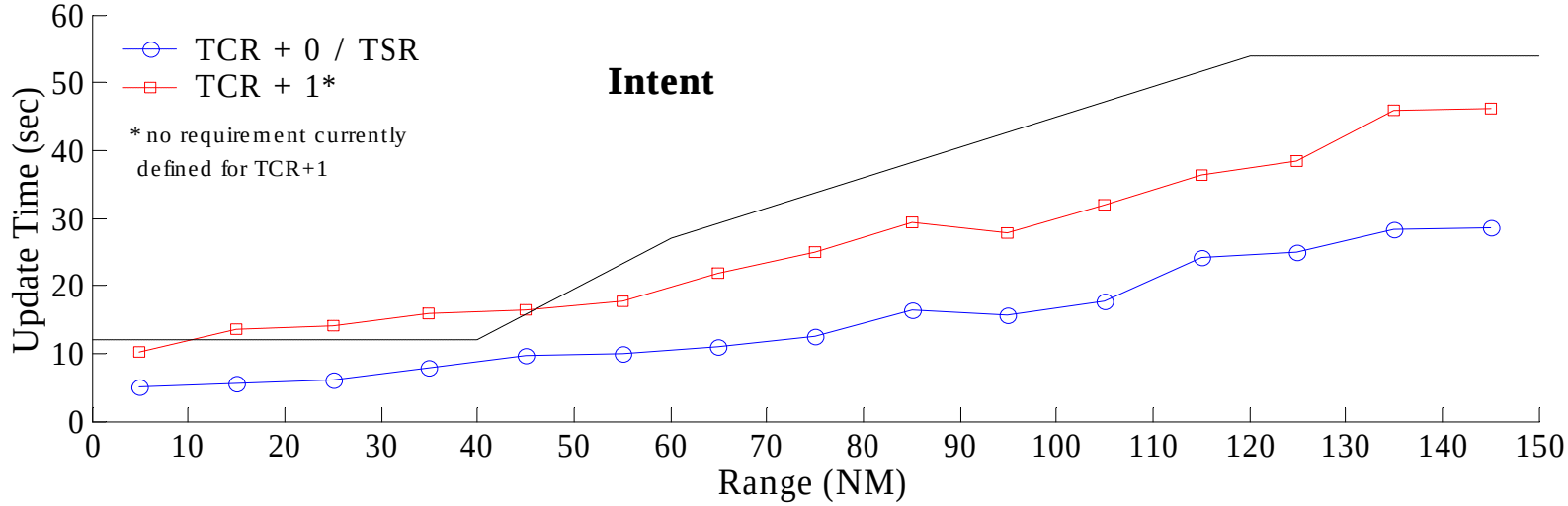
This Working Paper presents the model results from the Multi-Aircraft UAT Simulator (MAUS) for the LA Basin using the LA2020 scenario

Assumptions

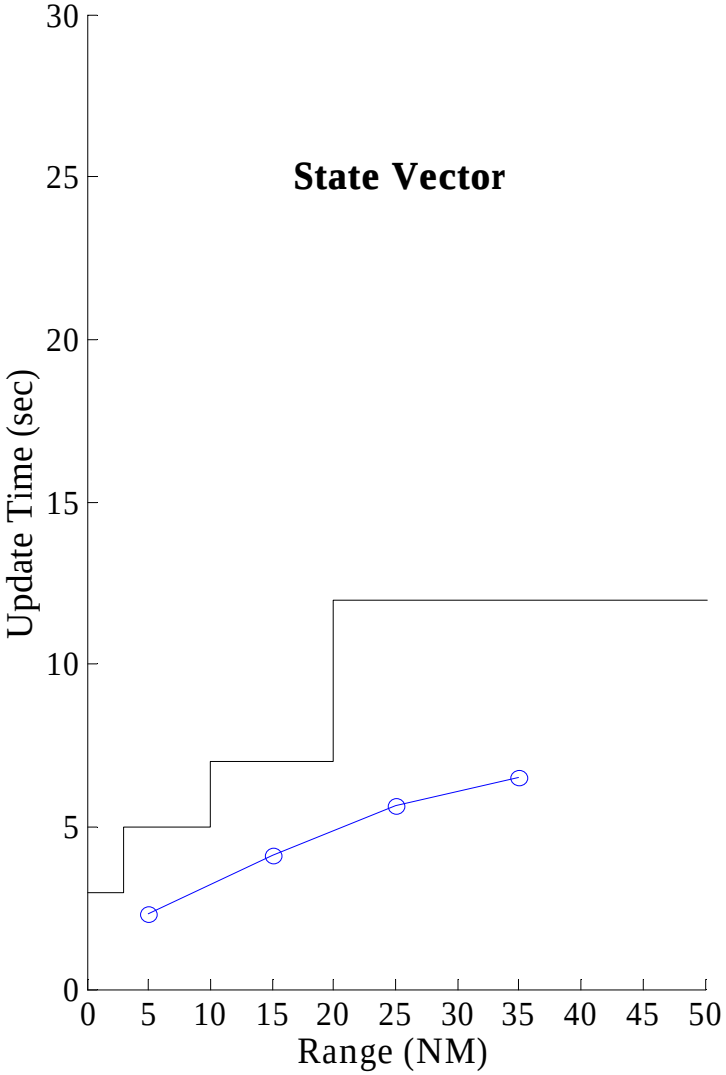
- Standard Interference Environment for the LA Basin
- Message transmission sequences as outlined at Atlanta meeting
- Message information content as outlined in Atlanta
- 16-second epoch (4 blocks of 4 in rotating transmission sequence)
- MAUS version is final for MOPS

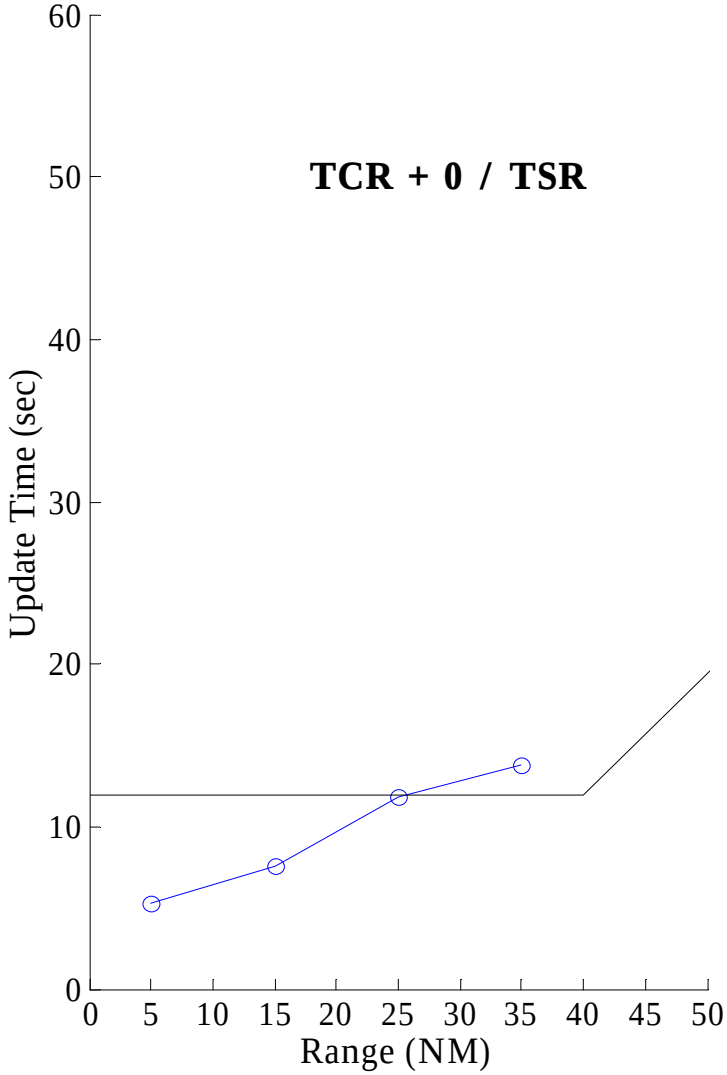
A3 Receiver at High Altitude Receiving A3 Transmitters



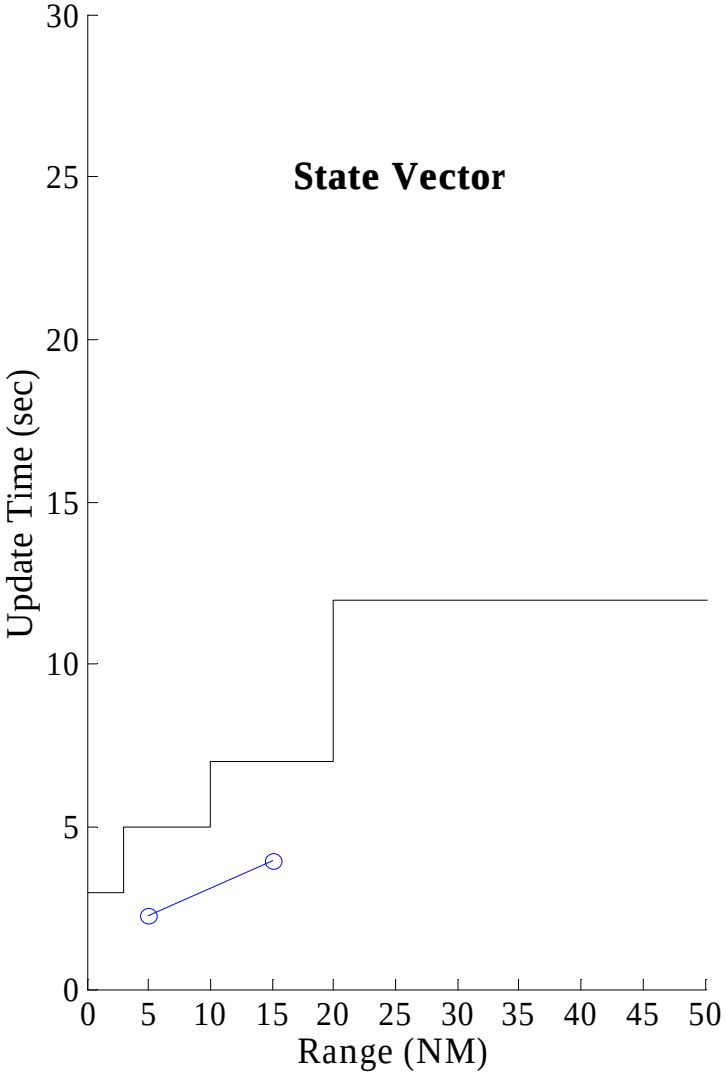


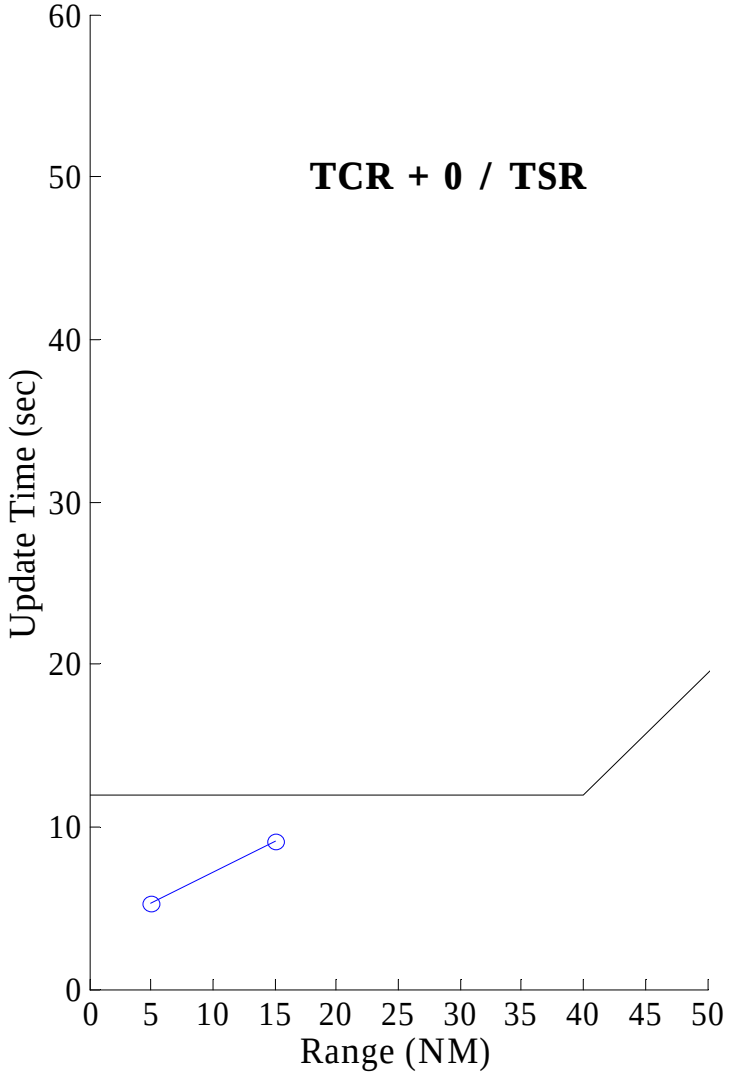
A3 Receiver at High Altitude Receiving A2 Transmitters



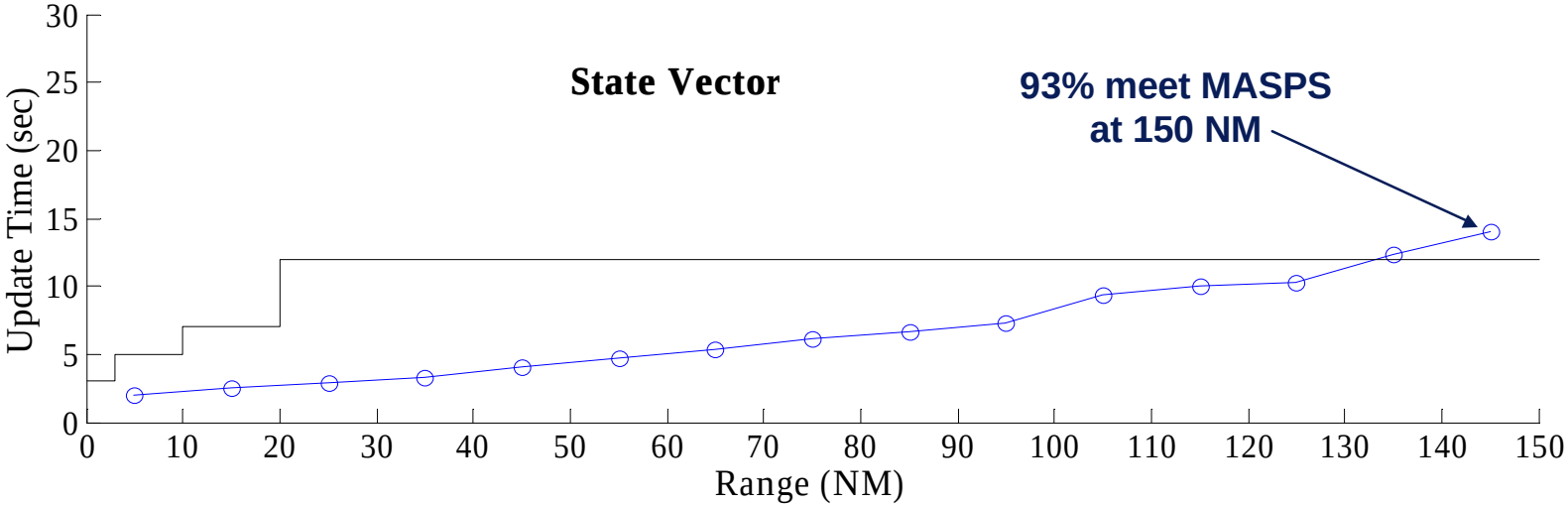


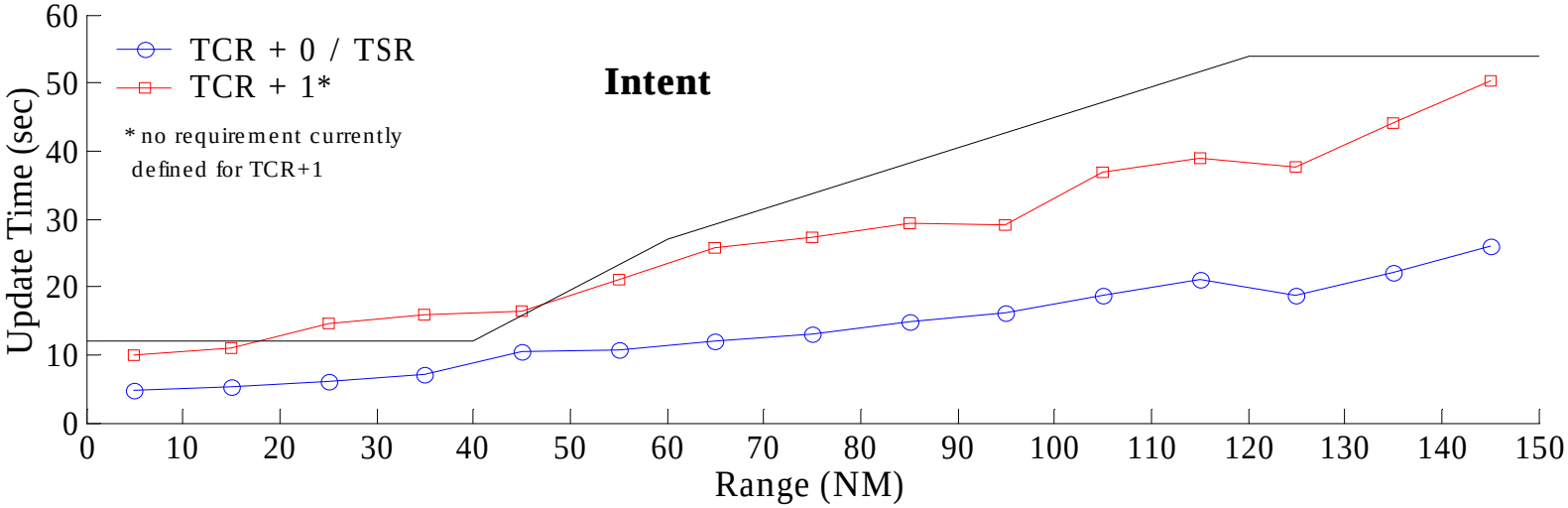
A3 Receiver at High Altitude Receiving A1H Transmitters



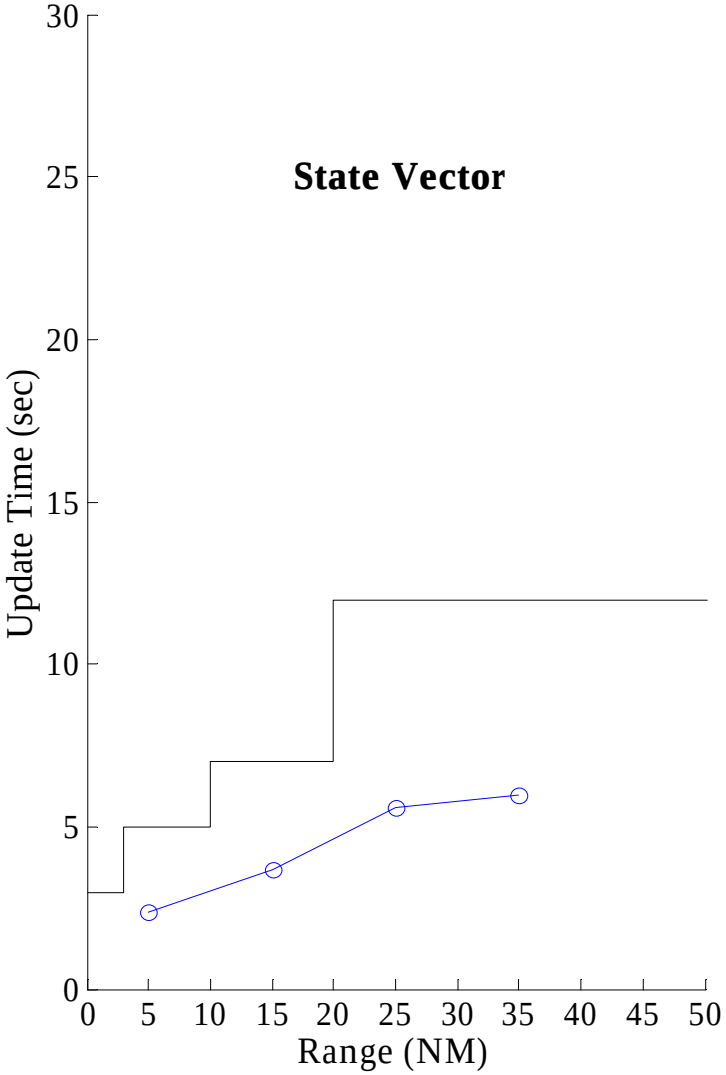


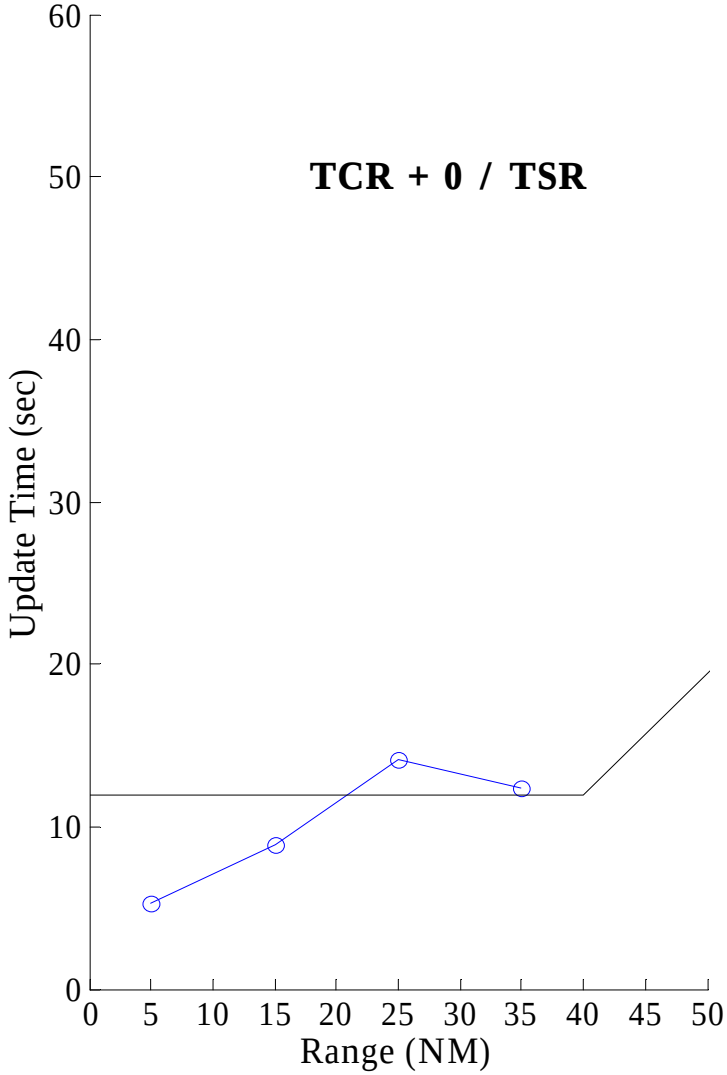
A3 Receiver at FL 150
Receiving A3 Transmitters



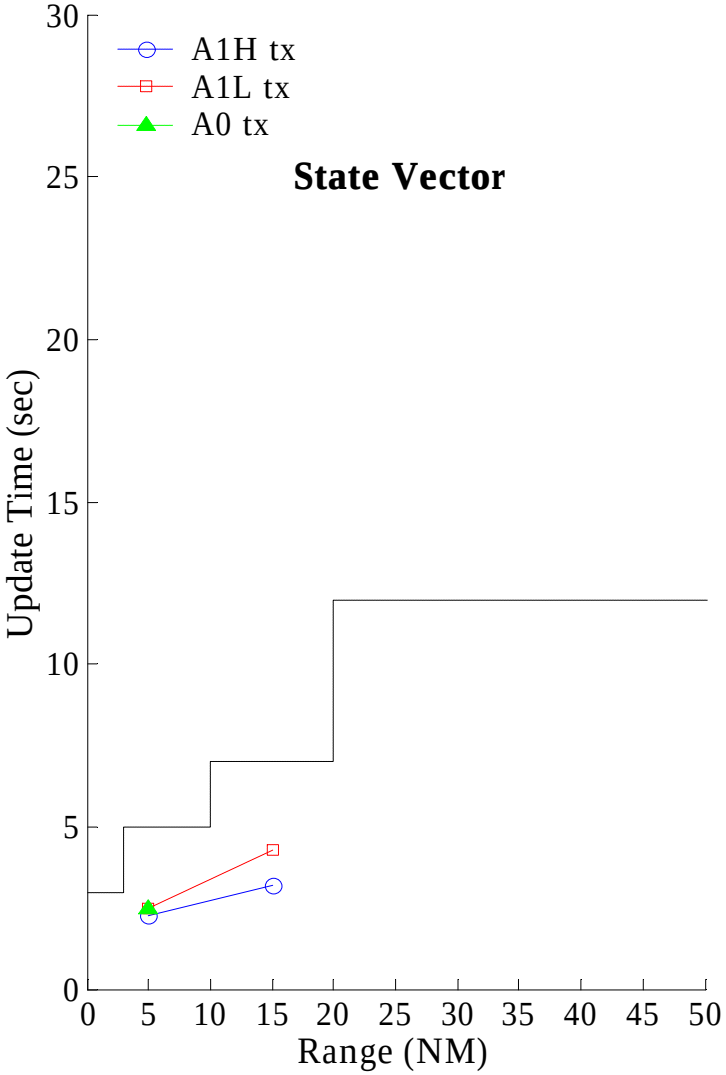


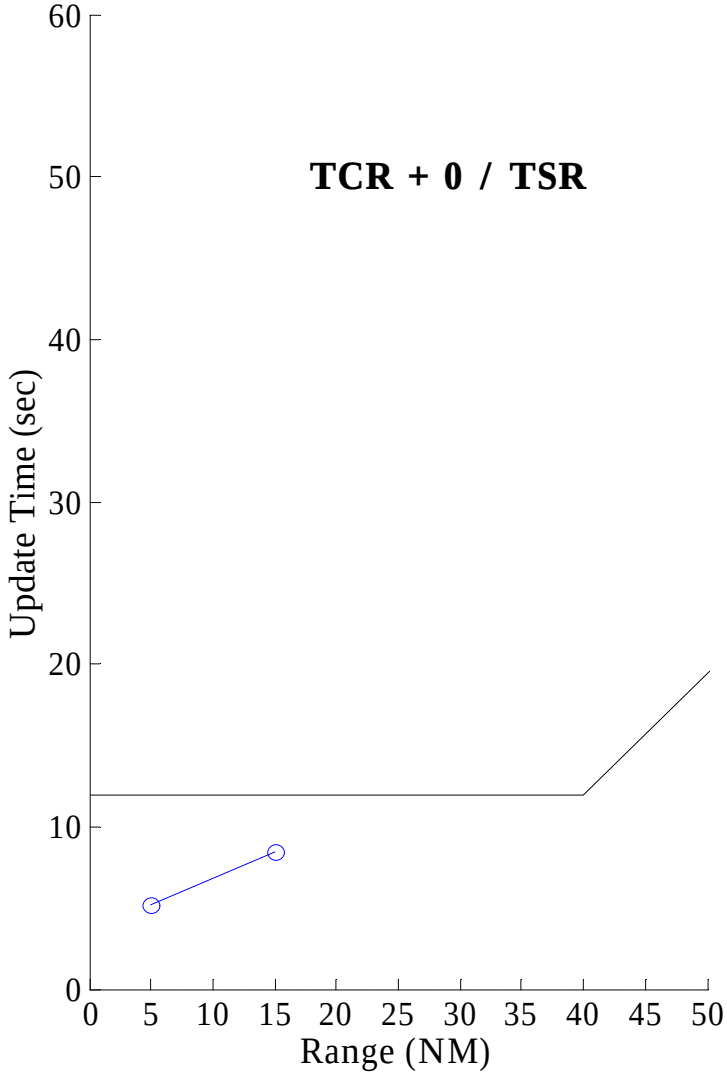
A3 Receiver at FL 150
Receiving A2 Transmitters



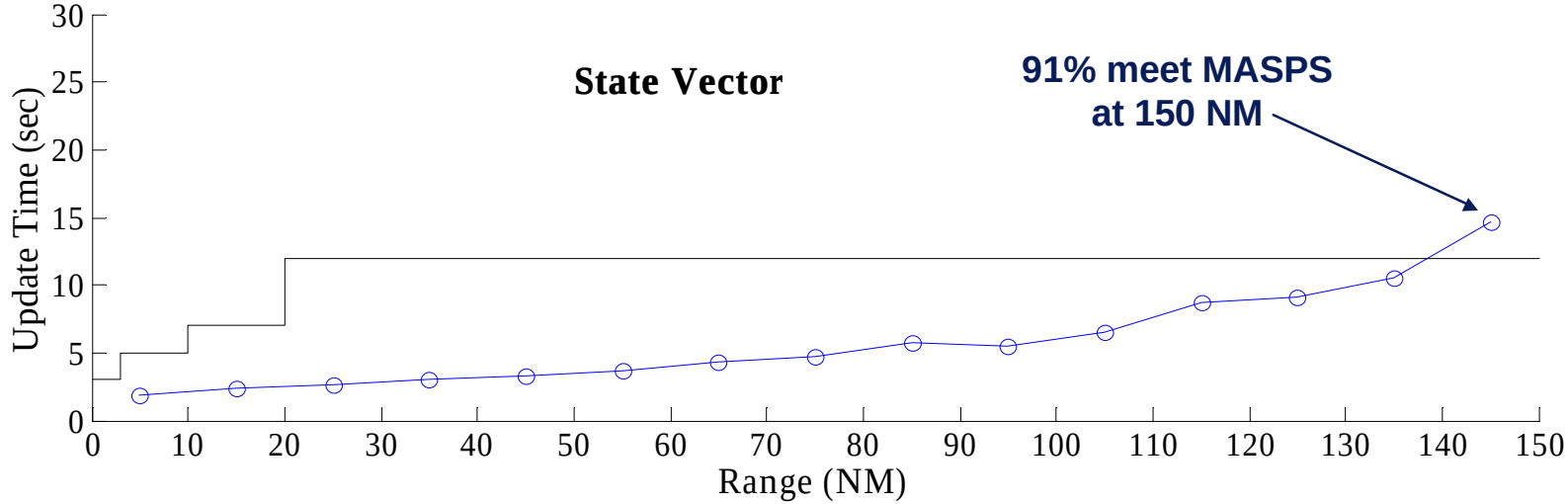


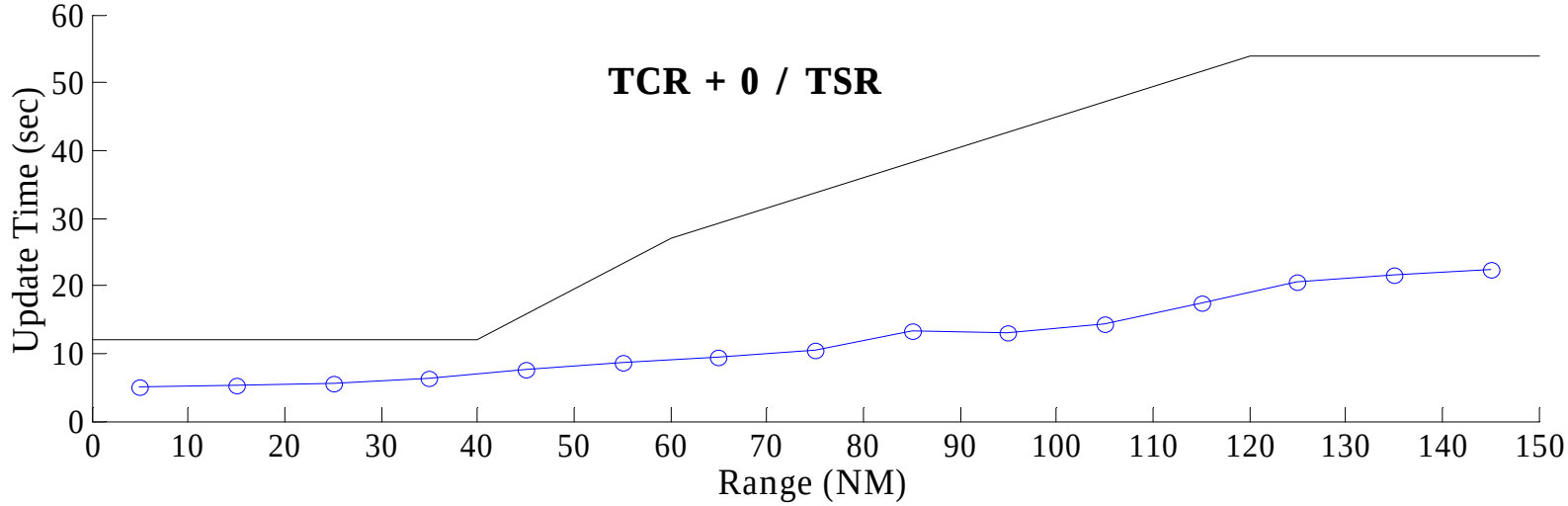
A3 Receiver at FL 150
Receiving A1 and A0 Transmitters



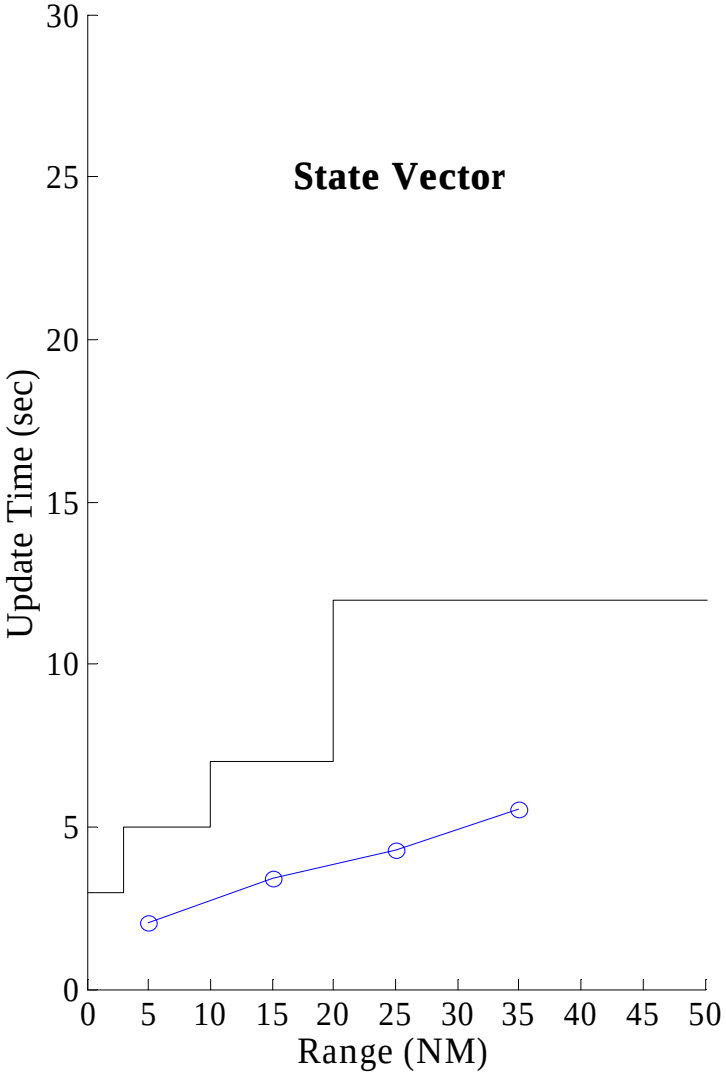


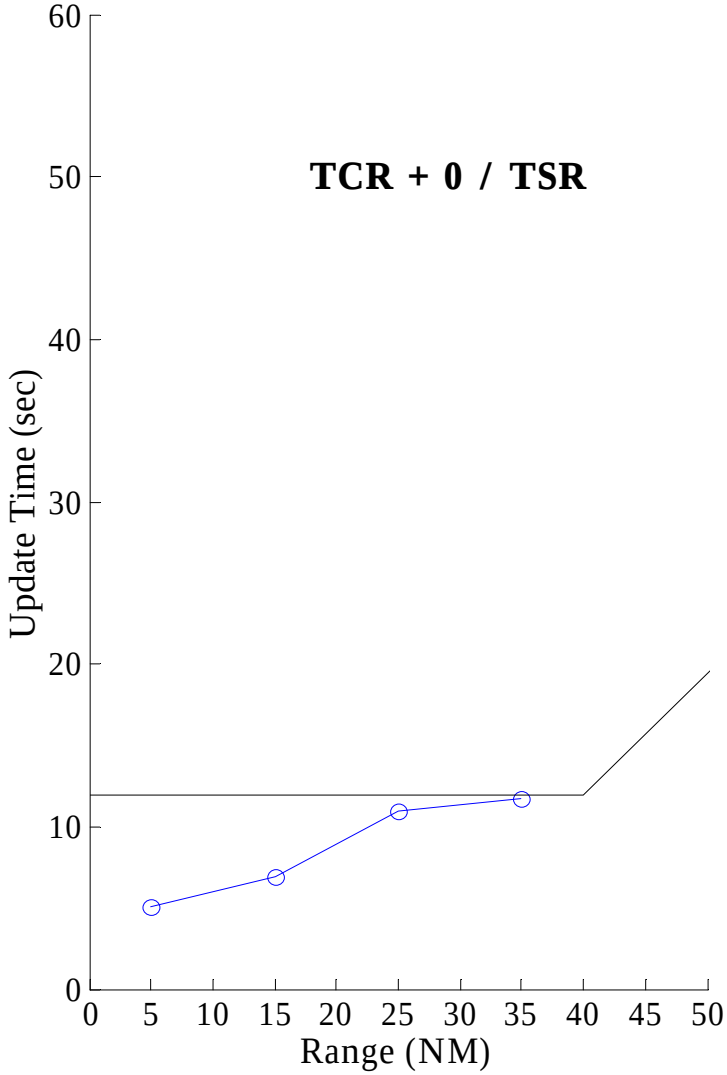
A2 Receiver at High Altitude Receiving A3 Transmitters



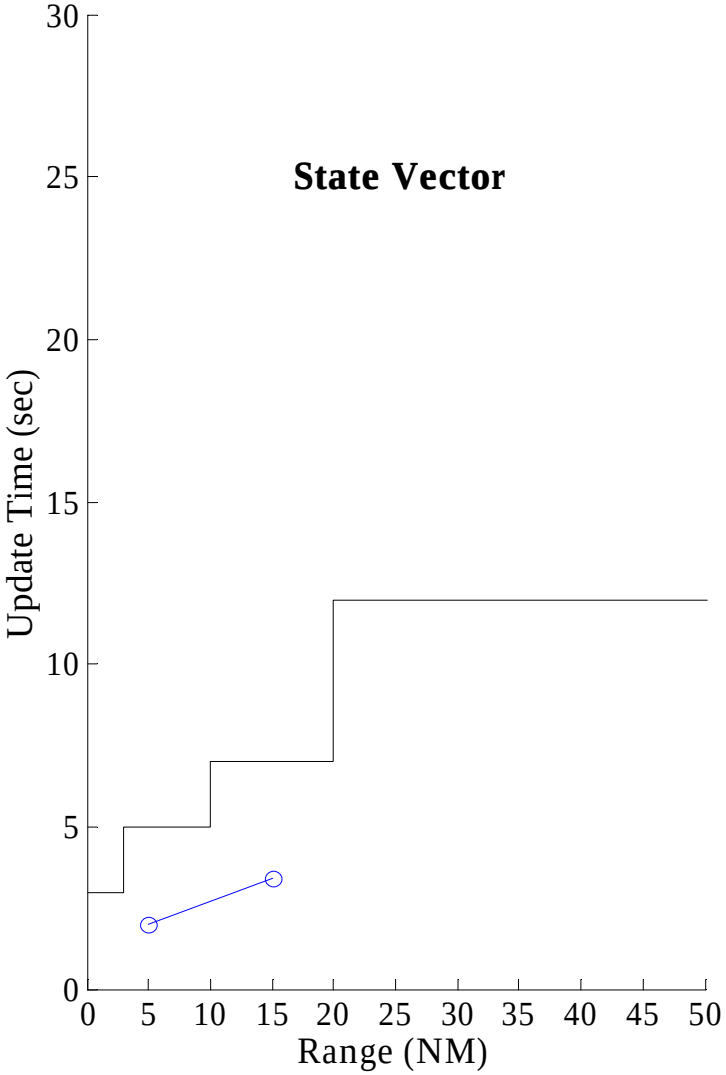


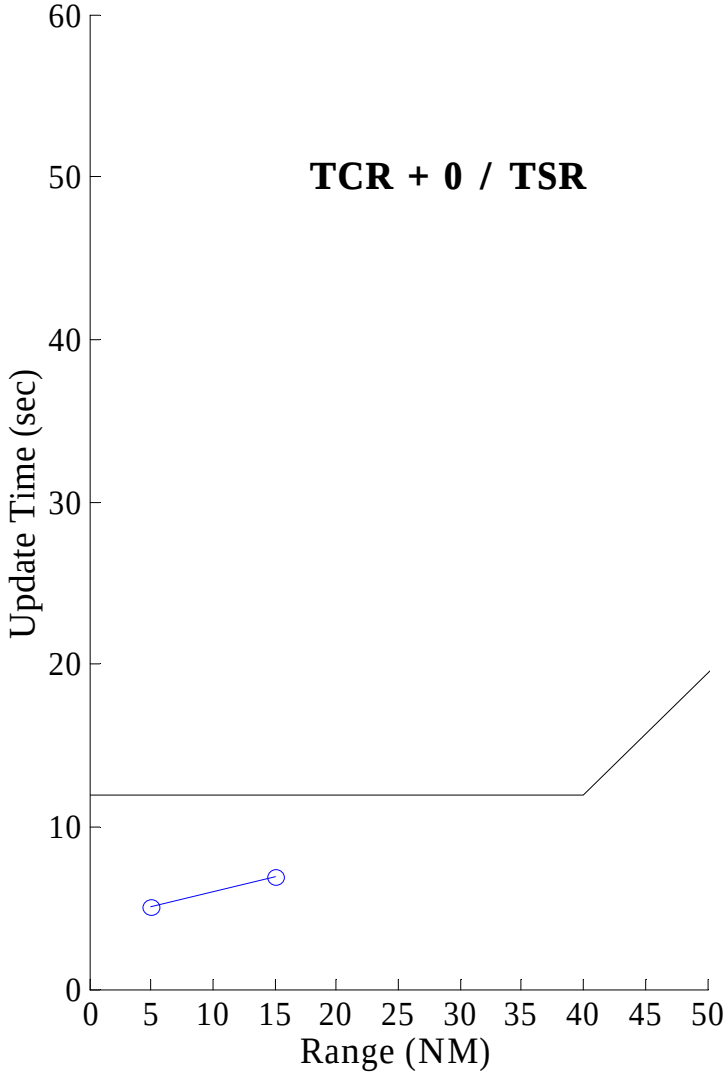
A2 Receiver at High Altitude Receiving A2 Transmitters



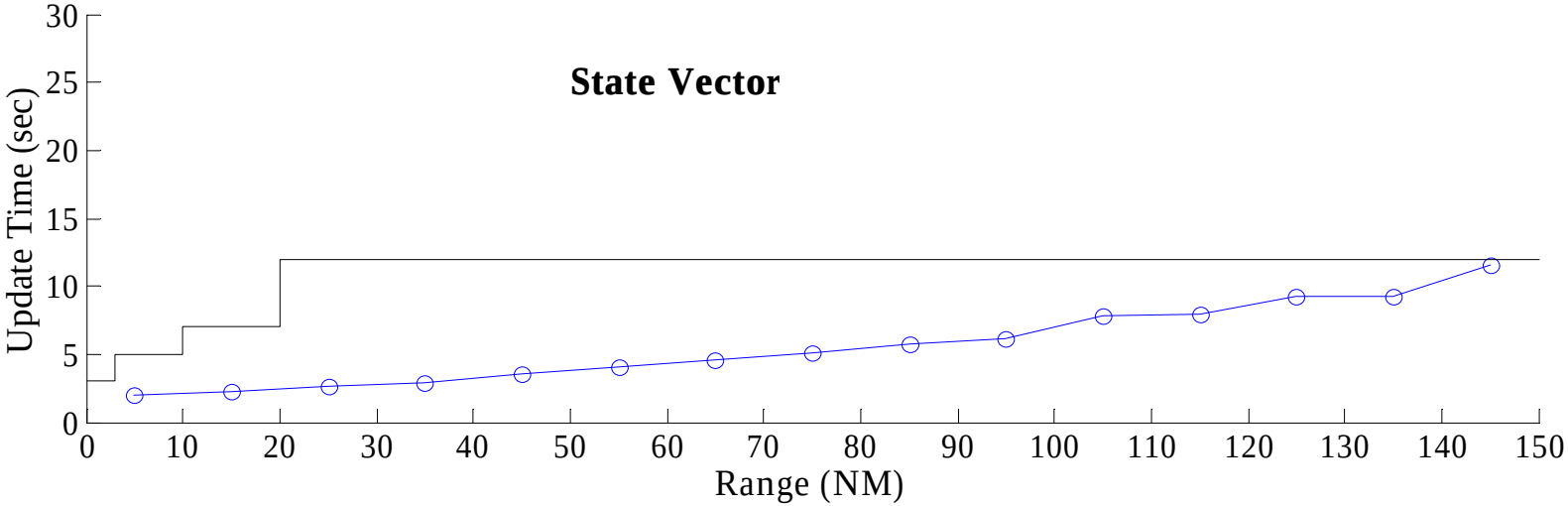


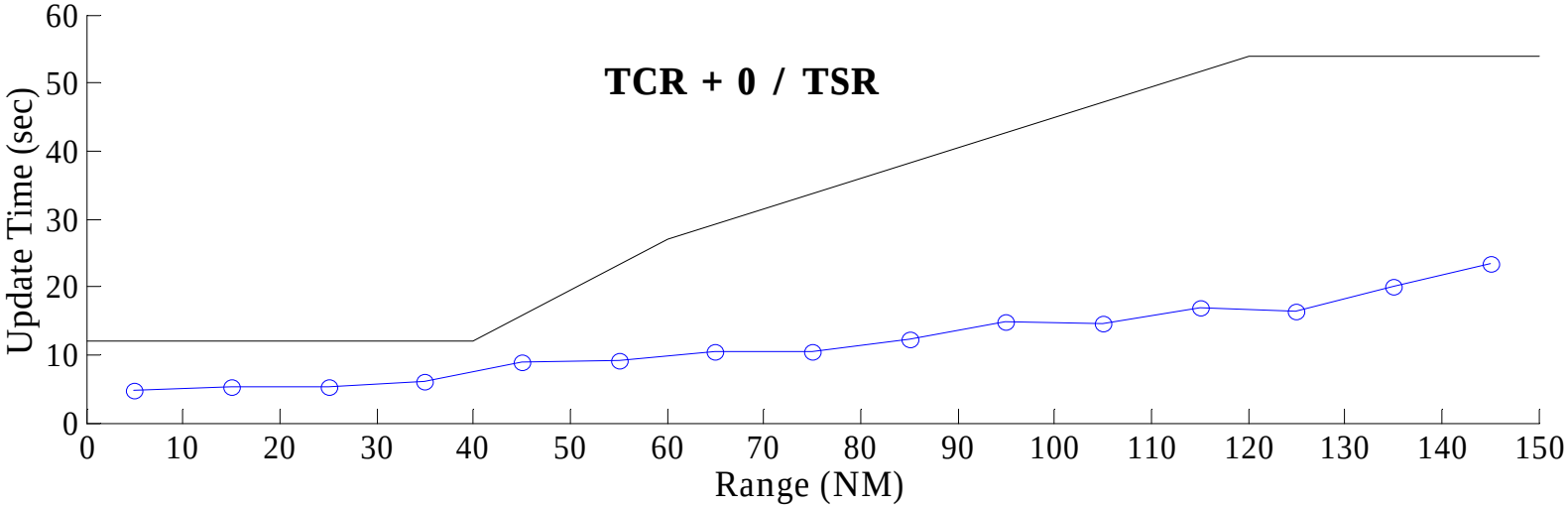
A2 Receiver at High Altitude Receiving A1H Transmitters



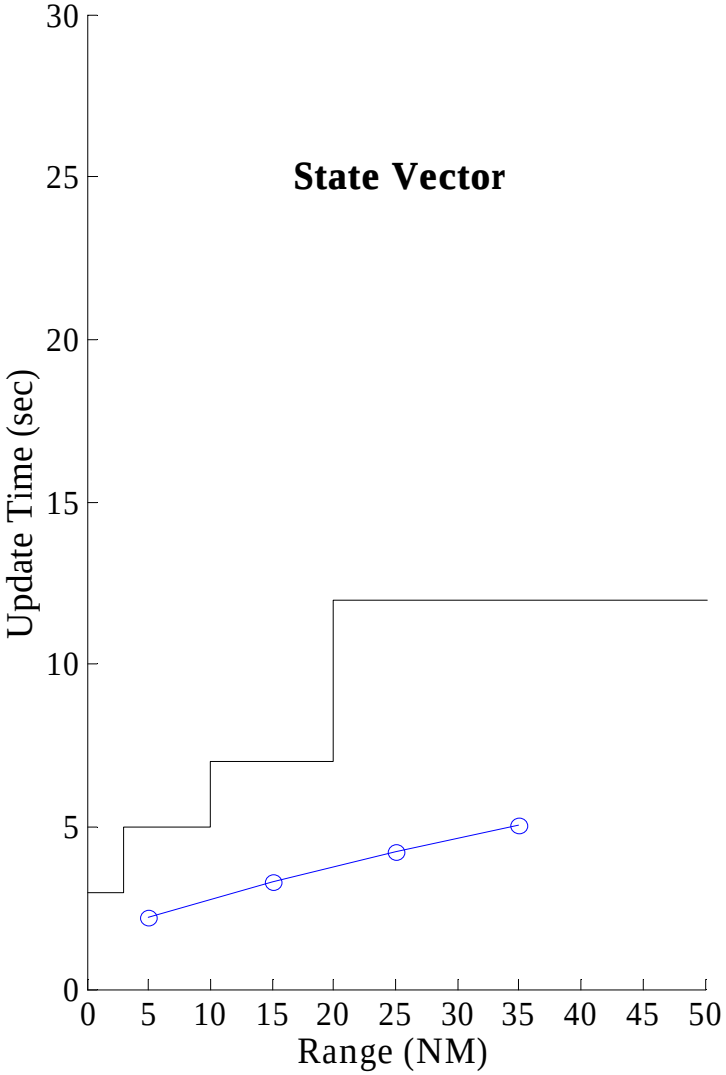


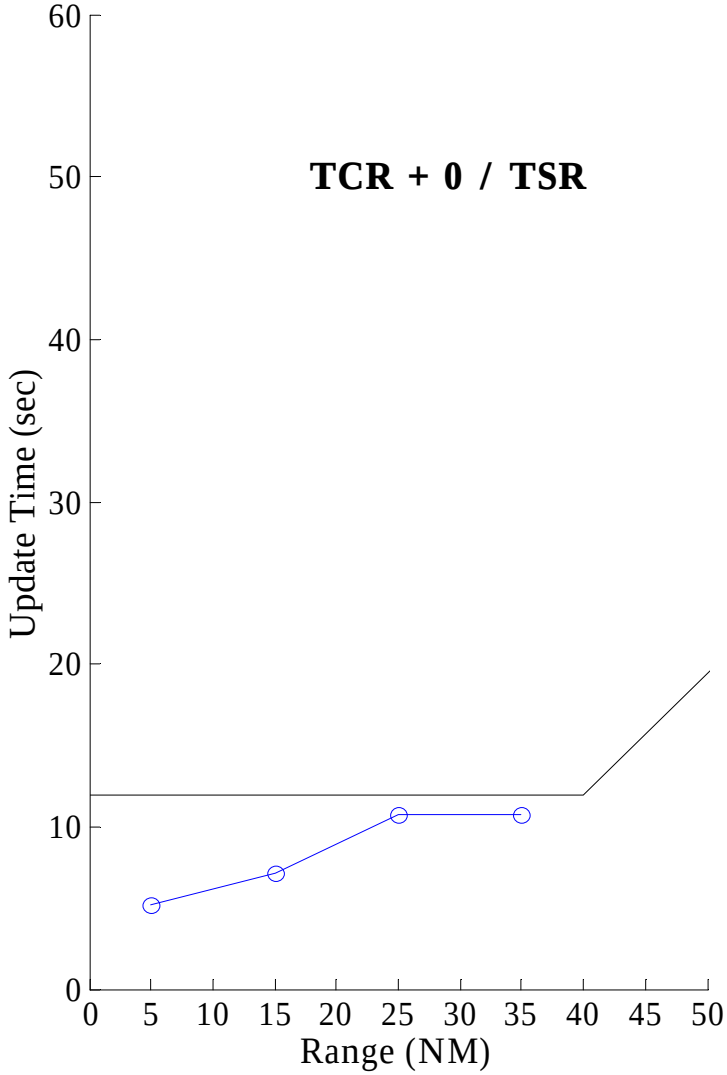
A2 Receiver at FL 150
Receiving A3 Transmitters



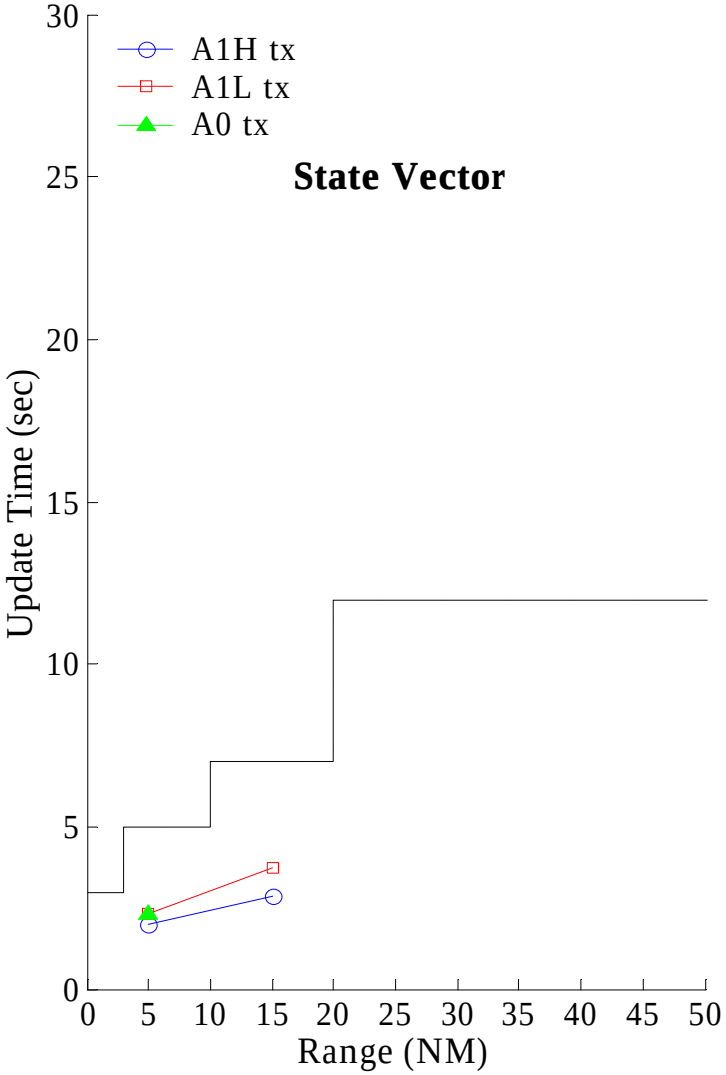


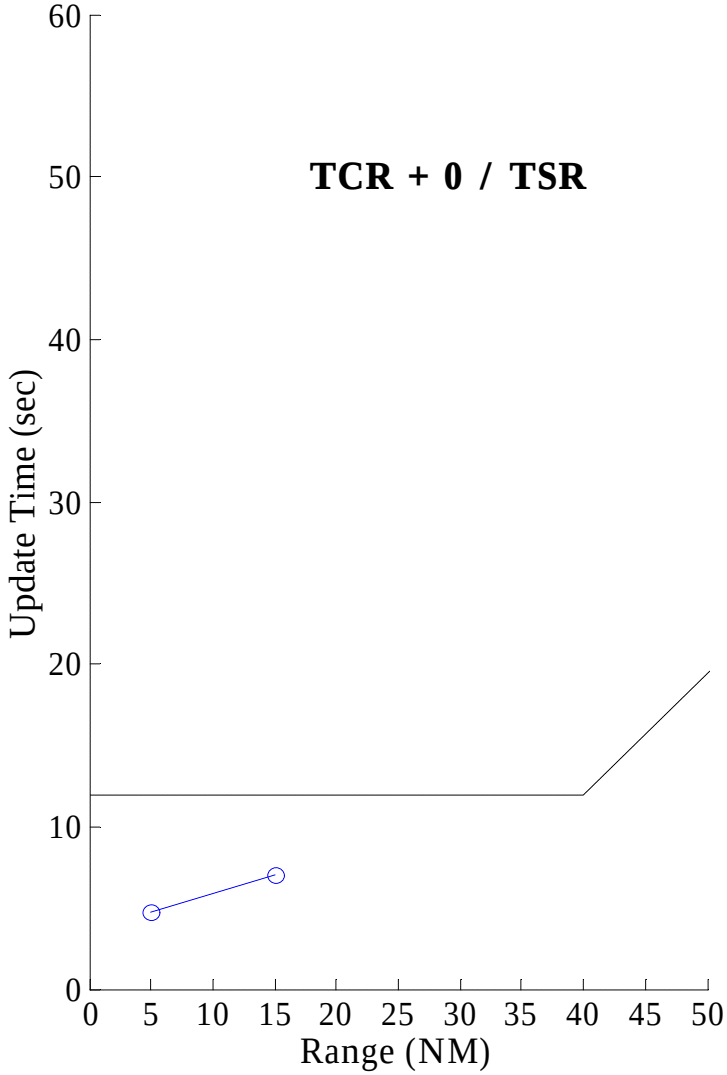
A2 Receiver at FL 150
Receiving A2 Transmitters



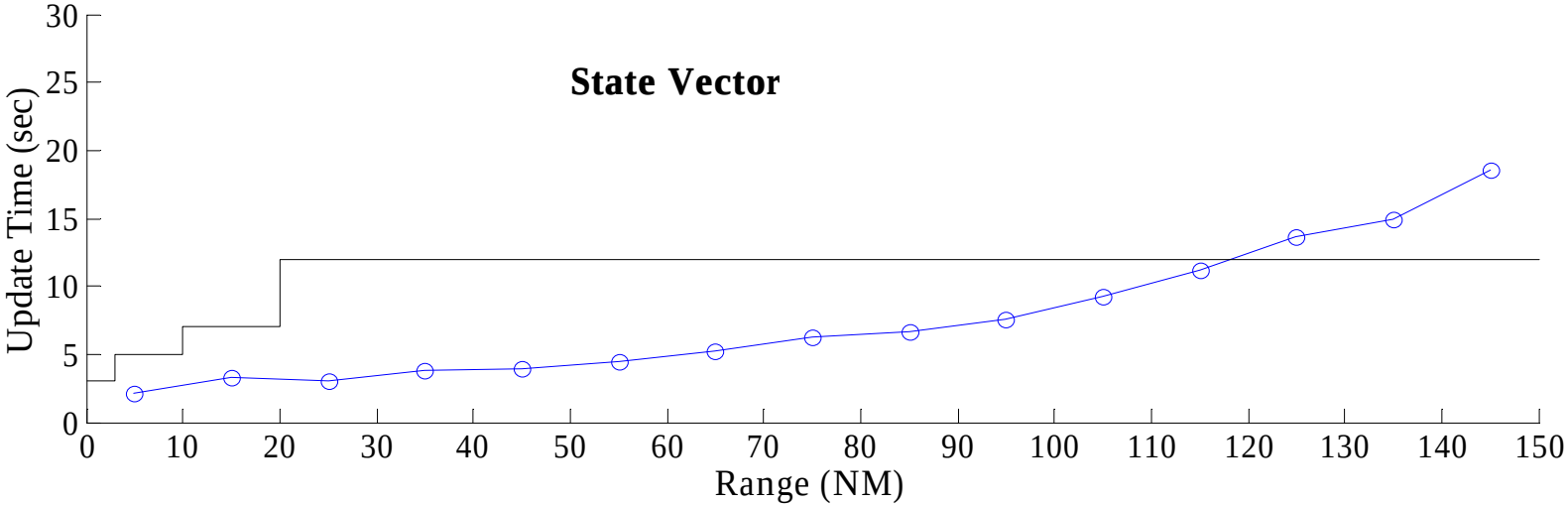


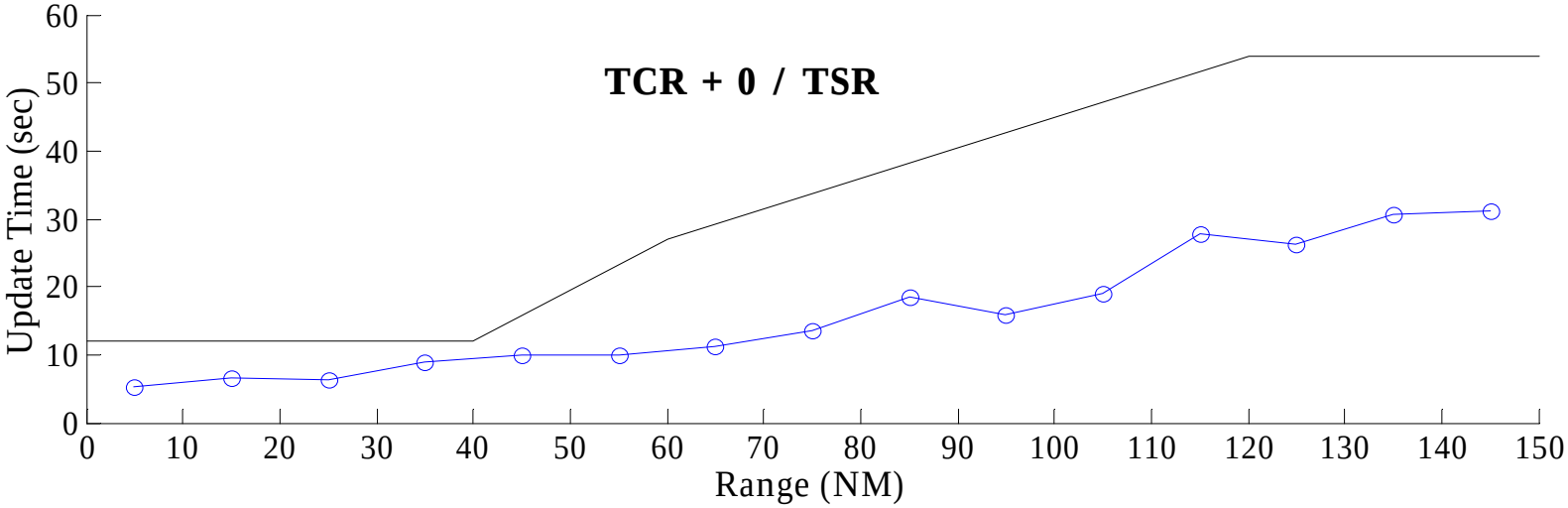
A2 Receiver at FL 150
Receiving A1 and A0 Transmitters



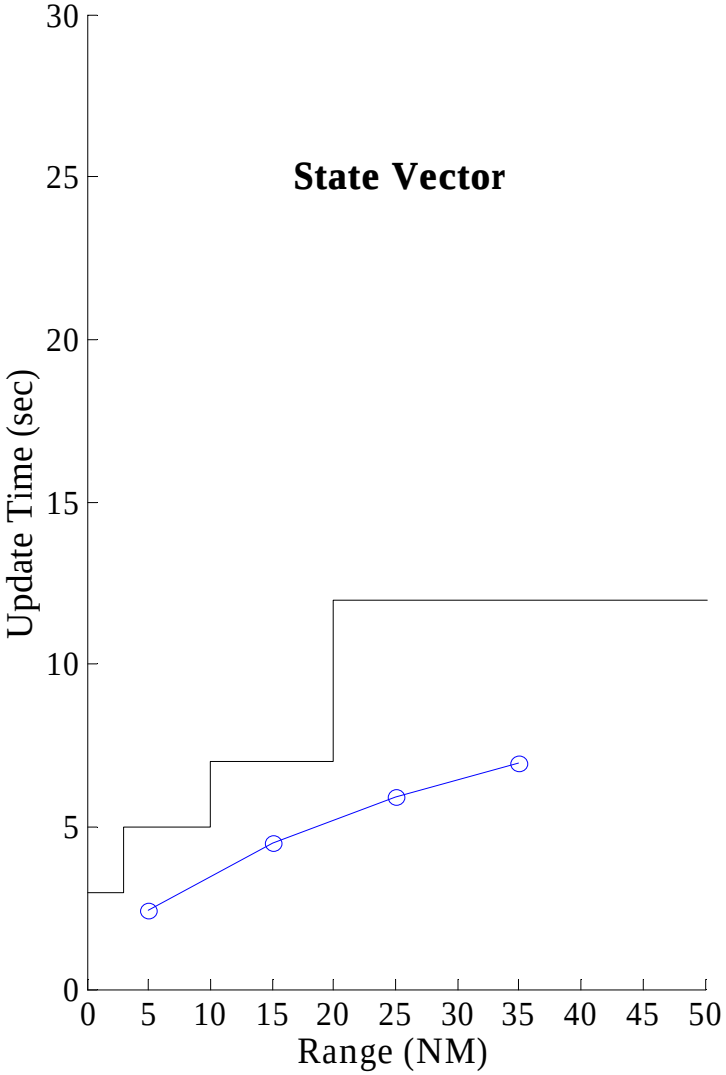


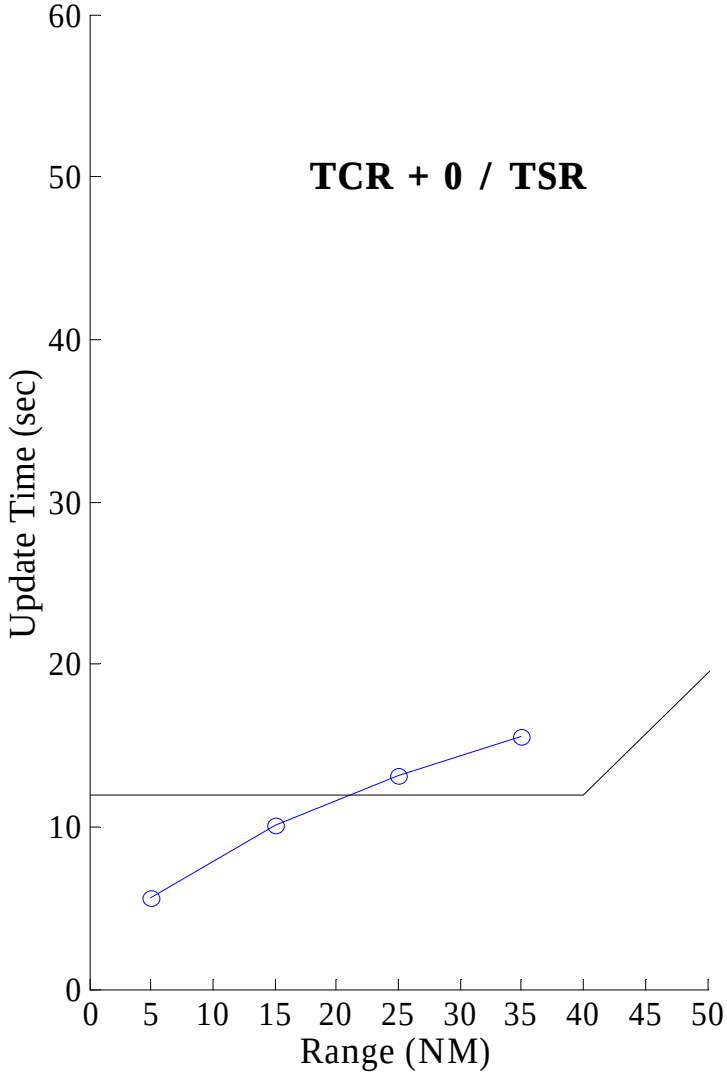
A1H Receiver at High Altitude Receiving A3 Transmitters



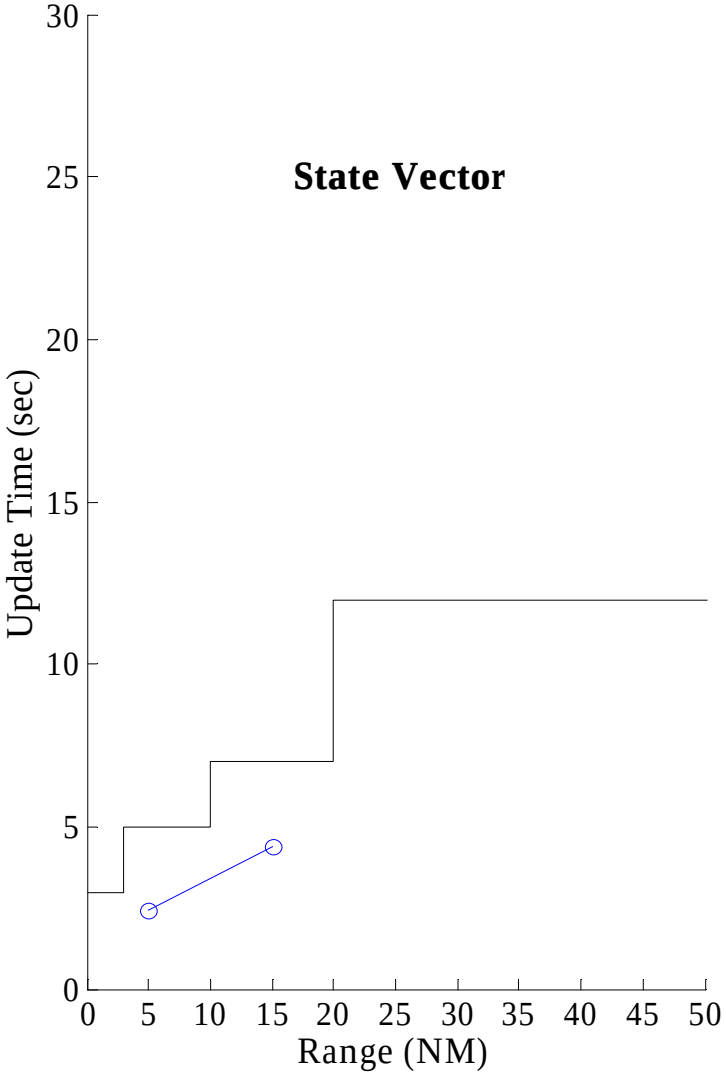


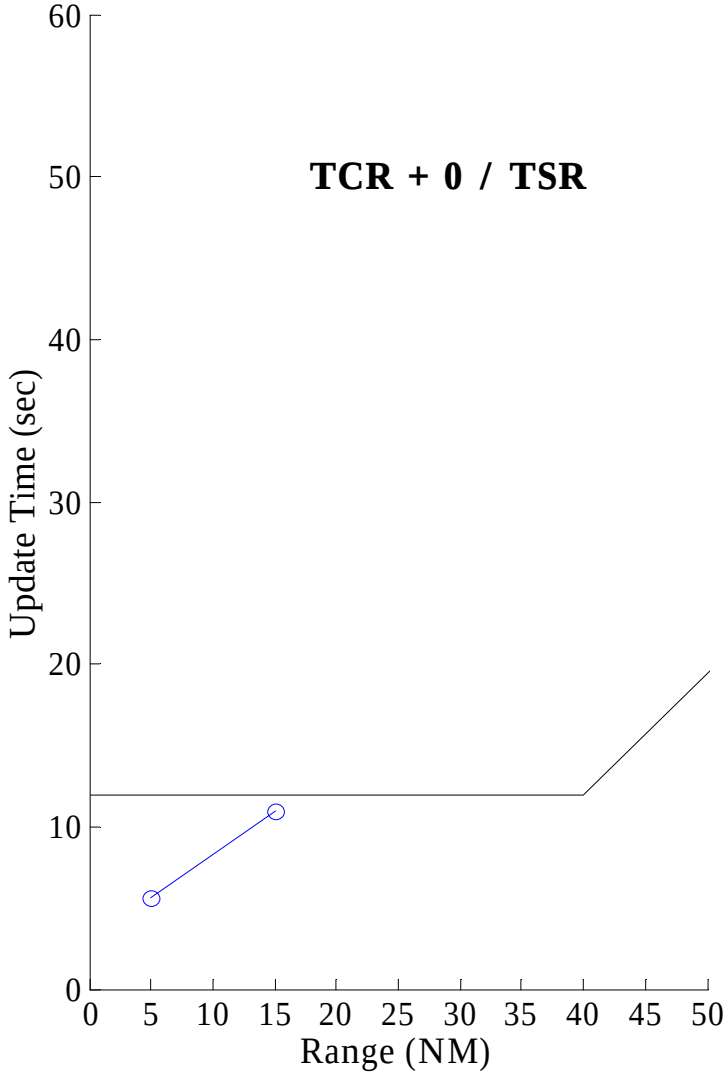
A1H Receiver at High Altitude Receiving A2 Transmitters



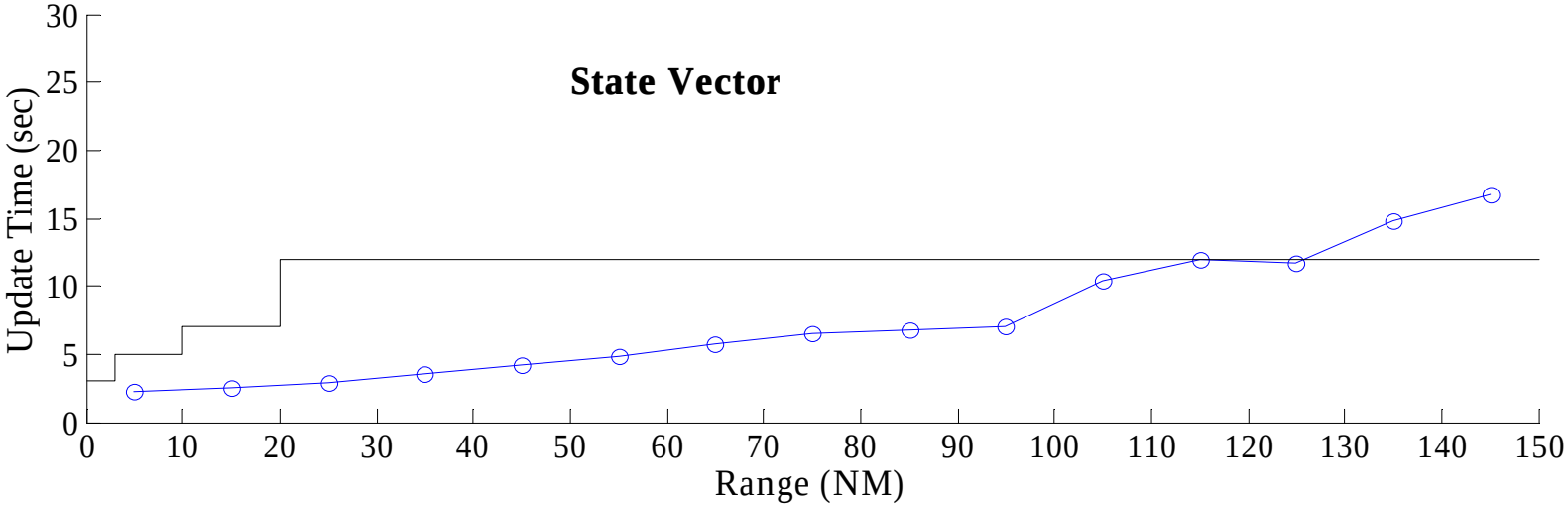


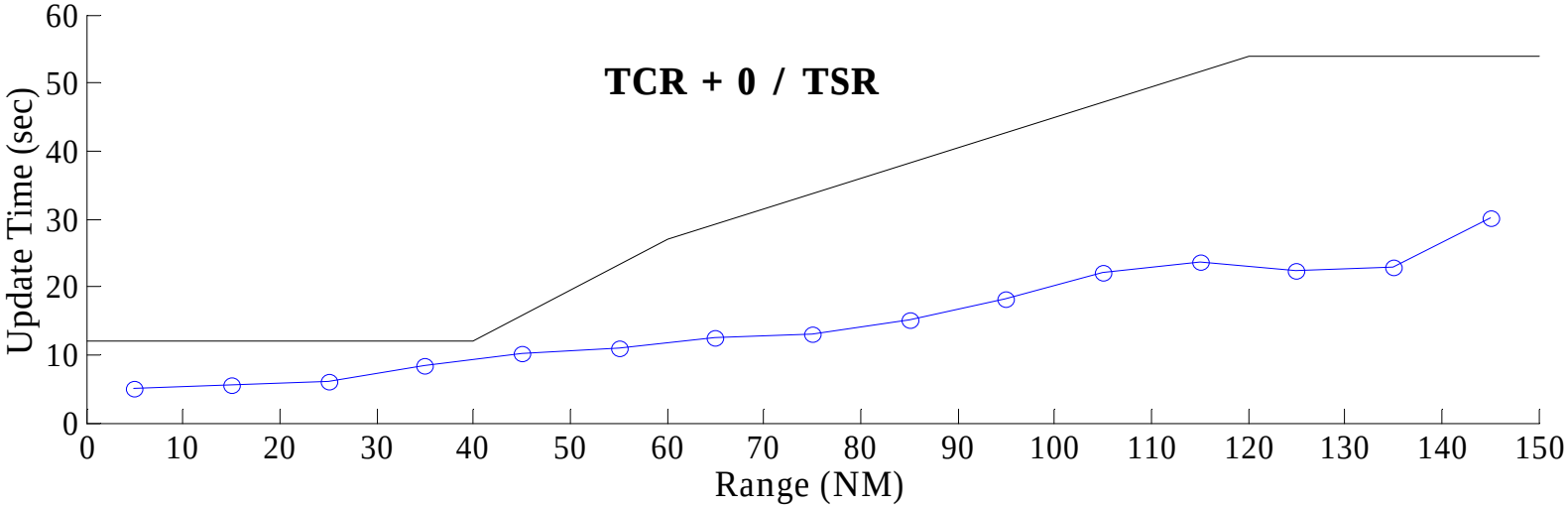
A1H Receiver at High Altitude Receiving A1H Transmitters



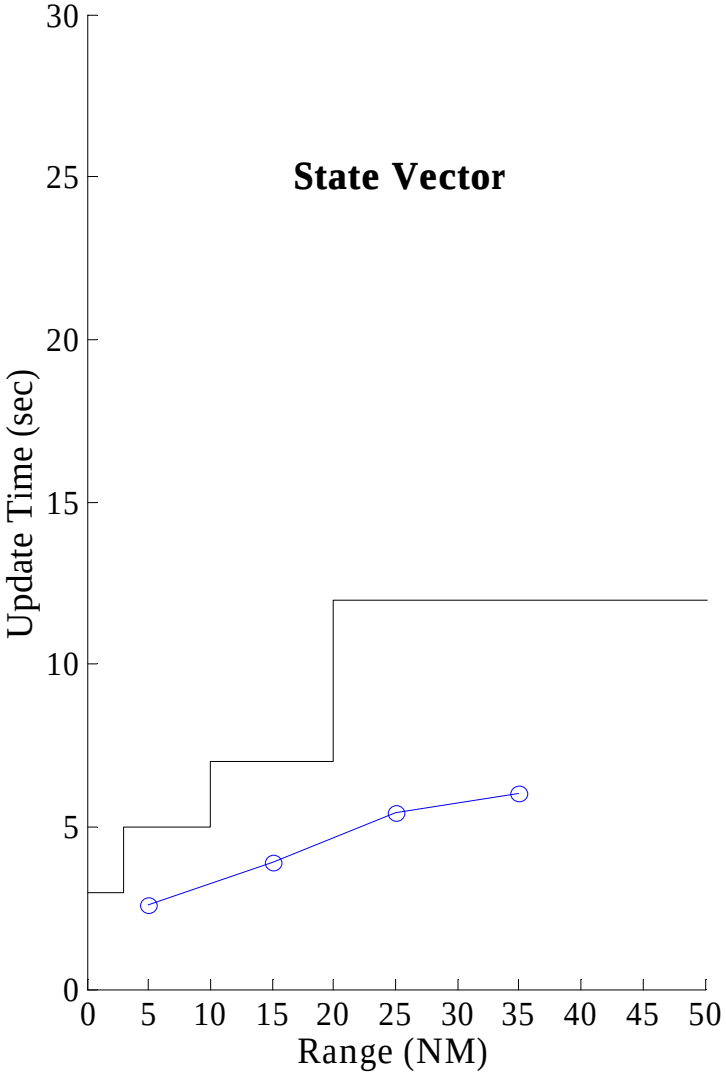


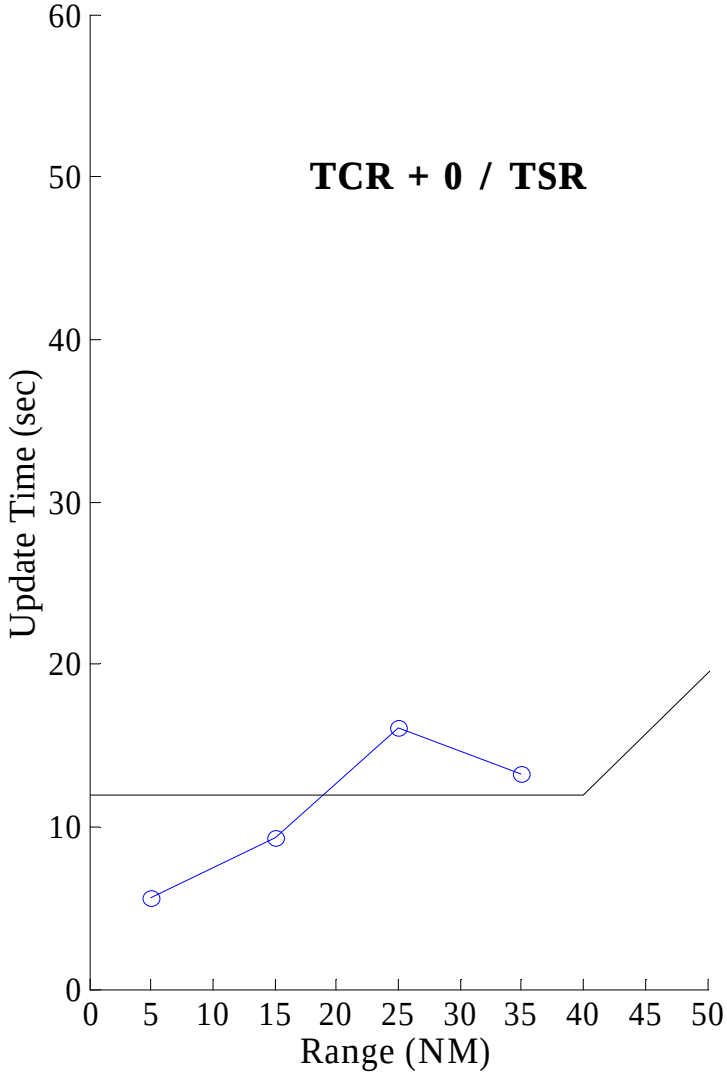
A1 Receiver at FL 150
Receiving A3 Transmitters



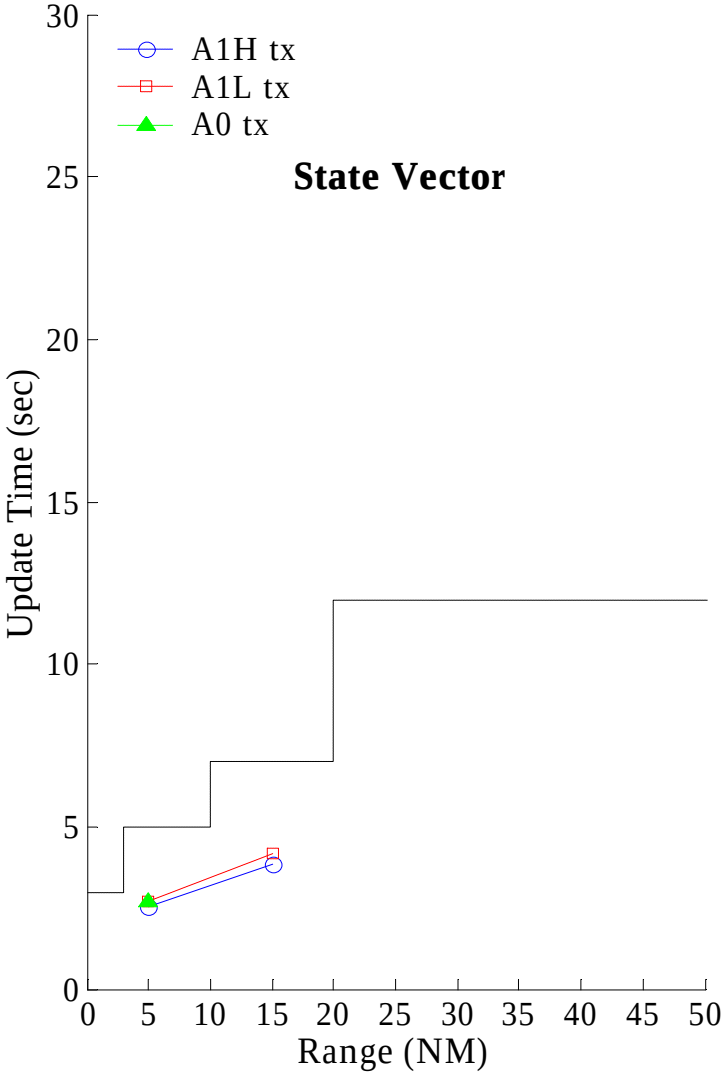


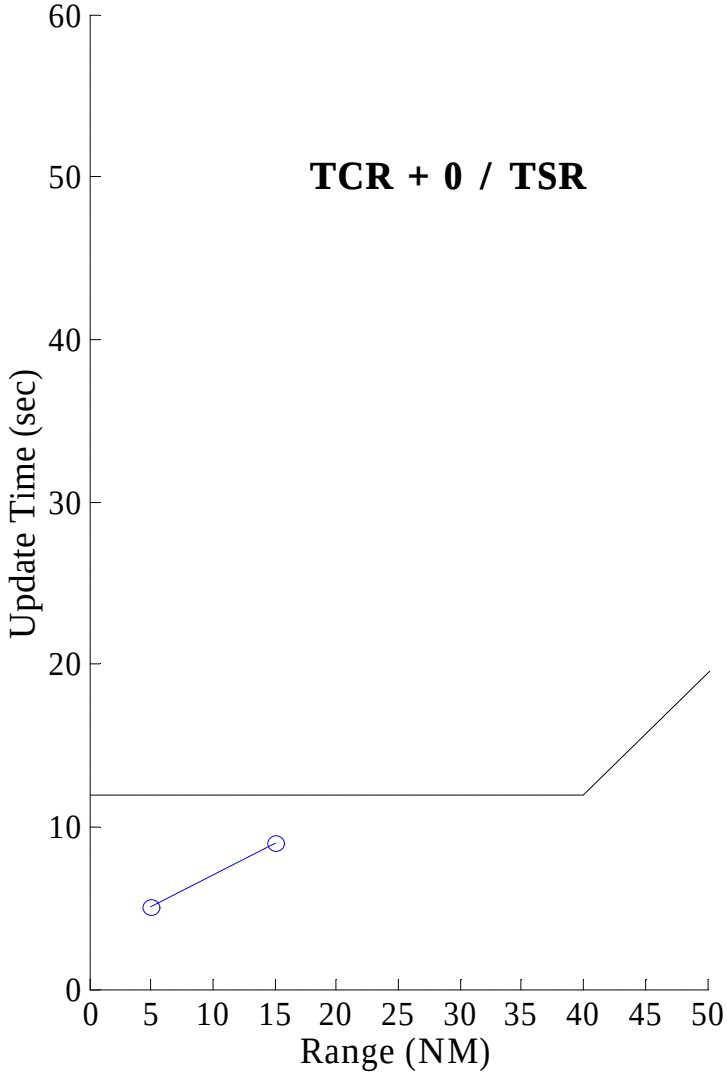
A1 Receiver at FL 150
Receiving A2 Transmitters



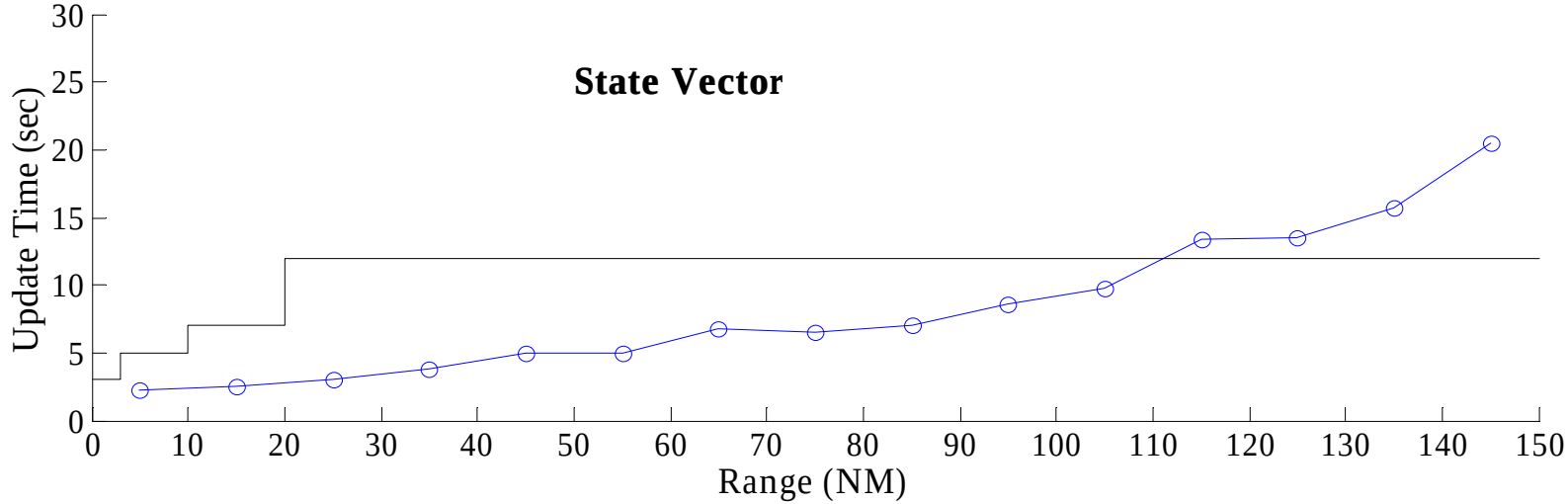


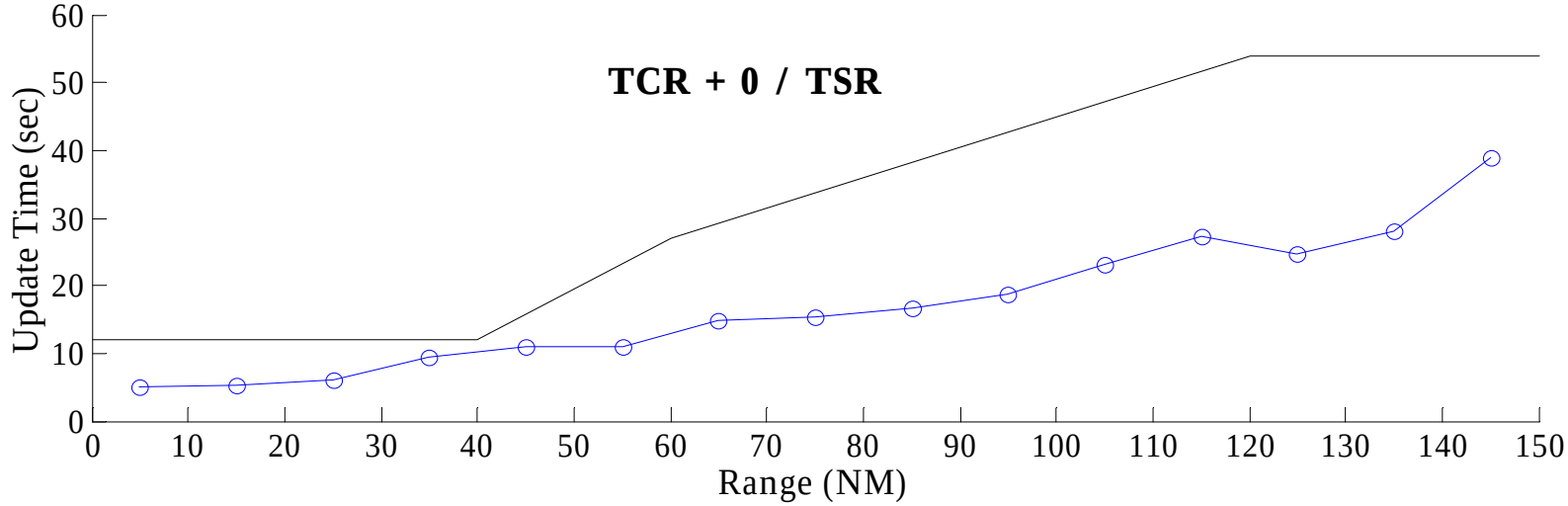
A1 Receiver at FL 150
Receiving A1 and A0 Transmitters



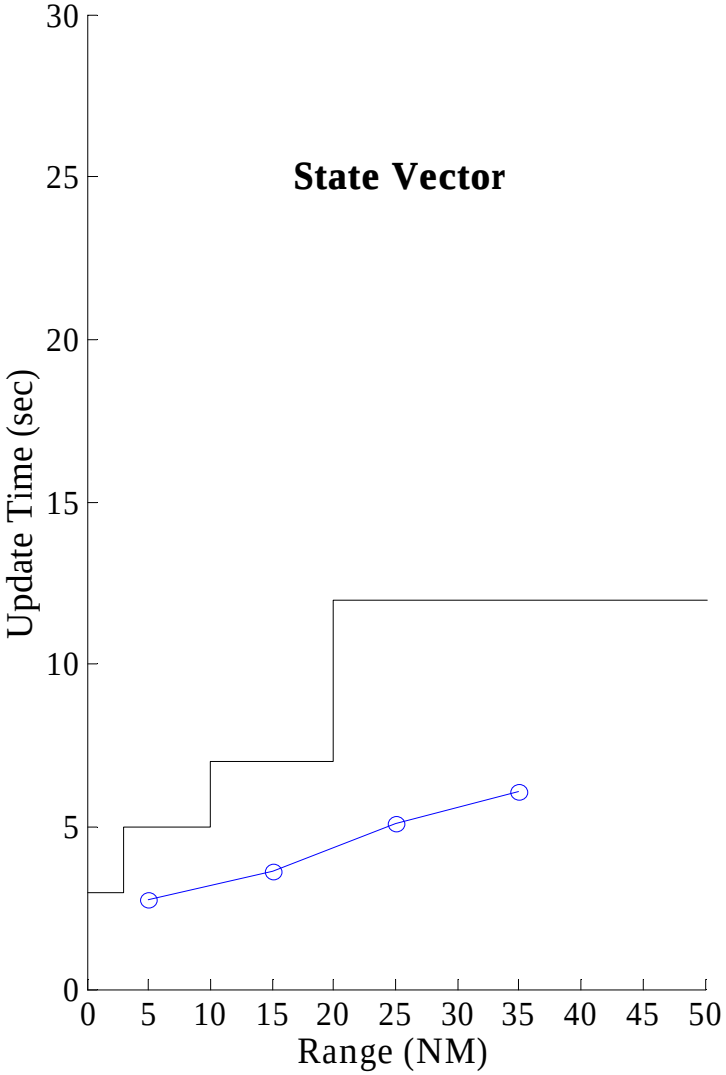


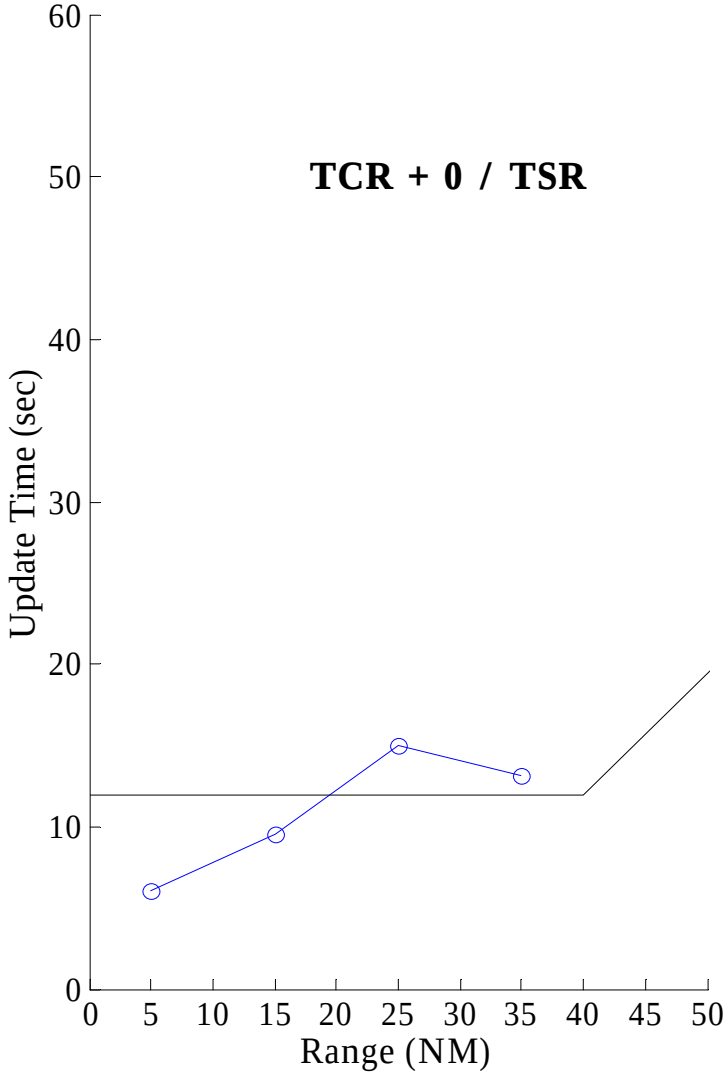
A0 Receiver at FL 150
Receiving A3 Transmitters



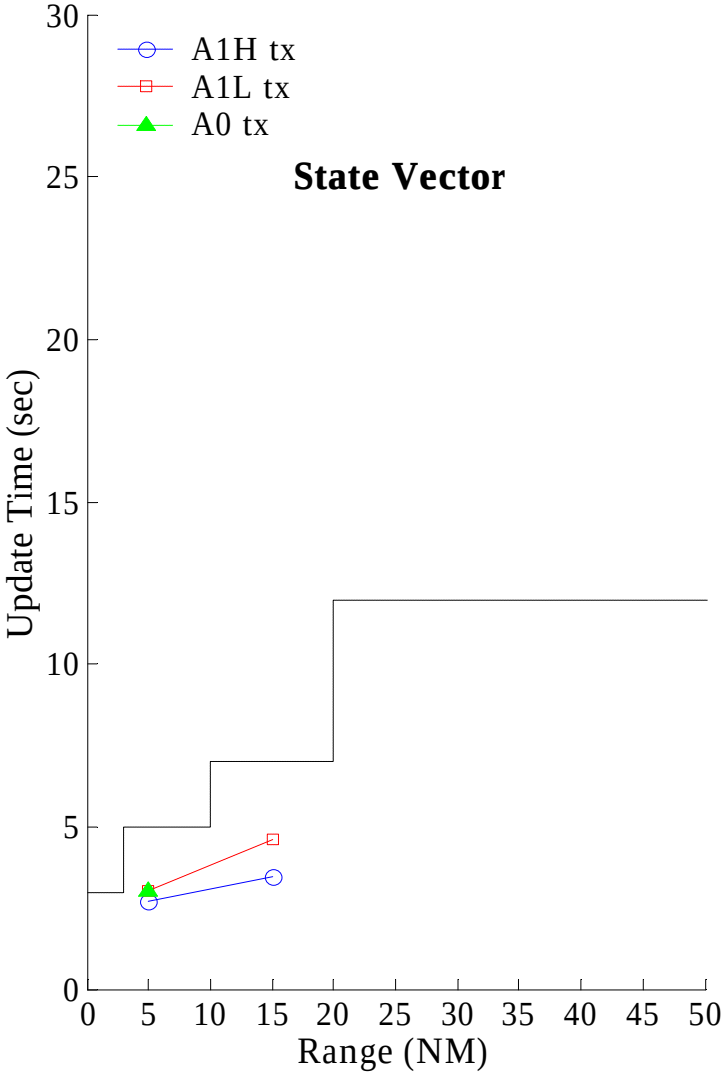


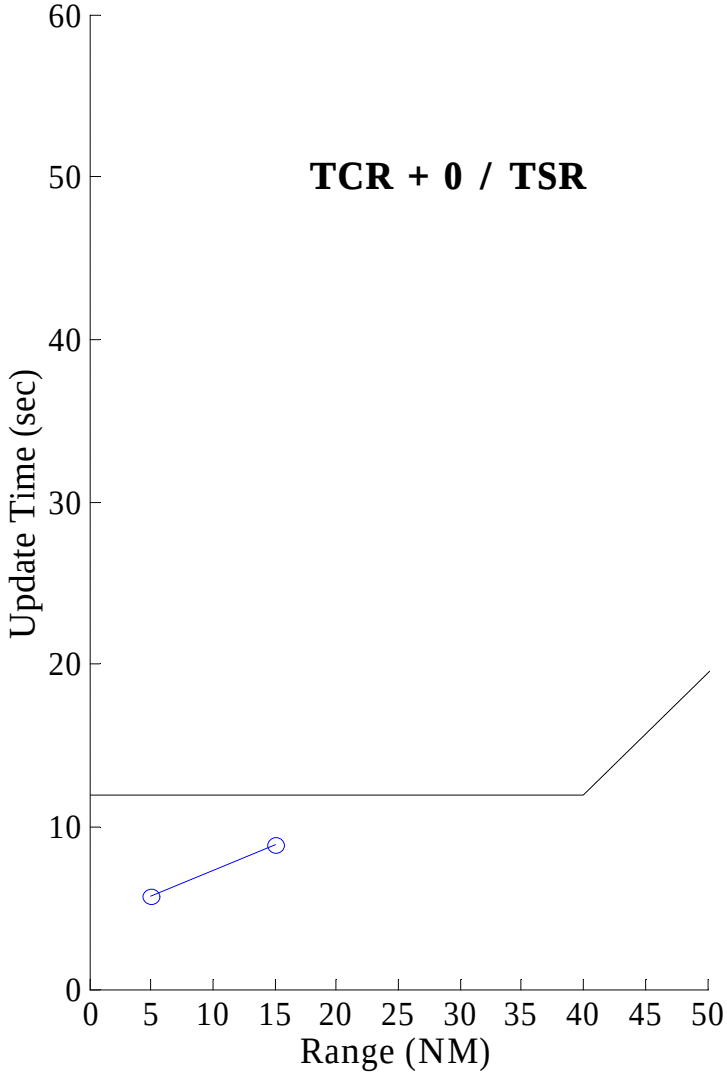
A0 Receiver at FL 150
Receiving A2 Transmitters





A0 Receiver at FL 150
Receiving A1 and A0 Transmitters

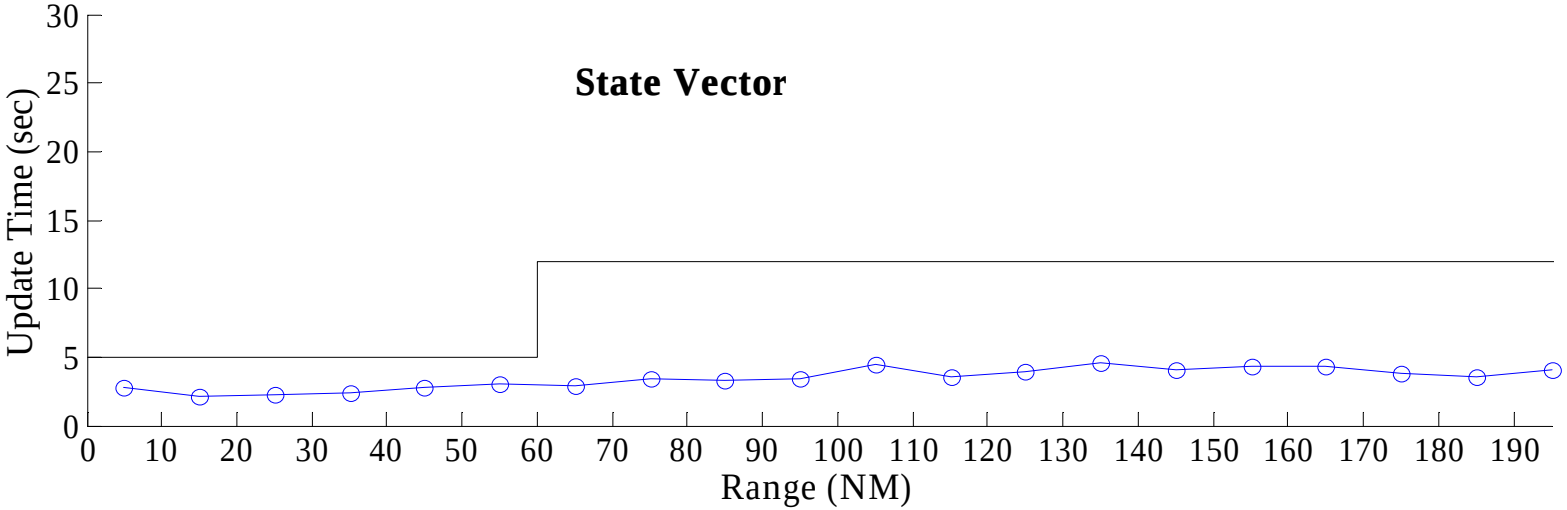


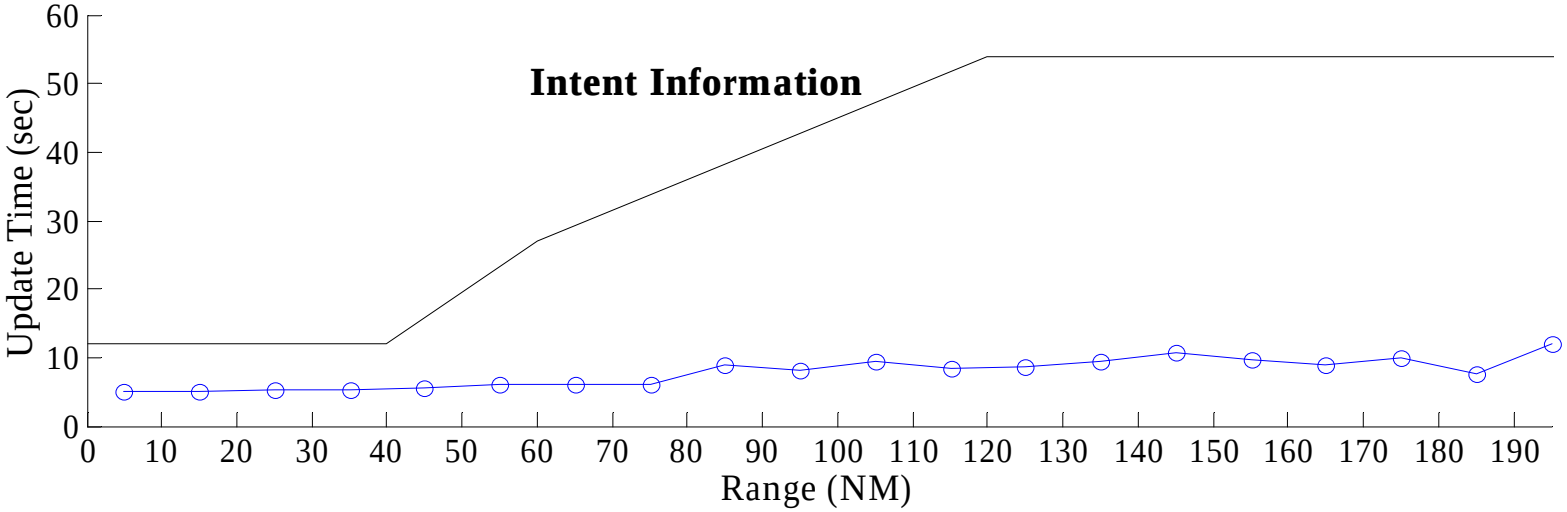


Approximate Distances of MASPS Compliance for State Vectors and *TCR+0 / TSR* for Air-Air Cases

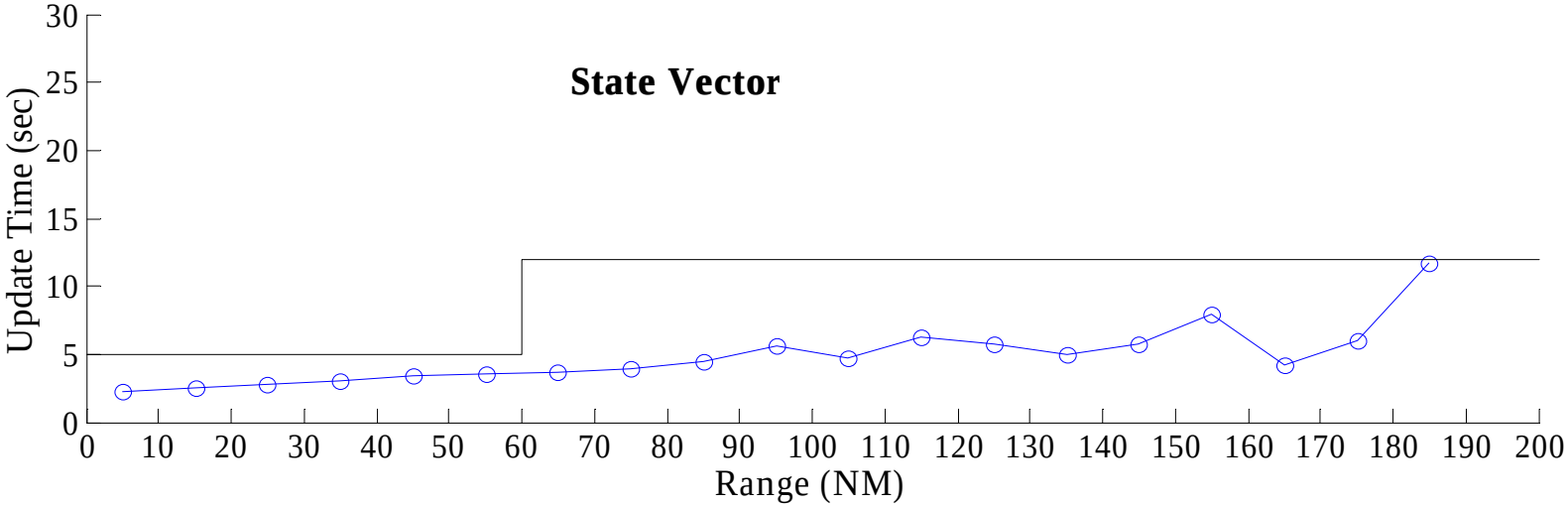
	A3 tx	A2 tx	A1H tx	A1L tx	A0 tx
A3 High rx	130 *150*	40 *25*	20 *20*	-	-
A2 High rx	140 *150*	40 *40?*	20 *20*	-	-
A1H High rx	120 *150*	40 *20*	20 *20*	-	-
A3 @ FL150 rx	130 *150*	40 *25*	20 *20*	20 *-*	10 *-*
A2 @ FL150 rx	150 *150*	40 *40?*	20 *20*	20 *-*	10 *-*
A1 @ FL150 rx	120 *150*	40 *20*	20 *20*	20 *-*	10 *-*
A0 @ FL150 rx	110 *150*	40 *20*	20 *20*	20 *-*	10 *-*

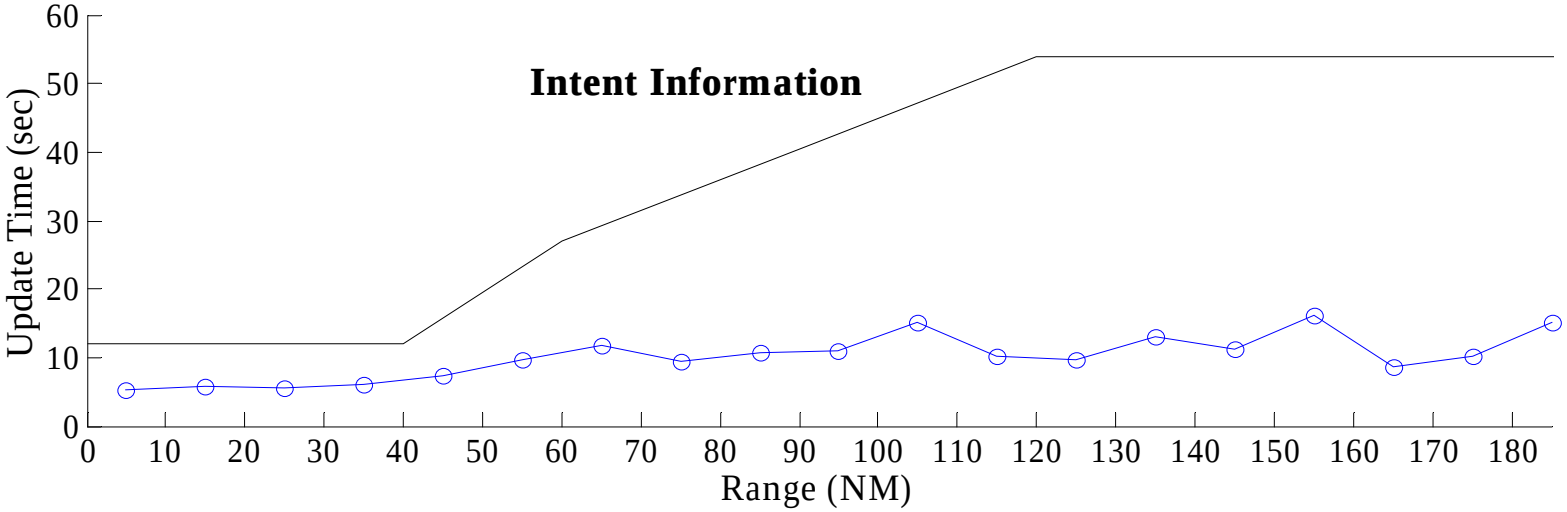
Ground Receiver
Receiving A3 Transmitters



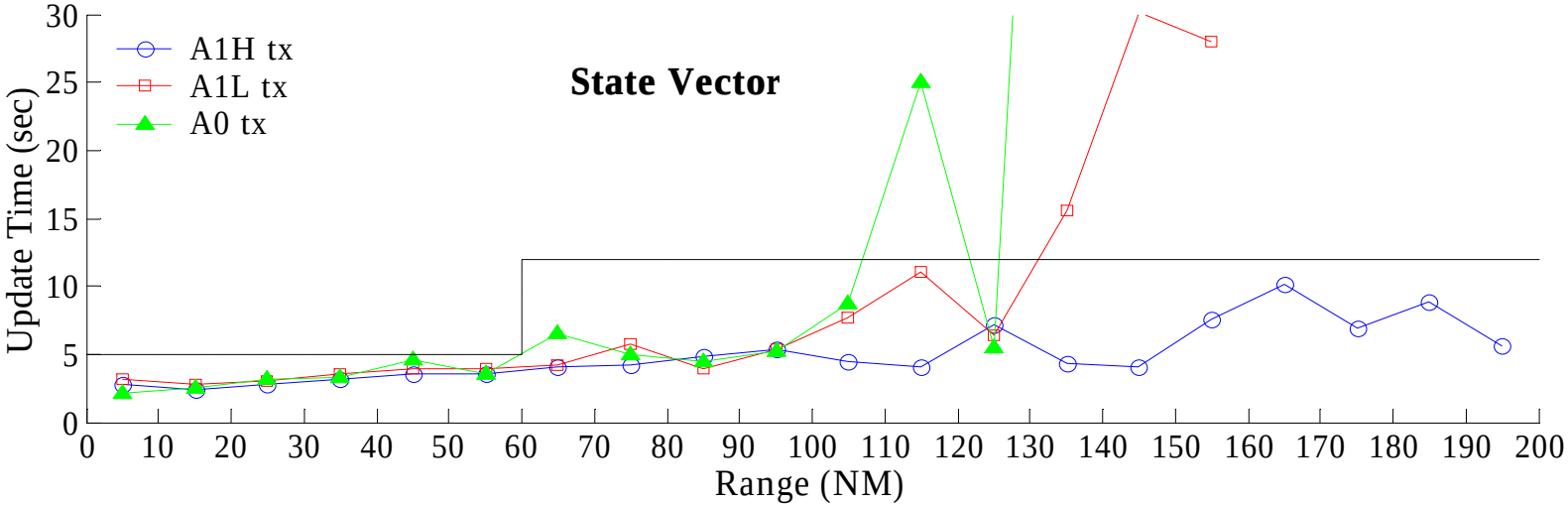


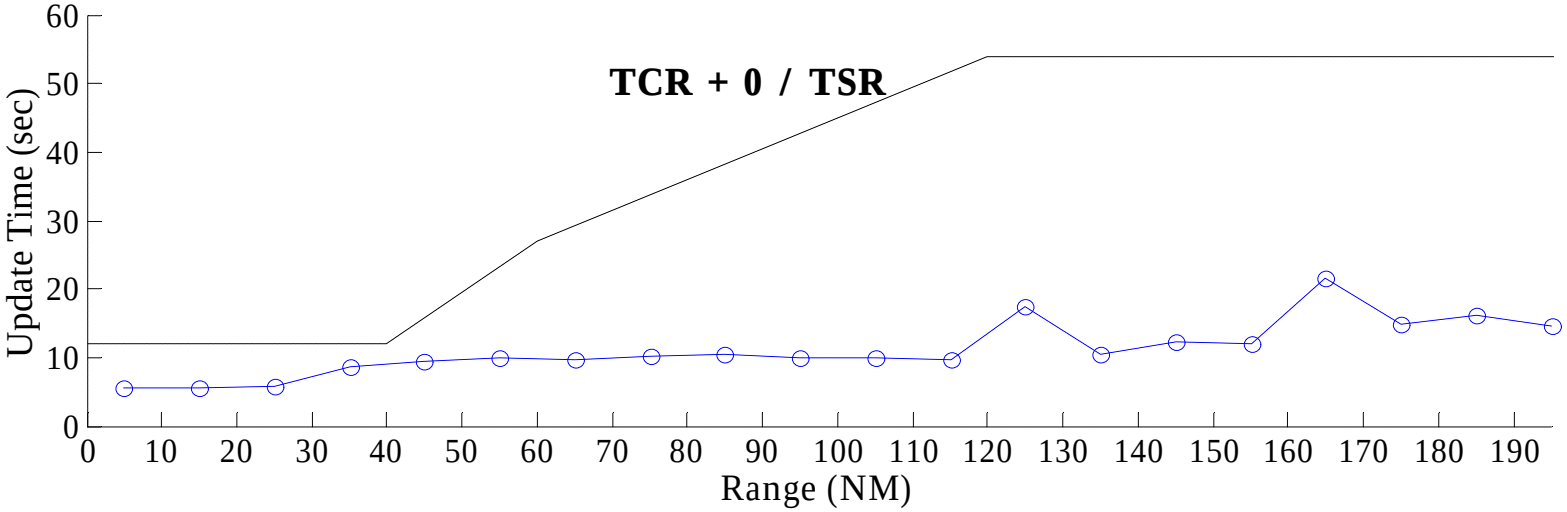
Ground Receiver
Receiving A2 Transmitters





Ground Receiver
Receiving A1 and A0 Transmitters





Ground Vehicle Transmitters to A/C on Approach

- Various aircraft on approach at 2000 feet
- Update times are 95th percentile at 0-10 NM range bin

Receiver	Update (sec)
A3	4.0
A2	4.0
A1	10.4
A0	4.0