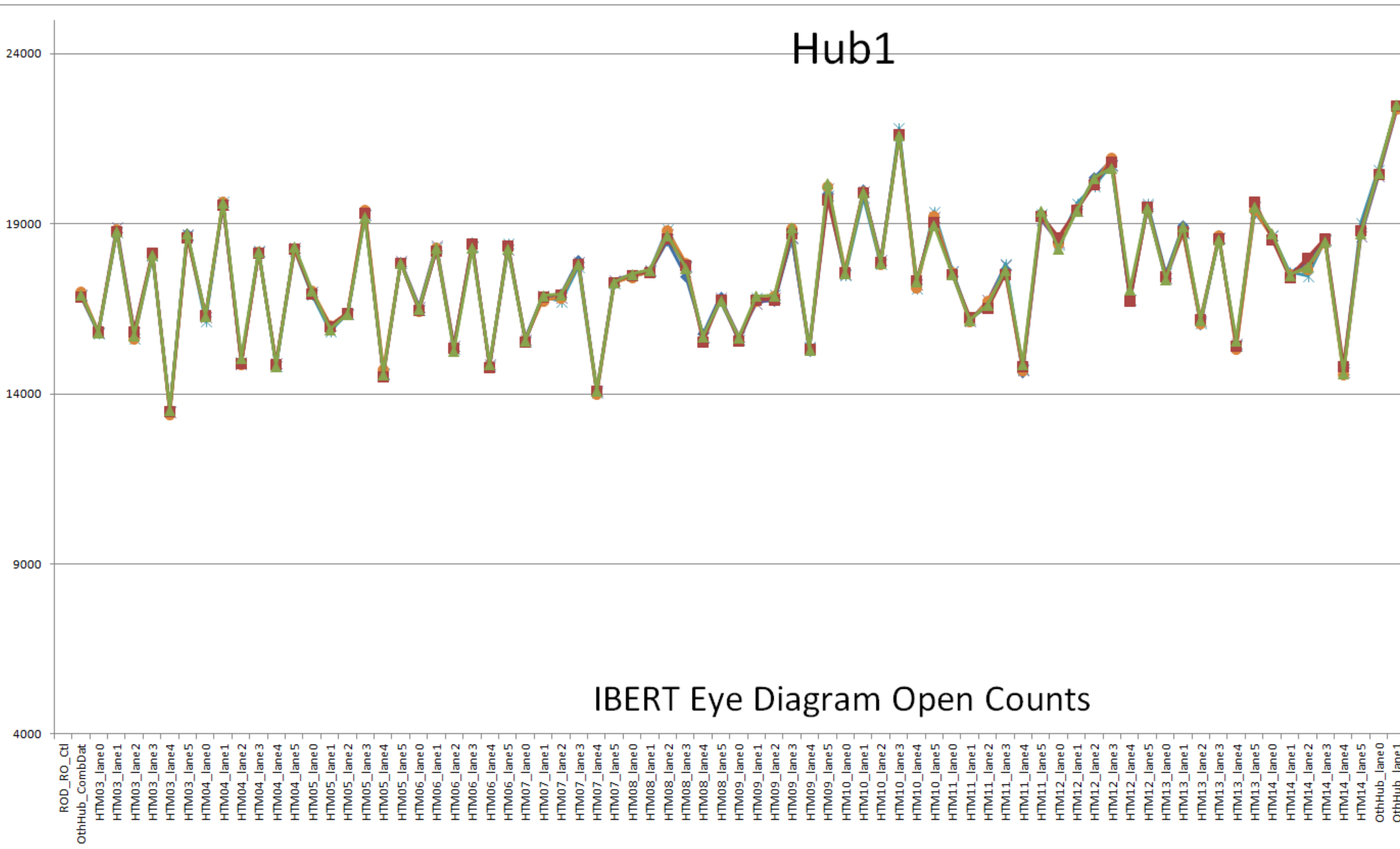


Hub1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



- O HUB1 17-Jun-2019_b noDFE&EqOFF
- O HUB1 18-Jun-2019_a noDFE&EqOFF
- O HUB1 18-Jun-2019_b noDFE&EqOFF
- O HUB1 18-Jun-2019_c noDFE&EqOFF
- O HUB1 19-Jun-2019_a noDFE&EqOFF
- O HUB1 19-Jun-2019_b noDFE&EqOFF
- O

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

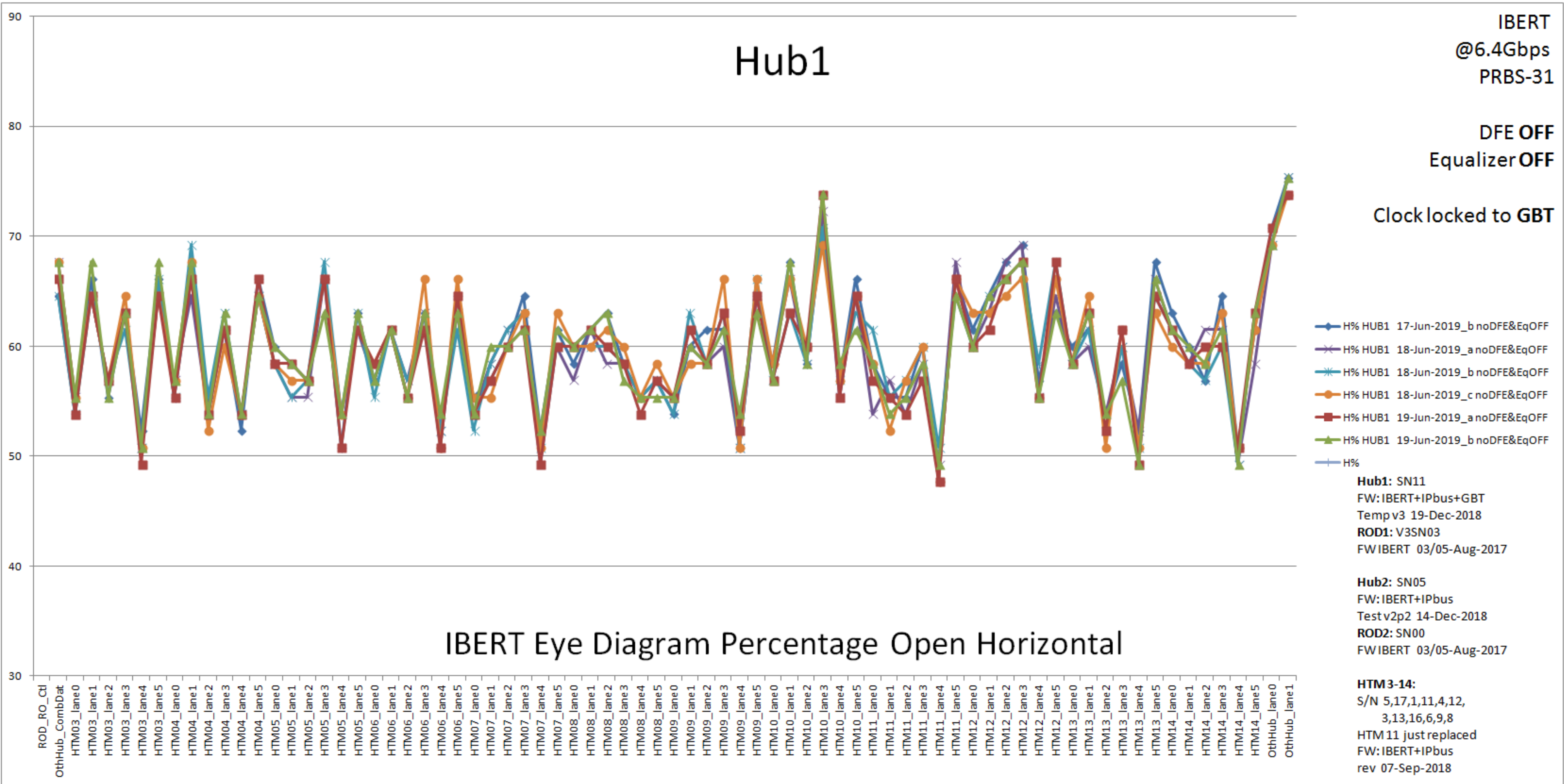
IBERT Eye Diagram Open Counts

Hub1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



- H% HUB1 17-Jun-2019_b noDFE&EqOFF
- H% HUB1 18-Jun-2019_a noDFE&EqOFF
- H% HUB1 18-Jun-2019_b noDFE&EqOFF
- H% HUB1 18-Jun-2019_c noDFE&EqOFF
- H% HUB1 19-Jun-2019_a noDFE&EqOFF
- H% HUB1 19-Jun-2019_b noDFE&EqOFF
- H%

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM 3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM 11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

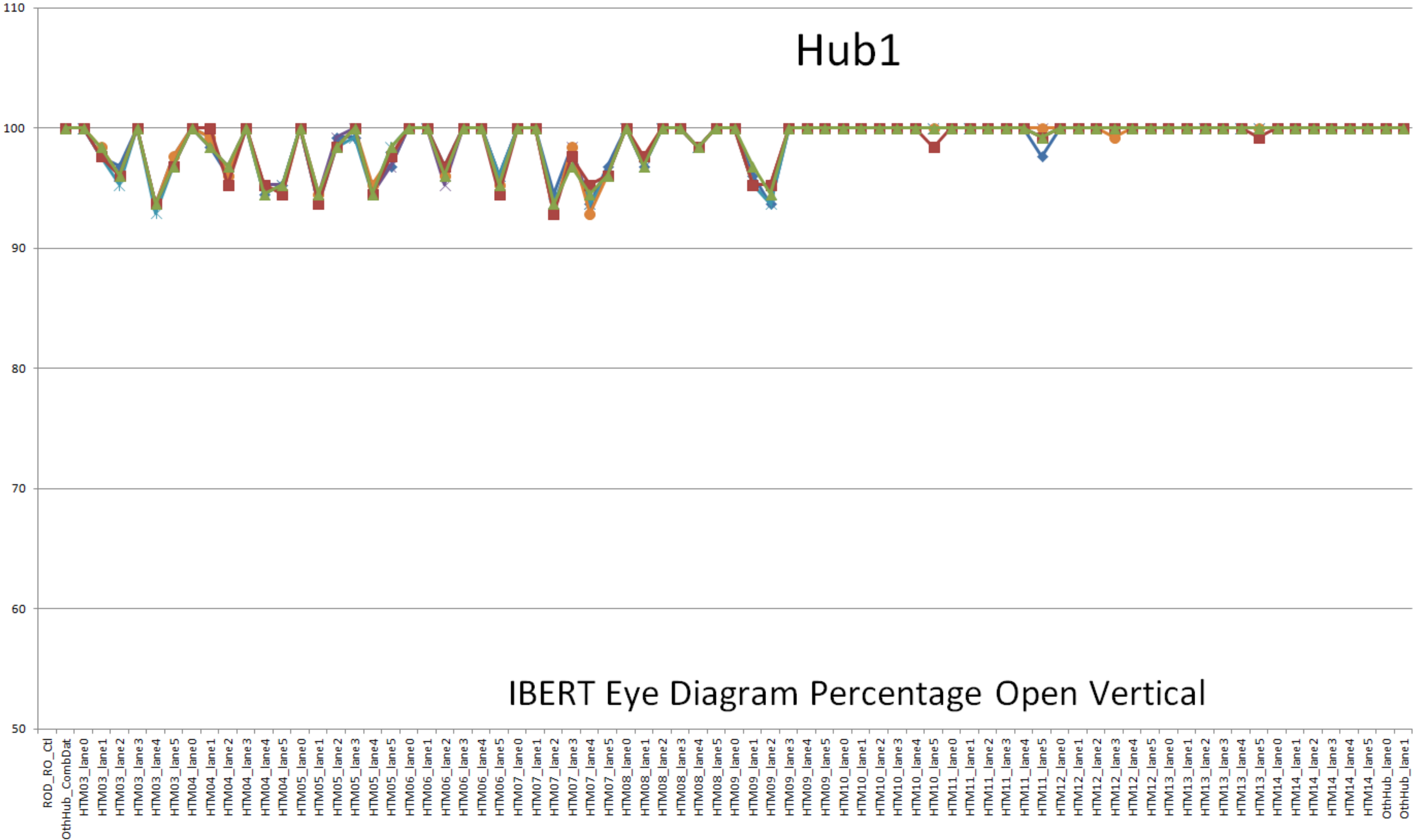
IBERT Eye Diagram Percentage Open Horizontal

Hub1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Percentage Open Vertical

- V% HUB1 17-Jun-2019_b noDFE&EqOFF
- V% HUB1 18-Jun-2019_a noDFE&EqOFF
- V% HUB1 18-Jun-2019_b noDFE&EqOFF
- V% HUB1 18-Jun-2019_c noDFE&EqOFF
- V% HUB1 19-Jun-2019_a noDFE&EqOFF
- V% HUB1 19-Jun-2019_b noDFE&EqOFF
- V%

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

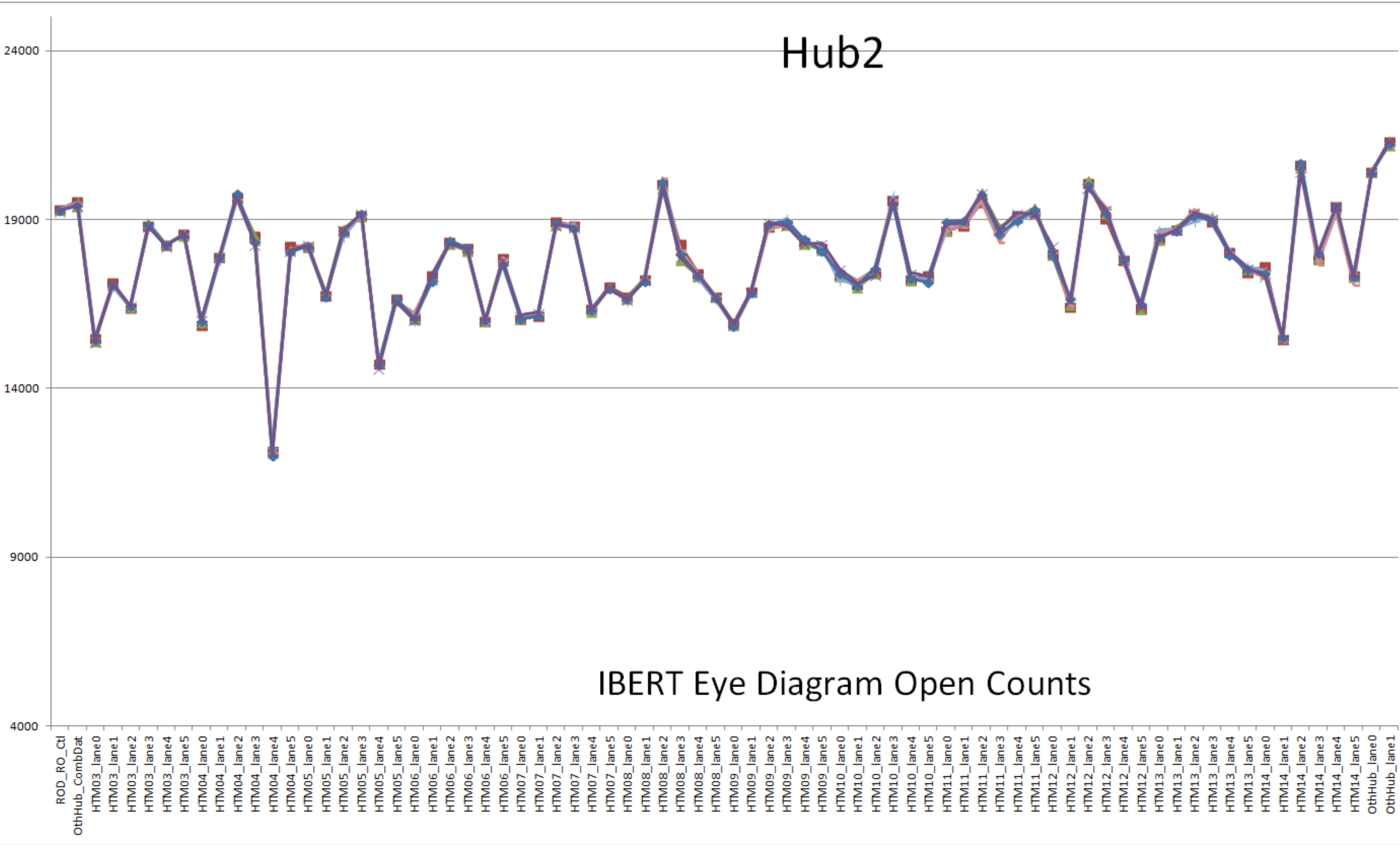
HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM 11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

Hub2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Open Counts

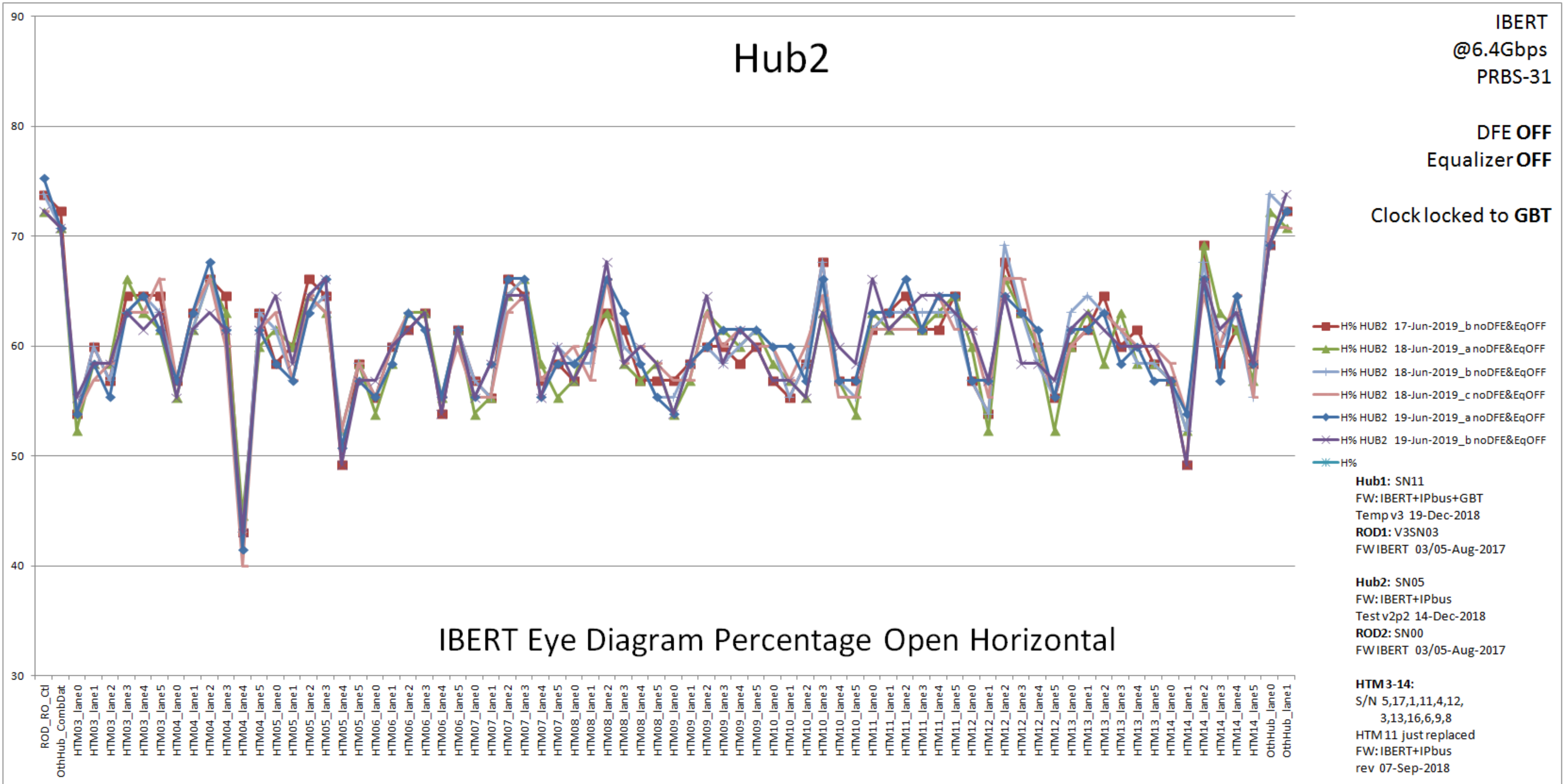
- O HUB2 17-Jun-2019_b noDFE&EqOFF
 - O HUB2 18-Jun-2019_a noDFE&EqOFF
 - O HUB2 18-Jun-2019_b noDFE&EqOFF
 - O HUB2 18-Jun-2019_c noDFE&EqOFF
 - O HUB2 19-Jun-2019_a noDFE&EqOFF
 - O HUB2 19-Jun-2019_b noDFE&EqOFF
 - O
- Hub1:** SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017
- Hub2:** SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017
- HTM3-14:**
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM 11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

Hub2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Percentage Open Horizontal

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

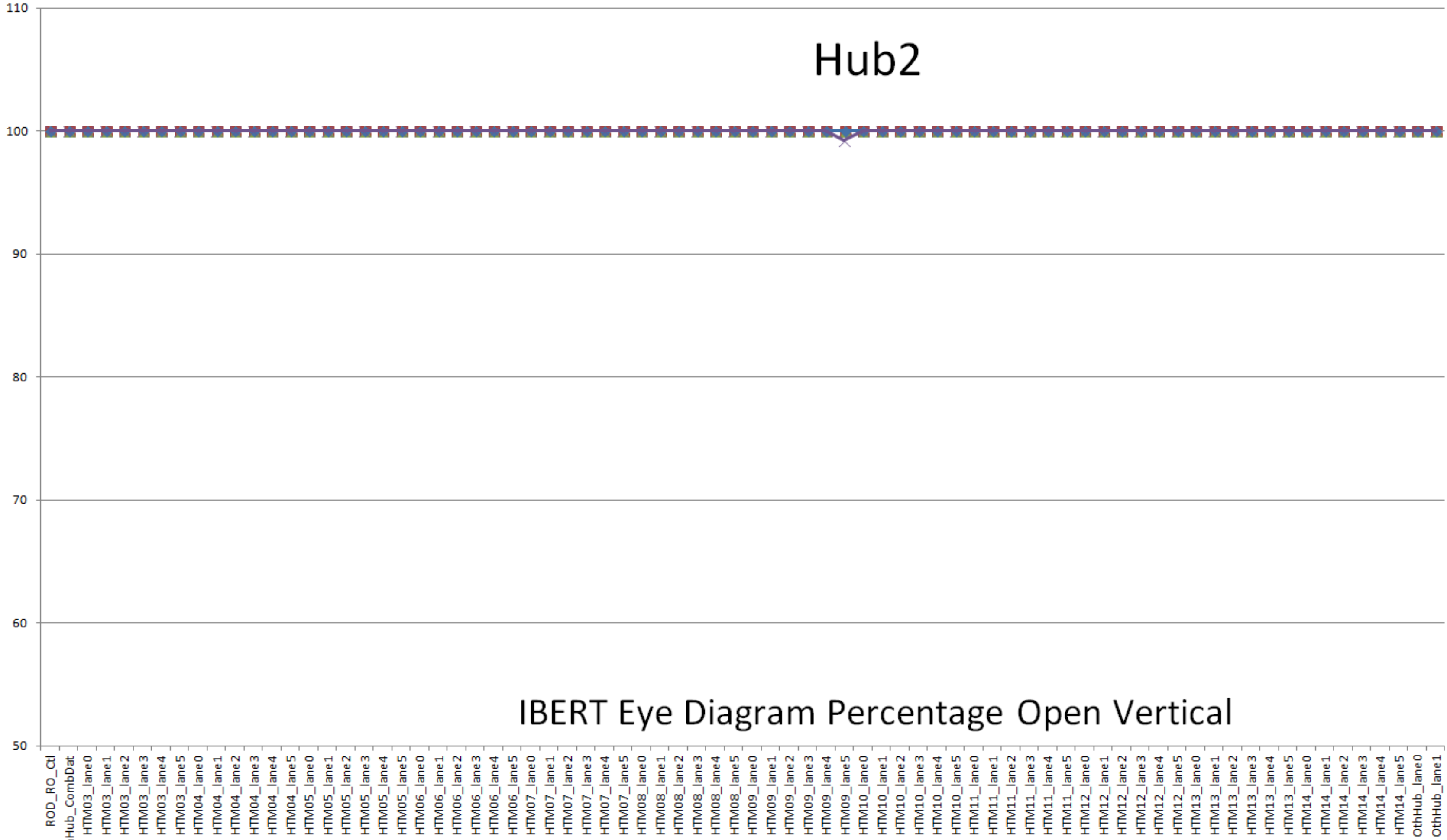
HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

Hub2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Percentage Open Vertical

- V% HUB2 17-Jun-2019_b noDFE&EqOFF
- V% HUB2 18-Jun-2019_a noDFE&EqOFF
- V% HUB2 18-Jun-2019_b noDFE&EqOFF
- V% HUB2 18-Jun-2019_c noDFE&EqOFF
- V% HUB2 19-Jun-2019_a noDFE&EqOFF
- V% HUB2 19-Jun-2019_b noDFE&EqOFF
- V%

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

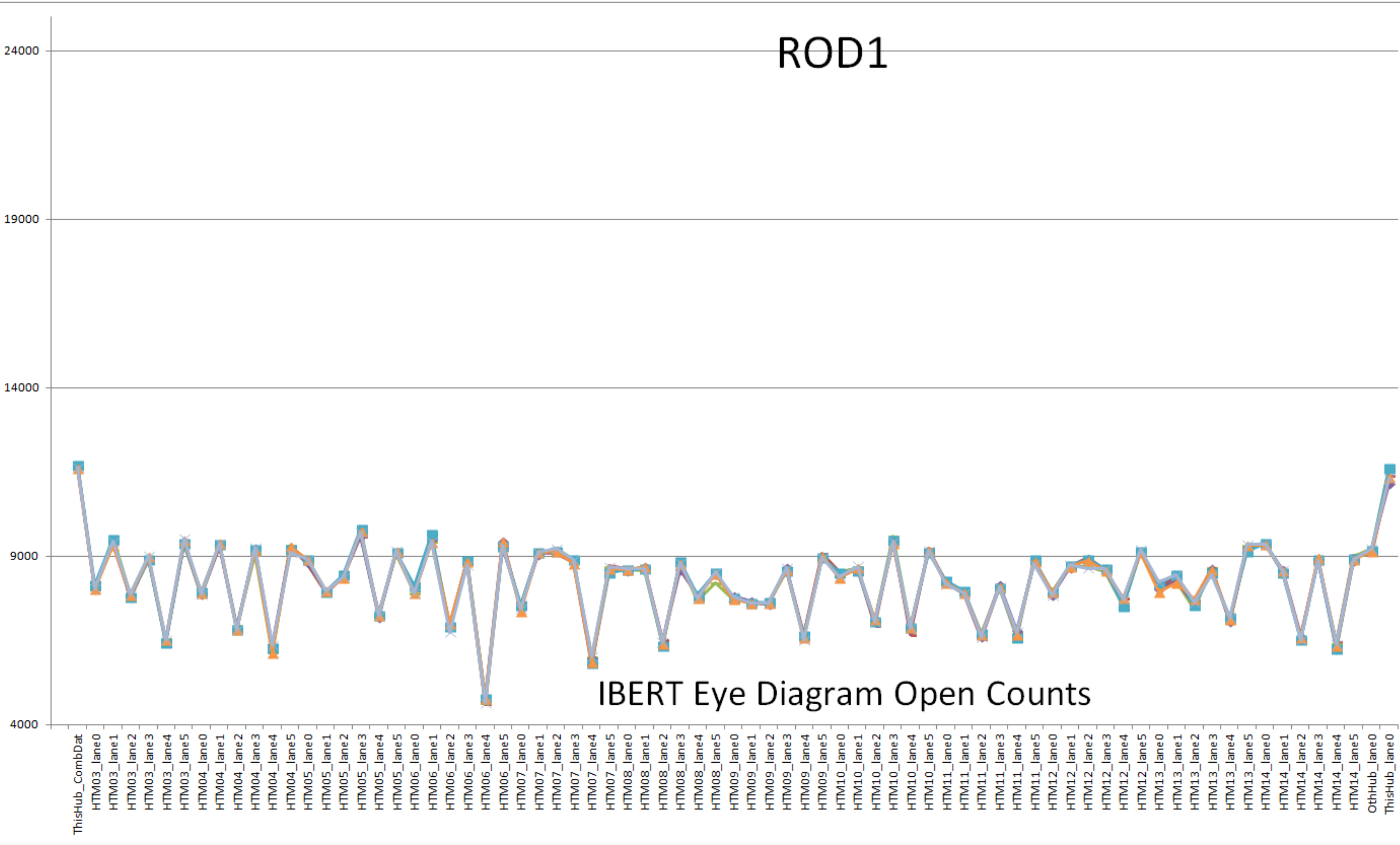
HTM 3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM 11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

ROD1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Open Counts

- O ROD1 17-Jun-2019_b noDFE&EqOFF
- O ROD1 18-Jun-2019_a noDFE&EqOFF
- O ROD1 18-Jun-2019_b noDFE&EqOFF
- O ROD1 18-Jun-2019_c noDFE&EqOFF
- O ROD1 19-Jun-2019_a noDFE&EqOFF
- O ROD1 19-Jun-2019_b noDFE&EqOFF
- O

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

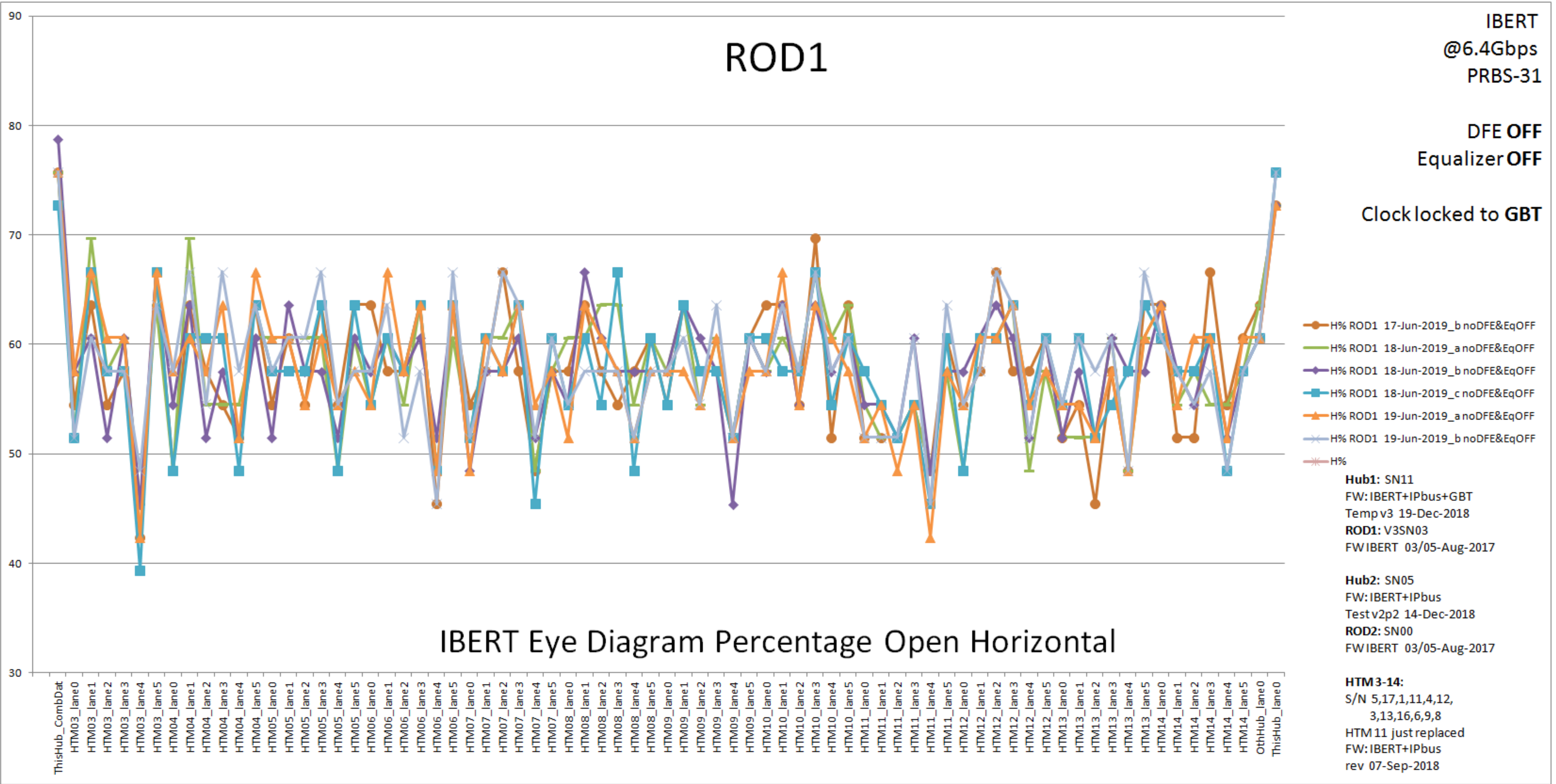
HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

ROD1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



Legend:
● H% ROD1 17-Jun-2019_b noDFE&EqOFF
■ H% ROD1 18-Jun-2019_a noDFE&EqOFF
◆ H% ROD1 18-Jun-2019_b noDFE&EqOFF
■ H% ROD1 18-Jun-2019_c noDFE&EqOFF
▲ H% ROD1 19-Jun-2019_a noDFE&EqOFF
× H% ROD1 19-Jun-2019_b noDFE&EqOFF
* H%

Hub1: SN11
FW: IBERT+IPbus+GBT
Temp v3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Test v2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

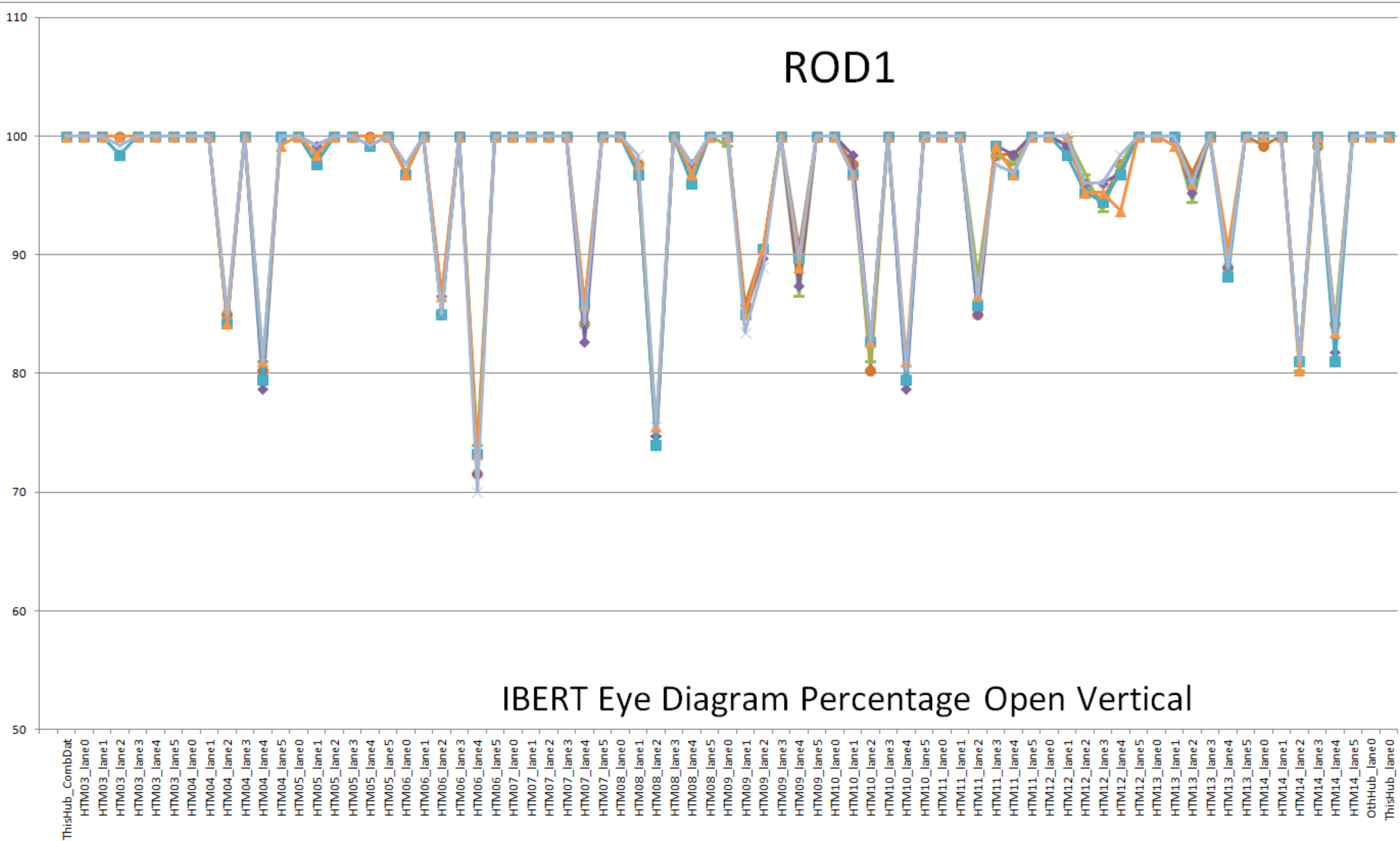
IBERT Eye Diagram Percentage Open Horizontal

ROD1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Percentage Open Vertical

- V% ROD1 17-Jun-2019_b noDFE&EqOFF
- V% ROD1 18-Jun-2019_a noDFE&EqOFF
- ◆ V% ROD1 18-Jun-2019_b noDFE&EqOFF
- V% ROD1 18-Jun-2019_c noDFE&EqOFF
- ▲ V% ROD1 19-Jun-2019_a noDFE&EqOFF
- ✕ V% ROD1 19-Jun-2019_b noDFE&EqOFF
- ✕ V%

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

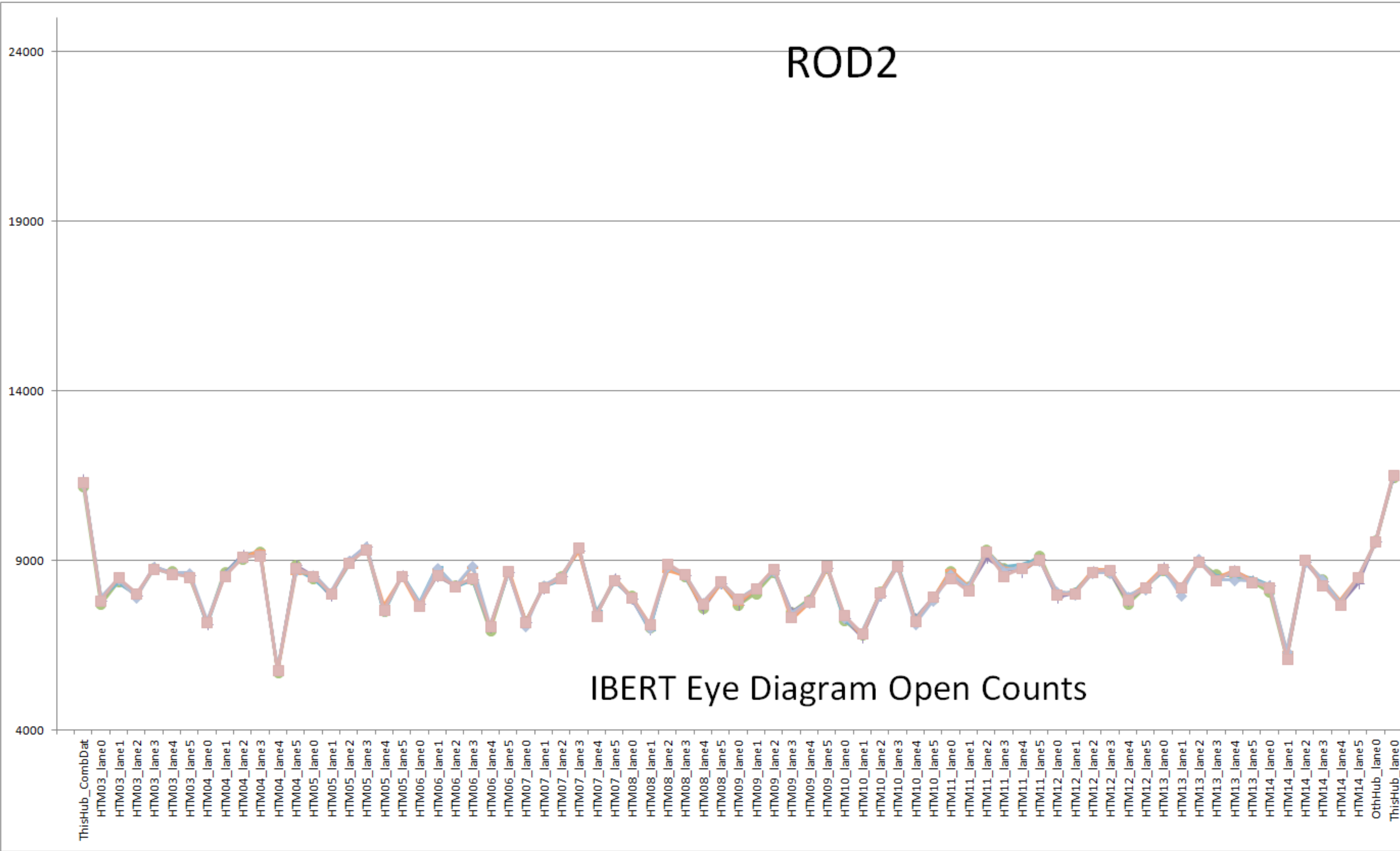
HTM 3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM 11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Open Counts

Hub1: SN11
FW: IBERT+IPbus+GBT
Temp v3 19-Dec-2018
ROD1: V3SN03
FW IBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Test v2p2 14-Dec-2018
ROD2: SN00
FW IBERT 03/05-Aug-2017

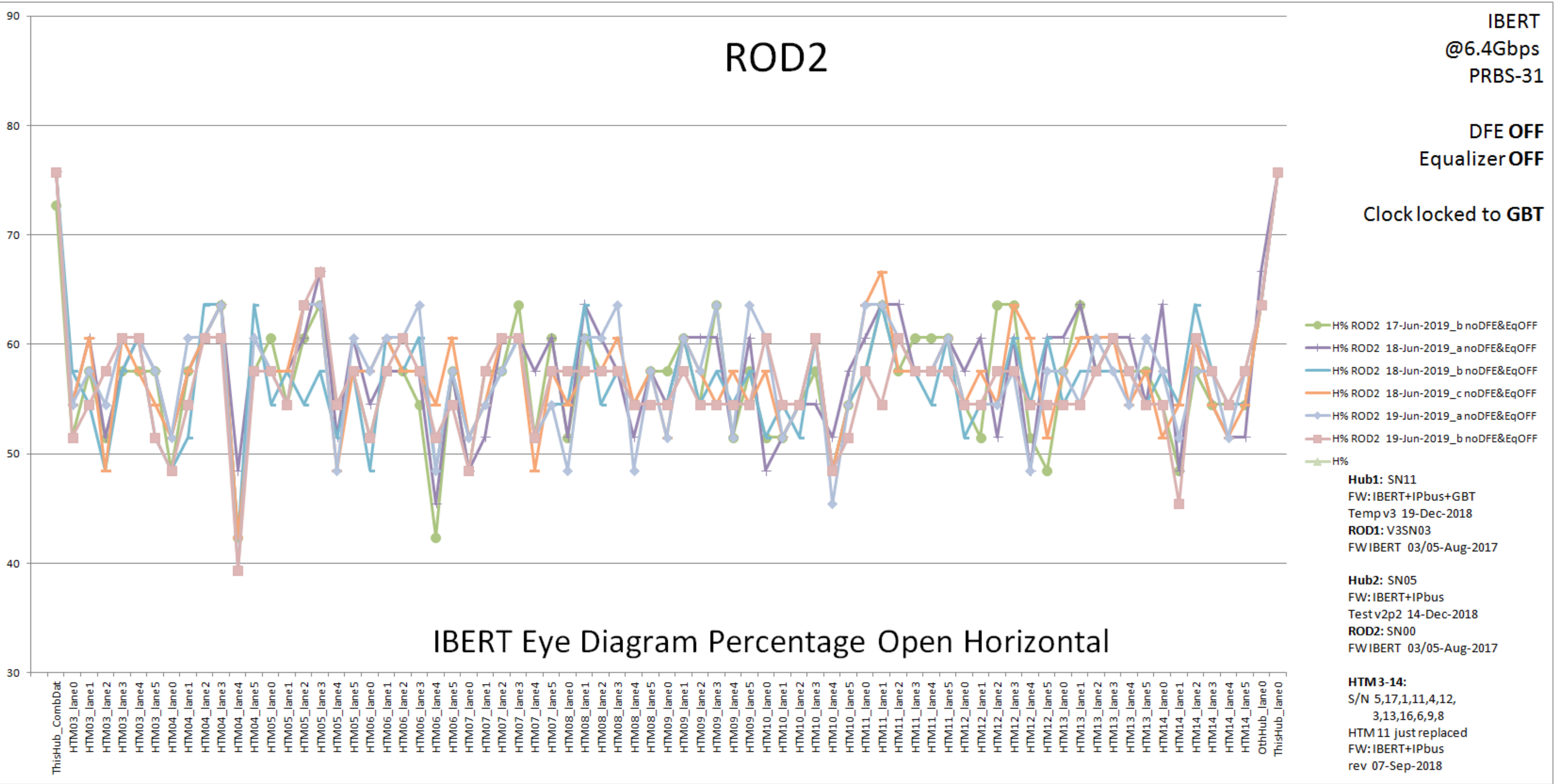
HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT

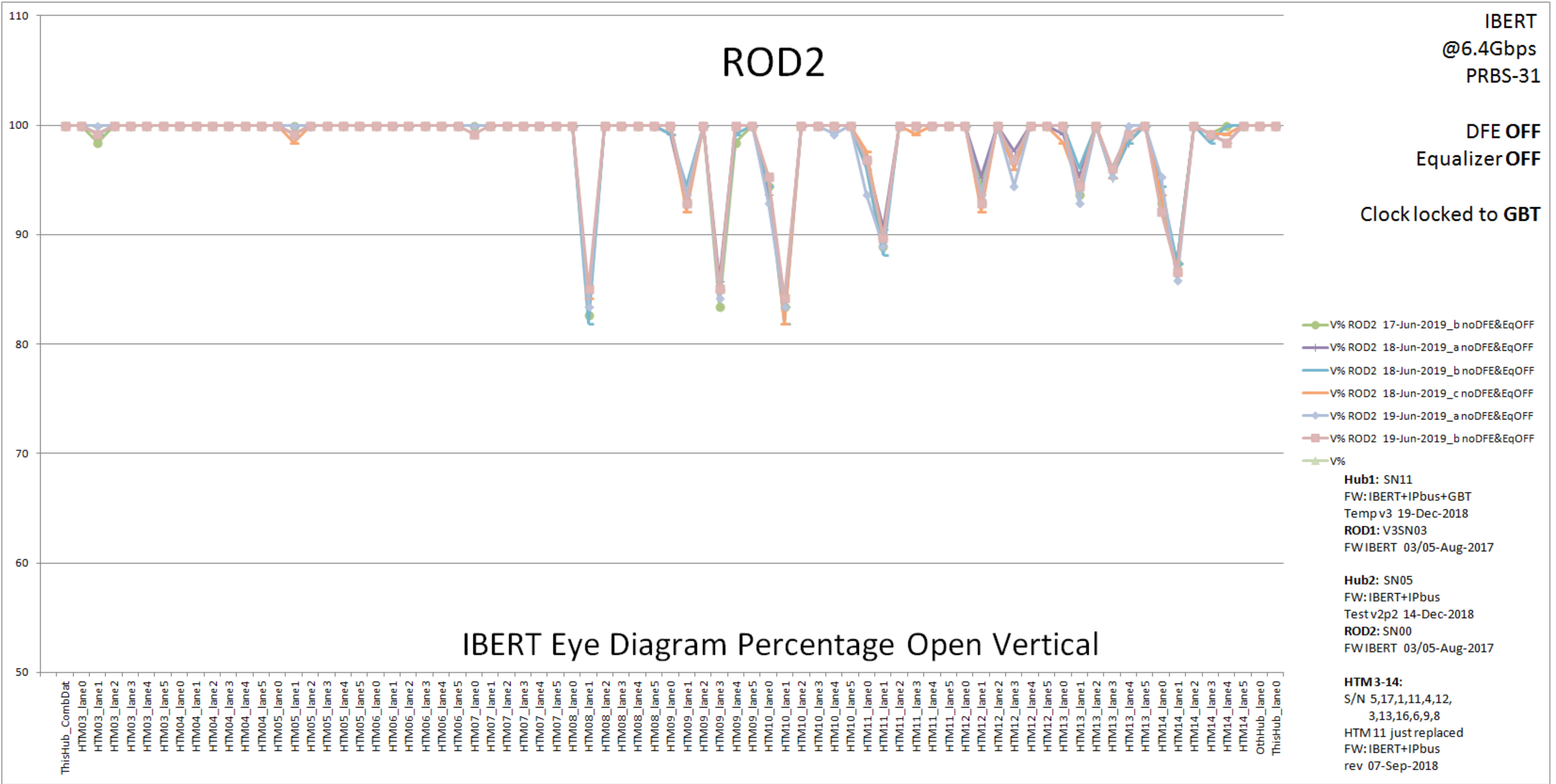


ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



- V% ROD2 17-Jun-2019_b noDFE&EqOFF
- V% ROD2 18-Jun-2019_a noDFE&EqOFF
- V% ROD2 18-Jun-2019_b noDFE&EqOFF
- V% ROD2 18-Jun-2019_c noDFE&EqOFF
- V% ROD2 19-Jun-2019_a noDFE&EqOFF
- V% ROD2 19-Jun-2019_b noDFE&EqOFF
- V%

Hub1: SN11
FW: IBERT+IPbus+GBT
Temp v3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

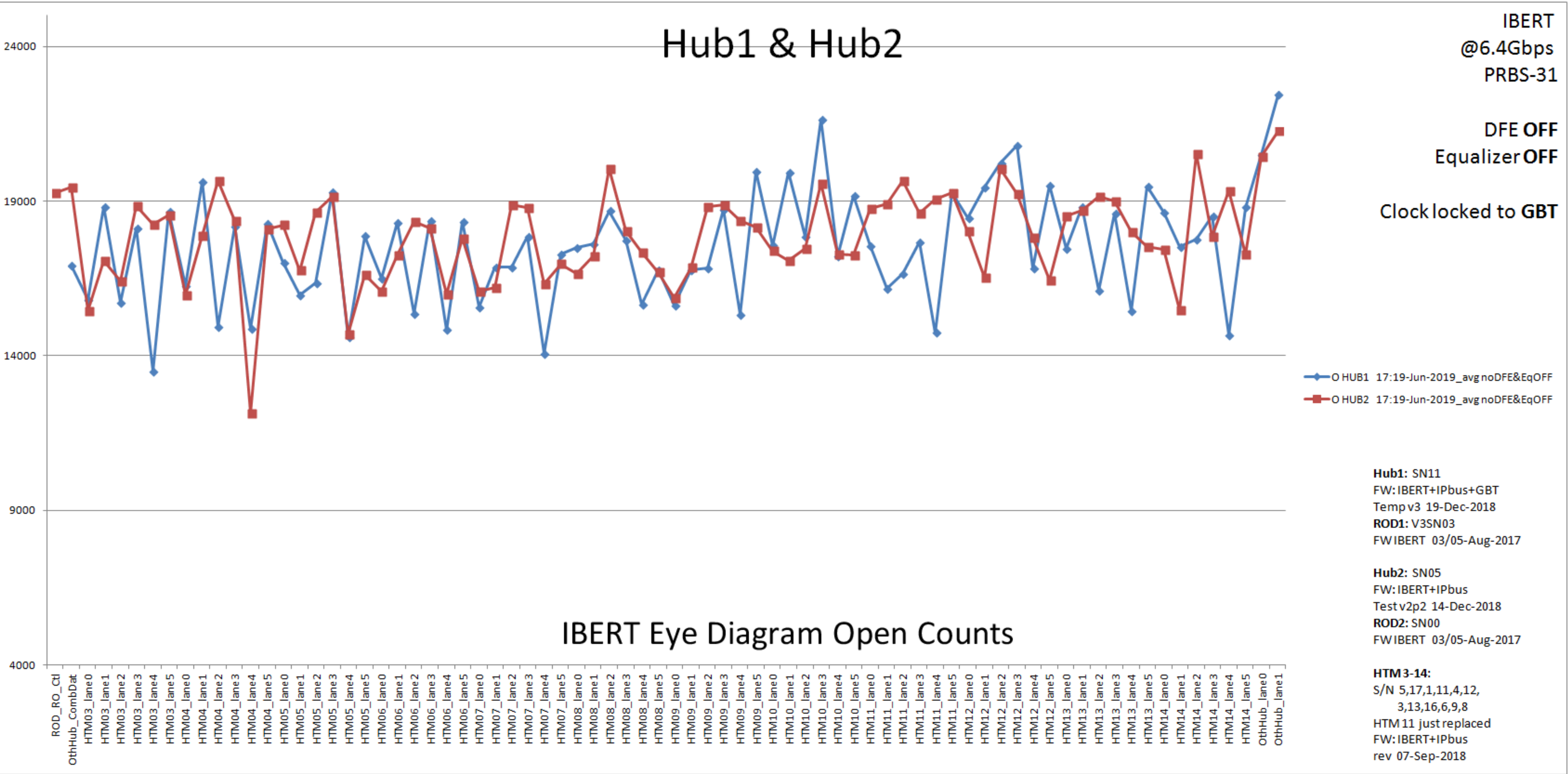
IBERT Eye Diagram Percentage Open Vertical

Hub1 & Hub2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



Legend:
◆ O HUB1 17:19-Jun-2019_avg noDFE&EqOFF
■ O HUB2 17:19-Jun-2019_avg noDFE&EqOFF

IBERT Eye Diagram Open Counts

Hub1: SN11
 FW: IBERT+IPbus+GBT
 Temp v3 19-Dec-2018
ROD1: V3SN03
 FWIBERT 03/05-Aug-2017

Hub2: SN05
 FW: IBERT+IPbus
 Test v2p2 14-Dec-2018
ROD2: SN00
 FWIBERT 03/05-Aug-2017

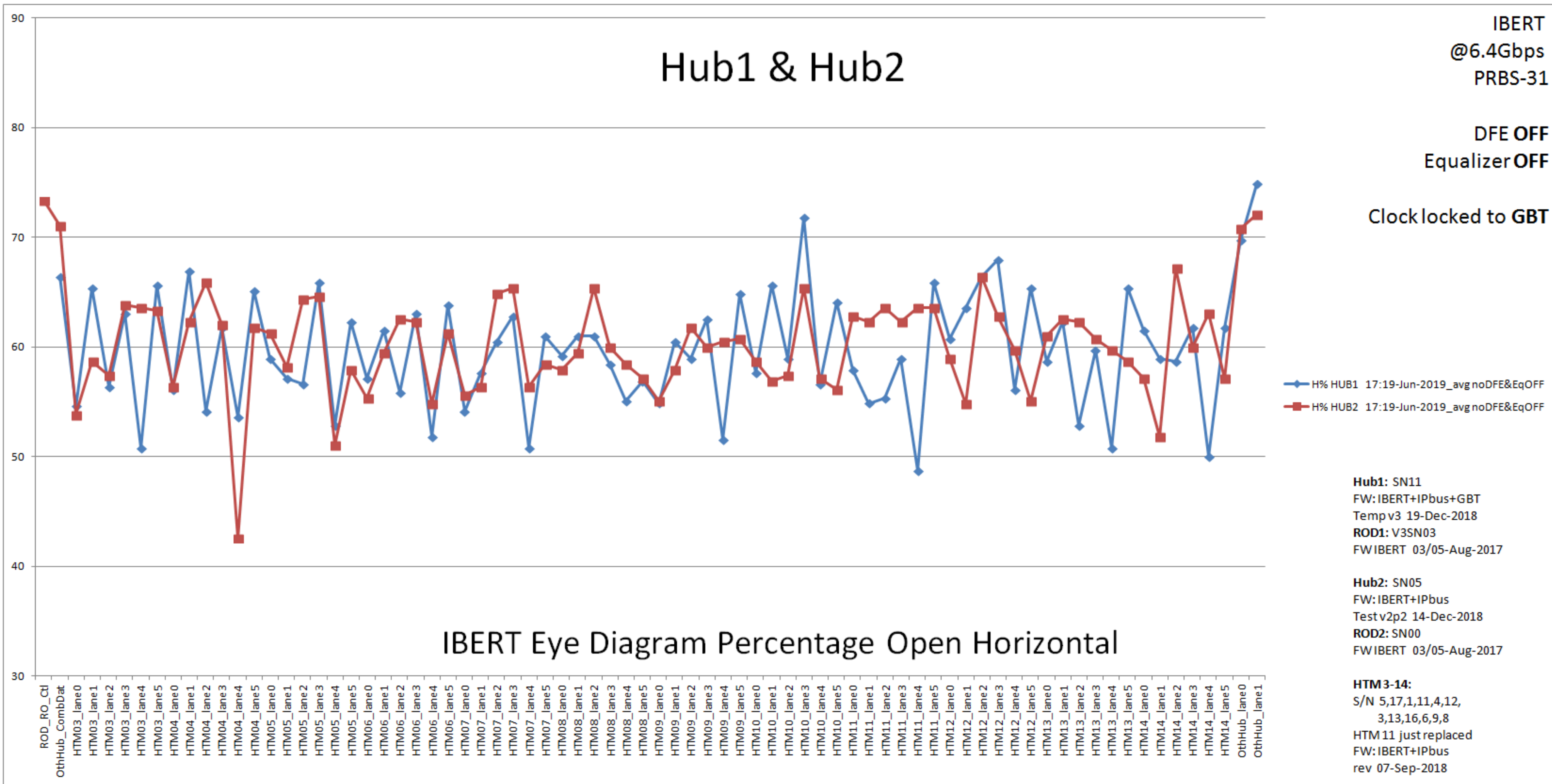
HTM3-14:
 S/N 5,17,1,11,4,12,
 3,13,16,6,9,8
 HTM11 just replaced
 FW: IBERT+IPbus
 rev 07-Sep-2018

Hub1 & Hub2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clocklocked to GBT



IBERT Eye Diagram Percentage Open Horizontal

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

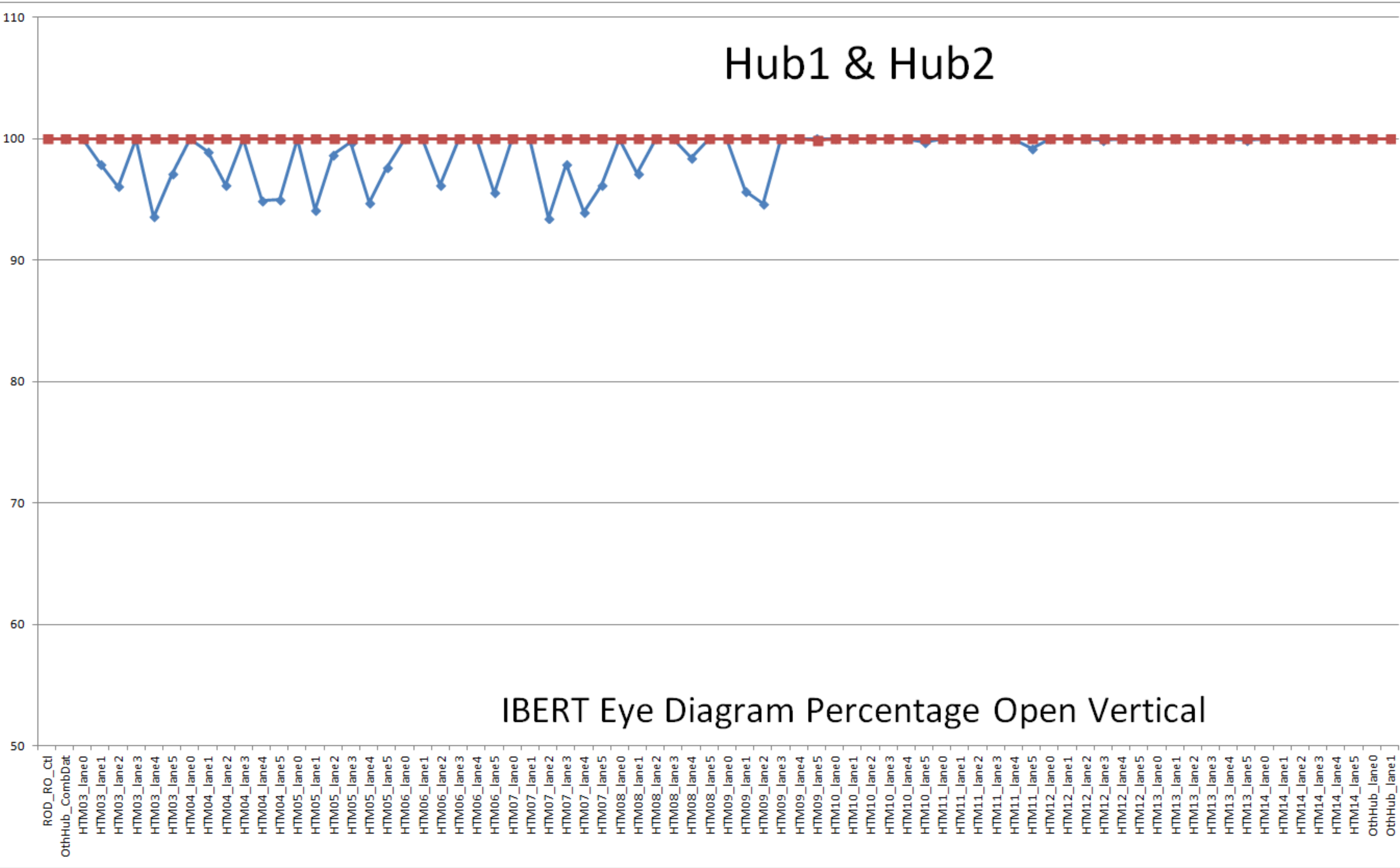
HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

Hub1 & Hub2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



◆ V% HUB1 17:19-Jun-2019_avg noDFE&EqOFF
■ V% HUB2 17:19-Jun-2019_avg noDFE&EqOFF

Hub1: SN11
FW: IBERT+IPbus+GBT
Temp v3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Test v2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

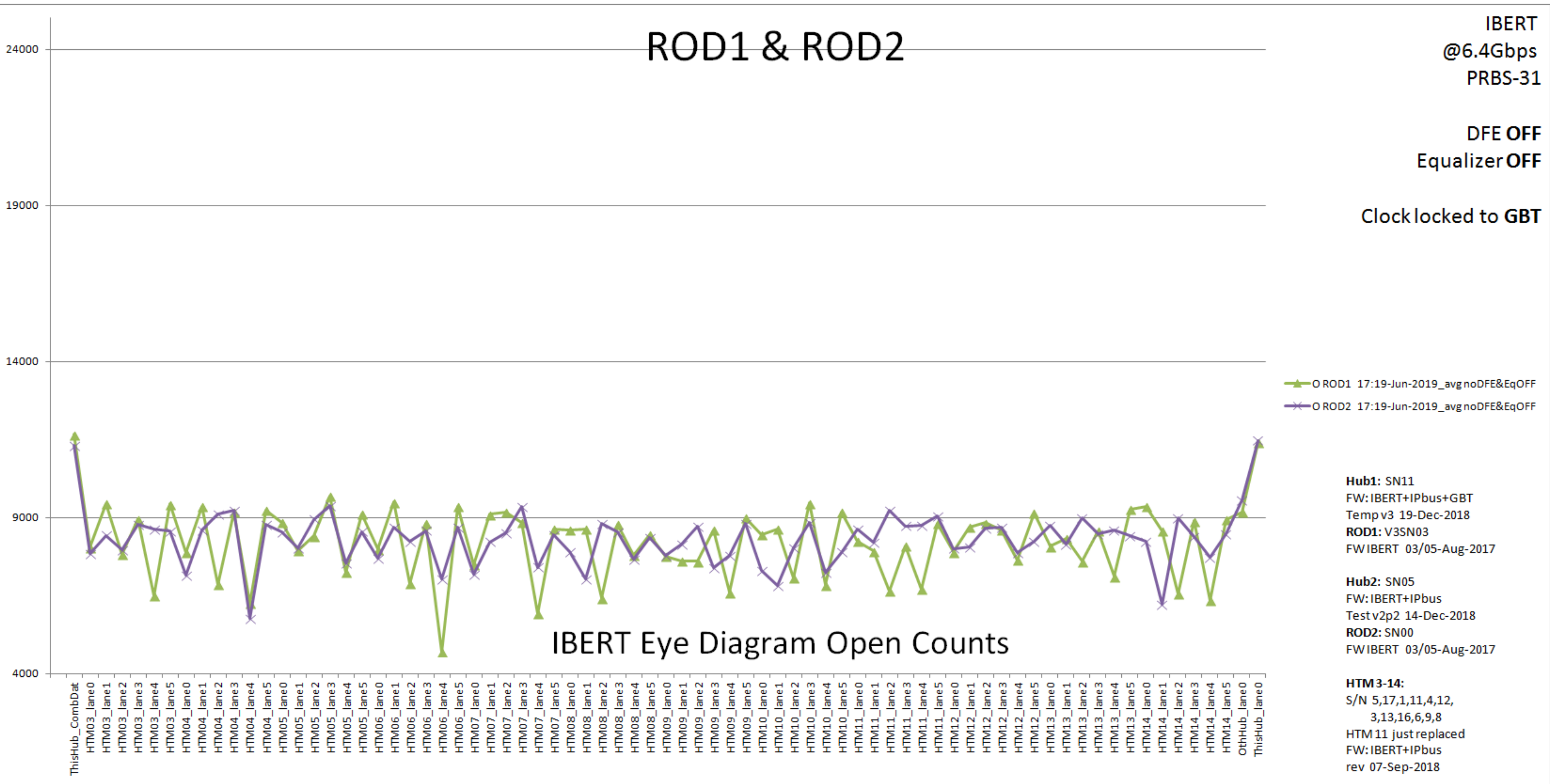
IBERT Eye Diagram Percentage Open Vertical

ROD1 & ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Open Counts

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

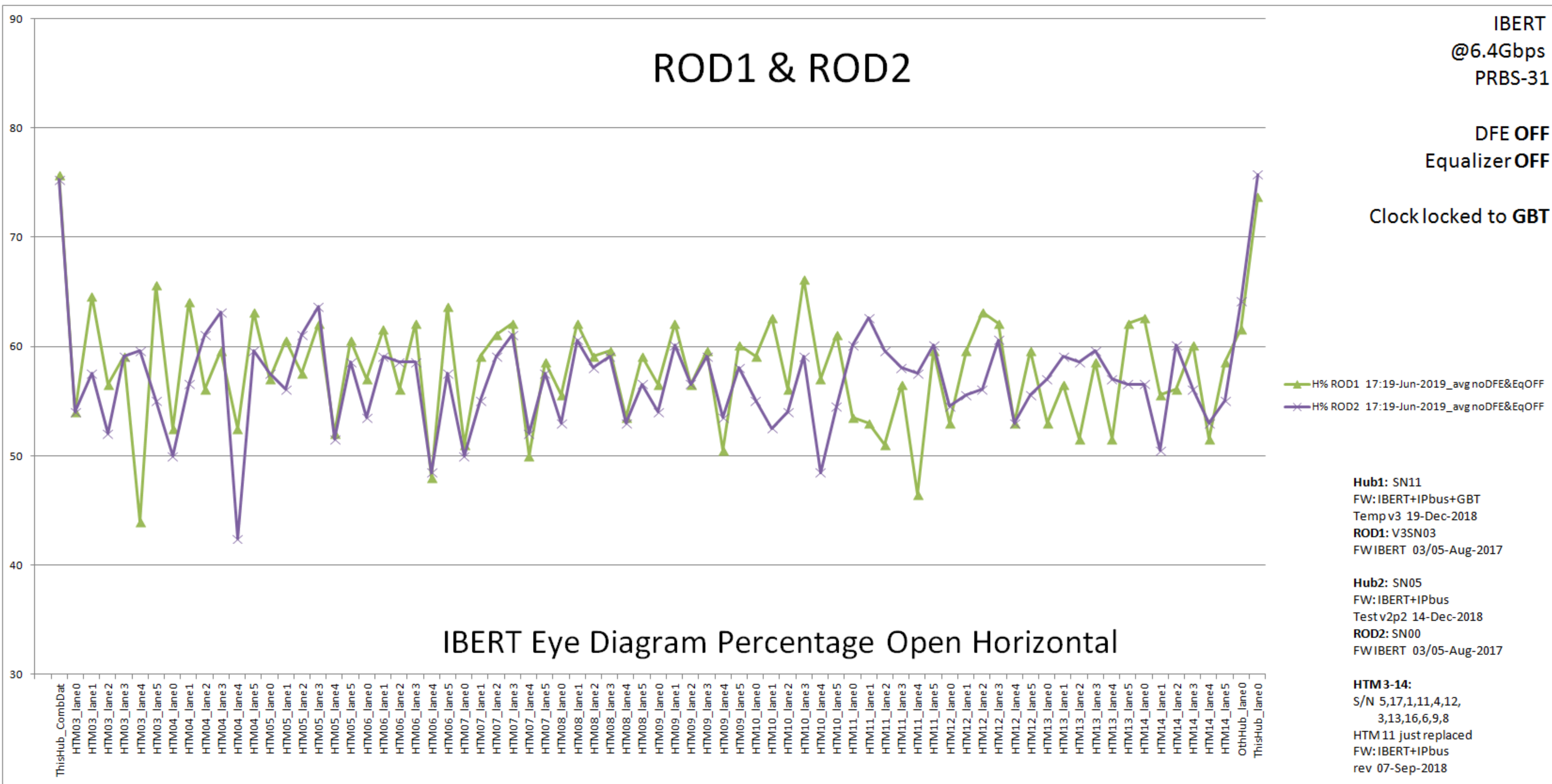
HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

ROD1 & ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



IBERT Eye Diagram Percentage Open Horizontal

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

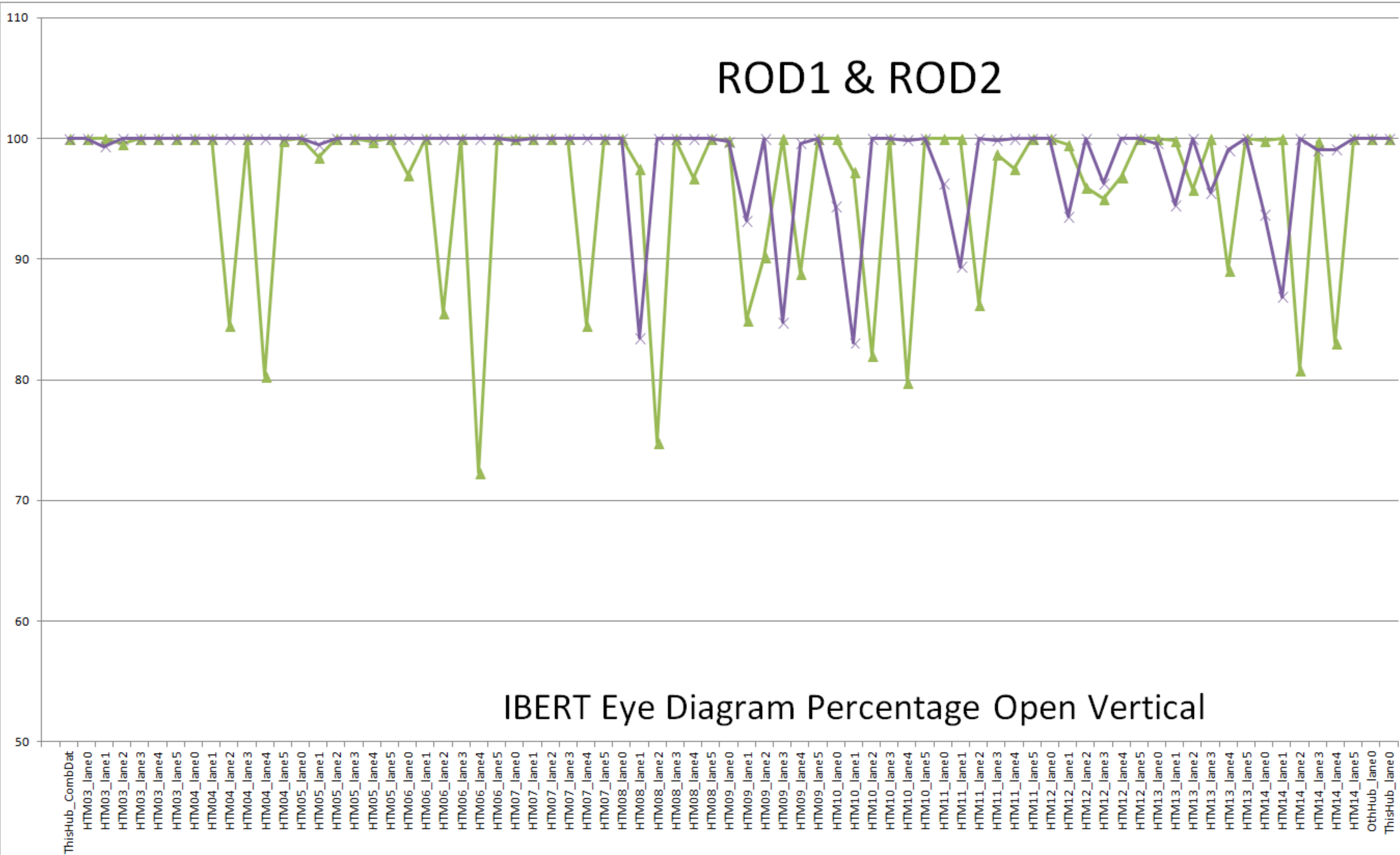
HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

ROD1 & ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



▲ V% ROD1 17:19-Jun-2019_avg noDFE&EqOFF
× V% ROD2 17:19-Jun-2019_avg noDFE&EqOFF

Hub1: SN11
 FW: IBERT+IPbus+GBT
 Tempv3 19-Dec-2018
ROD1: V3SN03
 FWIBERT 03/05-Aug-2017

Hub2: SN05
 FW: IBERT+IPbus
 Testv2p2 14-Dec-2018
ROD2: SN00
 FWIBERT 03/05-Aug-2017

HTM3-14:
 S/N 5,17,1,11,4,12,
 3,13,16,6,9,8
 HTM11 just replaced
 FW: IBERT+IPbus
 rev 07-Sep-2018

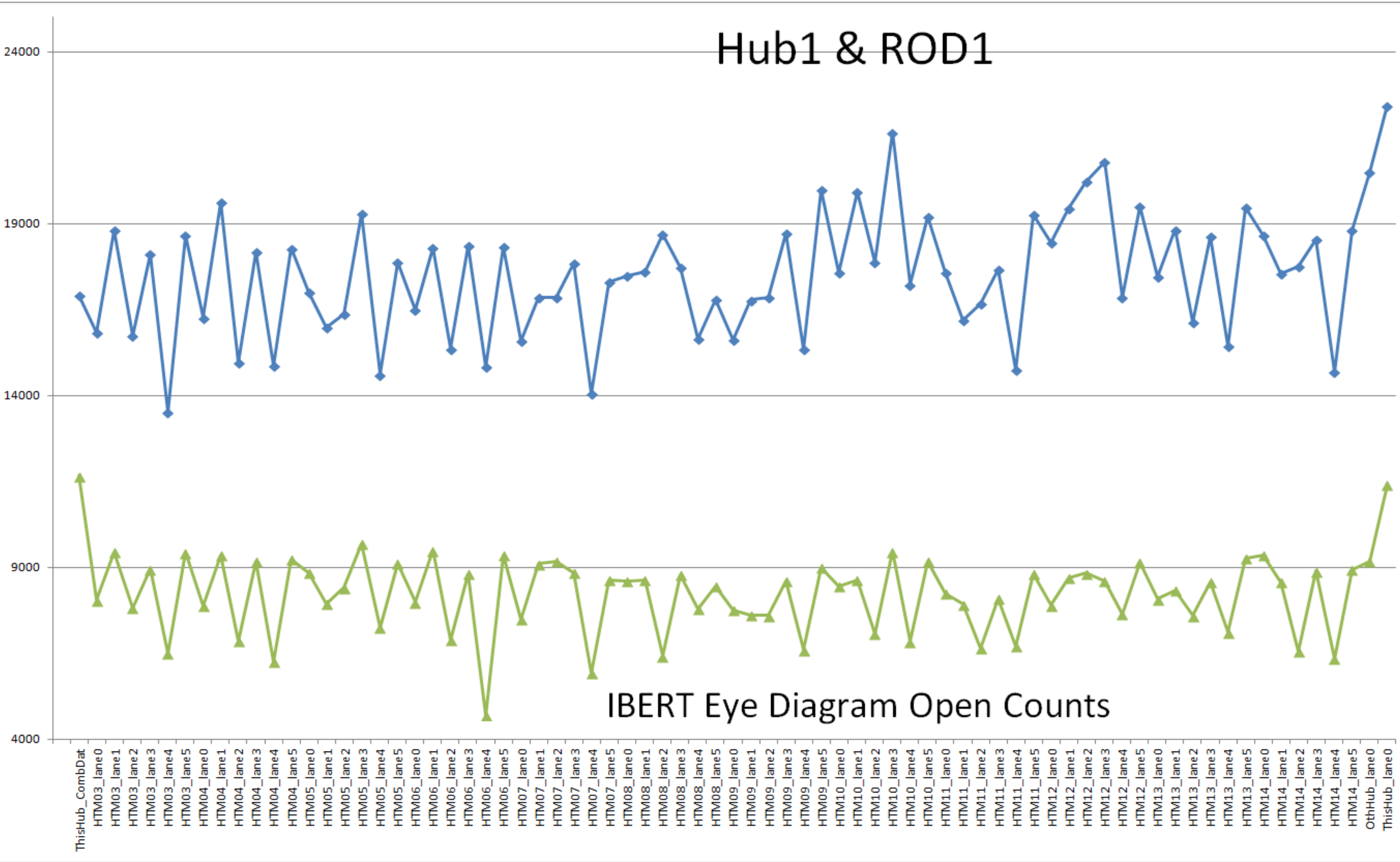
IBERT Eye Diagram Percentage Open Vertical

Hub1 & ROD1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



◆ O HUB1 17:19-Jun-2019_avg noDFE&EqOFF
▲ O ROD1 17:19-Jun-2019_avg noDFE&EqOFF

Hub1: SN11
 FW: IBERT+IPbus+GBT
 Tempv3 19-Dec-2018
ROD1: V3SN03
 FWIBERT 03/05-Aug-2017

Hub2: SN05
 FW: IBERT+IPbus
 Testv2p2 14-Dec-2018
ROD2: SN00
 FWIBERT 03/05-Aug-2017

HTM 3-14:
 S/N 5,17,1,11,4,12,
 3,13,16,6,9,8
 HTM 11 just replaced
 FW: IBERT+IPbus
 rev 07-Sep-2018

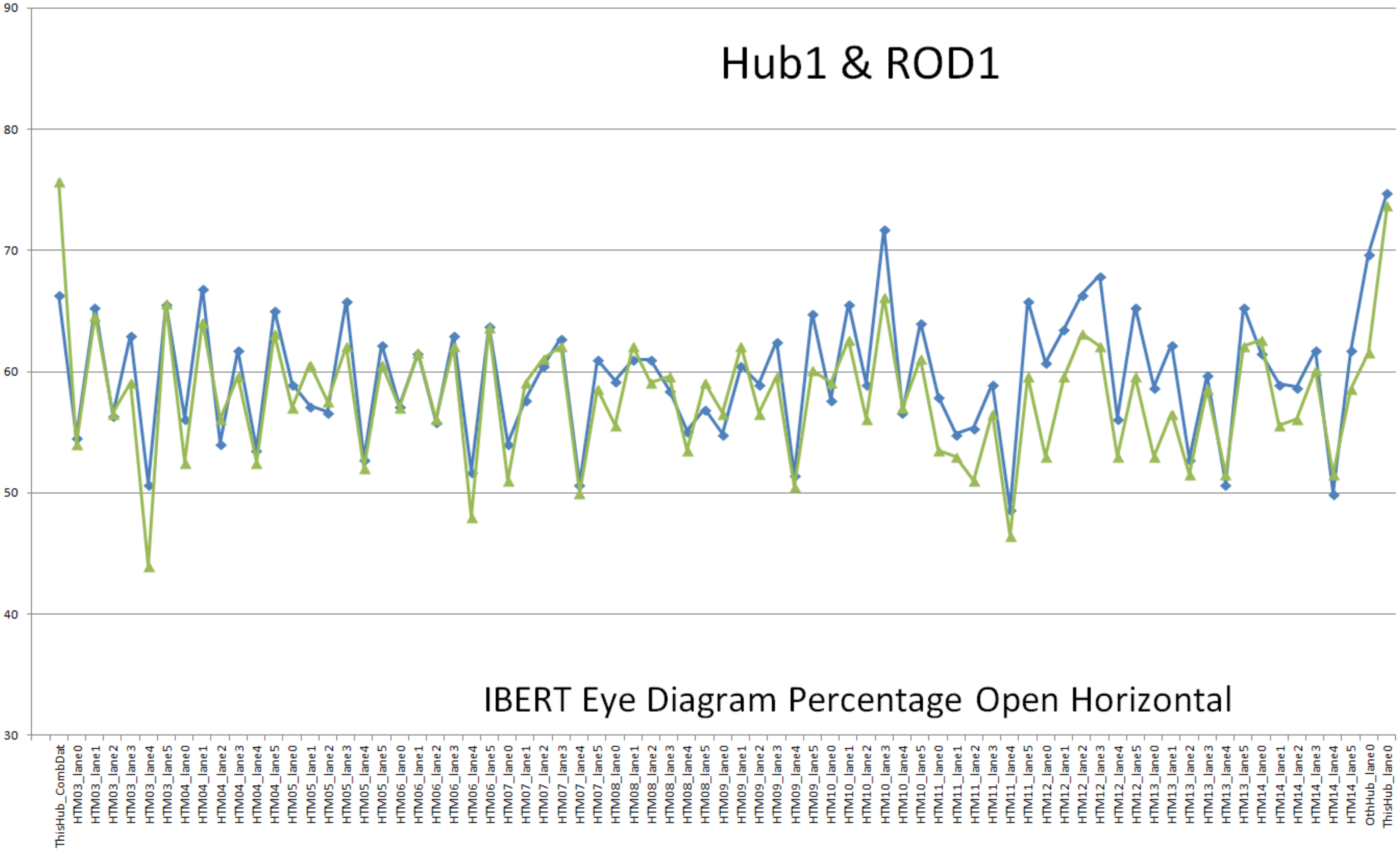
IBERT Eye Diagram Open Counts

Hub1 & ROD1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



H% HUB1 17:19-Jun-2019_avg noDFE&EqOFF
H% ROD1 17:19-Jun-2019_avg noDFE&EqOFF

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM 11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

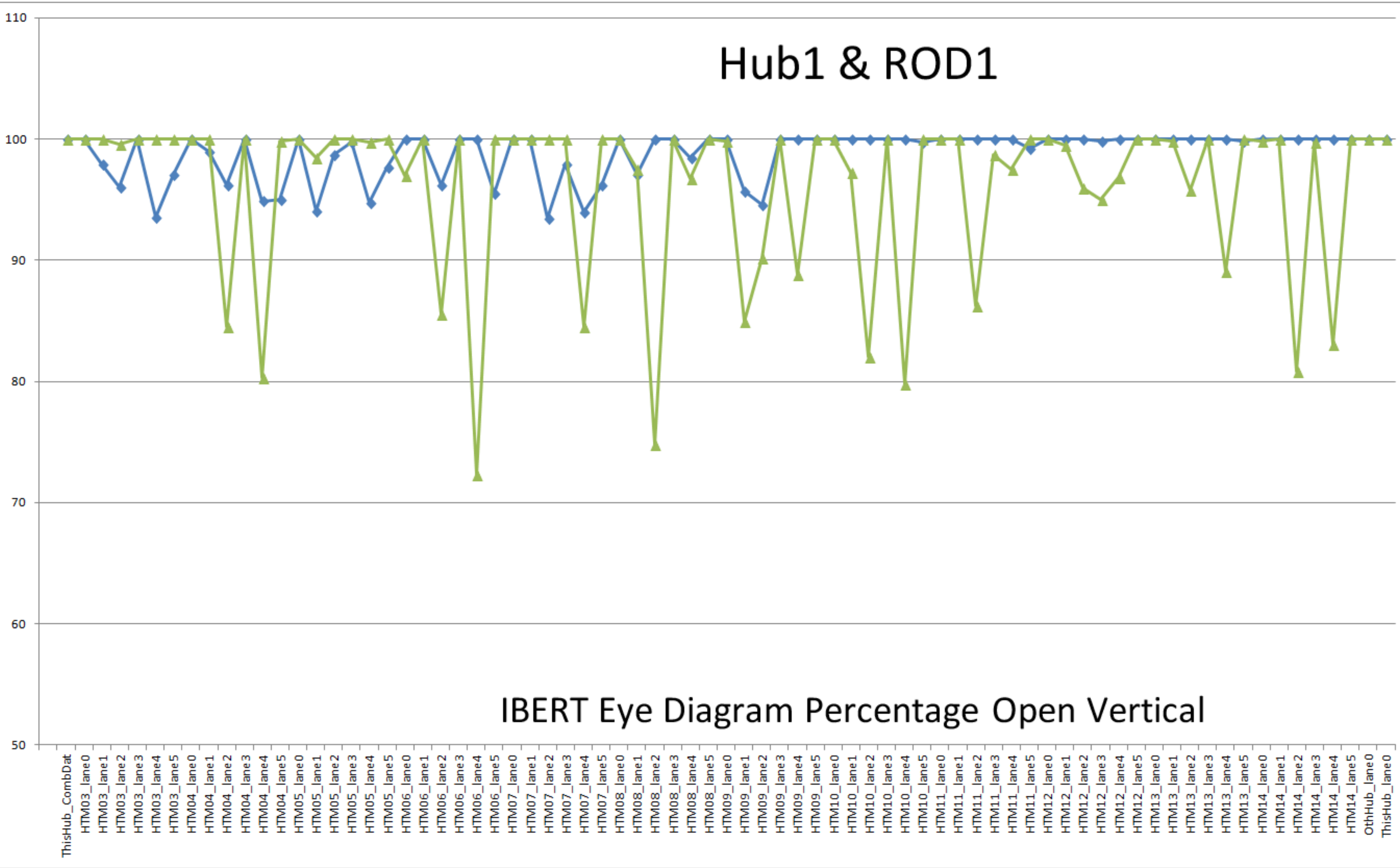
IBERT Eye Diagram Percentage Open Horizontal

Hub1 & ROD1

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



◆ V% HUB1 17:19-Jun-2019_avg noDFE&EqOFF
▲ V% ROD1 17:19-Jun-2019_avg noDFE&EqOFF

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

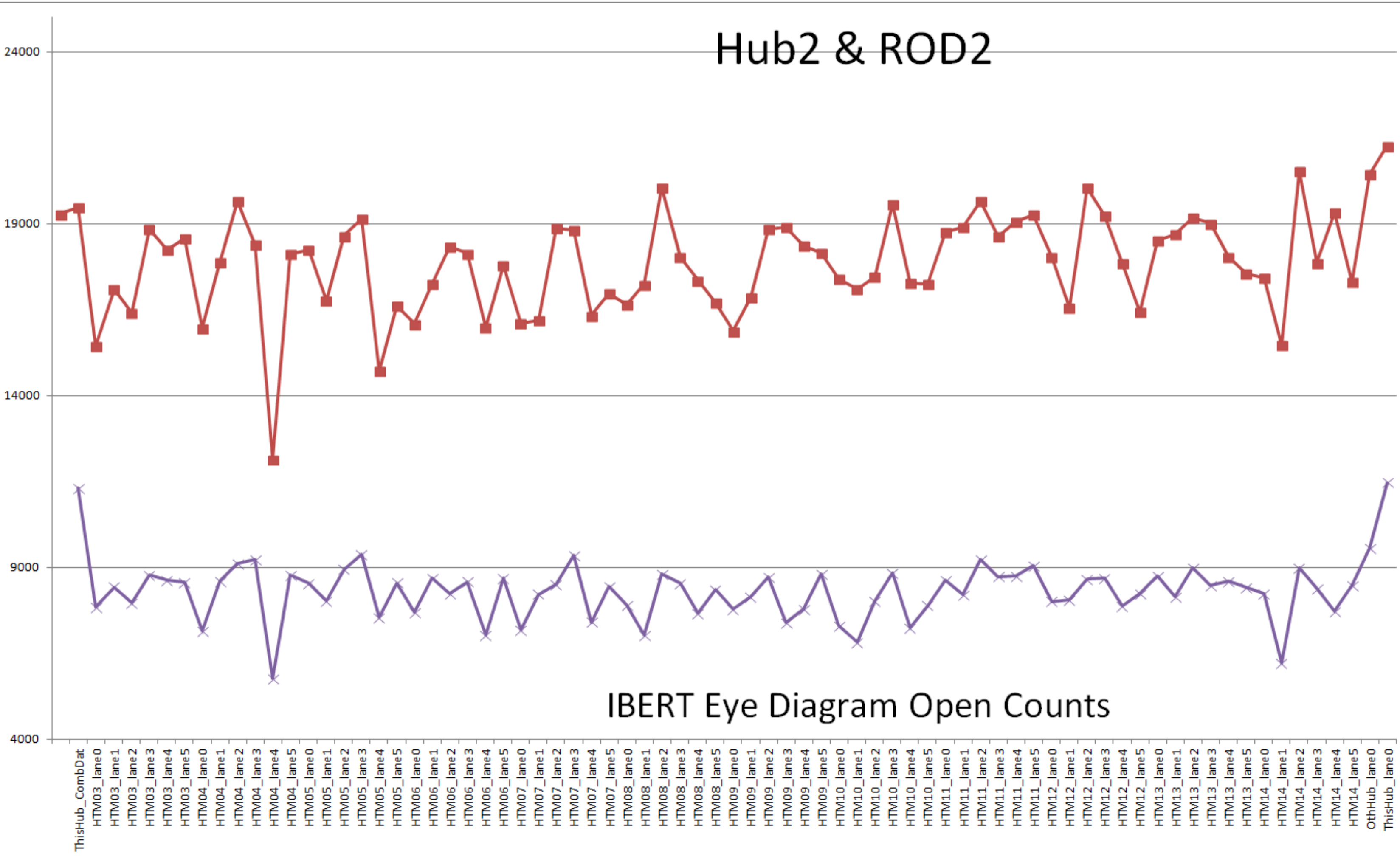
IBERT Eye Diagram Percentage Open Vertical

Hub2 & ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



■ O HUB2 17:19-Jun-2019_avg noDFE&EqOFF
 x O ROD2 17:19-Jun-2019_avg noDFE&EqOFF

Hub1: SN11
 FW: IBERT+IPbus+GBT
 Tempv3 19-Dec-2018
ROD1: V3SN03
 FWIBERT 03/05-Aug-2017

Hub2: SN05
 FW: IBERT+IPbus
 Testv2p2 14-Dec-2018
ROD2: SN00
 FWIBERT 03/05-Aug-2017

HTM3-14:
 S/N 5,17,1,11,4,12,
 3,13,16,6,9,8
 HTM11 just replaced
 FW: IBERT+IPbus
 rev 07-Sep-2018

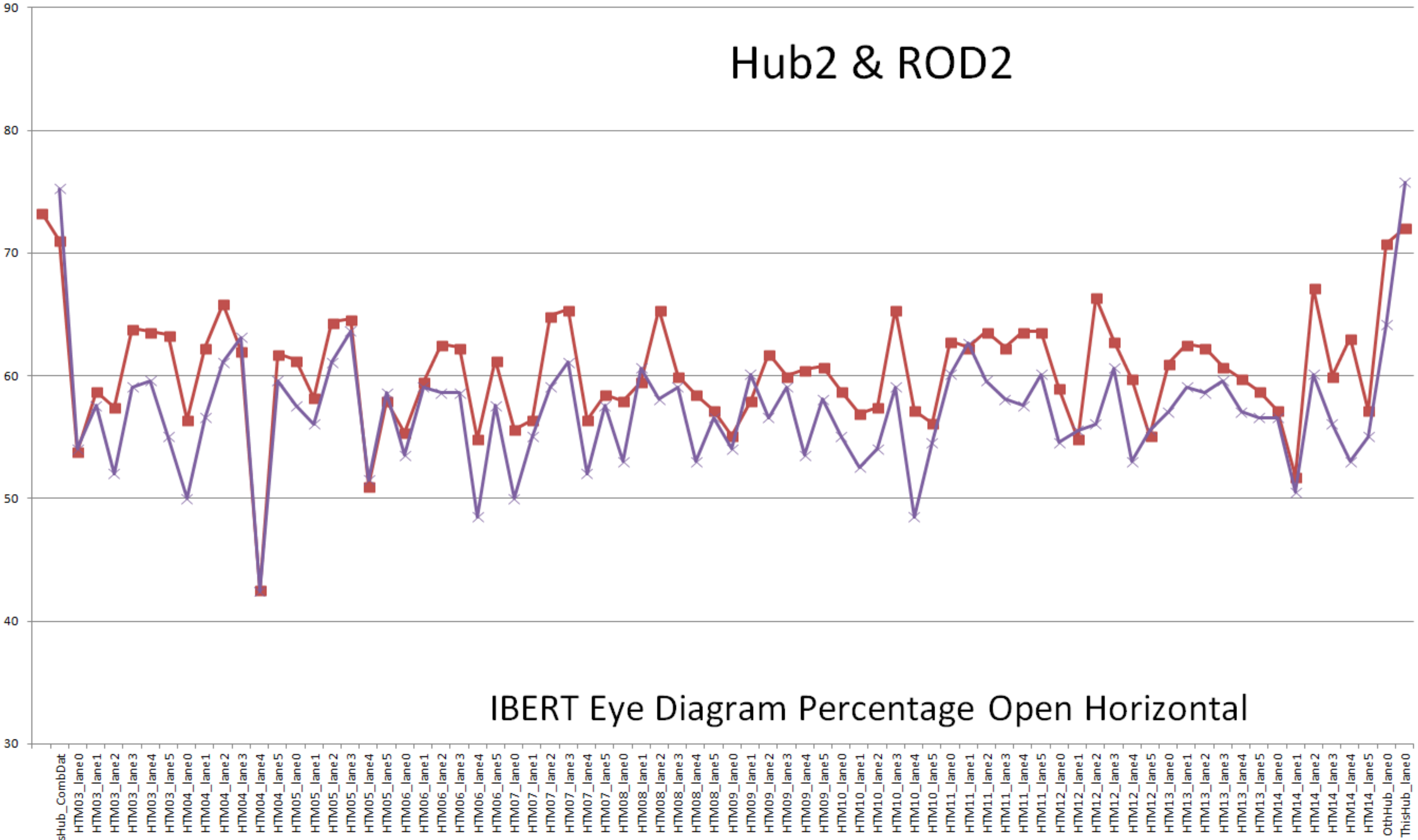
IBERT Eye Diagram Open Counts

Hub2 & ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



—■— H% HUB2 17:19-Jun-2019_avg noDFE&EqOFF
—x— H% ROD2 17:19-Jun-2019_avg noDFE&EqOFF

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM 3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM 11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

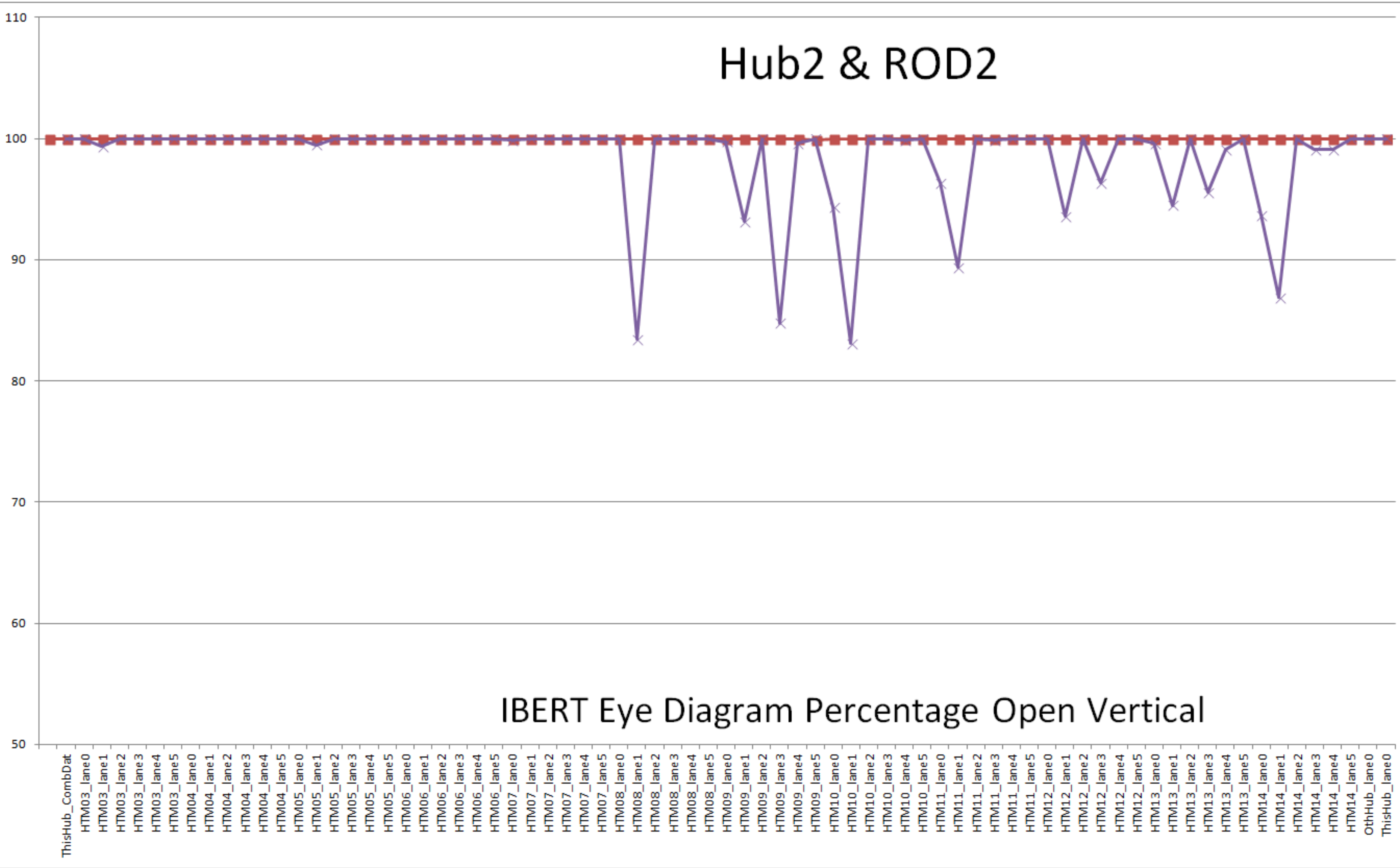
IBERT Eye Diagram Percentage Open Horizontal

Hub2 & ROD2

IBERT
@6.4Gbps
PRBS-31

DFE OFF
Equalizer OFF

Clock locked to GBT



V% HUB2 17:19-Jun-2019_avg noDFE&EqOFF
V% ROD2 17:19-Jun-2019_avg noDFE&EqOFF

Hub1: SN11
FW: IBERT+IPbus+GBT
Tempv3 19-Dec-2018
ROD1: V3SN03
FWIBERT 03/05-Aug-2017

Hub2: SN05
FW: IBERT+IPbus
Testv2p2 14-Dec-2018
ROD2: SN00
FWIBERT 03/05-Aug-2017

HTM3-14:
S/N 5,17,1,11,4,12,
3,13,16,6,9,8
HTM11 just replaced
FW: IBERT+IPbus
rev 07-Sep-2018

IBERT Eye Diagram Percentage Open Vertical