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ASIM Science Data Centre (ASDC)
MXGS and MMIA Configuration Tables

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Table 0.1 Change Log

ECR/ECO	Description	Rev	Date
Initial	First Issue for internal review	1.0	2025-07-28

0 Document Metadata

0.1 Purpose

The purpose of this document is to give a short description of the configuration tables for the ASIM MXGS and MMIA instruments.

0.2 Scope

This document covers the configuration tables for the MXGS and MMIA instruments on ASIM, and the long-term changes (EEPROM) applied to them during the operation of ASIM from the end of the commissioning phase. It does not cover the commissioning phase. It also does not cover short-term changes (SRAM) applied during specific operational phases, e.g., calibration periods.

0.3 Applicable Documents

The following documents are applicable to the definitions and activities described within this document.

0.4 Reference Documents

The following documents contain supporting and background information to be considered during the activities specified within this document.

Ref.	Doc. No.	Title	Issue
RD#1	Space Science Reviews, 215(26), March, 2019 Østgaard, N., Balling, J.E., Bjørnsen, T. et al. Space Sci Rev (2019) 215: 23. https://doi.org/10.1007/s11214-018-0573-7	The ASIM Mission on the International Space Station	
RD#2	Space Science Reviews, 215(23), February, 2019 Østgaard, N., Balling, J.E., Bjørnsen, T. et al. Space Sci Rev (2019) 215: 23. https://doi.org/10.1007/s11214-018-0573-7	The Modular X- and Gamma-Ray Sensor (MXGS) of the ASIM Payload on the International Space Station	
RD#3	Space Science Reviews, 215(28), June, 2019 Chanrion, O., Neubert, T., Lundgaard Rasmussen, I. et al. Space Sci Rev (2019) 215: 28. https://doi.org/10.1007/s11214-019-0593-y	The Modular Multispectral Imaging Array (MMIA) of the ASIM Payload on the International Space Station	
RD#4	ASIM-TER-MMIA-ICD-002	ASIM MMIA Software ICD	3D
RD#5	ASIM-TER-MXGS-ICD-001	ASIM MXGS Software ICD	3C

0.5 Abbreviations

ASDC	ASIM Science Data Centre
ASIM	Atmosphere-Space Interaction Monitor
BGO	Bismuth Germanium Oxide
B.USOC	Belgian User Science Operations Center
CCSDS	Consultative Committee on Space Data Systems
CDF	Common Data Format (NASA)
CHU	Camera Head Unit (MMIA)
Col-CC	Columbus Control Centre
CZT	Cadmium-Zinc-Telluride
DAU	Detector Assembly Module
DHPU	Data Handling and Power Unit
DK	Denmark
DMI	Danish Meteorological Institute
DPU	Data Processing Unit
DTU	Technical University of Denmark
ER	Event Report
ERM	Energy Response Matrix
ESA	European Space Agency
ESR	Experiment Science Requirements
ESTEC	European Space Technology Centre
EUMETSAT	European Meteorological Satellite Organisation
FITS	Flexible Image Transport System
FOV	Field of View
FST	Facility Science Team
GLPS	Global Lightning Protection Services
HED	High Energy Detector (MXGS)
HK	House Keeping (data)
HSO	Human Spaceflight and Operations
ISS	International Space Station
LED	Low Energy Detector (MXGS)
LEP	Lightning-induced Electron Precipitation
LIS	Lightning Imaging Sensor
MMIA	Modular Multi-spectral Imaging Array
MTG	Meteosat Third Generation
MXGS	Modular X-ray Gamma-ray Sensor
NASA	National Aeronautic and Space Administration
PMC	Polar Mesospheric Clouds
PMT	Photo-multiplier Tube
PRODEX	PROgramme de Développement d'Expériences scientifiques
REP	Relativistic Electron Precipitation
SAA	South Atlantic Anomaly
SDO	Science Data Observation
TARANIS	Tool for the Analysis of RAdiation from lightNIngs and Sprites
TBC	To be confirmed
TBD	To be determined
TC	Tele command
TEA-IS	Thunderstorm Effects on the Atmosphere-Ionosphere System
TGF	Terrestrial Gamma-ray Flash
TLE	Transient Luminous Events
UB	University of Bergen
UV	University of Valencia

0.6 Activities

0.7 List of TBDs

Number	*Section*	*Description*

0.8 List of TBCs

Number	*Section*	*Description*

Contents

1 Introduction

ASIM consists of two scientific instruments, the MXGS and the MMIA instruments, and the Data Handling and Power Unit (DHPU).

The MXGS is comprised of two detector planes, the High Energy Detectors (HED) and the Low Energy Detectors (LED).

The LED detector plane consists of a 128 x 128 array of CZT pixels divided into 4 Detector Assembly Units (DAUs). In front of the LED there is a coded mask used for geolocation purposes.

The HED detector plane consists of 4 BGO DAUs each with 3 Photo Multiplier Tubes (PMTs).

The MMIA is comprised of 2 Camera Head Units (CHUs) and 3 Photometers (PHOTs).

MXGS LED is enabled only during ISS night.

MXGS HED is always enabled except when passing over the South Atlantic Anomaly (SAA).

MMIA is enabled only during ISS night.

The MXGS and MMIA instruments can be configured from ground via upload of changes to several configuration tables for each instrument, either ‘permanent’ changes to the copy of the configuration tables located in the EEPROM sector of each instrument or short-term changes to the copy of the tables located in the SRAM sector of each instrument. Below is a description of these configuration tables and the EEPROM changes uploaded to them after the end of the ASIM commissioning phase.

1.1 Configuration Tables

6 configuration tables are available for the MXGS instrument:

- MXSG Memory ID 1210, System Parameters: controls memory scrubbing.
- MXGS Memory ID 1220, Buffer Control Parameters: sets the sizes of the three Data Collection Buffers and the Science Downlink Buffer.
- MXGS Memory ID 1230, Science Parameters: sets parameters for the Application SW, controlling the triggering algorithm and the data collection.
- MXGS Memory ID 1235, PSU Configuration Parameters: controls the High Voltage (HV) settings of the Power Supply Unit (PSU).
- MXGS Memory ID 1240, DAU Control Configuration Parameters: controls the configurable parts of the Detector Assembly Units (DAU).
- MXGS Memory ID 1245, DAU ASIC Configuration Parameters: detailed control of the CZT detectors.

3 configuration tables are available for the MMIA instrument:

- MMIA Memory ID 1210, System Parameters: controls memory scrubbing.
- MMIA Memory ID 1220, Buffer Control Parameters: sets the sizes of the three Data Collection Buffers and the Science Downlink Buffer.
- MMIA Memory ID 1230, Science Parameters: sets parameters for the Application SW, controlling the triggering algorithm and the data collection.

2 MXGS Configuration Tables

2.1 System Parameters MemID 1210

No changes were made to the System Parameters configuration table.

Table 1: MXGS 1210 - System Parameters

Date	2018-06-08
SCRUB_WORDS	100
SCRUB_PERIOD	1

2.2 Buffer Control Parameters MemID 1220

No changes were made to the Buffer Control Parameters configuration table.

Table 2: MXGS 1220 - Buffer Control Parameters

Date	2018-06-08
SIZE_COL_BUF_PRIO_1	600
SIZE_COL_BUF_PRIO_2	200
SIZE_COL_BUF_PRIO_3	175
SIZE_SCI_BUF	48

2.3 Science Parameters MemID 1230

A number of changes were made to the Science Parameter configuration table. Changes marked in red.

- The trigger threshold Look-up Tables were changed on several occasions to optimize the triggering algorithm.
- On 2021-02-23 the Long Trigger Window duration was changed from 25 ms to 50 ms for both LED and HED.
- On 2020-11-18 the threshold for Auroral Capture was increased from 10000 counts/s t0 20,000 count/s
- On 2020-11-18 the max duration for an auroral capture observation was increased from 2 min to 10 minutes, and on 2021-03-24 to 15 min,
- Following an Application SW update, on 2019-03-30 the HED anti-coincidence time were decreased from 1 µs to 0.5 µs (18 Fast Time clicks), and the Grey Mode Thresholds were increased from 19,000 counts/s to 30,000 counts/s, 190,000 counts/s to 300,000 counts/s, and 1,900,000 counts/s to 3,000,000 counts/s,

Table 3: MXGS 1230 - Science Parameters

Date	2018-06-08	2019-03-30	2020-11-18	2021-02-20	2021-02-23	2021-03-24	2024-09-11	2024-09-18
MXGS_TRIG_ENA	1	1	1	1	1	1	1	1
MMIA_MXGS_TRIG_ENA	1	1	1	1	1	1	1	1
MXGS_MMIA_TRIG_ENA	1	1	1	1	1	1	1	1

MMIA_TRIG_COMP_T	109	109	109	109	109	109	109	109
SUB_MODE_AUTO_ENA	1	1	1	1	1	1	1	1
CTS_SAMP_PR_1	0	0	0	0	0	0	0	0
MXGS_TRIG_PR_3	0	0	0	0	0	0	0	0
MMIA_TRIG_PR_3	0	0	0	0	0	0	0	0
MXGS_MMIA_TRIG_PR_3	0	0	0	0	0	0	0	0
LED_STW_D_1	300	300	300	300	300	300	300	300
LED_STW_D_2	1000	1000	1000	1000	1000	1000	1000	1000
LED_STW_D_3	3000	3000	3000	3000	3000	3000	3000	3000
LED_LTW_D	25000	25000	25000	25000	50000	50000	50000	50000
HED_STW_D_1	300	300	300	300	300	300	300	300
HED_STW_D_2	1000	1000	1000	1000	1000	1000	1000	1000
HED_STW_D_3	3000	3000	3000	3000	3000	3000	3000	3000
HED_LTW_D	25000	25000	25000	25000	50000	50000	50000	50000
THR_FIX_ENA	0	0	0	0	0	0	0	0
BKG_MON_DIS	0	0	0	0	0	0	0	0
LED_STW_FIX_THR_1	10	10	10	10	10	10	10	10
LED_STW_FIX_THR_2	15	15	15	15	15	15	15	15
LED_STW_FIX_THR_3	25	25	25	25	25	25	25	25
LED_LTW_FIX_THR	100	100	100	100	100	100	100	100
HED_STW_FIX_THR_1	10	10	10	10	10	10	10	10
HED_STW_FIX_THR_2	15	15	15	15	15	15	15	15
HED_STW_FIX_THR_3	25	25	25	25	25	25	25	25
HED_LTW_FIX_THR	100	100	100	100	100	100	100	100
LED_STW_VAR_THR_1(1)	255	255	255	255	255	255	255	255
LED_STW_VAR_THR_1(2)	7	5	7	5	5	5	5	5
LED_STW_VAR_THR_1(3)	8	6	8	6	6	6	6	6
LED_STW_VAR_THR_1(4)	8	6	8	6	6	6	6	6
LED_STW_VAR_THR_1(5)	8	6	8	6	6	6	6	6
LED_STW_VAR_THR_1(6)	9	7	9	7	7	7	7	7
LED_STW_VAR_THR_1(7)	9	7	9	7	7	7	7	7
LED_STW_VAR_THR_1(8)	9	7	9	7	7	7	7	7
LED_STW_VAR_THR_1(9)	10	8	10	8	8	8	8	8
LED_STW_VAR_THR_1(10)	10	8	10	8	8	8	8	8
LED_STW_VAR_THR_1(11)	10	8	10	8	8	8	8	8
LED_STW_VAR_THR_1(12)	10	8	10	8	8	8	8	8
LED_STW_VAR_THR_1(13)	10	8	10	8	8	8	8	8
LED_STW_VAR_THR_1(14)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_1(15)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_1(16)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_1(17)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_1(18)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_1(19)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_1(20)	11	9	11	9	9	9	9	9

LED_STW_VAR_THR_1(21)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_1(22)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_1(23)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_1(24)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_1(25)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_1(26)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_1(27)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_1(28)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_1(29)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_1(30)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_1(31)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_1(32)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_1(33)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_1(34)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_1(35)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(36)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(37)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(38)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(39)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(40)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(41)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(42)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(43)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_1(44)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(45)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(46)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(47)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(48)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(49)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(50)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(51)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(52)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(53)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_1(54)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(55)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(56)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(57)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(58)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(59)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(60)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(61)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(62)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(63)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_1(64)	17	15	17	15	15	15	15	15

LED_STW_VAR_THR_1(65)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(66)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(67)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(68)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(69)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(70)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(71)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(72)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(73)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(74)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_1(75)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(76)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(77)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(78)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(79)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(80)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(81)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(82)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(83)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(84)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(85)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_1(86)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(87)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(88)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(89)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(90)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(91)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(92)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(93)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(94)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(95)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(96)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(97)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(98)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_1(99)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(100)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(101)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(102)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(103)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(104)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(105)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(106)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(107)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(108)	20	18	20	18	18	18	18	18

LED_STW_VAR_THR_1(109)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(110)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_1(111)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(112)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(113)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(114)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(115)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(116)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(117)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(118)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(119)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(120)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(121)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(122)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(123)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_1(124)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_1(125)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_1(126)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_1(127)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_1(128)	255	255	255	255	255	255	255	255
LED_STW_VAR_THR_2(1)	255	255	255	255	255	255	255	255
LED_STW_VAR_THR_2(2)	9	7	9	7	7	7	7	7
LED_STW_VAR_THR_2(3)	9	7	9	7	7	7	7	7
LED_STW_VAR_THR_2(4)	10	8	10	8	8	8	8	8
LED_STW_VAR_THR_2(5)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_2(6)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_2(7)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_2(8)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_2(9)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_2(10)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_2(11)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_2(12)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_2(13)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_2(14)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_2(15)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_2(16)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_2(17)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_2(18)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_2(19)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_2(20)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_2(21)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_2(22)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_2(23)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_2(24)	17	15	17	15	15	15	15	15

LED_STW_VAR_THR_2(25)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_2(26)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_2(27)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_2(28)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_2(29)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_2(30)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_2(31)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_2(32)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_2(33)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_2(34)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_2(35)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_2(36)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_2(37)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_2(38)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_2(39)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_2(40)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_2(41)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_2(42)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_2(43)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_2(44)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_2(45)	23	21	23	21	21	21	21	21
LED_STW_VAR_THR_2(46)	23	21	23	21	21	21	21	21
LED_STW_VAR_THR_2(47)	23	21	23	21	21	21	21	21
LED_STW_VAR_THR_2(48)	23	21	23	21	21	21	21	21
LED_STW_VAR_THR_2(49)	24	22	24	22	22	22	22	22
LED_STW_VAR_THR_2(50)	24	22	24	22	22	22	22	22
LED_STW_VAR_THR_2(51)	24	22	24	22	22	22	22	22
LED_STW_VAR_THR_2(52)	24	22	24	22	22	22	22	22
LED_STW_VAR_THR_2(53)	24	22	24	22	22	22	22	22
LED_STW_VAR_THR_2(54)	25	23	25	23	23	23	23	23
LED_STW_VAR_THR_2(55)	25	23	25	23	23	23	23	23
LED_STW_VAR_THR_2(56)	25	23	25	23	23	23	23	23
LED_STW_VAR_THR_2(57)	25	23	25	23	23	23	23	23
LED_STW_VAR_THR_2(58)	26	24	26	24	24	24	24	24
LED_STW_VAR_THR_2(59)	26	24	26	24	24	24	24	24
LED_STW_VAR_THR_2(60)	26	24	26	24	24	24	24	24
LED_STW_VAR_THR_2(61)	26	24	26	24	24	24	24	24
LED_STW_VAR_THR_2(62)	26	24	26	24	24	24	24	24
LED_STW_VAR_THR_2(63)	27	25	27	25	25	25	25	25
LED_STW_VAR_THR_2(64)	27	25	27	25	25	25	25	25
LED_STW_VAR_THR_2(65)	27	25	27	25	25	25	25	25
LED_STW_VAR_THR_2(66)	27	25	27	25	25	25	25	25
LED_STW_VAR_THR_2(67)	27	25	27	25	25	25	25	25
LED_STW_VAR_THR_2(68)	28	26	28	26	26	26	26	26

LED_STW_VAR_THR_2(69)	28	26	28	26	26	26	26	26
LED_STW_VAR_THR_2(70)	28	26	28	26	26	26	26	26
LED_STW_VAR_THR_2(71)	28	26	28	26	26	26	26	26
LED_STW_VAR_THR_2(72)	28	26	28	26	26	26	26	26
LED_STW_VAR_THR_2(73)	29	27	29	27	27	27	27	27
LED_STW_VAR_THR_2(74)	29	27	29	27	27	27	27	27
LED_STW_VAR_THR_2(75)	29	27	29	27	27	27	27	27
LED_STW_VAR_THR_2(76)	29	27	29	27	27	27	27	27
LED_STW_VAR_THR_2(77)	29	27	29	27	27	27	27	27
LED_STW_VAR_THR_2(78)	30	28	30	28	28	28	28	28
LED_STW_VAR_THR_2(79)	30	28	30	28	28	28	28	28
LED_STW_VAR_THR_2(80)	30	28	30	28	28	28	28	28
LED_STW_VAR_THR_2(81)	30	28	30	28	28	28	28	28
LED_STW_VAR_THR_2(82)	30	28	30	28	28	28	28	28
LED_STW_VAR_THR_2(83)	31	29	31	29	29	29	29	29
LED_STW_VAR_THR_2(84)	31	29	31	29	29	29	29	29
LED_STW_VAR_THR_2(85)	31	29	31	29	29	29	29	29
LED_STW_VAR_THR_2(86)	31	29	31	29	29	29	29	29
LED_STW_VAR_THR_2(87)	31	29	31	29	29	29	29	29
LED_STW_VAR_THR_2(88)	32	30	32	30	30	30	30	30
LED_STW_VAR_THR_2(89)	32	30	32	30	30	30	30	30
LED_STW_VAR_THR_2(90)	32	30	32	30	30	30	30	30
LED_STW_VAR_THR_2(91)	32	30	32	30	30	30	30	30
LED_STW_VAR_THR_2(92)	32	30	32	30	30	30	30	30
LED_STW_VAR_THR_2(93)	33	31	33	31	31	31	31	31
LED_STW_VAR_THR_2(94)	33	31	33	31	31	31	31	31
LED_STW_VAR_THR_2(95)	33	31	33	31	31	31	31	31
LED_STW_VAR_THR_2(96)	33	31	33	31	31	31	31	31
LED_STW_VAR_THR_2(97)	33	31	33	31	31	31	31	31
LED_STW_VAR_THR_2(98)	33	31	33	31	31	31	31	31
LED_STW_VAR_THR_2(99)	34	32	34	32	32	32	32	32
LED_STW_VAR_THR_2(100)	34	32	34	32	32	32	32	32
LED_STW_VAR_THR_2(101)	34	32	34	32	32	32	32	32
LED_STW_VAR_THR_2(102)	34	32	34	32	32	32	32	32
LED_STW_VAR_THR_2(103)	34	32	34	32	32	32	32	32
LED_STW_VAR_THR_2(104)	35	33	35	33	33	33	33	33
LED_STW_VAR_THR_2(105)	35	33	35	33	33	33	33	33
LED_STW_VAR_THR_2(106)	35	33	35	33	33	33	33	33
LED_STW_VAR_THR_2(107)	35	33	35	33	33	33	33	33
LED_STW_VAR_THR_2(108)	35	33	35	33	33	33	33	33
LED_STW_VAR_THR_2(109)	35	33	35	33	33	33	33	33
LED_STW_VAR_THR_2(110)	36	34	36	34	34	34	34	34
LED_STW_VAR_THR_2(111)	36	34	36	34	34	34	34	34
LED_STW_VAR_THR_2(112)	36	34	36	34	34	34	34	34

LED_STW_VAR_THR_2(113)	36	34	36	34	34	34	34	34
LED_STW_VAR_THR_2(114)	36	34	36	34	34	34	34	34
LED_STW_VAR_THR_2(115)	37	35	37	35	35	35	35	35
LED_STW_VAR_THR_2(116)	37	35	37	35	35	35	35	35
LED_STW_VAR_THR_2(117)	37	35	37	35	35	35	35	35
LED_STW_VAR_THR_2(118)	37	35	37	35	35	35	35	35
LED_STW_VAR_THR_2(119)	37	35	37	35	35	35	35	35
LED_STW_VAR_THR_2(120)	37	35	37	35	35	35	35	35
LED_STW_VAR_THR_2(121)	38	36	38	36	36	36	36	36
LED_STW_VAR_THR_2(122)	38	36	38	36	36	36	36	36
LED_STW_VAR_THR_2(123)	38	36	38	36	36	36	36	36
LED_STW_VAR_THR_2(124)	38	36	38	36	36	36	36	36
LED_STW_VAR_THR_2(125)	38	36	38	36	36	36	36	36
LED_STW_VAR_THR_2(126)	39	37	39	37	37	37	37	37
LED_STW_VAR_THR_2(127)	39	37	39	37	37	37	37	37
LED_STW_VAR_THR_2(128)	255	255	255	255	255	255	255	255
LED_STW_VAR_THR_3(1)	255	255	255	255	255	255	255	255
LED_STW_VAR_THR_3(2)	11	9	11	9	9	9	9	9
LED_STW_VAR_THR_3(3)	12	10	12	10	10	10	10	10
LED_STW_VAR_THR_3(4)	13	11	13	11	11	11	11	11
LED_STW_VAR_THR_3(5)	14	12	14	12	12	12	12	12
LED_STW_VAR_THR_3(6)	15	13	15	13	13	13	13	13
LED_STW_VAR_THR_3(7)	16	14	16	14	14	14	14	14
LED_STW_VAR_THR_3(8)	17	15	17	15	15	15	15	15
LED_STW_VAR_THR_3(9)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_3(10)	18	16	18	16	16	16	16	16
LED_STW_VAR_THR_3(11)	19	17	19	17	17	17	17	17
LED_STW_VAR_THR_3(12)	20	18	20	18	18	18	18	18
LED_STW_VAR_THR_3(13)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_3(14)	21	19	21	19	19	19	19	19
LED_STW_VAR_THR_3(15)	22	20	22	20	20	20	20	20
LED_STW_VAR_THR_3(16)	23	21	23	21	21	21	21	21
LED_STW_VAR_THR_3(17)	23	21	23	21	21	21	21	21
LED_STW_VAR_THR_3(18)	24	22	24	22	22	22	22	22
LED_STW_VAR_THR_3(19)	25	23	25	23	23	23	23	23
LED_STW_VAR_THR_3(20)	25	23	25	23	23	23	23	23
LED_STW_VAR_THR_3(21)	26	24	26	24	24	24	24	24
LED_STW_VAR_THR_3(22)	26	24	26	24	24	24	24	24
LED_STW_VAR_THR_3(23)	27	25	27	25	25	25	25	25
LED_STW_VAR_THR_3(24)	28	26	28	26	26	26	26	26
LED_STW_VAR_THR_3(25)	28	26	28	26	26	26	26	26
LED_STW_VAR_THR_3(26)	29	27	29	27	27	27	27	27
LED_STW_VAR_THR_3(27)	29	27	29	27	27	27	27	27
LED_STW_VAR_THR_3(28)	30	28	30	28	28	28	28	28

LED_STW_VAR_THR_3(29)	30	28	30	28	28	28	28	28
LED_STW_VAR_THR_3(30)	31	29	31	29	29	29	29	29
LED_STW_VAR_THR_3(31)	32	30	32	30	30	30	30	30
LED_STW_VAR_THR_3(32)	32	30	32	30	30	30	30	30
LED_STW_VAR_THR_3(33)	33	31	33	31	31	31	31	31
LED_STW_VAR_THR_3(34)	33	31	33	31	31	31	31	31
LED_STW_VAR_THR_3(35)	34	32	34	32	32	32	32	32
LED_STW_VAR_THR_3(36)	34	32	34	32	32	32	32	32
LED_STW_VAR_THR_3(37)	35	33	35	33	33	33	33	33
LED_STW_VAR_THR_3(38)	35	33	35	33	33	33	33	33
LED_STW_VAR_THR_3(39)	36	34	36	34	34	34	34	34
LED_STW_VAR_THR_3(40)	36	34	36	34	34	34	34	34
LED_STW_VAR_THR_3(41)	37	35	37	35	35	35	35	35
LED_STW_VAR_THR_3(42)	37	35	37	35	35	35	35	35
LED_STW_VAR_THR_3(43)	38	36	38	36	36	36	36	36
LED_STW_VAR_THR_3(44)	39	37	39	37	37	37	37	37
LED_STW_VAR_THR_3(45)	39	37	39	37	37	37	37	37
LED_STW_VAR_THR_3(46)	40	38	40	38	38	38	38	38
LED_STW_VAR_THR_3(47)	40	38	40	38	38	38	38	38
LED_STW_VAR_THR_3(48)	41	39	41	39	39	39	39	39
LED_STW_VAR_THR_3(49)	41	39	41	39	39	39	39	39
LED_STW_VAR_THR_3(50)	42	40	42	40	40	40	40	40
LED_STW_VAR_THR_3(51)	42	40	42	40	40	40	40	40
LED_STW_VAR_THR_3(52)	43	41	43	41	41	41	41	41
LED_STW_VAR_THR_3(53)	43	41	43	41	41	41	41	41
LED_STW_VAR_THR_3(54)	44	42	44	42	42	42	42	42
LED_STW_VAR_THR_3(55)	44	42	44	42	42	42	42	42
LED_STW_VAR_THR_3(56)	45	43	45	43	43	43	43	43
LED_STW_VAR_THR_3(57)	45	43	45	43	43	43	43	43
LED_STW_VAR_THR_3(58)	46	44	46	44	44	44	44	44
LED_STW_VAR_THR_3(59)	46	44	46	44	44	44	44	44
LED_STW_VAR_THR_3(60)	46	44	46	44	44	44	44	44
LED_STW_VAR_THR_3(61)	47	45	47	45	45	45	45	45
LED_STW_VAR_THR_3(62)	47	45	47	45	45	45	45	45
LED_STW_VAR_THR_3(63)	48	46	48	46	46	46	46	46
LED_STW_VAR_THR_3(64)	48	46	48	46	46	46	46	46
LED_STW_VAR_THR_3(65)	49	47	49	47	47	47	47	47
LED_STW_VAR_THR_3(66)	49	47	49	47	47	47	47	47
LED_STW_VAR_THR_3(67)	50	48	50	48	48	48	48	48
LED_STW_VAR_THR_3(68)	50	48	50	48	48	48	48	48
LED_STW_VAR_THR_3(69)	51	49	51	49	49	49	49	49
LED_STW_VAR_THR_3(70)	51	49	51	49	49	49	49	49
LED_STW_VAR_THR_3(71)	52	50	52	50	50	50	50	50
LED_STW_VAR_THR_3(72)	52	50	52	50	50	50	50	50

LED_STW_VAR_THR_3(73)	53	51	53	51	51	51	51	51
LED_STW_VAR_THR_3(74)	53	51	53	51	51	51	51	51
LED_STW_VAR_THR_3(75)	54	52	54	52	52	52	52	52
LED_STW_VAR_THR_3(76)	54	52	54	52	52	52	52	52
LED_STW_VAR_THR_3(77)	54	52	54	52	52	52	52	52
LED_STW_VAR_THR_3(78)	55	53	55	53	53	53	53	53
LED_STW_VAR_THR_3(79)	55	53	55	53	53	53	53	53
LED_STW_VAR_THR_3(80)	56	54	56	54	54	54	54	54
LED_STW_VAR_THR_3(81)	56	54	56	54	54	54	54	54
LED_STW_VAR_THR_3(82)	57	55	57	55	55	55	55	55
LED_STW_VAR_THR_3(83)	57	55	57	55	55	55	55	55
LED_STW_VAR_THR_3(84)	58	56	58	56	56	56	56	56
LED_STW_VAR_THR_3(85)	58	56	58	56	56	56	56	56
LED_STW_VAR_THR_3(86)	59	57	59	57	57	57	57	57
LED_STW_VAR_THR_3(87)	59	57	59	57	57	57	57	57
LED_STW_VAR_THR_3(88)	59	57	59	57	57	57	57	57
LED_STW_VAR_THR_3(89)	60	58	60	58	58	58	58	58
LED_STW_VAR_THR_3(90)	60	58	60	58	58	58	58	58
LED_STW_VAR_THR_3(91)	61	59	61	59	59	59	59	59
LED_STW_VAR_THR_3(92)	61	59	61	59	59	59	59	59
LED_STW_VAR_THR_3(93)	62	60	62	60	60	60	60	60
LED_STW_VAR_THR_3(94)	62	60	62	60	60	60	60	60
LED_STW_VAR_THR_3(95)	63	61	63	61	61	61	61	61
LED_STW_VAR_THR_3(96)	63	61	63	61	61	61	61	61
LED_STW_VAR_THR_3(97)	63	61	63	61	61	61	61	61
LED_STW_VAR_THR_3(98)	64	62	64	62	62	62	62	62
LED_STW_VAR_THR_3(99)	64	62	64	62	62	62	62	62
LED_STW_VAR_THR_3(100)	65	63	65	63	63	63	63	63
LED_STW_VAR_THR_3(101)	65	63	65	63	63	63	63	63
LED_STW_VAR_THR_3(102)	66	64	66	64	64	64	64	64
LED_STW_VAR_THR_3(103)	66	64	66	64	64	64	64	64
LED_STW_VAR_THR_3(104)	67	65	67	65	65	65	65	65
LED_STW_VAR_THR_3(105)	67	65	67	65	65	65	65	65
LED_STW_VAR_THR_3(106)	67	65	67	65	65	65	65	65
LED_STW_VAR_THR_3(107)	68	66	68	66	66	66	66	66
LED_STW_VAR_THR_3(108)	68	66	68	66	66	66	66	66
LED_STW_VAR_THR_3(109)	69	67	69	67	67	67	67	67
LED_STW_VAR_THR_3(110)	69	67	69	67	67	67	67	67
LED_STW_VAR_THR_3(111)	70	68	70	68	68	68	68	68
LED_STW_VAR_THR_3(112)	70	68	70	68	68	68	68	68
LED_STW_VAR_THR_3(113)	70	68	70	68	68	68	68	68
LED_STW_VAR_THR_3(114)	71	69	71	69	69	69	69	69
LED_STW_VAR_THR_3(115)	71	69	71	69	69	69	69	69
LED_STW_VAR_THR_3(116)	72	70	72	70	70	70	70	70

LED_STW_VAR_THR_3(117)	72	70	72	70	70	70	70	70
LED_STW_VAR_THR_3(118)	73	71	73	71	71	71	71	71
LED_STW_VAR_THR_3(119)	73	71	73	71	71	71	71	71
LED_STW_VAR_THR_3(120)	73	71	73	71	71	71	71	71
LED_STW_VAR_THR_3(121)	74	72	74	72	72	72	72	72
LED_STW_VAR_THR_3(122)	74	72	74	72	72	72	72	72
LED_STW_VAR_THR_3(123)	75	73	75	73	73	73	73	73
LED_STW_VAR_THR_3(124)	75	73	75	73	73	73	73	73
LED_STW_VAR_THR_3(125)	76	74	76	74	74	74	74	74
LED_STW_VAR_THR_3(126)	76	74	76	74	74	74	74	74
LED_STW_VAR_THR_3(127)	76	74	76	74	74	74	74	74
LED_STW_VAR_THR_3(128)	255	255	255	255	255	255	255	255
LED_LTW_VAR_THR(1)	1023	1023	1023	1023	1023	1023	1023	1023
LED_LTW_VAR_THR(2)	21	21	22	21	27	27	29	29
LED_LTW_VAR_THR(3)	25	25	26	25	36	36	38	38
LED_LTW_VAR_THR(4)	31	31	32	31	45	45	47	47
LED_LTW_VAR_THR(5)	34	34	36	34	53	53	55	55
LED_LTW_VAR_THR(6)	40	40	42	40	60	60	63	63
LED_LTW_VAR_THR(7)	44	44	46	44	68	68	70	70
LED_LTW_VAR_THR(8)	48	48	50	48	75	75	78	78
LED_LTW_VAR_THR(9)	52	52	54	52	82	82	85	85
LED_LTW_VAR_THR(10)	55	55	58	55	89	89	92	92
LED_LTW_VAR_THR(11)	60	60	63	60	96	96	99	99
LED_LTW_VAR_THR(12)	64	64	67	64	103	103	106	106
LED_LTW_VAR_THR(13)	67	67	70	67	109	109	113	113
LED_LTW_VAR_THR(14)	71	71	74	71	116	116	120	120
LED_LTW_VAR_THR(15)	74	74	78	74	123	123	127	127
LED_LTW_VAR_THR(16)	77	77	81	77	129	129	134	134
LED_LTW_VAR_THR(17)	82	82	86	82	136	136	140	140
LED_LTW_VAR_THR(18)	85	85	89	85	142	142	147	147
LED_LTW_VAR_THR(19)	90	90	94	90	149	149	153	153
LED_LTW_VAR_THR(20)	93	93	97	93	155	155	160	160
LED_LTW_VAR_THR(21)	96	96	101	96	161	161	166	166
LED_LTW_VAR_THR(22)	100	100	105	100	168	168	173	173
LED_LTW_VAR_THR(23)	103	103	108	103	174	174	179	179
LED_LTW_VAR_THR(24)	107	107	112	107	180	180	186	186
LED_LTW_VAR_THR(25)	111	111	116	111	186	186	192	192
LED_LTW_VAR_THR(26)	115	115	120	115	193	193	198	198
LED_LTW_VAR_THR(27)	117	117	123	117	199	199	205	205
LED_LTW_VAR_THR(28)	121	121	127	121	205	205	211	211
LED_LTW_VAR_THR(29)	125	125	131	125	211	211	217	217
LED_LTW_VAR_THR(30)	128	128	134	128	217	217	223	223
LED_LTW_VAR_THR(31)	132	132	138	132	223	223	230	230
LED_LTW_VAR_THR(32)	135	135	141	135	230	230	236	236

LED_LTW_VAR_THR(33)	138	138	145	138	236	236	242	242
LED_LTW_VAR_THR(34)	142	142	149	142	242	242	248	248
LED_LTW_VAR_THR(35)	145	145	152	145	248	248	254	254
LED_LTW_VAR_THR(36)	148	148	155	148	254	254	260	260
LED_LTW_VAR_THR(37)	153	153	160	153	260	260	267	267
LED_LTW_VAR_THR(38)	156	156	163	156	266	266	273	273
LED_LTW_VAR_THR(39)	158	158	166	158	272	272	279	279
LED_LTW_VAR_THR(40)	161	161	169	161	278	278	285	285
LED_LTW_VAR_THR(41)	165	165	173	165	284	284	291	291
LED_LTW_VAR_THR(42)	169	169	177	169	290	290	297	297
LED_LTW_VAR_THR(43)	172	172	180	172	296	296	303	303
LED_LTW_VAR_THR(44)	176	176	184	176	302	302	309	309
LED_LTW_VAR_THR(45)	178	178	187	178	308	308	315	315
LED_LTW_VAR_THR(46)	181	181	190	181	313	313	321	321
LED_LTW_VAR_THR(47)	185	185	194	185	319	319	327	327
LED_LTW_VAR_THR(48)	188	188	197	188	325	325	333	333
LED_LTW_VAR_THR(49)	192	192	201	192	331	331	339	339
LED_LTW_VAR_THR(50)	196	196	205	196	337	337	345	345
LED_LTW_VAR_THR(51)	199	199	208	199	343	343	351	351
LED_LTW_VAR_THR(52)	201	201	211	201	349	349	357	357
LED_LTW_VAR_THR(53)	205	205	215	205	355	355	363	363
LED_LTW_VAR_THR(54)	208	208	218	208	360	360	369	369
LED_LTW_VAR_THR(55)	211	211	221	211	366	366	374	374
LED_LTW_VAR_THR(56)	214	214	224	214	372	372	380	380
LED_LTW_VAR_THR(57)	218	218	228	218	378	378	386	386
LED_LTW_VAR_THR(58)	221	221	231	221	384	384	392	392
LED_LTW_VAR_THR(59)	223	223	234	223	389	389	398	398
LED_LTW_VAR_THR(60)	227	227	238	227	395	395	404	404
LED_LTW_VAR_THR(61)	230	230	241	230	401	401	410	410
LED_LTW_VAR_THR(62)	234	234	245	234	407	407	416	416
LED_LTW_VAR_THR(63)	238	238	249	238	413	413	421	421
LED_LTW_VAR_THR(64)	241	241	252	241	418	418	427	427
LED_LTW_VAR_THR(65)	243	243	255	243	424	424	433	433
LED_LTW_VAR_THR(66)	247	247	259	247	430	430	439	439
LED_LTW_VAR_THR(67)	250	250	262	250	436	436	445	445
LED_LTW_VAR_THR(68)	253	253	265	253	441	441	451	451
LED_LTW_VAR_THR(69)	256	256	268	256	447	447	456	456
LED_LTW_VAR_THR(70)	260	260	272	260	453	453	462	462
LED_LTW_VAR_THR(71)	263	263	275	263	459	459	468	468
LED_LTW_VAR_THR(72)	265	265	278	265	464	464	474	474
LED_LTW_VAR_THR(73)	269	269	282	269	470	470	480	480
LED_LTW_VAR_THR(74)	272	272	285	272	476	476	485	485
LED_LTW_VAR_THR(75)	275	275	288	275	482	482	491	491
LED_LTW_VAR_THR(76)	279	279	292	279	487	487	497	497

LED_LTW_VAR_THR(77)	282	282	295	282	493	493	503	503
LED_LTW_VAR_THR(78)	284	284	298	284	499	499	508	508
LED_LTW_VAR_THR(79)	287	287	301	287	504	504	514	514
LED_LTW_VAR_THR(80)	291	291	305	291	510	510	520	520
LED_LTW_VAR_THR(81)	294	294	308	294	516	516	526	526
LED_LTW_VAR_THR(82)	297	297	311	297	521	521	531	531
LED_LTW_VAR_THR(83)	301	301	315	301	527	527	537	537
LED_LTW_VAR_THR(84)	304	304	318	304	533	533	543	543
LED_LTW_VAR_THR(85)	306	306	321	306	538	538	549	549
LED_LTW_VAR_THR(86)	310	310	325	310	544	544	554	554
LED_LTW_VAR_THR(87)	312	312	327	312	550	550	560	560
LED_LTW_VAR_THR(88)	315	315	330	315	555	555	566	566
LED_LTW_VAR_THR(89)	318	318	333	318	561	561	572	572
LED_LTW_VAR_THR(90)	322	322	337	322	567	567	577	577
LED_LTW_VAR_THR(91)	325	325	340	325	572	572	583	583
LED_LTW_VAR_THR(92)	327	327	343	327	578	578	589	589
LED_LTW_VAR_THR(93)	331	331	347	331	584	584	594	594
LED_LTW_VAR_THR(94)	334	334	350	334	589	589	600	600
LED_LTW_VAR_THR(95)	337	337	353	337	595	595	606	606
LED_LTW_VAR_THR(96)	340	340	356	340	600	600	611	611
LED_LTW_VAR_THR(97)	344	344	360	344	606	606	617	617
LED_LTW_VAR_THR(98)	347	347	363	347	612	612	623	623
LED_LTW_VAR_THR(99)	349	349	366	349	617	617	628	628
LED_LTW_VAR_THR(100)	353	353	370	353	623	623	634	634
LED_LTW_VAR_THR(101)	356	356	373	356	629	629	640	640
LED_LTW_VAR_THR(102)	359	359	376	359	634	634	645	645
LED_LTW_VAR_THR(103)	363	363	380	363	640	640	651	651
LED_LTW_VAR_THR(104)	365	365	382	365	645	645	657	657
LED_LTW_VAR_THR(105)	367	367	385	367	651	651	662	662
LED_LTW_VAR_THR(106)	370	370	388	370	657	657	668	668
LED_LTW_VAR_THR(107)	374	374	392	374	662	662	674	674
LED_LTW_VAR_THR(108)	377	377	395	377	668	668	679	679
LED_LTW_VAR_THR(109)	380	380	398	380	673	673	685	685
LED_LTW_VAR_THR(110)	384	384	402	384	679	679	691	691
LED_LTW_VAR_THR(111)	387	387	405	387	685	685	696	696
LED_LTW_VAR_THR(112)	389	389	408	389	690	690	702	702
LED_LTW_VAR_THR(113)	392	392	411	392	696	696	708	708
LED_LTW_VAR_THR(114)	396	396	415	396	701	701	713	713
LED_LTW_VAR_THR(115)	398	398	417	398	707	707	719	719
LED_LTW_VAR_THR(116)	401	401	420	401	712	712	724	724
LED_LTW_VAR_THR(117)	405	405	424	405	718	718	730	730
LED_LTW_VAR_THR(118)	408	408	427	408	724	724	736	736
LED_LTW_VAR_THR(119)	410	410	430	410	729	729	741	741
LED_LTW_VAR_THR(120)	413	413	433	413	735	735	747	747

LED_LTW_VAR_THR(121)	417	417	437	417	740	740	753	753
LED_LTW_VAR_THR(122)	420	420	440	420	746	746	758	758
LED_LTW_VAR_THR(123)	423	423	443	423	751	751	764	764
LED_LTW_VAR_THR(124)	426	426	446	426	757	757	769	769
LED_LTW_VAR_THR(125)	429	429	449	429	763	763	775	775
LED_LTW_VAR_THR(126)	431	431	452	431	768	768	781	781
LED_LTW_VAR_THR(127)	434	434	455	434	774	774	786	786
LED_LTW_VAR_THR(128)	1023	1023	1023	1023	1023	1023	1023	1023
HED_STW_VAR_THR_1(1)	255	255	255	255	255	255	255	255
HED_STW_VAR_THR_1(2)	11	6	6	6	6	6	6	6
HED_STW_VAR_THR_1(3)	12	7	7	7	7	7	7	7
HED_STW_VAR_THR_1(4)	12	7	7	7	7	7	7	7
HED_STW_VAR_THR_1(5)	12	7	7	7	7	7	7	7
HED_STW_VAR_THR_1(6)	13	8	8	8	8	8	8	8
HED_STW_VAR_THR_1(7)	13	8	8	8	8	8	8	8
HED_STW_VAR_THR_1(8)	13	8	8	8	8	8	8	8
HED_STW_VAR_THR_1(9)	14	9	9	9	9	9	9	9
HED_STW_VAR_THR_1(10)	14	9	9	9	9	9	9	9
HED_STW_VAR_THR_1(11)	14	9	9	9	9	9	9	9
HED_STW_VAR_THR_1(12)	14	9	9	9	9	9	9	9
HED_STW_VAR_THR_1(13)	14	9	9	9	9	9	9	9
HED_STW_VAR_THR_1(14)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_1(15)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_1(16)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_1(17)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_1(18)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_1(19)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_1(20)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_1(21)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_1(22)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_1(23)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_1(24)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_1(25)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_1(26)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_1(27)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_1(28)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_1(29)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_1(30)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_1(31)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_1(32)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_1(33)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_1(34)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_1(35)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_1(36)	18	13	13	13	13	13	13	13

HED_STW_VAR_THR_1(37)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_1(38)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_1(39)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_1(40)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_1(41)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_1(42)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_1(43)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_1(44)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(45)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(46)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(47)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(48)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(49)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(50)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(51)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(52)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(53)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_1(54)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(55)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(56)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(57)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(58)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(59)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(60)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(61)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(62)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(63)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_1(64)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(65)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(66)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(67)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(68)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(69)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(70)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(71)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(72)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(73)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(74)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_1(75)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(76)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(77)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(78)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(79)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(80)	22	17	17	17	17	17	17	17

HED_STW_VAR_THR_1(81)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(82)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(83)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(84)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(85)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_1(86)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(87)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(88)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(89)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(90)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(91)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(92)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(93)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(94)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(95)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(96)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(97)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(98)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_1(99)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(100)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(101)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(102)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(103)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(104)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(105)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(106)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(107)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(108)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(109)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(110)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_1(111)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(112)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(113)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(114)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(115)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(116)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(117)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(118)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(119)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(120)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(121)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(122)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(123)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_1(124)	26	21	21	21	21	21	21	21

HED_STW_VAR_THR_1(125)	26	21	21	21	21	21	21	21
HED_STW_VAR_THR_1(126)	26	21	21	21	21	21	21	21
HED_STW_VAR_THR_1(127)	26	21	21	21	21	21	21	21
HED_STW_VAR_THR_1(128)	255	255	255	255	255	255	255	255
HED_STW_VAR_THR_2(1)	255	255	255	255	255	255	255	255
HED_STW_VAR_THR_2(2)	13	8	8	8	8	8	8	8
HED_STW_VAR_THR_2(3)	13	8	8	8	8	8	8	8
HED_STW_VAR_THR_2(4)	14	9	9	9	9	9	9	9
HED_STW_VAR_THR_2(5)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_2(6)	15	10	10	10	10	10	10	10
HED_STW_VAR_THR_2(7)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_2(8)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_2(9)	16	11	11	11	11	11	11	11
HED_STW_VAR_THR_2(10)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_2(11)	17	12	12	12	12	12	12	12
HED_STW_VAR_THR_2(12)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_2(13)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_2(14)	18	13	13	13	13	13	13	13
HED_STW_VAR_THR_2(15)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_2(16)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_2(17)	19	14	14	14	14	14	14	14
HED_STW_VAR_THR_2(18)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_2(19)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_2(20)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_2(21)	20	15	15	15	15	15	15	15
HED_STW_VAR_THR_2(22)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_2(23)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_2(24)	21	16	16	16	16	16	16	16
HED_STW_VAR_THR_2(25)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_2(26)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_2(27)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_2(28)	22	17	17	17	17	17	17	17
HED_STW_VAR_THR_2(29)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_2(30)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_2(31)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_2(32)	23	18	18	18	18	18	18	18
HED_STW_VAR_THR_2(33)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_2(34)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_2(35)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_2(36)	24	19	19	19	19	19	19	19
HED_STW_VAR_THR_2(37)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_2(38)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_2(39)	25	20	20	20	20	20	20	20
HED_STW_VAR_THR_2(40)	25	20	20	20	20	20	20	20

HED_STW_VAR_THR_2(41)	26	21	21	21	21	21	21	21
HED_STW_VAR_THR_2(42)	26	21	21	21	21	21	21	21
HED_STW_VAR_THR_2(43)	26	21	21	21	21	21	21	21
HED_STW_VAR_THR_2(44)	26	21	21	21	21	21	21	21
HED_STW_VAR_THR_2(45)	27	22	22	22	22	22	22	22
HED_STW_VAR_THR_2(46)	27	22	22	22	22	22	22	22
HED_STW_VAR_THR_2(47)	27	22	22	22	22	22	22	22
HED_STW_VAR_THR_2(48)	27	22	22	22	22	22	22	22
HED_STW_VAR_THR_2(49)	28	23	23	23	23	23	23	23
HED_STW_VAR_THR_2(50)	28	23	23	23	23	23	23	23
HED_STW_VAR_THR_2(51)	28	23	23	23	23	23	23	23
HED_STW_VAR_THR_2(52)	28	23	23	23	23	23	23	23
HED_STW_VAR_THR_2(53)	28	23	23	23	23	23	23	23
HED_STW_VAR_THR_2(54)	29	24	24	24	24	24	24	24
HED_STW_VAR_THR_2(55)	29	24	24	24	24	24	24	24
HED_STW_VAR_THR_2(56)	29	24	24	24	24	24	24	24
HED_STW_VAR_THR_2(57)	29	24	24	24	24	24	24	24
HED_STW_VAR_THR_2(58)	30	25	25	25	25	25	25	25
HED_STW_VAR_THR_2(59)	30	25	25	25	25	25	25	25
HED_STW_VAR_THR_2(60)	30	25	25	25	25	25	25	25
HED_STW_VAR_THR_2(61)	30	25	25	25	25	25	25	25
HED_STW_VAR_THR_2(62)	30	25	25	25	25	25	25	25
HED_STW_VAR_THR_2(63)	31	26	26	26	26	26	26	26
HED_STW_VAR_THR_2(64)	31	26	26	26	26	26	26	26
HED_STW_VAR_THR_2(65)	31	26	26	26	26	26	26	26
HED_STW_VAR_THR_2(66)	31	26	26	26	26	26	26	26
HED_STW_VAR_THR_2(67)	31	26	26	26	26	26	26	26
HED_STW_VAR_THR_2(68)	32	27	27	27	27	27	27	27
HED_STW_VAR_THR_2(69)	32	27	27	27	27	27	27	27
HED_STW_VAR_THR_2(70)	32	27	27	27	27	27	27	27
HED_STW_VAR_THR_2(71)	32	27	27	27	27	27	27	27
HED_STW_VAR_THR_2(72)	32	27	27	27	27	27	27	27
HED_STW_VAR_THR_2(73)	33	28	28	28	28	28	28	28
HED_STW_VAR_THR_2(74)	33	28	28	28	28	28	28	28
HED_STW_VAR_THR_2(75)	33	28	28	28	28	28	28	28
HED_STW_VAR_THR_2(76)	33	28	28	28	28	28	28	28
HED_STW_VAR_THR_2(77)	33	28	28	28	28	28	28	28
HED_STW_VAR_THR_2(78)	34	29	29	29	29	29	29	29
HED_STW_VAR_THR_2(79)	34	29	29	29	29	29	29	29
HED_STW_VAR_THR_2(80)	34	29	29	29	29	29	29	29
HED_STW_VAR_THR_2(81)	34	29	29	29	29	29	29	29
HED_STW_VAR_THR_2(82)	34	29	29	29	29	29	29	29
HED_STW_VAR_THR_2(83)	35	30	30	30	30	30	30	30
HED_STW_VAR_THR_2(84)	35	30	30	30	30	30	30	30

HED_STW_VAR_THR_2(85)	35	30	30	30	30	30	30	30
HED_STW_VAR_THR_2(86)	35	30	30	30	30	30	30	30
HED_STW_VAR_THR_2(87)	35	30	30	30	30	30	30	30
HED_STW_VAR_THR_2(88)	36	31	31	31	31	31	31	31
HED_STW_VAR_THR_2(89)	36	31	31	31	31	31	31	31
HED_STW_VAR_THR_2(90)	36	31	31	31	31	31	31	31
HED_STW_VAR_THR_2(91)	36	31	31	31	31	31	31	31
HED_STW_VAR_THR_2(92)	36	31	31	31	31	31	31	31
HED_STW_VAR_THR_2(93)	37	32	32	32	32	32	32	32
HED_STW_VAR_THR_2(94)	37	32	32	32	32	32	32	32
HED_STW_VAR_THR_2(95)	37	32	32	32	32	32	32	32
HED_STW_VAR_THR_2(96)	37	32	32	32	32	32	32	32
HED_STW_VAR_THR_2(97)	37	32	32	32	32	32	32	32
HED_STW_VAR_THR_2(98)	37	32	32	32	32	32	32	32
HED_STW_VAR_THR_2(99)	38	33	33	33	33	33	33	33
HED_STW_VAR_THR_2(100)	38	33	33	33	33	33	33	33
HED_STW_VAR_THR_2(101)	38	33	33	33	33	33	33	33
HED_STW_VAR_THR_2(102)	38	33	33	33	33	33	33	33
HED_STW_VAR_THR_2(103)	38	33	33	33	33	33	33	33
HED_STW_VAR_THR_2(104)	39	34	34	34	34	34	34	34
HED_STW_VAR_THR_2(105)	39	34	34	34	34	34	34	34
HED_STW_VAR_THR_2(106)	39	34	34	34	34	34	34	34
HED_STW_VAR_THR_2(107)	39	34	34	34	34	34	34	34
HED_STW_VAR_THR_2(108)	39	34	34	34	34	34	34	34
HED_STW_VAR_THR_2(109)	39	34	34	34	34	34	34	34
HED_STW_VAR_THR_2(110)	40	35	35	35	35	35	35	35
HED_STW_VAR_THR_2(111)	40	35	35	35	35	35	35	35
HED_STW_VAR_THR_2(112)	40	35	35	35	35	35	35	35
HED_STW_VAR_THR_2(113)	40	35	35	35	35	35	35	35
HED_STW_VAR_THR_2(114)	40	35	35	35	35	35	35	35
HED_STW_VAR_THR_2(115)	41	36	36	36	36	36	36	36
HED_STW_VAR_THR_2(116)	41	36	36	36	36	36	36	36
HED_STW_VAR_THR_2(117)	41	36	36	36	36	36	36	36
HED_STW_VAR_THR_2(118)	41	36	36	36	36	36	36	36
HED_STW_VAR_THR_2(119)	41	36	36	36	36	36	36	36
HED_STW_VAR_THR_2(120)	41	36	36	36	36	36	36	36
HED_STW_VAR_THR_2(121)	42	37	37	37	37	37	37	37
HED_STW_VAR_THR_2(122)	42	37	37	37	37	37	37	37
HED_STW_VAR_THR_2(123)	42	37	37	37	37	37	37	37
HED_STW_VAR_THR_2(124)	42	37	37	37	37	37	37	37
HED_STW_VAR_THR_2(125)	42	37	37	37	37	37	37	37
HED_STW_VAR_THR_2(126)	43	38	38	38	38	38	38	38
HED_STW_VAR_THR_2(127)	43	38	38	38	38	38	38	38
HED_STW_VAR_THR_2(128)	255	255	255	255	255	255	255	255

HED_STW_VAR_THR_3(1)	255	255	255	255	255	255	255	255
HED_STW_VAR_THR_3(2)	15	11	11	11	11	11	11	11
HED_STW_VAR_THR_3(3)	16	12	12	12	12	12	12	12
HED_STW_VAR_THR_3(4)	17	13	13	13	13	13	13	13
HED_STW_VAR_THR_3(5)	18	14	14	14	14	14	14	14
HED_STW_VAR_THR_3(6)	19	15	15	15	15	15	15	15
HED_STW_VAR_THR_3(7)	20	16	16	16	16	16	16	16
HED_STW_VAR_THR_3(8)	21	17	17	17	17	17	17	17
HED_STW_VAR_THR_3(9)	22	18	18	18	18	18	18	18
HED_STW_VAR_THR_3(10)	22	18	18	18	18	18	18	18
HED_STW_VAR_THR_3(11)	23	19	19	19	19	19	19	19
HED_STW_VAR_THR_3(12)	24	20	20	20	20	20	20	20
HED_STW_VAR_THR_3(13)	25	21	21	21	21	21	21	21
HED_STW_VAR_THR_3(14)	25	21	21	21	21	21	21	21
HED_STW_VAR_THR_3(15)	26	22	22	22	22	22	22	22
HED_STW_VAR_THR_3(16)	27	23	23	23	23	23	23	23
HED_STW_VAR_THR_3(17)	27	23	23	23	23	23	23	23
HED_STW_VAR_THR_3(18)	28	24	24	24	24	24	24	24
HED_STW_VAR_THR_3(19)	29	25	25	25	25	25	25	25
HED_STW_VAR_THR_3(20)	29	25	25	25	25	25	25	25
HED_STW_VAR_THR_3(21)	30	26	26	26	26	26	26	26
HED_STW_VAR_THR_3(22)	30	26	26	26	26	26	26	26
HED_STW_VAR_THR_3(23)	31	27	27	27	27	27	27	27
HED_STW_VAR_THR_3(24)	32	28	28	28	28	28	28	28
HED_STW_VAR_THR_3(25)	32	28	28	28	28	28	28	28
HED_STW_VAR_THR_3(26)	33	29	29	29	29	29	29	29
HED_STW_VAR_THR_3(27)	33	29	29	29	29	29	29	29
HED_STW_VAR_THR_3(28)	34	30	30	30	30	30	30	30
HED_STW_VAR_THR_3(29)	34	30	30	30	30	30	30	30
HED_STW_VAR_THR_3(30)	35	31	31	31	31	31	31	31
HED_STW_VAR_THR_3(31)	36	32	32	32	32	32	32	32
HED_STW_VAR_THR_3(32)	36	32	32	32	32	32	32	32
HED_STW_VAR_THR_3(33)	37	33	33	33	33	33	33	33
HED_STW_VAR_THR_3(34)	37	33	33	33	33	33	33	33
HED_STW_VAR_THR_3(35)	38	34	34	34	34	34	34	34
HED_STW_VAR_THR_3(36)	38	34	34	34	34	34	34	34
HED_STW_VAR_THR_3(37)	39	35	35	35	35	35	35	35
HED_STW_VAR_THR_3(38)	39	35	35	35	35	35	35	35
HED_STW_VAR_THR_3(39)	40	36	36	36	36	36	36	36
HED_STW_VAR_THR_3(40)	40	36	36	36	36	36	36	36
HED_STW_VAR_THR_3(41)	41	37	37	37	37	37	37	37
HED_STW_VAR_THR_3(42)	41	37	37	37	37	37	37	37
HED_STW_VAR_THR_3(43)	42	38	38	38	38	38	38	38
HED_STW_VAR_THR_3(44)	43	39	39	39	39	39	39	39

HED_STW_VAR_THR_3(45)	43	39	39	39	39	39	39	39
HED_STW_VAR_THR_3(46)	44	40	40	40	40	40	40	40
HED_STW_VAR_THR_3(47)	44	40	40	40	40	40	40	40
HED_STW_VAR_THR_3(48)	45	41	41	41	41	41	41	41
HED_STW_VAR_THR_3(49)	45	41	41	41	41	41	41	41
HED_STW_VAR_THR_3(50)	46	42	42	42	42	42	42	42
HED_STW_VAR_THR_3(51)	46	42	42	42	42	42	42	42
HED_STW_VAR_THR_3(52)	47	43	43	43	43	43	43	43
HED_STW_VAR_THR_3(53)	47	43	43	43	43	43	43	43
HED_STW_VAR_THR_3(54)	48	44	44	44	44	44	44	44
HED_STW_VAR_THR_3(55)	48	44	44	44	44	44	44	44
HED_STW_VAR_THR_3(56)	49	45	45	45	45	45	45	45
HED_STW_VAR_THR_3(57)	49	45	45	45	45	45	45	45
HED_STW_VAR_THR_3(58)	50	46	46	46	46	46	46	46
HED_STW_VAR_THR_3(59)	50	46	46	46	46	46	46	46
HED_STW_VAR_THR_3(60)	50	46	46	46	46	46	46	46
HED_STW_VAR_THR_3(61)	51	47	47	47	47	47	47	47
HED_STW_VAR_THR_3(62)	51	47	47	47	47	47	47	47
HED_STW_VAR_THR_3(63)	52	48	48	48	48	48	48	48
HED_STW_VAR_THR_3(64)	52	48	48	48	48	48	48	48
HED_STW_VAR_THR_3(65)	53	49	49	49	49	49	49	49
HED_STW_VAR_THR_3(66)	53	49	49	49	49	49	49	49
HED_STW_VAR_THR_3(67)	54	50	50	50	50	50	50	50
HED_STW_VAR_THR_3(68)	54	50	50	50	50	50	50	50
HED_STW_VAR_THR_3(69)	55	51	51	51	51	51	51	51
HED_STW_VAR_THR_3(70)	55	51	51	51	51	51	51	51
HED_STW_VAR_THR_3(71)	56	52	52	52	52	52	52	52
HED_STW_VAR_THR_3(72)	56	52	52	52	52	52	52	52
HED_STW_VAR_THR_3(73)	57	53	53	53	53	53	53	53
HED_STW_VAR_THR_3(74)	57	53	53	53	53	53	53	53
HED_STW_VAR_THR_3(75)	58	54	54	54	54	54	54	54
HED_STW_VAR_THR_3(76)	58	54	54	54	54	54	54	54
HED_STW_VAR_THR_3(77)	58	54	54	54	54	54	54	54
HED_STW_VAR_THR_3(78)	59	55	55	55	55	55	55	55
HED_STW_VAR_THR_3(79)	59	55	55	55	55	55	55	55
HED_STW_VAR_THR_3(80)	60	56	56	56	56	56	56	56
HED_STW_VAR_THR_3(81)	60	56	56	56	56	56	56	56
HED_STW_VAR_THR_3(82)	61	57	57	57	57	57	57	57
HED_STW_VAR_THR_3(83)	61	57	57	57	57	57	57	57
HED_STW_VAR_THR_3(84)	62	58	58	58	58	58	58	58
HED_STW_VAR_THR_3(85)	62	58	58	58	58	58	58	58
HED_STW_VAR_THR_3(86)	63	59	59	59	59	59	59	59
HED_STW_VAR_THR_3(87)	63	59	59	59	59	59	59	59
HED_STW_VAR_THR_3(88)	63	59	59	59	59	59	59	59

HED_STW_VAR_THR_3(89)	64	60	60	60	60	60	60	60
HED_STW_VAR_THR_3(90)	64	60	60	60	60	60	60	60
HED_STW_VAR_THR_3(91)	65	61	61	61	61	61	61	61
HED_STW_VAR_THR_3(92)	65	61	61	61	61	61	61	61
HED_STW_VAR_THR_3(93)	66	62	62	62	62	62	62	62
HED_STW_VAR_THR_3(94)	66	62	62	62	62	62	62	62
HED_STW_VAR_THR_3(95)	67	63	63	63	63	63	63	63
HED_STW_VAR_THR_3(96)	67	63	63	63	63	63	63	63
HED_STW_VAR_THR_3(97)	67	63	63	63	63	63	63	63
HED_STW_VAR_THR_3(98)	68	64	64	64	64	64	64	64
HED_STW_VAR_THR_3(99)	68	64	64	64	64	64	64	64
HED_STW_VAR_THR_3(100)	69	65	65	65	65	65	65	65
HED_STW_VAR_THR_3(101)	69	65	65	65	65	65	65	65
HED_STW_VAR_THR_3(102)	70	66	66	66	66	66	66	66
HED_STW_VAR_THR_3(103)	70	66	66	66	66	66	66	66
HED_STW_VAR_THR_3(104)	71	67	67	67	67	67	67	67
HED_STW_VAR_THR_3(105)	71	67	67	67	67	67	67	67
HED_STW_VAR_THR_3(106)	71	67	67	67	67	67	67	67
HED_STW_VAR_THR_3(107)	72	68	68	68	68	68	68	68
HED_STW_VAR_THR_3(108)	72	68	68	68	68	68	68	68
HED_STW_VAR_THR_3(109)	73	69	69	69	69	69	69	69
HED_STW_VAR_THR_3(110)	73	69	69	69	69	69	69	69
HED_STW_VAR_THR_3(111)	74	70	70	70	70	70	70	70
HED_STW_VAR_THR_3(112)	74	70	70	70	70	70	70	70
HED_STW_VAR_THR_3(113)	74	70	70	70	70	70	70	70
HED_STW_VAR_THR_3(114)	75	71	71	71	71	71	71	71
HED_STW_VAR_THR_3(115)	75	71	71	71	71	71	71	71
HED_STW_VAR_THR_3(116)	76	72	72	72	72	72	72	72
HED_STW_VAR_THR_3(117)	76	72	72	72	72	72	72	72
HED_STW_VAR_THR_3(118)	77	73	73	73	73	73	73	73
HED_STW_VAR_THR_3(119)	77	73	73	73	73	73	73	73
HED_STW_VAR_THR_3(120)	77	73	73	73	73	73	73	73
HED_STW_VAR_THR_3(121)	78	74	74	74	74	74	74	74
HED_STW_VAR_THR_3(122)	78	74	74	74	74	74	74	74
HED_STW_VAR_THR_3(123)	79	75	75	75	75	75	75	75
HED_STW_VAR_THR_3(124)	79	75	75	75	75	75	75	75
HED_STW_VAR_THR_3(125)	80	76	76	76	76	76	76	76
HED_STW_VAR_THR_3(126)	80	76	76	76	76	76	76	76
HED_STW_VAR_THR_3(127)	80	76	76	76	76	76	76	76
HED_STW_VAR_THR_3(128)	255	255	255	255	255	255	255	255
hED_LTW_VAR_THR(1)	1023	1023	1023	1023	1023	1023	1023	1023
hED_LTW_VAR_THR(2)	45	45	45	45	29	29	26	28
hED_LTW_VAR_THR(3)	49	49	49	49	38	38	34	36
hED_LTW_VAR_THR(4)	54	54	54	54	47	47	42	45

hED_LTW_VAR_THR(5)	58	58	58	58	55	55	50	53
hED_LTW_VAR_THR(6)	63	63	63	63	63	63	57	60
hED_LTW_VAR_THR(7)	67	67	67	67	70	70	65	68
hED_LTW_VAR_THR(8)	70	70	70	70	78	78	72	75
hED_LTW_VAR_THR(9)	74	74	74	74	85	85	79	82
hED_LTW_VAR_THR(10)	78	78	78	78	92	92	85	89
hED_LTW_VAR_THR(11)	82	82	82	82	99	99	92	96
hED_LTW_VAR_THR(12)	86	86	86	86	106	106	99	103
hED_LTW_VAR_THR(13)	89	89	89	89	113	113	105	109
hED_LTW_VAR_THR(14)	92	92	92	92	120	120	112	116
hED_LTW_VAR_THR(15)	96	96	96	96	127	127	118	123
hED_LTW_VAR_THR(16)	99	99	99	99	134	134	125	130
hED_LTW_VAR_THR(17)	103	103	103	103	140	140	131	136
hED_LTW_VAR_THR(18)	106	106	106	106	147	147	137	142
hED_LTW_VAR_THR(19)	110	110	110	110	153	153	144	149
hED_LTW_VAR_THR(20)	113	113	113	113	160	160	150	155
hED_LTW_VAR_THR(21)	117	117	117	117	166	166	156	161
hED_LTW_VAR_THR(22)	120	120	120	120	173	173	162	168
hED_LTW_VAR_THR(23)	123	123	123	123	179	179	169	174
hED_LTW_VAR_THR(24)	127	127	127	127	186	186	175	181
hED_LTW_VAR_THR(25)	130	130	130	130	192	192	181	187
hED_LTW_VAR_THR(26)	134	134	134	134	198	198	187	193
hED_LTW_VAR_THR(27)	137	137	137	137	205	205	193	199
hED_LTW_VAR_THR(28)	140	140	140	140	211	211	199	205
hED_LTW_VAR_THR(29)	144	144	144	144	217	217	205	211
hED_LTW_VAR_THR(30)	147	147	147	147	223	223	211	217
hED_LTW_VAR_THR(31)	150	150	150	150	230	230	217	224
hED_LTW_VAR_THR(32)	153	153	153	153	236	236	223	230
hED_LTW_VAR_THR(33)	157	157	157	157	242	242	229	236
hED_LTW_VAR_THR(34)	160	160	160	160	248	248	235	242
hED_LTW_VAR_THR(35)	163	163	163	163	254	254	241	248
hED_LTW_VAR_THR(36)	166	166	166	166	260	260	247	254
hED_LTW_VAR_THR(37)	170	170	170	170	267	267	253	260
hED_LTW_VAR_THR(38)	173	173	173	173	273	273	259	266
hED_LTW_VAR_THR(39)	176	176	176	176	279	279	265	272
hED_LTW_VAR_THR(40)	179	179	179	179	285	285	271	278
hED_LTW_VAR_THR(41)	182	182	182	182	291	291	277	284
hED_LTW_VAR_THR(42)	186	186	186	186	297	297	282	290
hED_LTW_VAR_THR(43)	189	189	189	189	303	303	288	296
hED_LTW_VAR_THR(44)	192	192	192	192	309	309	294	302
hED_LTW_VAR_THR(45)	195	195	195	195	315	315	300	308
hED_LTW_VAR_THR(46)	198	198	198	198	321	321	306	314
hED_LTW_VAR_THR(47)	201	201	201	201	327	327	312	320
hED_LTW_VAR_THR(48)	204	204	204	204	333	333	317	325

hED_LTW_VAR_THR(49)	208	208	208	208	339	339	323	331
hED_LTW_VAR_THR(50)	211	211	211	211	345	345	329	337
hED_LTW_VAR_THR(51)	214	214	214	214	351	351	335	343
hED_LTW_VAR_THR(52)	217	217	217	217	357	357	341	349
hED_LTW_VAR_THR(53)	220	220	220	220	363	363	346	355
hED_LTW_VAR_THR(54)	223	223	223	223	369	369	352	361
hED_LTW_VAR_THR(55)	226	226	226	226	374	374	358	366
hED_LTW_VAR_THR(56)	229	229	229	229	380	380	364	372
hED_LTW_VAR_THR(57)	232	232	232	232	386	386	369	378
hED_LTW_VAR_THR(58)	235	235	235	235	392	392	375	384
hED_LTW_VAR_THR(59)	238	238	238	238	398	398	381	390
hED_LTW_VAR_THR(60)	241	241	241	241	404	404	387	396
hED_LTW_VAR_THR(61)	244	244	244	244	410	410	392	401
hED_LTW_VAR_THR(62)	248	248	248	248	416	416	398	407
hED_LTW_VAR_THR(63)	251	251	251	251	421	421	404	413
hED_LTW_VAR_THR(64)	254	254	254	254	427	427	409	418
hED_LTW_VAR_THR(65)	257	257	257	257	433	433	415	424
hED_LTW_VAR_THR(66)	260	260	260	260	439	439	421	430
hED_LTW_VAR_THR(67)	263	263	263	263	445	445	427	436
hED_LTW_VAR_THR(68)	266	266	266	266	451	451	432	442
hED_LTW_VAR_THR(69)	269	269	269	269	456	456	438	447
hED_LTW_VAR_THR(70)	272	272	272	272	462	462	444	453
hED_LTW_VAR_THR(71)	275	275	275	275	468	468	449	459
hED_LTW_VAR_THR(72)	278	278	278	278	474	474	455	465
hED_LTW_VAR_THR(73)	281	281	281	281	480	480	461	471
hED_LTW_VAR_THR(74)	284	284	284	284	485	485	466	476
hED_LTW_VAR_THR(75)	287	287	287	287	491	491	472	482
hED_LTW_VAR_THR(76)	290	290	290	290	497	497	477	487
hED_LTW_VAR_THR(77)	293	293	293	293	503	503	483	493
hED_LTW_VAR_THR(78)	296	296	296	296	508	508	489	499
hED_LTW_VAR_THR(79)	299	299	299	299	514	514	494	504
hED_LTW_VAR_THR(80)	302	302	302	302	520	520	500	510
hED_LTW_VAR_THR(81)	305	305	305	305	526	526	506	516
hED_LTW_VAR_THR(82)	308	308	308	308	531	531	511	521
hED_LTW_VAR_THR(83)	311	311	311	311	537	537	517	527
hED_LTW_VAR_THR(84)	314	314	314	314	543	543	522	533
hED_LTW_VAR_THR(85)	317	317	317	317	549	549	528	539
hED_LTW_VAR_THR(86)	320	320	320	320	554	554	534	544
hED_LTW_VAR_THR(87)	322	322	322	322	560	560	539	550
hED_LTW_VAR_THR(88)	325	325	325	325	566	566	545	556
hED_LTW_VAR_THR(89)	328	328	328	328	572	572	550	561
hED_LTW_VAR_THR(90)	331	331	331	331	577	577	556	567
hED_LTW_VAR_THR(91)	334	334	334	334	583	583	562	573
hED_LTW_VAR_THR(92)	337	337	337	337	589	589	567	578

hED_LTW_VAR_THR(93)	340	340	340	340	594	594	573	584
hED_LTW_VAR_THR(94)	343	343	343	343	600	600	578	589
hED_LTW_VAR_THR(95)	346	346	346	346	606	606	584	595
hED_LTW_VAR_THR(96)	349	349	349	349	611	611	590	601
hED_LTW_VAR_THR(97)	352	352	352	352	617	617	595	606
hED_LTW_VAR_THR(98)	355	355	355	355	623	623	601	612
hED_LTW_VAR_THR(99)	358	358	358	358	628	628	606	617
hED_LTW_VAR_THR(100)	361	361	361	361	634	634	612	623
hED_LTW_VAR_THR(101)	364	364	364	364	640	640	617	629
hED_LTW_VAR_THR(102)	367	367	367	367	645	645	623	634
hED_LTW_VAR_THR(103)	370	370	370	370	651	651	628	640
hED_LTW_VAR_THR(104)	372	372	372	372	657	657	634	646
hED_LTW_VAR_THR(105)	375	375	375	375	662	662	640	651
hED_LTW_VAR_THR(106)	378	378	378	378	668	668	645	657
hED_LTW_VAR_THR(107)	381	381	381	381	674	674	651	663
hED_LTW_VAR_THR(108)	384	384	384	384	679	679	656	668
hED_LTW_VAR_THR(109)	387	387	387	387	685	685	662	674
hED_LTW_VAR_THR(110)	390	390	390	390	691	691	667	679
hED_LTW_VAR_THR(111)	393	393	393	393	696	696	673	685
hED_LTW_VAR_THR(112)	396	396	396	396	702	702	678	690
hED_LTW_VAR_THR(113)	399	399	399	399	708	708	684	696
hED_LTW_VAR_THR(114)	402	402	402	402	713	713	689	701
hED_LTW_VAR_THR(115)	404	404	404	404	719	719	695	707
hED_LTW_VAR_THR(116)	407	407	407	407	724	724	700	712
hED_LTW_VAR_THR(117)	410	410	410	410	730	730	706	718
hED_LTW_VAR_THR(118)	413	413	413	413	736	736	711	724
hED_LTW_VAR_THR(119)	416	416	416	416	741	741	717	729
hED_LTW_VAR_THR(120)	419	419	419	419	747	747	722	735
hED_LTW_VAR_THR(121)	422	422	422	422	753	753	728	741
hED_LTW_VAR_THR(122)	425	425	425	425	758	758	733	746
hED_LTW_VAR_THR(123)	428	428	428	428	764	764	739	752
hED_LTW_VAR_THR(124)	430	430	430	430	769	769	744	757
hED_LTW_VAR_THR(125)	433	433	433	433	775	775	750	763
hED_LTW_VAR_THR(126)	436	436	436	436	781	781	755	768
hED_LTW_VAR_THR(127)	439	439	439	439	786	786	761	774
hED_LTW_VAR_THR(128)	1023	1023	1023	1023	1023	1023	1023	1023
LED_HED_COIN_T	0	0	0	0	0	0	0	0
LED_STW_THR_L	200	200	200	200	200	200	200	200
LED_STW_THR_U	850	850	850	850	850	850	850	850
LED_LTW_THR_L	200	200	200	200	200	200	200	200
LED_LTW_THR_U	1023	1023	1023	1023	1023	1023	1023	1023
HED_STW_THR_L	16	16	16	16	16	16	16	16
HED_STW_THR_U	1023	1023	1023	1023	1023	1023	1023	1023
HED_LTW_THR_L	16	16	16	16	16	16	16	16

HED_LTW_THR_U	1023	1023	1023	1023	1023	1023	1023	1023
LED_STW_AC_T	1	1	1	1	1	1	1	1
LED_LTW_AC_T	1	1	1	1	1	1	1	1
HED_STW_AC_T	1	18	18	18	18	18	18	18
HED_LTW_AC_T	1	18	18	18	18	18	18	18
MXGS_TRIG_INH_T	1	1	1	1	1	1	1	1
GREY_THR_C_1	19000	30000	30000	30000	30000	30000	30000	30000
GREY_THR_C_2	19000	30000	30000	30000	30000	30000	30000	30000
GREY_THR_C_3	190000	300000	300000	300000	300000	300000	300000	300000
GREY_THR_C_4	1900000	3000000	3000000	3000000	3000000	3000000	3000000	3000000
GREY_RATIO_Q_1	10	10	10	10	10	10	10	10
GREY_RATIO_Q_2	100	100	100	100	100	100	100	100
BKG_COVER_SEC	60	60	60	60	60	60	60	60
LED_PH_0_L	0	0	0	0	0	0	0	0
LED_PH_1_L	5	5	5	5	5	5	5	5
LED_PH_2_L	125	125	125	125	125	125	125	125
LED_PH_3_L	250	250	250	250	250	250	250	250
LED_PH_4_L	375	375	375	375	375	375	375	375
LED_PH_5_L	500	500	500	500	500	500	500	500
LED_PH_6_L	625	625	625	625	625	625	625	625
LED_PH_7_L	750	750	750	750	750	750	750	750
LED_PH_8_L	875	875	875	875	875	875	875	875
LED_PH_9_L	1020	1020	1020	1020	1020	1020	1020	1020
LED_PH_9_U	1023	1023	1023	1023	1023	1023	1023	1023
HED_PH_0_L	0	0	0	0	0	0	0	0
HED_PH_1_L	5	5	5	5	5	5	5	5
HED_PH_2_L	125	125	125	125	125	125	125	125
HED_PH_3_L	250	250	250	250	250	250	250	250
HED_PH_4_L	375	375	375	375	375	375	375	375
HED_PH_5_L	500	500	500	500	500	500	500	500
HED_PH_6_L	625	625	625	625	625	625	625	625
HED_PH_7_L	750	750	750	750	750	750	750	750
HED_PH_8_L	875	875	875	875	875	875	875	875
HED_PH_9_L	1020	1020	1020	1020	1020	1020	1020	1020
HED_PH_9_U	1023	1023	1023	1023	1023	1023	1023	1023
CTS_SAMP_RATIO	100	100	100	100	100	100	100	100
CTS_SAMP_COVER_SEC	60	60	60	60	60	60	60	60
CTS_SAMP_MAX_SIZE	256	256	256	256	256	256	256	256
LED_SPECT_ACC_T	600	600	600	600	600	600	600	600
LED_SPECT_INT_T	2200	2200	2200	2200	2200	2200	2200	2200
HED_SPECT_ACC_T	300	300	300	300	300	300	300	300
HED_SPECT_INT_T	1	1	1	1	1	1	1	1
AUR_RATE_THR	10000	10000	20000	20000	20000	20000	20000	20000
AUR_MAX_D	120	120	600	600	600	900	900	900

AUR_LED_BIN_D	50	50	50	50	50	50	50	50
AUR_HED_BIN_D	50	50	50	50	50	50	50	50
AUR_LED_PH_0_L	0	0	0	0	0	0	0	0
AUR_LED_PH_1_L	25	25	25	25	25	25	25	25
AUR_LED_PH_2_L	50	50	50	50	50	50	50	50
AUR_LED_PH_3_L	75	75	75	75	75	75	75	75
AUR_LED_PH_4_L	100	100	100	100	100	100	100	100
AUR_LED_PH_5_L	125	125	125	125	125	125	125	125
AUR_LED_PH_6_L	150	150	150	150	150	150	150	150
AUR_LED_PH_7_L	175	175	175	175	175	175	175	175
AUR_LED_PH_8_L	200	200	200	200	200	200	200	200
AUR_LED_PH_9_L	225	225	225	225	225	225	225	225
AUR_LED_PH_9_U	255	255	255	255	255	255	255	255
AUR_HED_PH_0_L	0	0	0	0	0	0	0	0
AUR_HED_PH_1_L	25	25	25	25	25	25	25	25
AUR_HED_PH_2_L	50	50	50	50	50	50	50	50
AUR_HED_PH_3_L	75	75	75	75	75	75	75	75
AUR_HED_PH_4_L	100	100	100	100	100	100	100	100
AUR_HED_PH_5_L	125	125	125	125	125	125	125	125
AUR_HED_PH_6_L	150	150	150	150	150	150	150	150
AUR_HED_PH_7_L	175	175	175	175	175	175	175	175
AUR_HED_PH_8_L	200	200	200	200	200	200	200	200
AUR_HED_PH_9_L	225	225	225	225	225	225	225	225
AUR_HED_PH_9_U	255	255	255	255	255	255	255	255
GREY_MAX_HYSTERESIS_COUNT	5	5	5	5	5	5	5	5
TRIG_THRES_MAX_HYSTERESIS_COUNT	5	5	5	5	5	5	5	5
HOT_PIX_FILT_ENA	1	1	1	1	1	1	1	1
RING_BUF_RESET_ENA	1	1	1	1	1	1	1	1
MAX_COUNTS_PER_CYCLE	0	300	300	300	300	300	300	300

2.4 PSU Configuration Parameters MenID 1235

In 2024, the HV settings for the BGO detectors in the Power Supply configuration table were changed to optimize observations. The change on 2024-05-04 was erroneous, corrected on 2024-05-13. Changes marked in red.

Table 4: MXGS 1235 - PSU Configuration Parameters

Date	2018-06-08	2024-04-17	2024-05-04	2024-05-13
BGO4_HV_VAL_REG	209	209	223	223
CZT4_HV_VAL_REG	43	43	43	43
BGO3_HV_VAL_REG	194	223	238	223
CZT3_HV_VAL_REG	43	43	43	43

BGO2_HV_VAL_REG	194	194	238	194
CZT2_HV_VAL_REG	43	43	43	43
BGO1_HV_VAL_REG	223	223	223	238
CZT1_HV_VAL_REG	43	43	43	43
HV_PIDEN_REG	255	255	255	255
BGO4_HV_I_REG	4	4	4	4
CZT4_HV_I_REG	4	4	4	4
BGO3_HV_I_REG	4	4	4	4
CZT3_HV_I_REG	4	4	4	4
BGO2_HV_I_REG	4	4	4	4
CZT2_HV_I_REG	4	4	4	4
BGO1_HV_I_REG	4	4	4	4
CZT1_HV_I_REG	4	4	4	4
HV_BGO_CONFIG_REG	214	214	214	214
HV_CZT_CONFIG_REG	150	150	150	150
SCAN_CHANNEL_REG	0	0	0	0
DEBUG_ENABLE_REG	0	0	0	0
DEBUG_REG	3	3	3	3
DEBUG_MUX_REG	0	0	0	0

2.5 DAU Control Configuration Parameters MemID 1240

In the DAU Control Configuration changes have been made to the threshold values (PPTRG - Post Peak Trigger and VALTRG – Valley Trigger) that controls the behaviour of Photomultiplier Tubes on the BGO detectors to optimize observations. Changes marked in red.

Table 5: MXGS 1240 - DAU Control Parameters

Date	2018-06-08	2020-08-08	2020-04-01	2024-04-17	2024-05-04
DAU_CZT_1_TBL_B	0	0	0	0	0
DAU_CZT_2_TBL_B	0	0	0	0	0
DAU_CZT_3_TBL_B	0	0	0	0	0
DAU_CZT_4_TBL_B	0	0	0	0	0
DAU_CZT_1 XA_CFG_1 CR0 (STR)	0	0	0	0	0
DAU_CZT_1 XA_CFG_1 CR0 (SRST)	0	0	0	0	0
DAU_CZT_1 XA_CFG_1 CR0 (STC)	0	0	0	0	0
DAU_CZT_1 XA_CFG_1 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_1 XA_CFG_1 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_1 XA_CFG_2 CR0 (STR)	0	0	0	0	0
DAU_CZT_1 XA_CFG_2 CR0 (SRST)	0	0	0	0	0
DAU_CZT_1 XA_CFG_2 CR0 (STC)	0	0	0	0	0
DAU_CZT_1 XA_CFG_2 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_1 XA_CFG_2 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_1 XA_CFG_3 CR0 (STR)	0	0	0	0	0
DAU_CZT_1 XA_CFG_3 CR0 (SRST)	0	0	0	0	0

DAU_CZT_1 XA_CFG_3 CR0 (STC)	0	0	0	0	0
DAU_CZT_1 XA_CFG_3 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_1 XA_CFG_3 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_1 XA_CFG_4 CR0 (STR)	0	0	0	0	0
DAU_CZT_1 XA_CFG_4 CR0 (SRST)	0	0	0	0	0
DAU_CZT_1 XA_CFG_4 CR0 (STC)	0	0	0	0	0
DAU_CZT_1 XA_CFG_4 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_1 XA_CFG_4 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_1 DM_IF_1 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_1 DM_IF_1 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_1 DM_IF_1 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_1 DM_IF_1 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_1 DM_IF_1 CR1 (HIT)	0	0	0	0	0
DAU_CZT_1 DM_IF_1 CR1 (DIS)	0	0	0	0	0
DAU_CZT_1 DM_IF_1 CR2 (DECF)	0	0	0	0	0
DAU_CZT_1 DM_IF_1 CR3 (ADC)	7	7	7	7	7
DAU_CZT_1 DM_IF_1 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_1 DM_IF_2 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_1 DM_IF_2 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_1 DM_IF_2 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_1 DM_IF_2 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_1 DM_IF_2 CR1 (HIT)	0	0	0	0	0
DAU_CZT_1 DM_IF_2 CR1 (DIS)	0	0	0	0	0
DAU_CZT_1 DM_IF_2 CR2 (DECF)	0	0	0	0	0
DAU_CZT_1 DM_IF_2 CR3 (ADC)	7	7	7	7	7
DAU_CZT_1 DM_IF_2 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_1 DM_IF_3 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_1 DM_IF_3 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_1 DM_IF_3 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_1 DM_IF_3 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_1 DM_IF_3 CR1 (HIT)	0	0	0	0	0
DAU_CZT_1 DM_IF_3 CR1 (DIS)	0	0	0	0	0
DAU_CZT_1 DM_IF_3 CR2 (DECF)	0	0	0	0	0
DAU_CZT_1 DM_IF_3 CR3 (ADC)	7	7	7	7	7
DAU_CZT_1 DM_IF_3 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_1 DM_IF_4 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_1 DM_IF_4 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_1 DM_IF_4 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_1 DM_IF_4 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_1 DM_IF_4 CR1 (HIT)	0	0	0	0	0
DAU_CZT_1 DM_IF_4 CR1 (DIS)	0	0	0	0	0
DAU_CZT_1 DM_IF_4 CR2 (DECF)	0	0	0	0	0
DAU_CZT_1 DM_IF_4 CR3 (ADC)	7	7	7	7	7
DAU_CZT_1 DM_IF_4 CR3 (ADRTIME)	7	7	7	7	7

DAU_CZT_1 RCU_Master CR0 (STARTSCRUB)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR0 (EDACERST)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR0 (SCTEST)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR0 (MRST)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR1 (SCRUBSTOP)	1	1	1	1	1
DAU_CZT_1 RCU_Master CR1 (ASIC)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR1 (TEST)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR2 (MTEST)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR2 (TTEST)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR2 (ATEST)	1	1	1	1	1
DAU_CZT_1 RCU_Master CR2 (ETEST)	1	1	1	1	1
DAU_CZT_1 RCU_Master CR3 (NOBLINK)	0	0	0	0	0
DAU_CZT_1 RCU_Master CR3 (DEBUGSEL)	0	0	0	0	0
DAU_CZT_1 BIN_CTRL CR1 (MHFILT)	1	1	1	1	1
DAU_CZT_1 BIN_CTRL SBL	0	0	0	0	0
DAU_CZT_1 BIN_CTRL SB1	26	26	26	26	26
DAU_CZT_1 BIN_CTRL SB2	51	51	51	51	51
DAU_CZT_1 BIN_CTRL SB3	77	77	77	77	77
DAU_CZT_1 BIN_CTRL SB4	102	102	102	102	102
DAU_CZT_1 BIN_CTRL SB5	128	128	128	128	128
DAU_CZT_1 BIN_CTRL SB6	153	153	153	153	153
DAU_CZT_1 BIN_CTRL SB7	179	179	179	179	179
DAU_CZT_1 BIN_CTRL SB8	204	204	204	204	204
DAU_CZT_1 BIN_CTRL SB9	230	230	230	230	230
DAU_CZT_1 BIN_CTRL SBH	255	255	255	255	255
DAU_CZT_1 BIN_CTRL BINSIZE	50	50	50	50	50
DAU_CZT_2 XA_CFG_1 CR0 (STR)	0	0	0	0	0
DAU_CZT_2 XA_CFG_1 CR0 (SRST)	0	0	0	0	0
DAU_CZT_2 XA_CFG_1 CR0 (STC)	0	0	0	0	0
DAU_CZT_2 XA_CFG_1 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_2 XA_CFG_1 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_2 XA_CFG_2 CR0 (STR)	0	0	0	0	0
DAU_CZT_2 XA_CFG_2 CR0 (SRST)	0	0	0	0	0
DAU_CZT_2 XA_CFG_2 CR0 (STC)	0	0	0	0	0
DAU_CZT_2 XA_CFG_2 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_2 XA_CFG_2 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_2 XA_CFG_3 CR0 (STR)	0	0	0	0	0
DAU_CZT_2 XA_CFG_3 CR0 (SRST)	0	0	0	0	0
DAU_CZT_2 XA_CFG_3 CR0 (STC)	0	0	0	0	0
DAU_CZT_2 XA_CFG_3 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_2 XA_CFG_3 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_2 XA_CFG_4 CR0 (STR)	0	0	0	0	0
DAU_CZT_2 XA_CFG_4 CR0 (SRST)	0	0	0	0	0
DAU_CZT_2 XA_CFG_4 CR0 (STC)	0	0	0	0	0

DAU_CZT_2 XA_CFG_4 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_2 XA_CFG_4 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_2 DM_IF_1 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_2 DM_IF_1 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_2 DM_IF_1 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_2 DM_IF_1 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_2 DM_IF_1 CR1 (HIT)	0	0	0	0	0
DAU_CZT_2 DM_IF_1 CR1 (DIS)	0	0	0	0	0
DAU_CZT_2 DM_IF_1 CR2 (DECF)	0	0	0	0	0
DAU_CZT_2 DM_IF_1 CR3 (ADC)	7	7	7	7	7
DAU_CZT_2 DM_IF_1 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_2 DM_IF_2 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_2 DM_IF_2 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_2 DM_IF_2 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_2 DM_IF_2 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_2 DM_IF_2 CR1 (HIT)	0	0	0	0	0
DAU_CZT_2 DM_IF_2 CR1 (DIS)	0	0	0	0	0
DAU_CZT_2 DM_IF_2 CR2 (DECF)	0	0	0	0	0
DAU_CZT_2 DM_IF_2 CR3 (ADC)	7	7	7	7	7
DAU_CZT_2 DM_IF_2 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_2 DM_IF_3 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_2 DM_IF_3 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_2 DM_IF_3 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_2 DM_IF_3 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_2 DM_IF_3 CR1 (HIT)	0	0	0	0	0
DAU_CZT_2 DM_IF_3 CR1 (DIS)	0	0	0	0	0
DAU_CZT_2 DM_IF_3 CR2 (DECF)	0	0	0	0	0
DAU_CZT_2 DM_IF_3 CR3 (ADC)	7	7	7	7	7
DAU_CZT_2 DM_IF_3 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_2 DM_IF_4 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_2 DM_IF_4 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_2 DM_IF_4 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_2 DM_IF_4 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_2 DM_IF_4 CR1 (HIT)	0	0	0	0	0
DAU_CZT_2 DM_IF_4 CR1 (DIS)	0	0	0	0	0
DAU_CZT_2 DM_IF_4 CR2 (DECF)	0	0	0	0	0
DAU_CZT_2 DM_IF_4 CR3 (ADC)	7	7	7	7	7
DAU_CZT_2 DM_IF_4 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_2 RCU_Master CR0 (STARTSCRUB)	0	0	0	0	0
DAU_CZT_2 RCU_Master CR0 (EDACERST)	0	0	0	0	0
DAU_CZT_2 RCU_Master CR0 (SCTEST)	0	0	0	0	0
DAU_CZT_2 RCU_Master CR0 (MRST)	0	0	0	0	0
DAU_CZT_2 RCU_Master CR1 (SCRUBSTOP)	1	1	1	1	1
DAU_CZT_2 RCU_Master CR1 (ASIC)	0	0	0	0	0

DAU_CZT_2 RCU_Master CR1 (TEST)	0	0	0	0	0
DAU_CZT_2 RCU_Master CR2 (MTEST)	0	0	0	0	0
DAU_CZT_2 RCU_Master CR2 (TTEST)	0	0	0	0	0
DAU_CZT_2 RCU_Master CR2 (ATEST)	1	1	1	1	1
DAU_CZT_2 RCU_Master CR2 (ETEST)	1	1	1	1	1
DAU_CZT_2 RCU_Master CR3 (NOBLINK)	0	0	0	0	0
DAU_CZT_2 RCU_Master CR3 (DEBUGSEL)	0	0	0	0	0
DAU_CZT_2 BIN_CTRL CR1 (MHFILT)	1	1	1	1	1
DAU_CZT_2 BIN_CTRL SBL	0	0	0	0	0
DAU_CZT_2 BIN_CTRL SB1	26	26	26	26	26
DAU_CZT_2 BIN_CTRL SB2	51	51	51	51	51
DAU_CZT_2 BIN_CTRL SB3	77	77	77	77	77
DAU_CZT_2 BIN_CTRL SB4	102	102	102	102	102
DAU_CZT_2 BIN_CTRL SB5	128	128	128	128	128
DAU_CZT_2 BIN_CTRL SB6	153	153	153	153	153
DAU_CZT_2 BIN_CTRL SB7	179	179	179	179	179
DAU_CZT_2 BIN_CTRL SB8	204	204	204	204	204
DAU_CZT_2 BIN_CTRL SB9	230	230	230	230	230
DAU_CZT_2 BIN_CTRL SBH	255	255	255	255	255
DAU_CZT_2 BIN_CTRL BINSIZE	50	50	50	50	50
DAU_CZT_3 XA_CFG_1 CR0 (STR)	0	0	0	0	0
DAU_CZT_3 XA_CFG_1 CR0 (SRST)	0	0	0	0	0
DAU_CZT_3 XA_CFG_1 CR0 (STC)	0	0	0	0	0
DAU_CZT_3 XA_CFG_1 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_3 XA_CFG_1 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_3 XA_CFG_2 CR0 (STR)	0	0	0	0	0
DAU_CZT_3 XA_CFG_2 CR0 (SRST)	0	0	0	0	0
DAU_CZT_3 XA_CFG_2 CR0 (STC)	0	0	0	0	0
DAU_CZT_3 XA_CFG_2 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_3 XA_CFG_2 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_3 XA_CFG_3 CR0 (STR)	0	0	0	0	0
DAU_CZT_3 XA_CFG_3 CR0 (SRST)	0	0	0	0	0
DAU_CZT_3 XA_CFG_3 CR0 (STC)	0	0	0	0	0
DAU_CZT_3 XA_CFG_3 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_3 XA_CFG_3 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_3 XA_CFG_4 CR0 (STR)	0	0	0	0	0
DAU_CZT_3 XA_CFG_4 CR0 (SRST)	0	0	0	0	0
DAU_CZT_3 XA_CFG_4 CR0 (STC)	0	0	0	0	0
DAU_CZT_3 XA_CFG_4 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_3 XA_CFG_4 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_3 DM_IF_1 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_3 DM_IF_1 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_3 DM_IF_1 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_3 DM_IF_1 CR1 (OFFS)	1	1	1	1	1

DAU_CZT_3 DM_IF_1 CR1 (HIT)	0	0	0	0	0
DAU_CZT_3 DM_IF_1 CR1 (DIS)	0	0	0	0	0
DAU_CZT_3 DM_IF_1 CR2 (DECF)	0	0	0	0	0
DAU_CZT_3 DM_IF_1 CR3 (ADC)	7	7	7	7	7
DAU_CZT_3 DM_IF_1 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_3 DM_IF_2 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_3 DM_IF_2 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_3 DM_IF_2 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_3 DM_IF_2 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_3 DM_IF_2 CR1 (HIT)	0	0	0	0	0
DAU_CZT_3 DM_IF_2 CR1 (DIS)	0	0	0	0	0
DAU_CZT_3 DM_IF_2 CR2 (DECF)	0	0	0	0	0
DAU_CZT_3 DM_IF_2 CR3 (ADC)	7	7	7	7	7
DAU_CZT_3 DM_IF_2 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_3 DM_IF_3 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_3 DM_IF_3 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_3 DM_IF_3 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_3 DM_IF_3 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_3 DM_IF_3 CR1 (HIT)	0	0	0	0	0
DAU_CZT_3 DM_IF_3 CR1 (DIS)	0	0	0	0	0
DAU_CZT_3 DM_IF_3 CR2 (DECF)	0	0	0	0	0
DAU_CZT_3 DM_IF_3 CR3 (ADC)	7	7	7	7	7
DAU_CZT_3 DM_IF_3 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_3 DM_IF_4 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_3 DM_IF_4 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_3 DM_IF_4 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_3 DM_IF_4 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_3 DM_IF_4 CR1 (HIT)	0	0	0	0	0
DAU_CZT_3 DM_IF_4 CR1 (DIS)	0	0	0	0	0
DAU_CZT_3 DM_IF_4 CR2 (DECF)	0	0	0	0	0
DAU_CZT_3 DM_IF_4 CR3 (ADC)	7	7	7	7	7
DAU_CZT_3 DM_IF_4 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_3 RCU_Master CR0 (STARTSCRUB)	0	0	0	0	0
DAU_CZT_3 RCU_Master CR0 (EDACERST)	0	0	0	0	0
DAU_CZT_3 RCU_Master CR0 (SCTEST)	0	0	0	0	0
DAU_CZT_3 RCU_Master CR0 (MRST)	0	0	0	0	0
DAU_CZT_3 RCU_Master CR1 (SCRUBSTOP)	1	1	1	1	1
DAU_CZT_3 RCU_Master CR1 (ASIC)	0	0	0	0	0
DAU_CZT_3 RCU_Master CR1 (TEST)	0	0	0	0	0
DAU_CZT_3 RCU_Master CR2 (MTEST)	0	0	0	0	0
DAU_CZT_3 RCU_Master CR2 (TTEST)	0	0	0	0	0
DAU_CZT_3 RCU_Master CR2 (ATEST)	1	1	1	1	1
DAU_CZT_3 RCU_Master CR2 (ETEST)	1	1	1	1	1
DAU_CZT_3 RCU_Master CR3 (NOBLINK)	0	0	0	0	0

DAU_CZT_3 RCU_Master CR3 (DEBUGSEL)	0	0	0	0	0
DAU_CZT_3 BIN_CTRL CR1 (MHFILT)	1	1	1	1	1
DAU_CZT_3 BIN_CTRL SBL	0	0	0	0	0
DAU_CZT_3 BIN_CTRL SB1	26	26	26	26	26
DAU_CZT_3 BIN_CTRL SB2	51	51	51	51	51
DAU_CZT_3 BIN_CTRL SB3	77	77	77	77	77
DAU_CZT_3 BIN_CTRL SB4	102	102	102	102	102
DAU_CZT_3 BIN_CTRL SB5	128	128	128	128	128
DAU_CZT_3 BIN_CTRL SB6	153	153	153	153	153
DAU_CZT_3 BIN_CTRL SB7	179	179	179	179	179
DAU_CZT_3 BIN_CTRL SB8	204	204	204	204	204
DAU_CZT_3 BIN_CTRL SB9	230	230	230	230	230
DAU_CZT_3 BIN_CTRL SBH	255	255	255	255	255
DAU_CZT_3 BIN_CTRL BINSIZE	50	50	50	50	50
DAU_CZT_4 XA_CFG_1 CR0 (STR)	0	0	0	0	0
DAU_CZT_4 XA_CFG_1 CR0 (SRST)	0	0	0	0	0
DAU_CZT_4 XA_CFG_1 CR0 (STC)	0	0	0	0	0
DAU_CZT_4 XA_CFG_1 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_4 XA_CFG_1 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_4 XA_CFG_2 CR0 (STR)	0	0	0	0	0
DAU_CZT_4 XA_CFG_2 CR0 (SRST)	0	0	0	0	0
DAU_CZT_4 XA_CFG_2 CR0 (STC)	0	0	0	0	0
DAU_CZT_4 XA_CFG_2 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_4 XA_CFG_2 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_4 XA_CFG_3 CR0 (STR)	0	0	0	0	0
DAU_CZT_4 XA_CFG_3 CR0 (SRST)	0	0	0	0	0
DAU_CZT_4 XA_CFG_3 CR0 (STC)	0	0	0	0	0
DAU_CZT_4 XA_CFG_3 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_4 XA_CFG_3 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_4 XA_CFG_4 CR0 (STR)	0	0	0	0	0
DAU_CZT_4 XA_CFG_4 CR0 (SRST)	0	0	0	0	0
DAU_CZT_4 XA_CFG_4 CR0 (STC)	0	0	0	0	0
DAU_CZT_4 XA_CFG_4 CR1 (CLKDIV)	180	180	180	180	180
DAU_CZT_4 XA_CFG_4 CR2 (ERRINJ)	0	0	0	0	0
DAU_CZT_4 DM_IF_1 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_4 DM_IF_1 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_4 DM_IF_1 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_4 DM_IF_1 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_4 DM_IF_1 CR1 (HIT)	0	0	0	0	0
DAU_CZT_4 DM_IF_1 CR1 (DIS)	0	0	0	0	0
DAU_CZT_4 DM_IF_1 CR2 (DECF)	0	0	0	0	0
DAU_CZT_4 DM_IF_1 CR3 (ADC)	7	7	7	7	7
DAU_CZT_4 DM_IF_1 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_4 DM_IF_2 CR0 (SNAP)	0	0	0	0	0

DAU_CZT_4 DM_IF_2 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_4 DM_IF_2 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_4 DM_IF_2 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_4 DM_IF_2 CR1 (HIT)	0	0	0	0	0
DAU_CZT_4 DM_IF_2 CR1 (DIS)	0	0	0	0	0
DAU_CZT_4 DM_IF_2 CR2 (DECF)	0	0	0	0	0
DAU_CZT_4 DM_IF_2 CR3 (ADC)	7	7	7	7	7
DAU_CZT_4 DM_IF_2 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_4 DM_IF_3 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_4 DM_IF_3 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_4 DM_IF_3 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_4 DM_IF_3 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_4 DM_IF_3 CR1 (HIT)	0	0	0	0	0
DAU_CZT_4 DM_IF_3 CR1 (DIS)	0	0	0	0	0
DAU_CZT_4 DM_IF_3 CR2 (DECF)	0	0	0	0	0
DAU_CZT_4 DM_IF_3 CR3 (ADC)	7	7	7	7	7
DAU_CZT_4 DM_IF_3 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_4 DM_IF_4 CR0 (SNAP)	0	0	0	0	0
DAU_CZT_4 DM_IF_4 CR1 (TIMEOUT)	15	15	15	15	15
DAU_CZT_4 DM_IF_4 CR1 (SNAPEN)	0	0	0	0	0
DAU_CZT_4 DM_IF_4 CR1 (OFFS)	1	1	1	1	1
DAU_CZT_4 DM_IF_4 CR1 (HIT)	0	0	0	0	0
DAU_CZT_4 DM_IF_4 CR1 (DIS)	0	0	0	0	0
DAU_CZT_4 DM_IF_4 CR2 (DECF)	0	0	0	0	0
DAU_CZT_4 DM_IF_4 CR3 (ADC)	7	7	7	7	7
DAU_CZT_4 DM_IF_4 CR3 (ADRTIME)	7	7	7	7	7
DAU_CZT_4 RCU_Master CR0 (STARTSCRUB)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR0 (EDACERST)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR0 (SCTEST)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR0 (MRST)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR1 (SCRUBSTOP)	1	1	1	1	1
DAU_CZT_4 RCU_Master CR1 (ASIC)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR1 (TEST)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR2 (MTEST)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR2 (TTEST)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR2 (ATEST)	1	1	1	1	1
DAU_CZT_4 RCU_Master CR2 (ETEST)	1	1	1	1	1
DAU_CZT_4 RCU_Master CR3 (NOBLINK)	0	0	0	0	0
DAU_CZT_4 RCU_Master CR3 (DEBUGSEL)	0	0	0	0	0
DAU_CZT_4 BIN_CTRL CR1 (MHFILT)	1	1	1	1	1
DAU_CZT_4 BIN_CTRL SBL	0	0	0	0	0
DAU_CZT_4 BIN_CTRL SB1	26	26	26	26	26
DAU_CZT_4 BIN_CTRL SB2	51	51	51	51	51
DAU_CZT_4 BIN_CTRL SB3	77	77	77	77	77

DAU_CZT_4 BIN_CTRL SB4	102	102	102	102	102
DAU_CZT_4 BIN_CTRL SB5	128	128	128	128	128
DAU_CZT_4 BIN_CTRL SB6	153	153	153	153	153
DAU_CZT_4 BIN_CTRL SB7	179	179	179	179	179
DAU_CZT_4 BIN_CTRL SB8	204	204	204	204	204
DAU_CZT_4 BIN_CTRL SB9	230	230	230	230	230
DAU_CZT_4 BIN_CTRL SBH	255	255	255	255	255
DAU_CZT_4 BIN_CTRL BINSIZE	50	50	50	50	50
DAU_BGO_1 RCU_Master CR0 (SCTEST)	0	0	0	0	0
DAU_BGO_1 RCU_Master CR0 (MRST)	0	0	0	0	0
DAU_BGO_1 RCU_Master CR1 (VALLEY_EN2)	1	1	1	1	1
DAU_BGO_1 RCU_Master CR1 (OFFSET_EN2)	1	1	1	1	1
DAU_BGO_1 RCU_Master CR1 (VALLEY_EN1)	1	1	1	1	1
DAU_BGO_1 RCU_Master CR1 (OFFSET_EN1)	1	1	1	1	1
DAU_BGO_1 RCU_Master CR1 (VALLEY_EN0)	1	1	1	1	1
DAU_BGO_1 RCU_Master CR1 (OFFSET_EN0)	1	1	1	1	1
DAU_BGO_1 RCU_Master CR2 (FTEST)	0	0	0	0	0
DAU_BGO_1 RCU_Master CR2 (TTEST)	0	0	0	0	0
DAU_BGO_1 RCU_Master CR2 (ATEST)	1	1	1	1	1
DAU_BGO_1 RCU_Master CR2 (ETEST)	1	1	1	1	1
DAU_BGO_1 RCU_Master CR3 (NOBLINK)	0	0	0	0	0
DAU_BGO_1 RCU_Master CR3 (DEBUGSEL)	0	0	0	0	0
DAU_BGO_1 PMT_IF_1 CR0 (DECF)	0	0	0	0	0
DAU_BGO_1 PMT_IF_1 CR1 (VALTRG)	20	20	20	15	15
DAU_BGO_1 PMT_IF_1 CR2 (PPTRG)	200	200	140	140	140
DAU_BGO_1 PMT_IF_1 CR3 (ADE)	1	1	1	1	1
DAU_BGO_1 PMT_IF_1 CR3 (SMP)	0	0	0	0	0
DAU_BGO_1 PMT_IF_1 CR3 (TCE)	0	0	0	0	0
DAU_BGO_1 PMT_IF_1 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_1 PMT_IF_1 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_1 PMT_IF_1 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_1 PMT_IF_1 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_1 PMT_IF_1 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_1 PMT_IF_1 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_1 PMT_IF_2 CR0 (DECF)	0	0	0	0	0
DAU_BGO_1 PMT_IF_2 CR1 (VALTRG)	20	20	20	15	15
DAU_BGO_1 PMT_IF_2 CR2 (PPTRG)	200	200	140	140	140
DAU_BGO_1 PMT_IF_2 CR3 (ADE)	1	1	1	1	1
DAU_BGO_1 PMT_IF_2 CR3 (SMP)	0	0	0	0	0
DAU_BGO_1 PMT_IF_2 CR3 (TCE)	0	0	0	0	0
DAU_BGO_1 PMT_IF_2 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_1 PMT_IF_2 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_1 PMT_IF_2 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_1 PMT_IF_2 CR5 (DECAY2)	233	233	233	233	233

DAU_BGO_1 PMT_IF_2 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_1 PMT_IF_2 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_1 PMT_IF_3 CR0 (DECF)	0	0	0	0	0
DAU_BGO_1 PMT_IF_3 CR1 (VALTRG)	20	20	20	15	15
DAU_BGO_1 PMT_IF_3 CR2 (PPTRG)	200	200	140	140	140
DAU_BGO_1 PMT_IF_3 CR3 (ADE)	1	1	1	1	1
DAU_BGO_1 PMT_IF_3 CR3 (SMP)	0	0	0	0	0
DAU_BGO_1 PMT_IF_3 CR3 (TCE)	0	0	0	0	0
DAU_BGO_1 PMT_IF_3 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_1 PMT_IF_3 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_1 PMT_IF_3 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_1 PMT_IF_3 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_1 PMT_IF_3 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_1 PMT_IF_3 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_1 TMON CR0 (TUPDATE)	0	0	0	0	0
DAU_BGO_1 TMON CR1 (TME)	1	1	1	1	1
DAU_BGO_1 TMON CR2 (CLKDIV)	18	18	18	18	18
DAU_BGO_1 BIN_CTRL SBL	0	0	0	0	0
DAU_BGO_1 BIN_CTRL SB1	26	26	26	26	26
DAU_BGO_1 BIN_CTRL SB2	51	51	51	51	51
DAU_BGO_1 BIN_CTRL SB3	77	77	77	77	77
DAU_BGO_1 BIN_CTRL SB4	102	102	102	102	102
DAU_BGO_1 BIN_CTRL SB5	128	128	128	128	128
DAU_BGO_1 BIN_CTRL SB6	153	153	153	153	153
DAU_BGO_1 BIN_CTRL SB7	179	179	179	179	179
DAU_BGO_1 BIN_CTRL SB8	204	204	204	204	204
DAU_BGO_1 BIN_CTRL SB9	230	230	230	230	230
DAU_BGO_1 BIN_CTRL SBH	255	255	255	255	255
DAU_BGO_1 BIN_CTRL BINSIZE	50	50	50	50	50
DAU_BGO_2 RCU_Master CR0 (SCTEST)	0	0	0	0	0
DAU_BGO_2 RCU_Master CR0 (MRST)	0	0	0	0	0
DAU_BGO_2 RCU_Master CR1 (VALLEY_EN2)	1	1	1	1	1
DAU_BGO_2 RCU_Master CR1 (OFFSET_EN2)	1	1	1	1	1
DAU_BGO_2 RCU_Master CR1 (VALLEY_EN1)	1	1	1	1	1
DAU_BGO_2 RCU_Master CR1 (OFFSET_EN1)	1	1	1	1	1
DAU_BGO_2 RCU_Master CR1 (VALLEY_EN0)	1	1	1	1	1
DAU_BGO_2 RCU_Master CR1 (OFFSET_EN0)	1	1	1	1	1
DAU_BGO_2 RCU_Master CR2 (FTEST)	0	0	0	0	0
DAU_BGO_2 RCU_Master CR2 (TTEST)	0	0	0	0	0
DAU_BGO_2 RCU_Master CR2 (ATEST)	1	1	1	1	1
DAU_BGO_2 RCU_Master CR2 (ETEST)	1	1	1	1	1
DAU_BGO_2 RCU_Master CR3 (NOBLINK)	0	0	0	0	0
DAU_BGO_2 RCU_Master CR3 (DEBUGSEL)	0	0	0	0	0
DAU_BGO_2 PMT_IF_1 CR0 (DECF)	0	0	0	0	0

DAU_BGO_2 PMT_IF_1 CR1 (VALTRG)	30	30	30	20	15
DAU_BGO_2 PMT_IF_1 CR2 (PPTRG)	200	200	120	120	120
DAU_BGO_2 PMT_IF_1 CR3 (ADE)	1	1	1	1	1
DAU_BGO_2 PMT_IF_1 CR3 (SMP)	0	0	0	0	0
DAU_BGO_2 PMT_IF_1 CR3 (TCE)	0	0	0	0	0
DAU_BGO_2 PMT_IF_1 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_2 PMT_IF_1 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_2 PMT_IF_1 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_2 PMT_IF_1 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_2 PMT_IF_1 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_2 PMT_IF_1 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_2 PMT_IF_2 CR0 (DECF)	0	0	0	0	0
DAU_BGO_2 PMT_IF_2 CR1 (VALTRG)	30	30	30	20	15
DAU_BGO_2 PMT_IF_2 CR2 (PPTRG)	200	200	120	120	120
DAU_BGO_2 PMT_IF_2 CR3 (ADE)	1	1	1	1	1
DAU_BGO_2 PMT_IF_2 CR3 (SMP)	0	0	0	0	0
DAU_BGO_2 PMT_IF_2 CR3 (TCE)	0	0	0	0	0
DAU_BGO_2 PMT_IF_2 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_2 PMT_IF_2 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_2 PMT_IF_2 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_2 PMT_IF_2 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_2 PMT_IF_2 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_2 PMT_IF_2 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_2 PMT_IF_3 CR0 (DECF)	0	0	0	0	0
DAU_BGO_2 PMT_IF_3 CR1 (VALTRG)	30	30	30	20	15
DAU_BGO_2 PMT_IF_3 CR2 (PPTRG)	200	200	120	120	120
DAU_BGO_2 PMT_IF_3 CR3 (ADE)	1	1	1	1	1
DAU_BGO_2 PMT_IF_3 CR3 (SMP)	0	0	0	0	0
DAU_BGO_2 PMT_IF_3 CR3 (TCE)	0	0	0	0	0
DAU_BGO_2 PMT_IF_3 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_2 PMT_IF_3 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_2 PMT_IF_3 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_2 PMT_IF_3 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_2 PMT_IF_3 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_2 PMT_IF_3 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_2 TMON CR0 (TUPDATE)	0	0	0	0	0
DAU_BGO_2 TMON CR1 (TME)	1	1	1	1	1
DAU_BGO_2 TMON CR2 (CLKDIV)	18	18	18	18	18
DAU_BGO_2 BIN_CTRL SBL	0	0	0	0	0
DAU_BGO_2 BIN_CTRL SB1	26	26	26	26	26
DAU_BGO_2 BIN_CTRL SB2	51	51	51	51	51
DAU_BGO_2 BIN_CTRL SB3	77	77	77	77	77
DAU_BGO_2 BIN_CTRL SB4	102	102	102	102	102
DAU_BGO_2 BIN_CTRL SB5	128	128	128	128	128

DAU_BGO_2 BIN_CTRL SB6	153	153	153	153	153
DAU_BGO_2 BIN_CTRL SB7	179	179	179	179	179
DAU_BGO_2 BIN_CTRL SB8	204	204	204	204	204
DAU_BGO_2 BIN_CTRL SB9	230	230	230	230	230
DAU_BGO_2 BIN_CTRL SBH	255	255	255	255	255
DAU_BGO_2 BIN_CTRL BINSIZE	50	50	50	50	50
DAU_BGO_3 RCU_Master CR0 (SCTEST)	0	0	0	0	0
DAU_BGO_3 RCU_Master CR0 (MRST)	0	0	0	0	0
DAU_BGO_3 RCU_Master CR1 (VALLEY_EN2)	1	1	1	1	1
DAU_BGO_3 RCU_Master CR1 (OFFSET_EN2)	1	1	1	1	1
DAU_BGO_3 RCU_Master CR1 (VALLEY_EN1)	1	1	1	1	1
DAU_BGO_3 RCU_Master CR1 (OFFSET_EN1)	1	1	1	1	1
DAU_BGO_3 RCU_Master CR1 (VALLEY_EN0)	1	1	1	1	1
DAU_BGO_3 RCU_Master CR1 (OFFSET_EN0)	1	1	1	1	1
DAU_BGO_3 RCU_Master CR2 (FTEST)	0	0	0	0	0
DAU_BGO_3 RCU_Master CR2 (TTEST)	0	0	0	0	0
DAU_BGO_3 RCU_Master CR2 (ATEST)	1	1	1	1	1
DAU_BGO_3 RCU_Master CR2 (ETEST)	1	1	1	1	1
DAU_BGO_3 RCU_Master CR3 (NOBLINK)	0	0	0	0	0
DAU_BGO_3 RCU_Master CR3 (DEBUGSEL)	0	0	0	0	0
DAU_BGO_3 PMT_IF_1 CR0 (DECF)	0	0	0	0	0
DAU_BGO_3 PMT_IF_1 CR1 (VALTRG)	15	15	15	15	15
DAU_BGO_3 PMT_IF_1 CR2 (PPTRG)	200	64	64	64	64
DAU_BGO_3 PMT_IF_1 CR3 (ADE)	1	1	1	1	1
DAU_BGO_3 PMT_IF_1 CR3 (SMP)	0	0	0	0	0
DAU_BGO_3 PMT_IF_1 CR3 (TCE)	0	0	0	0	0
DAU_BGO_3 PMT_IF_1 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_3 PMT_IF_1 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_3 PMT_IF_1 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_3 PMT_IF_1 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_3 PMT_IF_1 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_3 PMT_IF_1 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_3 PMT_IF_2 CR0 (DECF)	0	0	0	0	0
DAU_BGO_3 PMT_IF_2 CR1 (VALTRG)	15	15	15	15	15
DAU_BGO_3 PMT_IF_2 CR2 (PPTRG)	200	64	64	64	64
DAU_BGO_3 PMT_IF_2 CR3 (ADE)	1	1	1	1	1
DAU_BGO_3 PMT_IF_2 CR3 (SMP)	0	0	0	0	0
DAU_BGO_3 PMT_IF_2 CR3 (TCE)	0	0	0	0	0
DAU_BGO_3 PMT_IF_2 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_3 PMT_IF_2 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_3 PMT_IF_2 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_3 PMT_IF_2 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_3 PMT_IF_2 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_3 PMT_IF_2 CR7 (GAIN2)	9	9	9	9	9

DAU_BGO_3 PMT_IF_3 CR0 (DECF)	0	0	0	0	0
DAU_BGO_3 PMT_IF_3 CR1 (VALTRG)	15	15	15	15	15
DAU_BGO_3 PMT_IF_3 CR2 (PPTRG)	200	64	64	64	64
DAU_BGO_3 PMT_IF_3 CR3 (ADE)	1	1	1	1	1
DAU_BGO_3 PMT_IF_3 CR3 (SMP)	0	0	0	0	0
DAU_BGO_3 PMT_IF_3 CR3 (TCE)	0	0	0	0	0
DAU_BGO_3 PMT_IF_3 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_3 PMT_IF_3 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_3 PMT_IF_3 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_3 PMT_IF_3 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_3 PMT_IF_3 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_3 PMT_IF_3 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_3 TMON CR0 (TUPDATE)	0	0	0	0	0
DAU_BGO_3 TMON CR1 (TME)	1	1	1	1	1
DAU_BGO_3 TMON CR2 (CLKDIV)	18	18	18	18	18
DAU_BGO_3 BIN_CTRL SBL	0	0	0	0	0
DAU_BGO_3 BIN_CTRL SB1	26	26	26	26	26
DAU_BGO_3 BIN_CTRL SB2	51	51	51	51	51
DAU_BGO_3 BIN_CTRL SB3	77	77	77	77	77
DAU_BGO_3 BIN_CTRL SB4	102	102	102	102	102
DAU_BGO_3 BIN_CTRL SB5	128	128	128	128	128
DAU_BGO_3 BIN_CTRL SB6	153	153	153	153	153
DAU_BGO_3 BIN_CTRL SB7	179	179	179	179	179
DAU_BGO_3 BIN_CTRL SB8	204	204	204	204	204
DAU_BGO_3 BIN_CTRL SB9	230	230	230	230	230
DAU_BGO_3 BIN_CTRL SBH	255	255	255	255	255
DAU_BGO_3 BIN_CTRL BINSIZE	50	50	50	50	50
DAU_BGO_4 RCU_Master CR0 (SCTEST)	0	0	0	0	0
DAU_BGO_4 RCU_Master CR0 (MRST)	0	0	0	0	0
DAU_BGO_4 RCU_Master CR1 (VALLEY_EN2)	1	1	1	1	1
DAU_BGO_4 RCU_Master CR1 (OFFSET_EN2)	1	1	1	1	1
DAU_BGO_4 RCU_Master CR1 (VALLEY_EN1)	1	1	1	1	1
DAU_BGO_4 RCU_Master CR1 (OFFSET_EN1)	1	1	1	1	1
DAU_BGO_4 RCU_Master CR1 (VALLEY_EN0)	1	1	1	1	1
DAU_BGO_4 RCU_Master CR1 (OFFSET_EN0)	1	1	1	1	1
DAU_BGO_4 RCU_Master CR2 (FTEST)	0	0	0	0	0
DAU_BGO_4 RCU_Master CR2 (TTEST)	0	0	0	0	0
DAU_BGO_4 RCU_Master CR2 (ATEST)	1	1	1	1	1
DAU_BGO_4 RCU_Master CR2 (ETEST)	1	1	1	1	1
DAU_BGO_4 RCU_Master CR3 (NOBLINK)	0	0	0	0	0
DAU_BGO_4 RCU_Master CR3 (DEBUGSEL)	0	0	0	0	0
DAU_BGO_4 PMT_IF_1 CR0 (DECF)	0	0	0	0	0
DAU_BGO_4 PMT_IF_1 CR1 (VALTRG)	30	30	30	20	20
DAU_BGO_4 PMT_IF_1 CR2 (PPTRG)	200	200	140	140	140

DAU_BGO_4 PMT_IF_1 CR3 (ADE)	1	1	1	1	1
DAU_BGO_4 PMT_IF_1 CR3 (SMP)	0	0	0	0	0
DAU_BGO_4 PMT_IF_1 CR3 (TCE)	0	0	0	0	0
DAU_BGO_4 PMT_IF_1 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_4 PMT_IF_1 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_4 PMT_IF_1 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_4 PMT_IF_1 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_4 PMT_IF_1 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_4 PMT_IF_1 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_4 PMT_IF_2 CR0 (DECF)	0	0	0	0	0
DAU_BGO_4 PMT_IF_2 CR1 (VALTRG)	30	30	30	20	20
DAU_BGO_4 PMT_IF_2 CR2 (PPTRG)	200	200	140	140	140
DAU_BGO_4 PMT_IF_2 CR3 (ADE)	1	1	1	1	1
DAU_BGO_4 PMT_IF_2 CR3 (SMP)	0	0	0	0	0
DAU_BGO_4 PMT_IF_2 CR3 (TCE)	0	0	0	0	0
DAU_BGO_4 PMT_IF_2 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_4 PMT_IF_2 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_4 PMT_IF_2 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_4 PMT_IF_2 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_4 PMT_IF_2 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_4 PMT_IF_2 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_4 PMT_IF_3 CR0 (DECF)	0	0	0	0	0
DAU_BGO_4 PMT_IF_3 CR1 (VALTRG)	30	30	30	20	20
DAU_BGO_4 PMT_IF_3 CR2 (PPTRG)	200	200	140	140	140
DAU_BGO_4 PMT_IF_3 CR3 (ADE)	1	1	1	1	1
DAU_BGO_4 PMT_IF_3 CR3 (SMP)	0	0	0	0	0
DAU_BGO_4 PMT_IF_3 CR3 (TCE)	0	0	0	0	0
DAU_BGO_4 PMT_IF_3 CR3 (TSMP)	0	0	0	0	0
DAU_BGO_4 PMT_IF_3 CR3 (OFFLOCKT)	15	15	15	15	15
DAU_BGO_4 PMT_IF_3 CR4 (DECAY1)	218	218	218	218	218
DAU_BGO_4 PMT_IF_3 CR5 (DECAY2)	233	233	233	233	233
DAU_BGO_4 PMT_IF_3 CR6 (GAIN1)	100	100	100	100	100
DAU_BGO_4 PMT_IF_3 CR7 (GAIN2)	9	9	9	9	9
DAU_BGO_4 TMON CR0 (TUPDATE)	0	0	0	0	0
DAU_BGO_4 TMON CR1 (TME)	1	1	1	1	1
DAU_BGO_4 TMON CR2 (CLKDIV)	18	18	18	18	18
DAU_BGO_4 BIN_CTRL SBL	0	0	0	0	0
DAU_BGO_4 BIN_CTRL SB1	26	26	26	26	26
DAU_BGO_4 BIN_CTRL SB2	51	51	51	51	51
DAU_BGO_4 BIN_CTRL SB3	77	77	77	77	77
DAU_BGO_4 BIN_CTRL SB4	102	102	102	102	102
DAU_BGO_4 BIN_CTRL SB5	128	128	128	128	128
DAU_BGO_4 BIN_CTRL SB6	153	153	153	153	153
DAU_BGO_4 BIN_CTRL SB7	179	179	179	179	179

DAU_BGO_4 BIN_CTRL SB8	204	204	204	204	204
DAU_BGO_4 BIN_CTRL SB9	230	230	230	230	230
DAU_BGO_4 BIN_CTRL SBH	255	255	255	255	255
DAU_BGO_4 BIN_CTRL BINSIZE	50	50	50	50	50

2.6 DAU ASIC Configuration Parameters MemID 1245

The DAU ASIC Configuration table controls the 16384 CZT pixels individually. Changes have mainly been to disable noisy pixels. At the end of commissioning 249 pixels had been disabled, while an additional 12 pixels have been disabled during operations. Table 6 contains a list of disabled pixels, pixels disabled after commissioning marked in red.

During commissioning coarse tuning was doubled on Detector Module 1 ASIC 2 to correct for a firmware bit error.

Table 6: MXGS CZT - Disabled Pixels

#	CZT	Readout Chain	Detector Module	ASIC	ASIC Channel	ASIC Address	16-bit address
1	1	1	2	1	125	2	380
2	1	2	3	1	13	12	1548
3	1	2	3	1	19	12	1554
4	1	2	3	1	23	12	1558
5	1	2	3	1	48	12	1583
6	1	2	3	1	50	12	1585
7	1	2	3	1	52	12	1587
8	1	2	3	1	54	12	1589
9	1	2	3	1	56	12	1591
10	1	2	3	1	58	12	1593
11	1	2	3	1	60	12	1595
12	1	2	3	1	62	12	1597
13	1	2	3	1	64	12	1599
14	1	2	3	1	108	12	1643
15	1	2	3	1	110	12	1645
16	1	2	3	2	11	13	1674
17	1	2	3	2	13	13	1676
18	1	2	3	2	15	13	1678
19	1	2	3	2	17	13	1680
20	1	2	3	2	19	13	1682
21	1	3	2	1	112	18	2415
22	1	3	2	1	116	18	2419
23	1	3	2	2	17	19	2448
24	1	3	2	2	19	19	2450
25	1	3	4	1	11	22	2826
26	1	3	4	1	13	22	2828
27	1	3	4	1	15	22	2830

28	1	3	4	1	17	22	2832
29	1	3	4	1	19	22	2834
30	1	3	4	1	23	22	2838
31	1	3	4	1	45	22	2860
32	1	3	4	1	52	22	2867
33	1	3	4	1	54	22	2869
34	1	3	4	1	55	22	2870
35	1	3	4	1	56	22	2871
36	1	3	4	1	58	22	2873
37	1	3	4	1	60	22	2875
38	1	3	4	1	61	22	2876
39	1	3	4	1	62	22	2877
40	1	3	4	1	63	22	2878
41	1	3	4	1	64	22	2879
42	1	3	4	1	108	22	2923
43	1	3	4	1	110	22	2925
44	1	3	4	1	112	22	2927
45	1	3	4	1	114	22	2929
46	1	3	4	1	116	22	2931
47	1	3	4	2	9	23	2952
48	1	3	4	2	11	23	2954
49	1	3	4	2	13	23	2956
50	1	3	4	2	15	23	2958
51	1	3	4	2	17	23	2960
52	1	3	4	2	19	23	2962
53	1	3	4	2	23	23	2966
54	1	3	4	2	56	23	2999
55	1	3	4	2	58	23	3001
56	1	3	4	2	59	23	3002
57	1	3	4	2	60	23	3003
58	1	3	4	2	62	23	3005
59	1	3	4	2	64	23	3007
60	1	3	4	2	67	23	3010
61	1	3	4	2	69	23	3012
62	1	3	4	2	71	23	3014
63	1	3	4	2	108	23	3051
64	1	3	4	2	110	23	3053
65	1	3	4	2	112	23	3055
66	1	3	4	2	114	23	3057
67	1	3	4	2	116	23	3059
68	1	3	4	2	118	23	3061
69	1	3	4	2	122	23	3065
70	1	3	4	2	124	23	3067
71	1	3	4	2	127	23	3070

72	1	4	2	1	36	26	3363
73	1	4	4	1	11	30	3850
74	1	4	4	1	13	30	3852
75	1	4	4	1	19	30	3858
76	1	4	4	1	23	30	3862
77	1	4	4	2	5	31	3972
78	1	4	4	2	7	31	3974
79	1	4	4	2	11	31	3978
80	1	4	4	2	13	31	3980
81	1	4	4	2	15	31	3982
82	1	4	4	2	17	31	3984
83	1	4	4	2	19	31	3986
84	1	4	4	2	21	31	3988
85	1	4	4	2	48	31	4015
86	1	4	4	2	54	31	4021
87	1	4	4	2	56	31	4023
88	1	4	4	2	60	31	4027
89	1	4	4	2	69	31	4036
90	1	4	4	2	71	31	4038
91	1	4	4	2	75	31	4042
92	1	4	4	2	77	31	4044
93	1	4	4	2	102	31	4069
94	1	4	4	2	104	31	4071
95	1	4	4	2	106	31	4073
96	1	4	4	2	108	31	4075
97	1	4	4	2	110	31	4077
98	1	4	4	2	111	31	4078
99	1	4	4	2	112	31	4079
100	1	4	4	2	113	31	4080
101	1	4	4	2	114	31	4081
102	1	4	4	2	115	31	4082
103	1	4	4	2	116	31	4083
104	1	4	4	2	118	31	4085
105	1	4	4	2	119	31	4086
106	1	4	4	2	120	31	4087
107	1	4	4	2	122	31	4089
108	1	4	4	2	123	31	4090
109	1	4	4	2	124	31	4091
110	1	4	4	2	125	31	4092
111	1	4	4	2	126	31	4093
112	1	4	4	2	127	31	4094
113	1	4	4	2	128	31	4095
114	2	1	2	2	17	35	4496
115	2	1	3	1	19	36	4626

116	2	1	3	1	23	36	4630
117	2	1	3	2	118	37	4853
118	2	1	3	2	124	37	4859
119	2	1	3	2	127	37	4862
120	2	2	2	2	91	43	5594
121	2	2	4	2	30	47	6045
122	2	3	2	1	13	50	6412
123	2	3	2	1	17	50	6416
124	2	3	2	1	19	50	6418
125	2	3	2	1	23	50	6422
126	2	3	2	1	45	50	6444
127	2	3	2	1	48	50	6447
128	2	3	2	1	52	50	6451
129	2	3	2	1	54	50	6453
130	2	3	2	1	56	50	6455
131	2	3	2	1	58	50	6457
132	2	3	2	1	60	50	6459
133	2	3	2	1	62	50	6461
134	2	3	2	1	63	50	6462
135	2	3	2	1	64	50	6463
136	2	3	2	1	65	50	6464
137	2	3	2	1	66	50	6465
138	2	3	2	1	67	50	6466
139	2	3	2	1	68	50	6467
140	2	3	2	1	69	50	6468
141	2	3	2	1	70	50	6469
142	2	3	2	1	71	50	6470
143	2	3	2	1	73	50	6472
144	2	3	2	1	90	50	6489
145	2	3	2	1	108	50	6507
146	2	3	2	1	110	50	6509
147	2	3	2	1	112	50	6511
148	2	3	2	1	114	50	6513
149	2	3	2	1	116	50	6515
150	2	3	2	1	120	50	6519
151	2	3	2	2	13	51	6540
152	2	3	2	2	15	51	6542
153	2	3	2	2	17	51	6544
154	2	3	2	2	19	51	6546
155	2	3	2	2	23	51	6550
156	2	3	2	2	52	51	6579
157	2	3	2	2	53	51	6580
158	2	3	2	2	54	51	6581
159	2	3	2	2	56	51	6583

160	2	3	2	2	57	51	6584
161	2	3	2	2	58	51	6585
162	2	3	2	2	59	51	6586
163	2	3	2	2	60	51	6587
164	2	3	2	2	62	51	6589
165	2	3	2	2	63	51	6590
166	2	3	2	2	64	51	6591
167	2	3	2	2	65	51	6592
168	2	3	2	2	67	51	6594
169	2	3	2	2	69	51	6596
170	2	3	2	2	70	51	6597
171	2	3	2	2	71	51	6598
172	2	3	2	2	73	51	6600
173	2	3	2	2	75	51	6602
174	2	3	2	2	119	51	6646
175	2	3	2	2	128	51	6655
176	2	3	4	1	4	54	6915
177	2	3	4	1	6	54	6917
178	2	3	4	2	43	55	7082
179	2	3	4	2	52	55	7091
180	2	4	1	2	110	57	7405
181	2	4	1	2	114	57	7409
182	2	4	1	2	118	57	7413
183	2	4	1	2	124	57	7419
184	2	4	1	2	127	57	7422
185	2	4	3	2	38	61	7845
186	3	1	2	1	111	66	8558
187	3	1	2	1	113	66	8560
188	3	1	2	1	115	66	8562
189	3	1	2	1	117	66	8564
190	3	1	2	1	119	66	8566
191	3	1	2	1	121	66	8568
192	3	1	2	1	122	66	8569
193	3	1	2	1	123	66	8570
194	3	1	2	1	125	66	8572
195	3	1	2	1	126	66	8573
196	3	1	2	1	127	66	8574
197	3	1	2	1	128	66	8575
198	3	1	4	1	65	70	9024
199	3	1	4	1	73	70	9032
200	3	1	4	1	108	70	9067
201	3	1	4	1	110	70	9069
202	3	1	4	1	112	70	9071
203	3	1	4	1	116	70	9075

204	3	1	4	1	118	70	9077
205	3	1	4	2	110	71	9197
206	3	2	1	2	46	73	9389
207	3	2	1	2	47	73	9390
208	3	2	4	1	123	78	10106
209	3	3	2	2	91	83	10714
210	3	3	3	2	31	85	10910
211	3	3	3	2	44	85	10923
212	3	4	2	2	59	91	11706
213	3	4	2	2	62	91	11709
214	3	4	2	2	64	91	11711
215	3	4	3	2	89	93	11992
216	3	4	4	2	91	95	12250
217	4	1	1	2	7	97	12422
218	4	1	1	2	10	97	12425
219	4	1	4	2	108	103	13291
220	4	1	4	2	110	103	13293
221	4	1	4	2	114	103	13297
222	4	2	1	2	30	105	13469
223	4	2	3	2	41	109	13992
224	4	2	3	2	77	109	14028
225	4	3	1	1	22	112	14357
226	4	3	2	2	13	115	14732
227	4	3	2	2	56	115	14775
228	4	3	2	2	71	115	14790
229	4	3	2	2	77	115	14796
230	4	3	2	2	104	115	14823
231	4	3	2	2	108	115	14827
232	4	3	2	2	110	115	14829
233	4	3	2	2	112	115	14831
234	4	3	2	2	114	115	14833
235	4	3	2	2	115	115	14834
236	4	3	2	2	116	115	14835
237	4	3	2	2	118	115	14837
238	4	3	2	2	119	115	14838
239	4	3	2	2	120	115	14839
240	4	3	2	2	122	115	14841
241	4	3	2	2	123	115	14842
242	4	3	2	2	124	115	14843
243	4	3	2	2	125	115	14844
244	4	3	2	2	126	115	14845
245	4	3	2	2	127	115	14846
246	4	3	2	2	128	115	14847
247	4	3	3	2	35	117	15010

248	4	3	3	2	39	117	15014
249	4	3	3	2	49	117	15024
250	4	3	3	2	51	117	15026
251	4	3	3	2	55	117	15030
252	4	4	1	2	42	121	15529
253	4	4	2	1	83	122	15698
254	4	4	2	1	85	122	15700
255	4	4	3	1	33	124	15904
256	4	4	3	1	35	124	15906
257	4	4	3	1	119	124	15990
258	4	4	3	1	128	124	15999
259	4	4	3	2	87	125	16086
260	4	4	3	2	88	125	16087
261	4	4	3	2	89	125	16088

3 MMIA Configuration Tables

3.1 System Parameters MemID 1210

No changes were made to the System Parameters configuration table.

Date	2018-05-31
SCRUB_WORDS	100
SCRUB_PERIOD	1

3.2 Buffer Control Parameters MemID 1220

On 2019-05-08 buffer sizes were rearranged for more optimal performance.

Date	2018-06-09	2019-05-08
SIZE_COL_BUF_PRIO_1	550	350
SIZE_COL_BUF_PRIO_2	300	400
SIZE_COL_BUF_PRIO_3	125	175
OVERW_COL_BUF_PRIO	0	0
SIZE_SCI_BUF	48	98

3.3 Science Parameters MemID 1230

On 2018-08-08 EM Gain was increased for CHU 1 (one value corrected on 2018-11-08).

In 2022, after moving the ASIM instrument to limb viewing the parameters for the MMIA triggering algorithm (FACTOR_CHU_1/2, HIT_MIN_CHU_1/2 and EXTEND_CHU_1/2) were adjusted for the new viewing conditions. In 2024, after moving back to nadir view, the parameters were reset to the original values.

Date	2018-06-08	2018-08-08	2018-11-08	2022-03-23	2022-03-24	2022-05-11	2022-09-02	2022-10-14	2022-10-19	2024-04-17
MMIA_TRIG_ENA	1	1	1	1	1	1	1	1	1	1
MXGS_MMIA_TRIG_ENA	1	1	1	1	1	1	1	1	1	1
MMIA_MXGS_TLE_TRIG_ENA	1	1	1	1	1	1	1	1	1	1
MMIA_MXGS_LIGHT_TRIG_ENA	1	1	1	1	1	1	1	1	1	1
MXGS_TRIG_COMP_T	6	6	6	6	6	6	6	6	6	6
TRIGED_FRAME_RATE	12	12	12	12	12	12	12	12	12	12
COSMIC_EVENT_REJECTION	1	1	1	1	1	1	1	1	1	1
CHU_CROP_OFFSET_ROW	3	3	3	3	3	3	3	3	3	3
CHU_CROP_OFFSET_COL	7	7	7	7	7	7	7	7	7	7
MMIA_TLE_TRIG_PR_3_META	0	0	0	0	0	0	0	0	0	0
MMIA_LIGHT_TRIG_PR_3_META	0	0	0	0	0	0	0	0	0	0
MMIA_MXGS_TLE_TRIG_PR_3_META	0	0	0	0	0	0	0	0	0	0
MMIA_MXGS_LIGHT_TRIG_PR_3_META	0	0	0	0	0	0	0	0	0	0

MXGS_TRIG_PR_3_META	0	0	0	0	0	0	0	0	0	0
MMIA_TLE_TRIG_PR_3_PIXEL	0	0	0	0	0	0	0	0	0	0
MMIA_LIGHT_TRIG_PR_3_PIXEL	1	1	1	1	1	1	1	1	1	1
(MMIA_MXGS_TLE_TRIG_PR_3_PIXEL	0	0	0	0	0	0	0	0	0	0
MMIA_MXGS_LIGHT_TRIG_PR_3_PIXEL	0	0	0	0	0	0	0	0	0	0
CHU_1_EM_GAIN_TAB(1)	431	458	458	458	458	458	458	458	458	458
CHU_1_EM_GAIN_TAB(2)	451	478	478	478	478	478	478	478	478	478
CHU_1_EM_GAIN_TAB(3)	471	498	498	498	498	498	498	498	498	498
CHU_1_EM_GAIN_TAB(4)	491	518	518	518	518	518	518	518	518	518
CHU_1_EM_GAIN_TAB(5)	511	538	538	538	538	538	538	538	538	538
CHU_1_EM_GAIN_TAB(6)	531	558	558	558	558	558	558	558	558	558
CHU_1_EM_GAIN_TAB(7)	552	579	579	579	579	579	579	579	579	579
CHU_1_EM_GAIN_TAB(8)	572	599	599	599	599	599	599	599	599	599
CHU_1_EM_GAIN_TAB(9)	592	651	619	619	619	619	619	619	619	619
CHU_1_EM_GAIN_TAB(10)	612	639	639	639	639	639	639	639	639	639
CHU_1_EM_GAIN_TAB(11)	632	659	659	659	659	659	659	659	659	659
CHU_1_EM_GAIN_TAB(12)	652	679	679	679	679	679	679	679	679	679
CHU_1_EM_GAIN_TAB(13)	652	679	679	679	679	679	679	679	679	679
CHU_1_EM_GAIN_TAB(14)	652	679	679	679	679	679	679	679	679	679
CHU_1_EM_GAIN_TAB(15)	652	679	679	679	679	679	679	679	679	679
CHU_1_EM_GAIN_TAB(16)	652	679	679	679	679	679	679	679	679	679
CHU_1_TEMP_TAB(1)	2050	2050	2050	2050	2050	2050	2050	2050	2050	2050
CHU_1_TEMP_TAB(2)	2258	2258	2258	2258	2258	2258	2258	2258	2258	2258
CHU_1_TEMP_TAB(3)	2469	2469	2469	2469	2469	2469	2469	2469	2469	2469
CHU_1_TEMP_TAB(4)	2676	2676	2676	2676	2676	2676	2676	2676	2676	2676
CHU_1_TEMP_TAB(5)	2874	2874	2874	2874	2874	2874	2874	2874	2874	2874
CHU_1_TEMP_TAB(6)	3061	3061	3061	3061	3061	3061	3061	3061	3061	3061
CHU_1_TEMP_TAB(7)	3233	3233	3233	3233	3233	3233	3233	3233	3233	3233
CHU_1_TEMP_TAB(8)	3387	3387	3387	3387	3387	3387	3387	3387	3387	3387
CHU_1_TEMP_TAB(9)	3522	3522	3522	3522	3522	3522	3522	3522	3522	3522
CHU_1_TEMP_TAB(10)	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638
CHU_1_TEMP_TAB(11)	3736	3736	3736	3736	3736	3736	3736	3736	3736	3736
CHU_1_TEMP_TAB(12)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817

CHU_1_TEMP_TAB(13)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817
CHU_1_TEMP_TAB(14)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817
CHU_1_TEMP_TAB(15)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817
CHU_1_TEMP_TAB(16)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817
CHU_2_EM_GAIN_TAB(1)	371	371	371	371	371	371	371	371	371	371
CHU_2_EM_GAIN_TAB(2)	391	391	391	391	391	391	391	391	391	391
CHU_2_EM_GAIN_TAB(3)	411	411	411	411	411	411	411	411	411	411
CHU_2_EM_GAIN_TAB(4)	431	431	431	431	431	431	431	431	431	431
CHU_2_EM_GAIN_TAB(5)	451	451	451	451	451	451	451	451	451	451
CHU_2_EM_GAIN_TAB(6)	471	471	471	471	471	471	471	471	471	471
CHU_2_EM_GAIN_TAB(7)	491	491	491	491	491	491	491	491	491	491
CHU_2_EM_GAIN_TAB(8)	511	511	511	511	511	511	511	511	511	511
CHU_2_EM_GAIN_TAB(9)	531	531	531	531	531	531	531	531	531	531
CHU_2_EM_GAIN_TAB(10)	551	551	551	551	551	551	551	551	551	551
CHU_2_EM_GAIN_TAB(11)	571	571	571	571	571	571	571	571	571	571
CHU_2_EM_GAIN_TAB(12)	591	591	591	591	591	591	591	591	591	591
CHU_2_EM_GAIN_TAB(13)	591	591	591	591	591	591	591	591	591	591
CHU_2_EM_GAIN_TAB(14)	591	591	591	591	591	591	591	591	591	591
CHU_2_EM_GAIN_TAB(15)	591	591	591	591	591	591	591	591	591	591
CHU_2_EM_GAIN_TAB(16)	591	591	591	591	591	591	591	591	591	591
CHU_2_TEMP_TAB(1)	2051	2051	2051	2051	2051	2051	2051	2051	2051	2051
CHU_2_TEMP_TAB(2)	2259	2259	2259	2259	2259	2259	2259	2259	2259	2259
CHU_2_TEMP_TAB(3)	2469	2469	2469	2469	2469	2469	2469	2469	2469	2469
CHU_2_TEMP_TAB(4)	2676	2676	2676	2676	2676	2676	2676	2676	2676	2676
CHU_2_TEMP_TAB(5)	2875	2875	2875	2875	2875	2875	2875	2875	2875	2875
CHU_2_TEMP_TAB(6)	3062	3062	3062	3062	3062	3062	3062	3062	3062	3062
CHU_2_TEMP_TAB(7)	3234	3234	3234	3234	3234	3234	3234	3234	3234	3234
CHU_2_TEMP_TAB(8)	3388	3388	3388	3388	3388	3388	3388	3388	3388	3388
CHU_2_TEMP_TAB(9)	3523	3523	3523	3523	3523	3523	3523	3523	3523	3523
CHU_2_TEMP_TAB(10)	3639	3639	3639	3639	3639	3639	3639	3639	3639	3639
CHU_2_TEMP_TAB(11)	3737	3737	3737	3737	3737	3737	3737	3737	3737	3737
CHU_2_TEMP_TAB(12)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817
CHU_2_TEMP_TAB(13)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817
CHU_2_TEMP_TAB(14)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817
CHU_2_TEMP_TAB(15)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817
CHU_2_TEMP_TAB(16)	3817	3817	3817	3817	3817	3817	3817	3817	3817	3817

CHU_1_OPCODE_01	4	4	4	4	4	4	4	4	4	4
CHU_1_OPDATA_01	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000
CHU_1_OPCODE_02	4	4	4	4	4	4	4	4	4	4
CHU_1_OPDATA_02	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001
CHU_1_OPCODE_03	16	16	16	16	16	16	16	16	16	16
CHU_1_OPDATA_03	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C
CHU_1_OPCODE_04	17	17	17	17	17	17	17	17	17	17
CHU_1_OPDATA_04	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3
CHU_1_OPCODE_05	18	18	18	18	18	18	18	18	18	18
CHU_1_OPDATA_05	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8
CHU_1_OPCODE_06	19	19	19	19	19	19	19	19	19	19
CHU_1_OPDATA_06	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07
CHU_1_OPCODE_07	20	20	20	20	20	20	20	20	20	20
CHU_1_OPDATA_07	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB
CHU_1_OPCODE_08	23	23	23	23	23	23	23	23	23	23
CHU_1_OPDATA_08	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000
CHU_1_OPCODE_09	24	24	24	24	24	24	24	24	24	24
CHU_1_OPDATA_09	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0
CHU_1_OPCODE_10	25	25	25	25	25	25	25	25	25	25
CHU_1_OPDATA_10	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000
CHU_1_OPCODE_11	26	26	26	26	26	26	26	26	26	26
CHU_1_OPDATA_11	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0
CHU_1_OPCODE_12	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_12	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065
CHU_1_OPCODE_13	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_13	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A
CHU_1_OPCODE_14	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_14	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209
CHU_1_OPCODE_15	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_15	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308
CHU_1_OPCODE_16	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_16	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474
CHU_1_OPCODE_17	3	3	3	3	3	3	3	3	3	3

CHU_1_OPDATA_17	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E
CHU_1_OPCODE_18	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_18	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600
CHU_1_OPCODE_19	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_19	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800
CHU_1_OPCODE_20	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_20	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908
CHU_1_OPCODE_21	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_21	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001
CHU_1_OPCODE_22	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_22	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F
CHU_1_OPCODE_23	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_23	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200
CHU_1_OPCODE_24	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_24	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300
CHU_1_OPCODE_25	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_25	0x0000 1561	0x0000 1561	0x0000 15BB	0x0000 15BB	0x0000 15BB	0x0000 15BB	0x0000 15BB	0x0000 15BB	0x0000 15BB	0x0000 15BB
CHU_1_OPCODE_26	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_26	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801
CHU_1_OPCODE_27	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_27	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980
CHU_1_OPCODE_28	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_28	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00
CHU_1_OPCODE_29	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_29	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF
CHU_1_OPCODE_30	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_30	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61
CHU_1_OPCODE_31	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_31	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C
CHU_1_OPCODE_32	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_32	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136
CHU_1_OPCODE_33	3	3	3	3	3	3	3	3	3	3

CHU_1_OPDATA_33	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201
CHU_1_OPCODE_34	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_34	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B
CHU_1_OPCODE_35	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_35	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434
CHU_1_OPCODE_36	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_36	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512
CHU_1_OPCODE_37	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_37	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F
CHU_1_OPCODE_38	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_38	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000
CHU_1_OPCODE_39	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_39	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100
CHU_1_OPCODE_40	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_40	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200
CHU_1_OPCODE_41	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_41	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300
CHU_1_OPCODE_42	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_42	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400
CHU_1_OPCODE_43	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_43	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500
CHU_1_OPCODE_44	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_44	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600
CHU_1_OPCODE_45	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_45	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700
CHU_1_OPCODE_46	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_46	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800
CHU_1_OPCODE_47	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_47	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900
CHU_1_OPCODE_48	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_48	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00
CHU_1_OPCODE_49	3	3	3	3	3	3	3	3	3	3

CHU_1_OPDATA_49	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00
CHU_1_OPCODE_50	3	3	3	3	3	3	3	3	3	3
CHU_1_OPDATA_50	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00
CHU_1_OPCODE_51	5	5	5	5	5	5	5	5	5	5
CHU_1_OPDATA_51	0x0000 0100	0x0000 0100	0x0000 0112	0x0000 0112	0x0000 0112	0x0000 0112	0x0000 0112	0x0000 0112	0x0000 0112	0x0000 0112
CHU_2_OPCODE_01	4	4	4	4	4	4	4	4	4	4
CHU_2_OPDATA_01	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000	0x0000 0000
CHU_2_OPCODE_02	4	4	4	4	4	4	4	4	4	4
CHU_2_OPDATA_02	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001	0x0000 0001
CHU_2_OPCODE_03	16	16	16	16	16	16	16	16	16	16
CHU_2_OPDATA_03	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C	0x0000 1C1C
CHU_2_OPCODE_04	17	17	17	17	17	17	17	17	17	17
CHU_2_OPDATA_04	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3	0x0000 C3C3
CHU_2_OPCODE_05	18	18	18	18	18	18	18	18	18	18
CHU_2_OPDATA_05	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8	0x0000 F8F8
CHU_2_OPCODE_06	19	19	19	19	19	19	19	19	19	19
CHU_2_OPDATA_06	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07	0x0000 8F07
CHU_2_OPCODE_07	20	20	20	20	20	20	20	20	20	20
CHU_2_OPDATA_07	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB	0x0000 FBFB
CHU_2_OPCODE_08	23	23	23	23	23	23	23	23	23	23
CHU_2_OPDATA_08	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000
CHU_2_OPCODE_09	24	24	24	24	24	24	24	24	24	24
CHU_2_OPDATA_09	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0
CHU_2_OPCODE_10	25	25	25	25	25	25	25	25	25	25
CHU_2_OPDATA_10	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000	0x07FF F000
CHU_2_OPCODE_11	26	26	26	26	26	26	26	26	26	26
CHU_2_OPDATA_11	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0	0x000F FFF0
CHU_2_OPCODE_12	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_12	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065	0x0000 0065
CHU_2_OPCODE_13	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_13	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A	0x0000 016A
CHU_2_OPCODE_14	3	3	3	3	3	3	3	3	3	3

CHU_2_OPDATA_14	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209	0x0000 0209
CHU_2_OPCODE_15	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_15	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308	0x0000 0308
CHU_2_OPCODE_16	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_16	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474	0x0000 0474
CHU_2_OPCODE_17	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_17	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E	0x0000 050E
CHU_2_OPCODE_18	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_18	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600	0x0000 0600
CHU_2_OPCODE_19	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_19	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800	0x0000 0800
CHU_2_OPCODE_20	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_20	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908	0x0000 0908
CHU_2_OPCODE_21	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_21	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001	0x0000 1001
CHU_2_OPCODE_22	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_22	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F	0x0000 110F
CHU_2_OPCODE_23	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_23	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200	0x0000 1200
CHU_2_OPCODE_24	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_24	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300	0x0000 1300
CHU_2_OPCODE_25	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_25	0x0000 15FB	0x0000 15FB	0x0000 15FB	0x0000 15FB	0x0000 15FB	0x0000 15FB	0x0000 15FB	0x0000 15FB	0x0000 15FB	0x0000 15FB
CHU_2_OPCODE_26	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_26	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801	0x0000 1801
CHU_2_OPCODE_27	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_27	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980	0x0000 1980
CHU_2_OPCODE_28	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_28	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00	0x0000 1A00
CHU_2_OPCODE_29	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_29	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF	0x0000 1BFF
CHU_2_OPCODE_30	3	3	3	3	3	3	3	3	3	3

CHU_2_OPDATA_30	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61	0x0000 1C61
CHU_2_OPCODE_31	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_31	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C	0x0000 202C
CHU_2_OPCODE_32	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_32	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136	0x0000 2136
CHU_2_OPCODE_33	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_33	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201	0x0000 2201
CHU_2_OPCODE_34	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_34	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B	0x0000 230B
CHU_2_OPCODE_35	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_35	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434	0x0000 2434
CHU_2_OPCODE_36	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_36	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512	0x0000 2512
CHU_2_OPCODE_37	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_37	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F	0x0000 280F
CHU_2_OPCODE_38	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_38	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000	0x0000 3000
CHU_2_OPCODE_39	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_39	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100	0x0000 3100
CHU_2_OPCODE_40	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_40	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200	0x0000 3200
CHU_2_OPCODE_41	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_41	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300	0x0000 3300
CHU_2_OPCODE_42	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_42	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400	0x0000 3400
CHU_2_OPCODE_43	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_43	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500	0x0000 3500
CHU_2_OPCODE_44	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_44	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600	0x0000 3600
CHU_2_OPCODE_45	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_45	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700	0x0000 3700
CHU_2_OPCODE_46	3	3	3	3	3	3	3	3	3	3

CHU_2_OPDATA_46	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800	0x0000 3800
CHU_2_OPCODE_47	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_47	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900	0x0000 3900
CHU_2_OPCODE_48	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_48	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00	0x0000 3C00
CHU_2_OPCODE_49	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_49	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00	0x0000 3D00
CHU_2_OPCODE_50	3	3	3	3	3	3	3	3	3	3
CHU_2_OPDATA_50	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00	0x0000 3F00
CHU_2_OPCODE_51	5	5	5	5	5	5	5	5	5	5
CHU_2_OPDATA_51	0x0000 012C	0x0000 012C	0x0000 012C	0x0000 012C	0x0000 012C	0x0000 012C	0x0000 012C	0x0000 012C	0x0000 012C	0x0000 012C
PHOT_1_HVC	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996
PHOT_2_HVC	2389	2389	2389	2389	2389	2389	2389	2389	2389	2389
PHOT_3_HVC	2508	2508	2508	2508	2508	2508	2508	2508	2508	2508
PHOT_SAMPLED_META_DATA	10	10	10	10	10	10	10	10	10	10
PHOT_RE_POWER_DELAY	3	3	3	3	3	3	3	3	3	3
MAX_DEPTH_PHOT	4095	4095	4095	4095	4095	4095	4095	4095	4095	4095
FACTOR_PHOT_1	5	5	5	5	5	5	5	5	5	5
FACTOR_PHOT_1	5	5	5	5	5	5	5	5	5	5
NUM_SAMPLES_BCK_PHOT_1	32	32	32	32	32	32	32	32	32	32
FACTOR_PHOT_2	5	5	5	5	5	5	5	5	5	5
HIT_MIN_PHOT_2	5	5	5	5	5	5	5	5	5	5
NUM_SAMPLES_BCK_PHOT_2	32	32	32	32	32	32	32	32	32	32
FACTOR_PHOT_3	5	5	5	5	5	5	5	5	5	5
HIT_MIN_PHOT_3	5	5	5	5	5	5	5	5	5	5
NUM_SAMPLES_BCK_PHOT_3	32	32	32	32	32	32	32	32	32	32
MAX_DEPTH_CHU	4095	4095	4095	4095	4095	4095	4095	4095	4095	4095
FACTOR_CHU_1	5	5	5	3	4	4	3	4	3	5
HIT_MIN_CHU_1	5	5	5	3	3	4	4	5	4	5
EXTEND_CHU_1	2	2	2	5	5	5	5	5	5	2
FACTOR_CHU_2	5	5	5	3	4	4	3	4	3	5
HIT_MIN_CHU_2	5	5	5	3	3	4	4	5	4	5
EXTEND_CHU_2	2	2	2	5	5	5	5	5	5	2
CAT_SENSOR_A	5	5	5	5	5	5	5	5	5	5
CAT_SENSOR_B	5	5	5	5	5	5	5	5	5	5
CAT_METHOD	1	1	1	1	1	1	1	1	1	1
CAT_THR	10	10	10	10	10	10	10	10	10	10

COMP_ENABLED	32768	32768	32768	32768	32768	32768	32768	32768	32768	32768
COMP_WAVELET_LEVEL	3	3	3	3	3	3	3	3	3	3
COMP_TARGET	2	2	2	2	2	2	2	2	2	2
COMP_MIN_TARGET	0	0	0	0	0	0	0	0	0	0
COMP_MIN_BITPLANES	70	70	70	70	70	70	70	70	70	70