1 Introduction

This document provides a summary listing of the IDT, ISS, and ISP datasets that are currently available for use in COMPASS SIM processing. The various tasks within the SIM subsystem of COMPASS simulate the response of the COMPTEL detectors to incident γ radiation, using in part the GEANT Monte Carlo simulation code developed and maintained at CERN.

A basic description of each dataset type follows.

IDT = *Instrument Definitions Table*, an encoded physical mass model of the COMPTEL instrument, a *required* input dataset to the SIMGAM, SIMTRK, and SIMENE tasks of the SIM subsystem; the IDT dataset is sometimes referred to as the "COMPTEL Mass Model" (not to be confused with the "GRO Mass Model" which describes the mass distribution of the entire GRO spacecraft).

ISS = *Instrument Specifications (or Status) Table*, contains information on various instrumental response characteristics, such as detector thresholds, spectral-, spatial-, and timing-resolution parameters, module status, and burst-mode definitions; these values are used to statistically "broaden" each simulated event to more accurately reflect the true response of COMPTEL; *required* input to the SIMFIN and SIMENE tasks of SIM.

ISP = *Input Spectrum Table*, represents an alternative *optional* means of specifying an input source spectrum to the SIMGAM Monte Carlo program; an ISP dataset is simply a text table of histogram values, listed by input energy interval, by which any arbitrary spectral shape can be defined for the sampling and selection of beam-photon energies.

The SIM Development Group at UNH currently consists of Ben Hersh, Cheenu Kappadath, R. Marc Kippen, Mark McConnell, Dan Morris, Greg Stacy, and Xu Peng. George Simpson carried out early SIM studies at UNH. The Leiden group provided much assistance in defining the proper instrumental parameters to be used in SIM, and caught several errors in early versions of these datasets. We thank, in particular, Cor de Vries, Hans de Boer, and Rob van Dijk.

This document will be updated periodically to include information on additional IDT, ISS, and ISP datasets as they become available for general use.

2 Reference List

1. "Overview of COMPASS Simulation Tasks (SIM Subsystem)," J. G. Stacy, COM-RP-UNH-SIM-038, 18 February, 1994.
2. "Description of the COMPTEL SIM Mass Model (IDT Dataset)," J. G. Stacy, COM-RP-UNH-SIM-039, 22 June, 1994.
3. *Monte Carlo Simulation of the COMPTEL Gamma-Ray Telescope*, R. M. Kippen, Master's Thesis, University of New Hampshire, May, 1991.
4. *GEANT Detector Description and Simulation Tool*, CERN Application Software Group, Computing and Networks Division, CERN, Geneva, Switzerland (Edition of March, 1994, for GEANT version 3.21).
5. The original of the present document is kept as the file

   `/home/gstacy/tex/sim/idt_iss/sim-idt-iss-isp.tex`

   on comptel.unh.edu at UNH.

3 IDT Datasets

The IDT ("Instrument Definitions Table") dataset consists of an encoded physical mass model of the COMPTEL instrument, and is a required input dataset to the SIMGAM, SIMTRK, and SIMENE tasks of the SIM subsystem of COMPASS. These tasks simulate the response of the COMPTEL detectors to incident γ radiation, using the GEANT Monte Carlo simulation code developed and maintained at CERN. A detailed description of the contents of the IDT dataset can be found in the document "Description of the COMPTEL SIM Mass Model (IDT Dataset)," COM-RP-UNH-SIM-039, 22 June 1994, by J. G. Stacy.

Note that two "versions" of a given IDT dataset exist in the COMPASS ORACLE database: one for use in simulating the "in-flight" response of the instrument (this is currently U1008.IDT), and one for use in simulating pre-launch "calibration" measurements (currently U1009.IDT). The only difference between the two is that, for the in-flight case, the master "dummy" volumes are filled with vacuum, and for calibration simulations the dummy volumes are filled with air.

At the present time, the recommended IDT dataset for use when simulating the in-flight response of COMPTEL is UNH-IDT-1008, and UNH-IDT-1009 when simulating the pre-launch calibration response of the instrument.

The following table provides a listing of all IDT datafiles currently recorded within the COMPASS ORACLE database. Note, however, that only the last two, UNH-IDT-1008 and UNH-IDT-1009, are of sufficiently high quality for use in SIM processing. See Appendix A.1 for further information on the history of changes to the IDT datasets.

```
                     DATASET DESCRIPTORS                         Form: SBM3DSD2
                        DB Table: DSD                            User:  COM
                                                                 Version: 1.0
-Dataset Id-- Qual   St   Date    -------Validity Interval------- ----TPT Id----
U IDT 1000    -50    A 16-MAY-91 0     0        99999 0
Original SIM prototype instrument model as in Kippen thesis
U IDT 1001    -50    A 20-MAY-91 0     0        99999 0
First revision of instrument model by Greg Stacy (1991)  (AIR FILLING MODEL)
U IDT 1002    -50    A 25-JUN-91 0     0        99999 0
First revision of instrument model by Greg Stacy (1991)  (VACUUM FILLING MODEL)
U IDT 1004    -50    A 25-NOV-92 0     0        99999 0
Revised with correct D1/D2 mass, in-flight  model
U IDT 1005    -50    A 25-NOV-92 0     0        99999 0
Revised with correct D1/D2 mass, calibration model
U IDT 1006    -50    A 18-DEC-92 0     0        99999 0
Minor mods to D1/D2 mass positions, in-flight model
U IDT 1007    -50    A 18-DEC-92 0     0        99999 0
Minor mods to D1/D2 mass positions, calib. model
U IDT 1008    100    A 20-APR-94 0     0        99999 0
D1 platform mixture fix, in-flight model
U IDT 1009    100    A 25-APR-94 0     0        99999 0
D1 platform mixture fix, calibration model
```

4 ISS Datasets

The ISS ("Instrument Specifications (or Status) Table") dataset contains information on various instrumental response characteristics, such as detector thresholds, spectral-, spatial-, and timing-resolution parameters, module status, and burst-mode definitions. These values are used to statistically "broaden" each simulated event to more accurately reflect the true response of COMPTEL. The ISS is a *required* input dataset to the SIMFIN and SIMENE tasks of SIM.

The following tables provide a listing of the ISS datafiles which are currently recorded within the COMPASS ORACLE database. Note that there exist a number of ISS datasets associated with gamma-ray bursts, since burst parameters typically change for each burst simulation run.

At the present time, the recommended ISS dataset for use when simulating the in-flight response of COMPTEL is UNH-ISS-1008, and UNH-ISS-1007 when simulating the pre-launch calibration response of the instrument.

Users who wish to specify particular in-flight conditions for simulation study should edit the "default" UNH-ISS-1008 dataset, and create a new ISS dataset tailored to their specific needs (as is done for gamma-ray burst studies).

See Appendix A.2 for further information on the history of changes to the ISS datasets.

```
                     DATASET DESCRIPTORS                             Form: SBM3DSD2
                        DB Table: DSD                                User:  COM
                                                                     Version: 1.0
-Dataset Id-- Qual   St   Date   -------Validity Interval------- ----TPT Id----
U ISS 1000    50     A 20-AUG-91 0     0         99999 0
Version 1 response table (nominal thresholds) used for telescope cal. simulatio
U ISS 1001    50     A 20-AUG-91 0     0         99999 0
Response table set at TJD 8379 values
U ISS 1002    -100   D 27-AUG-91 0     0         99999 0
XXX do not use XXX incorrect settings
U ISS 1003    50     A 27-AUG-91 0     0         99999 0
THRES: D1&D2 LEV 6, D2-7 LEV 7; ALL MODULES ON; BURST MODE SET TO VALUES FROM C
U ISS 1004    50     A 03-SEP-91 0     0         99999 0
THRES: D1&D2 LEV 6, D2-7 LEV 7; ALL MODULES ON; NEW BURST MODE VALUES FROM C.W.
U ISS 1005    50     A 04-SEP-91 0     0         99999 0
GRB910503 SETTINGS FOR BOTH TELESCOPE AND BURST MODES
U ISS 1006    50     A 11-SEP-91 0     0         99999 0
Solar Flare (TJD 8416-9-JUN) Telescope settings
U ISS 1007    100    A 30-OCT-91 0     0         99999 0
GSF Telescope Calibration Settings
U ISS 1008    100    A 30-OCT-91 0     0         99999 0
Current In-flight Settings (THRES:D1 lev. 6, D2-7 lev. 7, other D2 lev. 6)
U ISS 1009    50     A 30-OCT-91 0     0         99999 0
GRB910503 Settings
U ISS 1010    50     A 30-OCT-91 0     0         99999 0
TJD 8416 settings (9-jun-91 solar flare mode)
U ISS 1011    100    A 06-JAN-92 0     0         99999 0
Low Threshold Settings (THRES:D1 lev. 7, D2 lev. 7)
U ISS 1013    100    A 26-AUG-92 0     0         99999 0
ToO Settings, TJD 8847-8854 (GRO J0422+32), D1 lvl 6, D2 lvl 7 with new NRGs
U ISS 1014    50     A 08-SEP-92 0     0         99999 0
Obs Per 7.0, TJD 8476-8483 (Cyg X-3), revised threshold levels
U ISS 1015    50     A 14-SEP-92 0     0         99999 0
GRB920830 WITH D1 AND D2 SOFTWARE THRESHOLDS AT 70 AND 650 KEV
U ISS 1016    50     A 16-SEP-92 0     0         99999 0
Special for GRB910503 (New Hard Thresholds)
U ISS 1017    50     A 17-SEP-92 0     0         99999 0
Special for GRB910425 (New Hard Thresholds)
U ISS 1018    50     A 17-SEP-92 0     0         99999 0
Special for GRB910814 (New Hard Thresholds)
U ISS 1020    100    A 17-SEP-92 0     0         99999 0
V.P. 36.5 (GRO J0422+32).  Threshold data from IFCTHR run of TJD 8847.
U ISS 1021    100    A 17-SEP-92 0     0         99999 0
V.P. 39.0 (GRO J0422+32).  Threshold data from IFCTHR run of TJD 8868.
U ISS 1022    50     A 18-SEP-92 0     0         99999 0
Special for GRB910601 (New Hard Thresholds)
U ISS 1023    50     A 18-SEP-92 0     0         99999 0
Special for GRB910609 (New Hard Thresholds)
U ISS 1024    50     A 22-SEP-92 0     0         99999 0
Special for GRB910627 (New Hard Thresholds)
U ISS 1025    50     A 22-SEP-92 0     0         99999 0
Special for GRB910709 (New Hard Thresholds)
U ISS 1026    50     A 23-SEP-92 0     0         99999 0
Special for GRB910714 (New Hard Thresholds)
```

```
                    DATASET DESCRIPTORS                             Form: SBM3DSD2
                       DB Table: DSD                                User:  COM
                                                                    Version: 1.0
-Dataset Id-- Qual   St   Date   -------Validity Interval------- ----TPT Id----
U ISS 1027    50     A 29-SEP-92 0     0         99999 0
Special for GRB911118 (New Hard Thresholds)
U ISS 1029    100    A 17-FEB-93 1     0         99999 0
ISS FOR GRB920622 DATA TJD: 8796 (THRESHOLDS FROM UNH-BTH-1047)
U ISS 1030    50     A 27-MAY-93 0     0         99999 0
Obs Per 203, TJD 8957-8978 (Cygnus)
U ISS 1031    100    A 15-JUL-93 1     0         99999 0
TJD 9018 (GRB930131) THRESHOLD SETTINGS
U ISS 1033    100    A 17-SEP-93 1     0         99999 0
SAME AS 1008 BU D1-6, D2-14 OFF - NEW ISS FORMAT
U ISS 1034    100    A 19-SEP-93 1     0         99999 0
ISS FOR TJD 9055 (GRB930309)  FROM U-BTH-1065
U ISS 1035    100    A 21-SEP-93 1     0         99999 0
FROM U1008.ISS WITH D1-6, D2-14 OFF
U ISS 1036    100    A 21-SEP-93 1     0         99999 0
SPECIAL FOR GRB930309
U ISS 1037    100    A 16-MAY-94 1     0         99999 0
SPECIAL FOR GRB910425 (TJD 8371)
U ISS 1038    100    A 16-MAY-94 1     0         99999 0
SPECIAL FOR GRB910503 (TJD 8379)
U ISS 1039    100    A 16-MAY-94 1     0         99999 0
SPECIAL FOR GRB910601 (TJD 8408)
U ISS 1040    100    A 16-MAY-94 1     0         99999 0
SPECIAL FOR GRB910627 (TJD 8434)
U ISS 1041    100    A 18-MAY-94 1     0         99999 0
SPECIAL FOR GRB910709 (TJD 8446)
U ISS 1042    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB910814 (TJD 8482)
U ISS 1043    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB911118 (TJD 8578)
U ISS 1044    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB920622 (TJD 8795)
U ISS 1045    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB920830 (TJD 8864)
U ISS 1046    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB930118 (TJD 9005)
U ISS 1047    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB930131 (TJD 9018)
U ISS 1048    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB930309 (TJD 9055)
U ISS 1049    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB930612 (TJD 9150)
U ISS 1050    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB930704 (TJD 9172)
U ISS 1051    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB931229 (TJD 9350)
U ISS 1052    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB940217 (TJD 9400)
U ISS 1053    100    A 19-MAY-94 1     0         99999 0
SPECIAL FOR GRB940301 (TJD 9412)
```

5 ISP Datasets

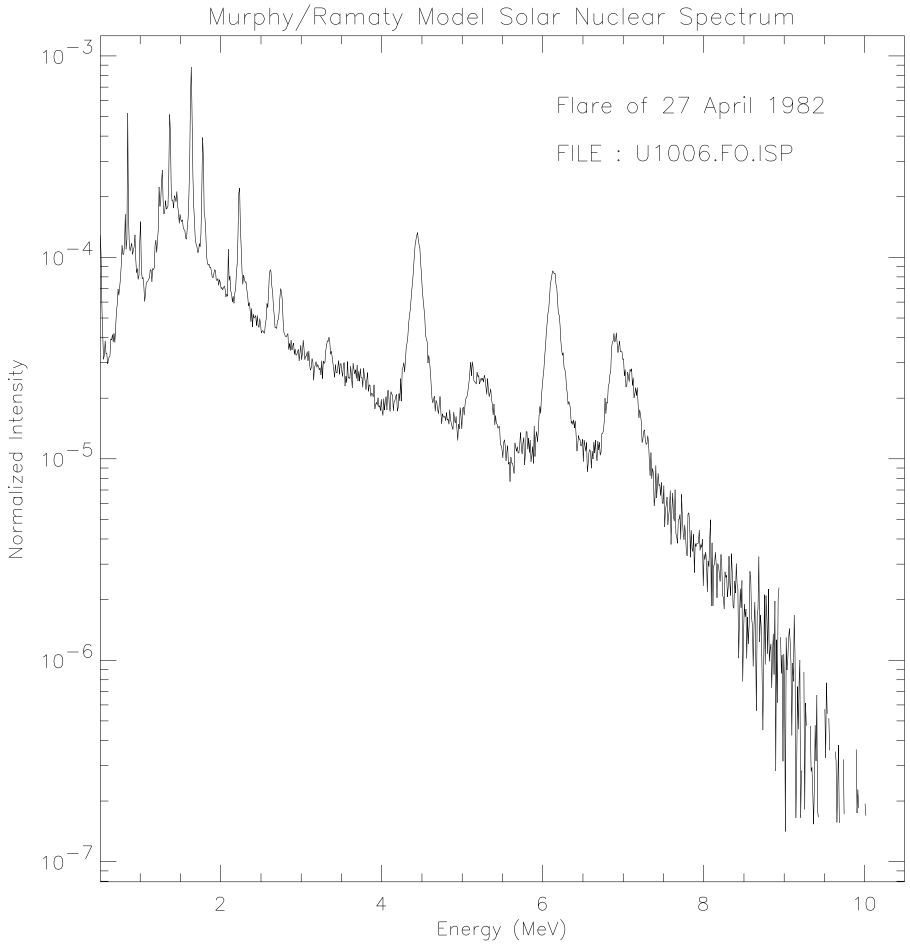
The ISP ("Input Spectrum Table") dataset represents an alternative *optional* means of specifying an input source spectrum to the SIMGAM Monte Carlo program. An ISP dataset is simply a text table of histogram values, listed by input energy interval, by which any arbitrary spectral shape can be defined for the sampling and selection of beam-photon energies.

The ISP dataset is a simple text file with 80 characters per record, beginning with a seven-line header which describes the contents of the file. The header is followed by a line which gives the total number of energy bins (or "channels") in the spectral histogram. This, in turn, is followed by the spectral data itself which is given in a two-column format with energies in column 1 and fluxes in column 2. The numbers are in free format; energies are in GeV and refer to the bin center; fluxes are in arbitrary units.

We illustrate below the structure of an ISP dataset, using an abbreviated version of the file UNH-ISP-1006, which has been distributed as a sample ISP dataset.

```
C-----------------------------------------------------------------
C Creation Date: 06-AUG-93
C Spectral Source: Murphy's 27 April 82 solar flare spectrum: 10 keV bins
C Number of bins: 1000
C Bin size: 10 keV
C Starting Energy: 504.5 keV
C----------------------------------------------------------------
  1000                           <=== number of energy bins or channels
  0.000504500  0.000129074
  0.000514500  9.90572e-05
.
.
.    (energy)       (flux)
.
.
    0.0104045      0.00000
    0.0104145      0.00000
    0.0104245      0.00000
    0.0104345      0.00000
    0.0104445      0.00000
    0.0104545      0.00000
    0.0104645      0.00000
    0.0104745      0.00000
    0.0104845      0.00000
    0.0104945  3.84905e-06
```

The following figure is a plot of the contents of the file UNH-ISP-1006, consisting of a model of the nuclear-line-plus-continuum spectrum for the solar flare of 27 April 1982 (after Murphy and Ramaty).



The following table provides a listing of the ISP datafiles which are currently recorded within the COMPASS ORACLE database. Note that only one ISP file has actually been distributed (the others listed were used primarily for testing purposes at UNH). It is expected that most users will create their own ISP datasets, dependant on their particular requirements. The UNH-ISP-1006 dataset presented here was intended to be an illustrative example.

```
                      DATASET DESCRIPTORS                            Form: SBM3DSD2
                         DB Table: DSD                               User:  COM
                                                                     Version: 1.0
-Dataset Id-- Qual   St   Date     -------Validity Interval------- ----TPT Id----
U ISP 1004    -50    D           1     0         99999 0
Murphy 27 April 82 Spectrum with 10keV binning and ge 500 keV
U ISP 1006    100    A 02-MAR-94 1     0         99999 0
Murphy's 27 April 1982 Flare Spectrum
U ISP 1007    -50    A 11-APR-94 1               99999
E-2 Power Law + 4.4 MeV line Tabulated Spectrum
U ISP 1008    50     A 11-APR-94 1               99999
E-2 Power Law Tabulated Spectrum
U ISP 1009    50     A 11-APR-94
E-2 Power Law + 2.2 MeV Line Tabulated Spectrum
U ISP 1010    50     A
E-2 Power Law with narrow 4.4 line (30 keV) width
U ISP 1011    50     A
E-2 Power Law with broad 4.4 MeV line (width = 3*sqrt(4400))
```

A Comments on Particular Datasets

In this Appendix, for completeness, we include comments on individual datasets that appeared in previous issues of this document. In future issues, we will also include a history of changes to existing datasets, and their predicted effects, if any, on the results of previous or ongoing simulation studies.

A.1 IDT Datasets

UNH-IDT-1000 Same as last prototype mass model (IDTV101), later found to be in error (see Marc Kippen's master's thesis for details on the general scheme); this was the first model to be used inside COMPASS; *air* fills the mother volume for pre-launch calibration simulations.

UNH-IDT-1001 Previous model modified to obtain correct mass between detectors, later found to be in error; corrected NE 213A approximation, corrected D1 module radius (to 13.8 cm) plus miscellaneous other corrections; *air* fills the mother volume for pre-launch calibration simulations.

UNH-IDT-1002 "Paired" with UNH-IDT-1001; modified to have *vacuum* fill the mother volume for in-flight telescope response simulations.

UNH-IDT-1004 Revision of UNH-IDT-1002 with correct mass above D1 and between D1 and D2 (incorrect prototype mass model was originally loaded into COMPASS); "vacuum-filling" in-flight version.

UNH-IDT-1005 "Paired" with UNH-IDT-1004; revision with correct mass above D1 and between D1 and D2 (incorrect prototype mass model was originally loaded into COMPASS); "air-filling" pre-launch calibration version.

UNH-IDT-1006 Slight revision of UNH-IDT-1004, to correct small (mm-scale) gaps (filled with vacuum in the case of UNH-IDT-1004) in the module housing specifications; should have no measurable impact on simulation studies; "vacuum-filling" in-flight version.

UNH-IDT-1007 "Paired" with UNH-IDT-1006; slight revision of UNH-IDT-1005, to correct small (mm-scale) gaps (filled with air in the case of UNH-IDT-1005) in the module housing specifications; should have no measurable impact on simulation studies; "air-filling" pre-launch calibration version.

UNH-IDT-1008 *Current IDT dataset for simulation of in-flight response.* Revision of UNH-IDT-1006, to correct the assignment of the chemical mixture for the D1 platform (previously the D1 platform was incorrectly assigned the chemical mixture appropriate for the D2 platform); this correction should have no measurable impact on simulation studies; "vacuum-filling" in-flight version.

UNH-IDT-1009 *Current IDT dataset for simulation of pre-launch calibrations.* "Paired" with UNH-IDT-1008; Revision of UNH-IDT-1007, to correct the assignment of the chemical mixture for the D1 platform (previously the D1 platform was incorrectly assigned the chemical mixture appropriate for the D2 platform); this correction should have no measurable impact on simulation studies; "air-filling" pre-launch calibration version.

Note on the most recent change to an IDT dataset — UNH-IDT-1008/1009:

Just when we thought that the IDT tables couldn't possibly contain any further errors, the ever-vigilant Rob van Dijk informed us that he had noted a mistake in the UNH-IDT-1006 table, in which the wrong chemical mixture had been assigned to the D1 platform assembly. Specifically, in the "volumes"-definition portion of the UNH-IDT-1006 dataset, mixture number 14 was incorrectly assigned to the D1 platform, instead of mixture number 10 (which had always been correctly defined for the D1 platform in the "mixtures"-definition part of the table); mixture 14 is actually for the D2 platform.

As near as we can tell, this mistake has always been in the IDT datasets, its origins presumably lost in the mists of time, dating back to that long-ago epoch when both platform assemblies were probably assigned the same chemical mixture composition. The same mistake appears in the original COMPASS IDT table (UNH-IDT-1000), which was created from the one used in Marc Kippen's master's thesis (though Marc used slightly different volume and density values than those currently in use).

Fortunately, *the simple one-line fix to correct this error is not expected to have any discernible effect on the outcome of any simulation studies*, especially for telescope runs, since the two mixtures are very close to each other in composition (both platforms are basically aluminum). Note also that *this correction has NO effect on the mass distribution above D1 or between D1 and D2.* Basic telescope efficiencies should remain essentially unchanged, since beam photons are directed only at the D1 modules themselves, and not the platform surrounding them.

The biggest difference is an approximately –11% change in volume density for the D1 platform (1.27 vs 1.429 g/cm^3). This implies a corresponding change in column density (6.35 vs 7.145 g/cm^2) for the D1 platform thickness of 5.0 cm (correctly specified in the volumes-definition part of earlier IDT datasets). While this could potentially have a measurable effect on some of the burst-mode results, for those bursts within the field of view, a series of tests carried out by Marc Kippen showed no significant differences between burst-simulation results obtained using either the previous or the latest corrected version of the IDT dataset.

The exact numbers for the D1 and D2 platform mixtures are as follows; elemental composition is expressed as percentage by weight:

	Mixture 10	Mixture 14
Al	83.02	79.88
Cu	7.91	6.30
C	5.38	11.67
Sn	1.43	—
Pb	1.43	—
H	0.83	1.46
O	—	0.69
Total:	100.0%	100.0%
Density(g/cm^3):	1.27	1.429

Mixture 10 is the true mixture for the D1 platform, and mixture 14 is the true mixture for the D2 platform, mistakenly assigned previously to the D1 platform as well.

The change in density implies that the total mass of the D1 platform was 8.468 kg too high. The total mass of the COMPTEL model was then 1172.195 kg, and should have been 1163.727 kg (i.e., it was previously 0.7% too high).

A final, relatively minor, change: in the D1 platform mix, the atomic weight of lead was given as 208.98 (which is actually bismuth), instead of 207.19 (as given in the other mixtures containing lead). This value was corrected to 207.19 (see Table 3-1, page 25, of Marc Kippen's thesis).

A.2 ISS Datasets

UNH-ISS-1000 Much the same as last prototype version (PDV101); however, all hardware threshold values now follow a gaussian shape rather than a linear one; all modules are activated; thresholds are set as follows, for D1: all at level 5, for D2-7: level 7, all other D2: level 6. These were the settings for the telescope calibration at GSF.

UNH-ISS-1001 Used for simulation of GRB910503; the settings from that period include: D1 and D2 all at threshold level 6; D1-7, D2-1 and D2-5 have been de-activated.

UNH-ISS-1003 Thresholds set to: D1 and D2 at level 6, except for D2-7 at level 7. These are the current normal mode thresholds; all modules are activated (deactivated modules can be removed later during analysis of SIM data); burst-mode definitions, thresholds and histogram information, are set according to values given by C. Winkler for burst calibration. *Contains erroneous burst-mode values.*

UNH-ISS-1004 Same as UNH-ISS-1003 except the burst histogramming has been changed to values given by C. Winkler for GRB910503. *Contains erroneous burst-mode values.*

UNH-ISS-1005 Used for simulation of GRB910503. The settings from that period include: D1 and D2 all at threshold level 6; D1-7, D2-1 and D2-5 have been de-activated. Burst mode settings: low range histogram origin 45.98 keV; low range bin-width 9.86 keV; high range histogram origin -149.40 keV; high range bin width 84.70 keV; low range threshold position (at half max) 100 keV; low range threshold half-width (at half max) 45 keV; high range threshold position (at half max) 260 keV; high range threshold half-width (at half max) 90 keV.

UNH-ISS-1006 Special solar flare mode on TJD 8416 (=June 9, 1991). Settings as follows, telescope mode only; Module thresholds: D1, all at level 4; D2-7 at level 7; all other D2 at level 6; D2-5 and D2-14 de-activated.

NOTE: *ISS datasets after UNH-ISS-1006 do not contain burst-mode definitions and must be used with SIMFIN version 3 and higher. Similarly, SIMFIN version 3 and higher cannot use any of the ISS tables earlier than UNH-ISS-1007.*

UNH-ISS-1007 *"Default" pre-launch calibration ISS dataset.* Contains standard GSF calibration settings (formerly UNH-ISS-1000); all modules activated; thresholds: D1 at level 5, D2-7 at level 7, all other D2 level 6.

UNH-ISS-1008 *"Default" in-flight ISS dataset.* Contains current in-flight settings (formerly UNH-ISS-1003); all modules activated; thresholds: D1 at level 6, D2-7 at level 7, remaining D2 at level 6.

UNH-ISS-1009 GRB910503 settings (formerly UNH-ISS-1005); D1-7, D2-1 and D2-5 de-activated; thresholds all at level 6.

UNH-ISS-1010 TJD 8416 settings (= solar flare of June 9, 1991) (formerly UNH-ISS-1006); D2-5 and D2-14 de-activated; thresholds: D1 at level 4, D2-7 at level 7, all other D2 at level 6.

UNH-ISS-1011 Lowest hardware threshold settings; all modules activated; thresholds: D1 at level 7, D2 at level 7, all other D2 at level 6.

This concludes the documentation currently available for individual datasets. The remaining ISS datasets (numbers 1013 to 1053) were created for the simulation of specific in-flight events, typically target-of-opportunity observations or gamma-ray bursts. Additional information on particular datasets will be included in future issues of this document, as warranted.

Document Title Log of Available IDT/ISS/ISP Datasets for SIM Processing

Document ID COM-RP-UNH-SIM-021

Issue No 3

Issue Date 14 July 1994

Prepared by J. G. Stacy, R. M. Kippen, and M. McConnell

Approved by

Authorized by

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