```
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 111110111001000001011111 and CRC remainder 001110110110110110000110
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '0001'
             message_body: '010100111010001100001011100001'
                      CRC: '111110111001000001011111'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 53.0505
      estimatedDopplerEnd: 63.4032
           estimatedDelay: 0.0282
           estimatedPhase: 1.8851
ans =
    "Results saved in MM_test_5.65_12.6_f3_d500_s10_c5.json"
Elapsed time is 8.133529 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.367568 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
```

```
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
 struct with fields:
           maxPeak: 0.0076
       idStartTime: 281651
    idDopplerShift: 51
              mean: 7.0216e-07
        meanSquare: 1.0124e-06
             phase: 1.8445
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
```

```
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 111000.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 001001001101011110100000 and CRC remainder 111001011001100011110011
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '0000'
             message_body: '101001000001110010010100001110'
                      CRC: '001001001101011110100000'
                    ACKed: 0
             isACKmessage: 0
```

estimatedDopplerStart: 53.0505 estimatedDopplerEnd: 58.2268 estimatedDelay: 0.0282 estimatedPhase: 1.8445 ans = "Results saved in MM_test_5.98_12.6_f3_d500_s10_c5.json" Elapsed time is 8.038341 seconds. ans = "Generation test signal completed." Elapsed time is 0.364508 seconds. preciseInterval = 281650 ans = "Acquisition search 10.0% completed." ans = "Acquisition search 20.0% completed." ans = "Acquisition search 30.0% completed." ans = "Acquisition search 40.0% completed." ans = "Acquisition search 50.0% completed." ans = "Acquisition search 60.0% completed." ans = "Acquisition search 70.0% completed." ans = "Acquisition search 80.0% completed."

```
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0051
       idStartTime: 281651
    idDopplerShift: 51
              mean: 1.7510e-07
        meanSquare: 1.0046e-06
             phase: 1.7967
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 101011.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 100001.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 001001110011000011111011 and CRC remainder 0100100000011011111000001
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING_OK: 1
          DEMODULATION OK: 0
                    SV_ID: '100001'
               message_ID: '0011'
             message_body: '111100110011001100001010010010'
                      CRC: '001001110011000011111011'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 53.0505
      estimatedDopplerEnd: 43.9921
           estimatedDelay: 0.0282
           estimatedPhase: 1.7967
ans =
    "Results saved in MM_test_6.31_12.6_f3_d500_s10_c5.json"
Elapsed time is 8.020158 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.362270 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
```

```
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0052
       idStartTime: 281651
    idDopplerShift: 51
              mean: 1.4895e-07
        meanSquare: 1.0075e-06
             phase: 1.6651
ans =
    "Tracker step 1: demodulated 10 symbols."
```

```
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 001001.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Incorrect received sync 0100100000.
> In MessageAnalyzer/validateAndSplitMessage (line 115)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 001011.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 110110110010100011001101 and CRC remainder 110111111110111011101110110
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
```

```
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '001011'
               message_ID: '0001'
             message_body: '010110110110000011001000101101'
                      CRC: '110110110010100011001101'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 53.0505
      estimatedDopplerEnd: 65.9913
           estimatedDelay: 0.0282
           estimatedPhase: 1.6651
ans =
    "Results saved in MM_test_6.64_12.6_f3_d500_s10_c5.json"
Elapsed time is 8.022512 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.367189 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
```

```
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0791
       idStartTime: 281651
    idDopplerShift: 52
              mean: 5.7225e-07
        meanSquare: 1.3318e-06
             phase: 1.6132
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
```

```
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 101010.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 001000111000101111100001 and CRC remainder 011100010001101001001011
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '0100'
             message_body: '101010110001101100001000010110'
                      CRC: '001000111000101111100001'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 63.1515
      estimatedDopplerEnd: 81.9160
           estimatedDelay: 0.0282
           estimatedPhase: 1.6132
ans =
    "Results saved in MM_test_2.32_25.4_f3_d500_s10_c5.json"
Elapsed time is 8.061051 seconds.
ans =
    "Generation test signal completed."
```

```
Elapsed time is 0.370761 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0504
```

idStartTime: 281652 idDopplerShift: 52 mean: 3.2432e-07 meanSquare: 1.1376e-06 phase: 1.5804 ans = "Tracker step 1: demodulated 10 symbols." ans = "Tracker step 2: demodulated 20 symbols." ans = "Tracker step 3: demodulated 30 symbols." ans = "Tracker step 4: demodulated 40 symbols." ans = "Tracker step 5: demodulated 50 symbols." ans = "Tracker step 6: demodulated 60 symbols." ans = "Tracker step 7: demodulated 70 symbols." ans = "Tracker step 8: demodulated 80 symbols." Warning: Error. Incorrect received tail 000001. > In MessageAnalyzer/validateAndSplitMessage (line 110) In MessageAnalyzer/analyzeMessage (line 71) In RECEIVER (line 273) In RECEIVERTest/globalTest (line 118) Warning: Error no ack: received CRC 0000011111111000000100001 and CRC remainder 0010010001110101111100101 > In MessageAnalyzer/analyzeMessage (line 85) In RECEIVER (line 273) In RECEIVERTest/globalTest (line 118) ans = "Received message analyzed." ans =

"DEMODULATION RESULT 0" ans = struct with fields: version: "2" ACQUISITION OK: 1 TRACKING_OK: 1 DEMODULATION_OK: 0 SV_ID: '000001' message_ID: '0011' message_body: '010100001110000011001010010010' CRC: '0000011111111000000100001' ACKed: 0 isACKmessage: 1 estimatedDopplerStart: 63.1515 estimatedDopplerEnd: 86.4453 estimatedDelay: 0.0282 estimatedPhase: 1.5804 ans = "Results saved in MM_test_2.99_25.4_f3_d500_s10_c5.json" Elapsed time is 8.073456 seconds. ans = "Generation test signal completed." Elapsed time is 0.373312 seconds. preciseInterval = 281650 ans = "Acquisition search 10.0% completed." ans = "Acquisition search 20.0% completed." ans = "Acquisition search 30.0% completed." ans = "Acquisition search 40.0% completed." ans = "Acquisition search 50.0% completed."

```
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0318
       idStartTime: 281651
    idDopplerShift: 52
              mean: 4.0598e-07
       meanSquare: 1.0585e-06
             phase: 1.6450
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
```

```
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 011001.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 001000111100110011010100 and CRC remainder 1100001010101000101010100
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '0100'
             message_body: '101010110001101100001010010110'
                      CRC: '001000111100110011011100'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 63.1515
      estimatedDopplerEnd: 86.4453
           estimatedDelay: 0.0282
           estimatedPhase: 1.6450
ans =
    "Results saved in MM_test_3.65_25.4_f3_d500_s10_c5.json"
Elapsed time is 8.065881 seconds.
ans =
```

```
"Generation test signal completed."
Elapsed time is 0.372491 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
```

maxPeak: 0.0198 idStartTime: 281651 idDopplerShift: 52 mean: 4.2299e-07 meanSquare: 1.0206e-06 phase: 1.5990 ans = "Tracker step 1: demodulated 10 symbols." ans = "Tracker step 2: demodulated 20 symbols." ans = "Tracker step 3: demodulated 30 symbols." ans = "Tracker step 4: demodulated 40 symbols." ans = "Tracker step 5: demodulated 50 symbols." ans = "Tracker step 6: demodulated 60 symbols." ans = "Tracker step 7: demodulated 70 symbols." ans = "Tracker step 8: demodulated 80 symbols." Warning: Error. Incorrect received tail 001111. > In MessageAnalyzer/validateAndSplitMessage (line 110) In MessageAnalyzer/analyzeMessage (line 71) In RECEIVER (line 273) In RECEIVERTest/globalTest (line 118) > In MessageAnalyzer/analyzeMessage (line 85) In RECEIVER (line 273) In RECEIVERTest/globalTest (line 118) ans = "Received message analyzed." ans =

```
"DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '0000'
             message_body: '101010110001101100001000010110'
                      CRC: '001001111111100000010010'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 63.1515
      estimatedDopplerEnd: 78.6807
           estimatedDelay: 0.0282
           estimatedPhase: 1.5990
ans =
    "Results saved in MM_test_4.32_25.4_f3_d500_s10_c5.json"
Elapsed time is 8.064548 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.372466 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
```

```
"Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0128
       idStartTime: 281652
    idDopplerShift: 52
              mean: 2.3428e-07
        meanSquare: 1.0169e-06
             phase: 1.6221
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
```

```
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 100000.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 001001110010100001011101 and CRC remainder 111010110101010100010001
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '0010'
             message_body: '1010111110001110100111010010010'
                      CRC: '001001110010100001011101'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 63.1515
      estimatedDopplerEnd: 90.3277
           estimatedDelay: 0.0282
           estimatedPhase: 1.6221
ans =
    "Results saved in MM_test_4.98_25.4_f3_d500_s10_c5.json"
Elapsed time is 8.183796 seconds.
ans =
```

```
"Generation test signal completed."
Elapsed time is 0.371320 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
```

maxPeak: 0.0105

```
idStartTime: 281652
    idDopplerShift: 52
              mean: 1.2768e-07
        meanSquare: 1.0143e-06
             phase: 1.5480
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 100100.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 110111001111000101100001 and CRC remainder 111011101101010001011000
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
```

```
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '0011'
             message_body: '101010110001101100001100011111'
                      CRC: '110111001111000101100001'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 63.1515
      estimatedDopplerEnd: 86.4453
           estimatedDelay: 0.0282
           estimatedPhase: 1.5480
ans =
    "Results saved in MM_test_5.32_25.4_f3_d500_s10_c5.json"
Elapsed time is 8.037213 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.367544 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
```

```
"Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0081
       idStartTime: 281649
    idDopplerShift: 51
             mean: 3.9937e-07
        meanSquare: 1.0118e-06
             phase: 2.8623
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 011011.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 000110.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 100100110111101100000000 and CRC remainder 1000010011101111111111001
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000110'
               message_ID: '1101'
             message_body: '101000110110001001110111110001'
                      CRC: '100100110111101100000000'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 53.0505
      estimatedDopplerEnd: 64.0502
           estimatedDelay: 0.0282
           estimatedPhase: 2.8623
```

```
"Results saved in MM_test_5.65_25.4_f3_d500_s10_c5.json"
Elapsed time is 8.051966 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.363587 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
```

```
"Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0066
       idStartTime: 281652
    idDopplerShift: 52
              mean: 2.5189e-07
        meanSquare: 1.0083e-06
             phase: 1.6373
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 000010.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 10001010101010001011 and CRC remainder 110001111101011100110101
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
```

```
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '0011'
             message_body: '011011000101111100001100011110'
                      CRC: '100010101011000110001011'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 63.1515
      estimatedDopplerEnd: 67.0338
           estimatedDelay: 0.0282
           estimatedPhase: 1.6373
ans =
    "Results saved in MM_test_5.98_25.4_f3_d500_s10_c5.json"
Elapsed time is 8.079847 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.380649 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
```

```
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0051
       idStartTime: 281650
    idDopplerShift: 51
              mean: 1.1439e-07
        meanSquare: 1.0084e-06
             phase: 2.9199
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 001111.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Incorrect received sync 0101100001.
> In MessageAnalyzer/validateAndSplitMessage (line 115)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 000100100011001100100100 and CRC remainder 001111000110011001110
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '1100'
             message_body: '100110111010001111010111100000'
                      CRC: '000100100011001100100100'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 53.0505
```

estimatedDopplerEnd: 72.4618 estimatedDelay: 0.0282 estimatedPhase: 2.9199 ans = "Results saved in MM_test_6.31_25.4_f3_d500_s10_c5.json" Elapsed time is 8.061015 seconds. ans = "Generation test signal completed." Elapsed time is 0.370695 seconds. preciseInterval = 281650 ans = "Acquisition search 10.0% completed." ans = "Acquisition search 20.0% completed." ans = "Acquisition search 30.0% completed." ans = "Acquisition search 40.0% completed." ans = "Acquisition search 50.0% completed." ans = "Acquisition search 60.0% completed." ans = "Acquisition search 70.0% completed." ans = "Acquisition search 80.0% completed." ans =

```
"Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0047
       idStartTime: 281649
    idDopplerShift: 51
              mean: 7.9927e-08
       meanSquare: 1.0042e-06
             phase: 2.7302
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 100111.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Incorrect received sync 0101100010.
> In MessageAnalyzer/validateAndSplitMessage (line 115)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV ID 010011.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 0000000100111001010000 and CRC remainder 101100010001011000111011
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '010011'
               message_ID: '1100'
             message_body: '111101101110001010001000011111'
                      CRC: '000000010011100101001000'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 53.0505
      estimatedDopplerEnd: 76.3441
           estimatedDelay: 0.0282
           estimatedPhase: 2.7302
ans =
    "Results saved in MM_test_6.64_25.4_f3_d500_s10_c5.json"
Elapsed time is 8.033837 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.375244 seconds.
preciseInterval =
      281650
```

```
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0846
       idStartTime: 281650
    idDopplerShift: 53
              mean: 4.0792e-07
        meanSquare: 1.3380e-06
             phase: 2.4108
```

```
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 101000.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 000000.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 100111011010011011001011 and CRC remainder 110000011110101100001000
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
```

```
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING OK: 1
          DEMODULATION OK: 0
                    SV_ID: '000000'
               message_ID: '1100'
             message_body: '01101111010001000001000101111'
                      CRC: '100111011010011011001011'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 79.7231
           estimatedDelay: 0.0282
           estimatedPhase: 2.4108
ans =
    "Results saved in MM_test_2.32_51_f3_d500_s10_c5.json"
Elapsed time is 8.010519 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.367872 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
```

```
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
          maxPeak: 0.0522
       idStartTime: 281650
    idDopplerShift: 53
              mean: 5.3988e-07
        meanSquare: 1.1373e-06
             phase: 2.4197
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 100110.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 000010.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 0011010000000000000011 and CRC remainder 001101101100001101111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000010'
               message_ID: '1100'
             message_body: '010011110011111011100000101011'
                      CRC: '001101000000000001000011'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 81.6642
           estimatedDelay: 0.0282
           estimatedPhase: 2.4197
ans =
    "Results saved in MM_test_2.99_51_f3_d500_s10_c5.json"
Elapsed time is 8.043099 seconds.
```

```
ans =
    "Generation test signal completed."
Elapsed time is 0.375079 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
```

```
struct with fields:
           maxPeak: 0.0333
       idStartTime: 281650
    idDopplerShift: 53
              mean: 1.0095e-07
        meanSquare: 1.0575e-06
             phase: 2.4287
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 010110.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 000000.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 0001001001111001100000011 and CRC remainder 001010001011110010111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
```

```
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000000'
               message_ID: '1100'
             message_body: '100100001101001110110011101101'
                      CRC: '000100100111100110000011'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 84.2524
           estimatedDelay: 0.0282
           estimatedPhase: 2.4288
ans =
    "Results saved in MM_test_3.65_51_f3_d500_s10_c5.json"
Elapsed time is 8.069640 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.369096 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
```

```
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
 struct with fields:
           maxPeak: 0.0207
       idStartTime: 281650
    idDopplerShift: 53
              mean: 7.9507e-07
        meanSquare: 1.0228e-06
             phase: 2.3838
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
```

```
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 011011.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 000010.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 011101001111100100001010 and CRC remainder 01111111010000111101000011
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000010'
               message_ID: '1101'
             message_body: '010011101011100010110101001111'
                      CRC: '0111010011111100100001010'
                    ACKed: 0
             isACKmessage: 1
```

```
estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 73.8996
           estimatedDelay: 0.0282
           estimatedPhase: 2.3838
ans =
    "Results saved in MM_test_4.32_51_f3_d500_s10_c5.json"
Elapsed time is 8.054139 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.374601 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
```

```
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0128
       idStartTime: 281650
    idDopplerShift: 53
              mean: 4.0547e-07
        meanSquare: 1.0161e-06
             phase: 2.3635
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 001101.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 000000.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 010011000000000011000011 and CRC remainder 1000100101111111111010100
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING_OK: 1
          DEMODULATION OK: 0
                    SV_ID: '000000'
               message_ID: '1101'
             message_body: '011011110101000011111010011000'
                      CRC: '010011000000000011000011'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 84.8995
           estimatedDelay: 0.0282
           estimatedPhase: 2.3635
ans =
    "Results saved in MM_test_4.98_51_f3_d500_s10_c5.json"
Elapsed time is 8.022546 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.367256 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
```

```
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0102
       idStartTime: 281651
    idDopplerShift: 53
              mean: 4.3121e-07
        meanSquare: 1.0107e-06
             phase: 2.3459
ans =
    "Tracker step 1: demodulated 10 symbols."
```

```
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 100100.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 000010.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 001011001011111000000010 and CRC remainder 110011100001111110111001
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
```

```
version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000010'
               message_ID: '1111'
             message body: '00101110000000001111011001101'
                      CRC: '0010110010111111000000010'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 77.7819
           estimatedDelay: 0.0282
           estimatedPhase: 2.3459
ans =
    "Results saved in MM_test_5.32_51_f3_d500_s10_c5.json"
Elapsed time is 8.184447 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.378717 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
```

```
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0083
       idStartTime: 281651
    idDopplerShift: 53
              mean: 1.6844e-07
       meanSquare: 1.0093e-06
             phase: 2.3817
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
```

```
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 111110.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 111001000001001110100010 and CRC remainder 000000010110111110001011
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000001'
               message_ID: '1100'
             message_body: '110101000001001011010101110000'
                      CRC: '111001000001001110100010'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 81.0172
           estimatedDelay: 0.0282
           estimatedPhase: 2.3816
ans =
    "Results saved in MM_test_5.65_51_f3_d500_s10_c5.json"
Elapsed time is 8.352210 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.362179 seconds.
preciseInterval =
```

281650

```
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0072
       idStartTime: 281650
    idDopplerShift: 53
              mean: 4.7829e-07
        meanSquare: 1.0046e-06
             phase: 2.4173
```

```
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 011011.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 000000.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 101100100011101001100000 and CRC remainder 100110101101010010001000
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
```

"DEMODULATION RESULT 0" ans = struct with fields: version: "2" ACQUISITION OK: 1 TRACKING_OK: 1 DEMODULATION_OK: 0 SV_ID: '000000' message_ID: '1100' message_body: '110101000101101111101110001101' CRC: '101100100011101001100000' ACKed: 0 isACKmessage: 0 estimatedDopplerStart: 73.2525 estimatedDopplerEnd: 84.8995 estimatedDelay: 0.0282 estimatedPhase: 2.4173 ans = "Results saved in MM_test_5.98_51_f3_d500_s10_c5.json" Elapsed time is 8.076157 seconds. ans = "Generation test signal completed." Elapsed time is 0.375544 seconds. preciseInterval = 281650 ans = "Acquisition search 10.0% completed." ans = "Acquisition search 20.0% completed." ans = "Acquisition search 30.0% completed." ans = "Acquisition search 40.0% completed." ans = "Acquisition search 50.0% completed."

```
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0050
       idStartTime: 281650
    idDopplerShift: 53
              mean: 4.1623e-07
       meanSquare: 1.0042e-06
             phase: 2.2326
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
```

```
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 001011.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 001100.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 110110001100110100010110 and CRC remainder 100001001010111111111010
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '001100'
               message_ID: '1101'
             message_body: '010011010100111010001101010001'
                      CRC: '110110001100110100010110'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 74.5467
           estimatedDelay: 0.0282
           estimatedPhase: 2.2327
ans =
    "Results saved in MM_test_6.31_51_f3_d500_s10_c5.json"
```

```
Elapsed time is 8.045223 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.368641 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
```

```
ans =
  struct with fields:
           maxPeak: 0.0050
       idStartTime: 281650
    idDopplerShift: 53
              mean: 4.8271e-07
        meanSquare: 1.0037e-06
             phase: 2.3983
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 000010.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 001000.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 1101000111101100101111110 and CRC remainder 1001111100010000111001011
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '001000'
               message_ID: '1100'
             message_body: '1011000011000000111111110010110'
                      CRC: '110100011110110010111110'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 73.2525
      estimatedDopplerEnd: 101.0760
           estimatedDelay: 0.0282
           estimatedPhase: 2.3983
ans =
    "Results saved in MM_test_6.64_51_f3_d500_s10_c5.json"
Elapsed time is 8.051530 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.367528 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
```

```
"Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0760
       idStartTime: 281648
    idDopplerShift: 55
              mean: 3.8469e-07
       meanSquare: 1.3387e-06
             phase: -2.2888
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
```

```
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 000100.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 001111.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 110000000011101000010110 and CRC remainder 000010101101101000011100
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '001111'
               message_ID: '0000'
             message_body: '011110100000110101110001101110'
                      CRC: '110000000011101000010110'
```

ACKed: 0

isACKmessage: 1 estimatedDopplerStart: 93.4545 estimatedDopplerEnd: 94.7487 estimatedDelay: 0.0282 estimatedPhase: 3.9944 ans = "Results saved in MM_test_2.32_102.6_f3_d500_s10_c5.json" Elapsed time is 8.031078 seconds. ans = "Generation test signal completed." Elapsed time is 0.380111 seconds. preciseInterval = 281650 ans = "Acquisition search 10.0% completed." ans = "Acquisition search 20.0% completed." ans = "Acquisition search 30.0% completed." ans = "Acquisition search 40.0% completed." ans = "Acquisition search 50.0% completed." ans = "Acquisition search 60.0% completed." ans = "Acquisition search 70.0% completed." ans = "Acquisition search 80.0% completed."

```
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0469
       idStartTime: 281648
    idDopplerShift: 55
              mean: 1.1207e-07
        meanSquare: 1.1348e-06
             phase: -2.2892
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
```

ans =

```
Warning: Error. Incorrect received tail 110110.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 001111.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 011010001011001100011000 and CRC remainder 1111111001101101100101111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '001111'
               message_ID: '0000'
             message_body: '011101010011110111010100111001'
                      CRC: '011010001011001100011000'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 93.4545
      estimatedDopplerEnd: 109.6310
           estimatedDelay: 0.0282
           estimatedPhase: 3.9940
ans =
    "Results saved in MM_test_2.99_102.6_f3_d500_s10_c5.json"
Elapsed time is 8.040522 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.372252 seconds.
preciseInterval =
      281650
```

```
"Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0302
       idStartTime: 281648
    idDopplerShift: 55
              mean: 2.8744e-07
        meanSquare: 1.0587e-06
             phase: -2.2775
```

```
"Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 100010.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 001111.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 111001001010101010110110 and CRC remainder 1101111100110100000111101
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
```

```
struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV ID: '001111'
               message ID: '0001'
             message_body: '110000011000010001101011110101'
                      CRC: '111001001010101010110110'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 93.4545
      estimatedDopplerEnd: 105.7490
           estimatedDelay: 0.0282
           estimatedPhase: 4.0057
ans =
    "Results saved in MM_test_3.65_102.6_f3_d500_s10_c5.json"
Elapsed time is 8.528329 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.367884 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
```

```
"Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0193
       idStartTime: 281648
    idDopplerShift: 55
              mean: 2.9340e-07
        meanSquare: 1.0310e-06
             phase: -2.2634
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
```

```
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 011011.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 001111.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 100100001010000011000001 and CRC remainder 1100000010100101111111000
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '001111'
               message_ID: '0000'
             message_body: '0010001000010000010001110'
                      CRC: '100100001010000011000001'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 93.4545
      estimatedDopplerEnd: 93.4546
           estimatedDelay: 0.0282
           estimatedPhase: 4.0198
ans =
    "Results saved in MM_test_4.32_102.6_f3_d500_s10_c5.json"
Elapsed time is 8.343821 seconds.
ans =
```

```
"Generation test signal completed."
Elapsed time is 0.382081 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
```

maxPeak: 0.0114

idStartTime: 281648 idDopplerShift: 55 mean: 3.8141e-07 meanSquare: 1.0144e-06 phase: -2.2886 ans = "Tracker step 1: demodulated 10 symbols." ans = "Tracker step 2: demodulated 20 symbols." ans = "Tracker step 3: demodulated 30 symbols." ans = "Tracker step 4: demodulated 40 symbols." ans = "Tracker step 5: demodulated 50 symbols." ans = "Tracker step 6: demodulated 60 symbols." ans = "Tracker step 7: demodulated 70 symbols." ans = "Tracker step 8: demodulated 80 symbols." Warning: Error. Incorrect received tail 100011. > In MessageAnalyzer/validateAndSplitMessage (line 110) In MessageAnalyzer/analyzeMessage (line 71) In RECEIVER (line 273) In RECEIVERTest/globalTest (line 118) Warning: Error. Not my message, incorrect received SV_ID 000110. > In MessageAnalyzer/validateAndSplitMessage (line 120) In MessageAnalyzer/analyzeMessage (line 71) In RECEIVER (line 273) In RECEIVERTest/globalTest (line 118) Warning: Error no ack: received CRC 00010000011010100010011 and CRC remainder 010000101111001010011100 > In MessageAnalyzer/analyzeMessage (line 85) In RECEIVER (line 273) In RECEIVERTest/globalTest (line 118)

```
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '000110'
               message_ID: '0010'
             message_body: '000000110101000110001111110111'
                      CRC: '000100000110101100010011'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 93.4545
      estimatedDopplerEnd: 88.9252
           estimatedDelay: 0.0282
           estimatedPhase: 3.9946
ans =
    "Results saved in MM_test_4.98_102.6_f3_d500_s10_c5.json"
Elapsed time is 8.301961 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.368632 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
```

```
"Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0097
       idStartTime: 281648
    idDopplerShift: 55
              mean: 7.7867e-08
       meanSquare: 1.0131e-06
             phase: -2.3626
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 100110.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 001111.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 11000001000100001010100 and CRC remainder 1111101111100010010110101
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '001111'
               message_ID: '0001'
             message_body: '101000111100111110101000101110'
                      CRC: '110000010001000001010100'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 93.4545
      estimatedDopplerEnd: 86.3369
```

estimatedDelay: 0.0282

estimatedPhase: 3.9206 ans = "Results saved in MM_test_5.32_102.6_f3_d500_s10_c5.json" Elapsed time is 8.260811 seconds. ans = "Generation test signal completed." Elapsed time is 0.371992 seconds. preciseInterval = 281650 ans = "Acquisition search 10.0% completed." ans = "Acquisition search 20.0% completed." ans = "Acquisition search 30.0% completed." ans = "Acquisition search 40.0% completed." ans = "Acquisition search 50.0% completed." ans = "Acquisition search 60.0% completed." ans = "Acquisition search 70.0% completed." ans = "Acquisition search 80.0% completed." ans =

```
"Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0076
       idStartTime: 281648
    idDopplerShift: 55
              mean: 2.8867e-07
        meanSquare: 1.0130e-06
             phase: -2.2719
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 010111.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
```

```
In RECEIVERTest/globalTest (line 118)
Warning: Error. Incorrect received sync 0101100001.
> In MessageAnalyzer/validateAndSplitMessage (line 115)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 100001.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 11100101100101101101101 and CRC remainder 101100100111011110010110
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '100001'
               message_ID: '1011'
             message_body: '1001000001010001011011100010'
                      CRC: '111001011001011011101101'
                    ACKed: 0
             isACKmessage: 0
    estimatedDopplerStart: 93.4545
      estimatedDopplerEnd: 100.5720
           estimatedDelay: 0.0282
           estimatedPhase: 4.0113
ans =
    "Results saved in MM_test_5.65_102.6_f3_d500_s10_c5.json"
Elapsed time is 8.313937 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.367579 seconds.
preciseInterval =
      281650
```

```
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
  struct with fields:
           maxPeak: 0.0057
       idStartTime: 281649
    idDopplerShift: 55
              mean: 2.0981e-07
        meanSquare: 1.0069e-06
             phase: -2.4078
```

```
"Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
    "Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 111001.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 110001.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 101010111010000111110110 and CRC remainder 010101111110101001000000
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
```

```
ans =
  struct with fields:
                  version: "2"
           ACQUISITION_OK: 1
              TRACKING_OK: 1
          DEMODULATION OK: 0
                    SV ID: '110001'
               message_ID: '1100'
             message_body: '011111100110010010110100011011'
                      CRC: '101010111010000111110110'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 93.4545
      estimatedDopplerEnd: 102.5130
           estimatedDelay: 0.0282
           estimatedPhase: 3.8754
ans =
    "Results saved in MM_test_5.98_102.6_f3_d500_s10_c5.json"
Elapsed time is 8.201194 seconds.
ans =
    "Generation test signal completed."
Elapsed time is 0.366590 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
```

```
"Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
 struct with fields:
           maxPeak: 0.0051
       idStartTime: 281648
    idDopplerShift: 55
              mean: 4.5674e-07
       meanSquare: 1.0083e-06
             phase: -2.2594
ans =
    "Tracker step 1: demodulated 10 symbols."
ans =
    "Tracker step 2: demodulated 20 symbols."
ans =
    "Tracker step 3: demodulated 30 symbols."
ans =
    "Tracker step 4: demodulated 40 symbols."
ans =
    "Tracker step 5: demodulated 50 symbols."
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
ans =
    "Tracker step 7: demodulated 70 symbols."
ans =
    "Tracker step 8: demodulated 80 symbols."
Warning: Error. Incorrect received tail 110010.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error. Not my message, incorrect received SV_ID 110010.
> In MessageAnalyzer/validateAndSplitMessage (line 120)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
Warning: Error no ack: received CRC 100110100100011010111110 and CRC remainder 11010101111001010111110
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 273)
In RECEIVERTest/globalTest (line 118)
ans =
    "Received message analyzed."
ans =
    "DEMODULATION RESULT 0"
ans =
  struct with fields:
                  version: "2"
           ACQUISITION OK: 1
              TRACKING_OK: 1
          DEMODULATION_OK: 0
                    SV_ID: '110010'
               message_ID: '0100'
             message_body: '00101101111011111011110100100'
                      CRC: '100110100100011010111110'
                    ACKed: 0
             isACKmessage: 1
    estimatedDopplerStart: 93.4545
      estimatedDopplerEnd: 105.7490
           estimatedDelay: 0.0282
           estimatedPhase: 4.0238
ans =
    "Results saved in MM_test_6.31_102.6_f3_d500_s10_c5.json"
Elapsed time is 8.182581 seconds.
```

```
ans =
    "Generation test signal completed."
Elapsed time is 0.376067 seconds.
preciseInterval =
      281650
ans =
    "Acquisition search 10.0% completed."
ans =
    "Acquisition search 20.0% completed."
ans =
    "Acquisition search 30.0% completed."
ans =
    "Acquisition search 40.0% completed."
ans =
    "Acquisition search 50.0% completed."
ans =
    "Acquisition search 60.0% completed."
ans =
    "Acquisition search 70.0% completed."
ans =
    "Acquisition search 80.0% completed."
ans =
    "Acquisition search 90.0% completed."
ans =
    "Acquisition search 100.0% completed."
ans =
```

struct with fields: maxPeak: 0.0032 idStartTime: 176015 idDopplerShift: 46 mean: 1.2365e-07 meanSquare: 1.0082e-06 phase: 2.5315 Warning: NO SIGNALS FOUND > In RECEIVER (line 187) In RECEIVERTest/globalTest (line 118) ans = "Results saved in MM_test_6.64_102.6_f3_d500_s10_c5.json" Elapsed time is 4.403971 seconds. Done RECEIVERTest ans = 1×2400 TestResult array with properties: Name Passed Failed Incomplete Duration Details Totals: 2400 Passed, 0 Failed, 0 Incomplete. 29978.049 seconds testing time. >>