ASSOCIATION INTERNATIONALE DE GÉODÉSIE

BUREAU GRAVIMETRIQUE INTERNATIONAL

BULLETIN D'INFORMATION

N° 54

JUIN 1984

18, avenue Edouard-Belin
31055 TOULOUSE CEDEX
FRANCE

ASSOCIATION INTERNATIONALE DE GÉODÉSIE

BUREAU GRAVIMETRIQUE INTERNATIONAL

BULLETIN D'INFORMATION

N° 54

JUIN 1984

18, avenue Edouard-Belin
31055 TOULOUSE CEDEX
FRANCE

Informations for Contributors

Contributors should follow as closely as possible the rules below :

Manuscripts should be typed (double-spaced) in Prestige-Elite characters (IBM-type), on one side of plain paper 21 cm x 29.7 cm, with a 2 cm margin on the left and right hand sides as well as on the bottom, and with a 3 cm margin at the top (as indicated by the frame drawn on this page).

Title of paper. Titles should be carefully worded to include only key words.

Abstract. The abstract of a paper should be informative rather than descriptive. It is not a table of contents. The abstract should be suitable for separate publication and should include all words useful for indexing. Its length should be limited to one typescript page.

Table of contents. Long papers may include a table of contents following the abstract.

Footnotes. Because footnotes are distracting, they should be avoided as much as possible.

Mathematics. For papers with complicated notation, a list of symbols and their definitions should be provided as an appendix. All characters that are available on standard typewriters should be typed in equations as well as test. Symbols that must be handwritten should be identified by notes in the margin. Ample space (1.9 cm above and below) should be allowed around equations so that type can be marked for the printer. Where an accent or underscore has been used to designate a special type face (e.g., boldface for vectors, script for transforms, sans serif for tensors), the type should be specified by a note in the margin. Bars cannot be set over superscripts or extended over more than one character. Therefore angle brackets are preferable to overbars to denote averages, and superscript symbols (such as $\bar{x}$, $'$, and $\neq$) are preferable to accents over characters. Care should be taken to distinguish between the letter O and zero, the letter l and the number one, kappa and k, mu and the letter u, nu and v, eta and n, also subscripts and superscripts should be clearly noted and easily distinguished. Unusual symbols should be avoided.

Acknowledgments. Only significant contributions by professional colleagues, financial support, or institutional sponsorship should be included in acknowledgments.

References. A complete and accurate list of references is of major importance in review papers. All listed references should be cited in text. A complete reference to a periodical gives author (s), title of article, name of journal, volume number, initial and final page numbers (or statement "in press"), and year published. A reference to an article in a book, pages cited, publisher, publisher's location, and year published. When a paper presented at a meeting is referenced, the location, dates, and sponsor of the meeting should be given. References to foreign works should indicate whether the original or a translation is cited. Unpublished communications can be referred to in text but should not be listed. Page numbers should be included in reference citations following direct quotations in text. If the same information has been published in more than one place, give the most accessible reference ; e.g. a textbook is preferable to a journal, a journal is preferable to a technical report.

Tables. Tables are numbered serially with Arabic numerals, in the order of their citation in text. Each table should have a title, and each column, including the first, should have a heading. Column headings should be arranged to that their relation to the data is clear.

Footnotes for the tables should appear below the final double rule and should be indicated by a, b, c, etc. Each table should be referred to in the text.

Illustrations. Original drawings of sharply focused glossy prints should be supplied, with two clear Xerox copies of each for the reviewers. Maximum size for figure copy is (25.4 x 40.6 cm). After reduction to printed page size, the smallest lettering or symbol on a figure should not be less than 0.1 cm high ; the largest should not exceed 0.3 cm. All figures should be cited in text and numbered in the order of citation. Figure legends should be submitted together on one or more sheets, not separately with the figures.

Mailing. Typescripts should be packaged in stout padded or stiff containers ; figure copy should be protected with stiff cardboard.

BUREAU GRAVIMETRIQUE INTERNATIONAL

Toulouse

BULLETIN D'INFORMATION

Juin 1984

N° 54

Publié pour le Conseil International des Unions Scientifiques avec l'aide financière de l'UNESCO
Subvention UNESCO 1984 DG/2.1/414/50

TABLE OF CONTENTS

Bull. d'Inf. n° 54

PART I

INTERNAL MATTERS

B.G.I. DATA MANAGEMENT SYSTEM

TECHNICAL DESCRIPTION

J.F. ISAAC

INTRODUCTION

Since its settlement in Toulouse, BGI put most of its efforts in the automation of many tasks related to the data preprocessing, analysis, retrieval and the management of the gravity maps file. These efforts resulted in the elaboration of a new data base and dedicated data management system.

The purpose of this report is to describe in same details all the aspects of the system. This includes both informations of general interest (data preprocessing tools, standard outputs from the data base...), and the technical specifications of the system such as file organization, data coding, retrieval techniques...

In order to complete this document, the descriptions of the exchange formats and gravity anomaly computation formulas used at BGI (already published in Bulletin d'Information No 53) are given in annex.

I - GENERAL DESCRIPTION

The BGI data base contains about 3 millions gravity measurements coming from more than 2500 sources, 160 characters being used to describe each of them (including informations useful for its evaluation and interpretation -see Annex A). As previously stated (réf. 1), this leaded BGI to store the data in two forms :

- the Archive Files where the data is stored on several high density magnetic tapes in full format,
- the Compressed Gravity Data File (CGDF) which is disk resident where selected fields are stored in a minimum number of bits.

Depending on the kind of informations needed to satisfy a user's request, data will be extracted interactively from the CGDF or by means of a batch process from the Archive Files, using disk resident index files in both cases. Thus, the management system developed by BGI consists of :

- the data files (CGDF and Archive)

- a set of index files, working files and annex files

- programs and routines accessing and managing these files,

  . preprocessing (reformatting, validation, coding...)
  . files creation, maintenance and updating
  . data extraction and editing
  . postprocessing (graphics...)

Figure 1 shows a general flow chart of the system

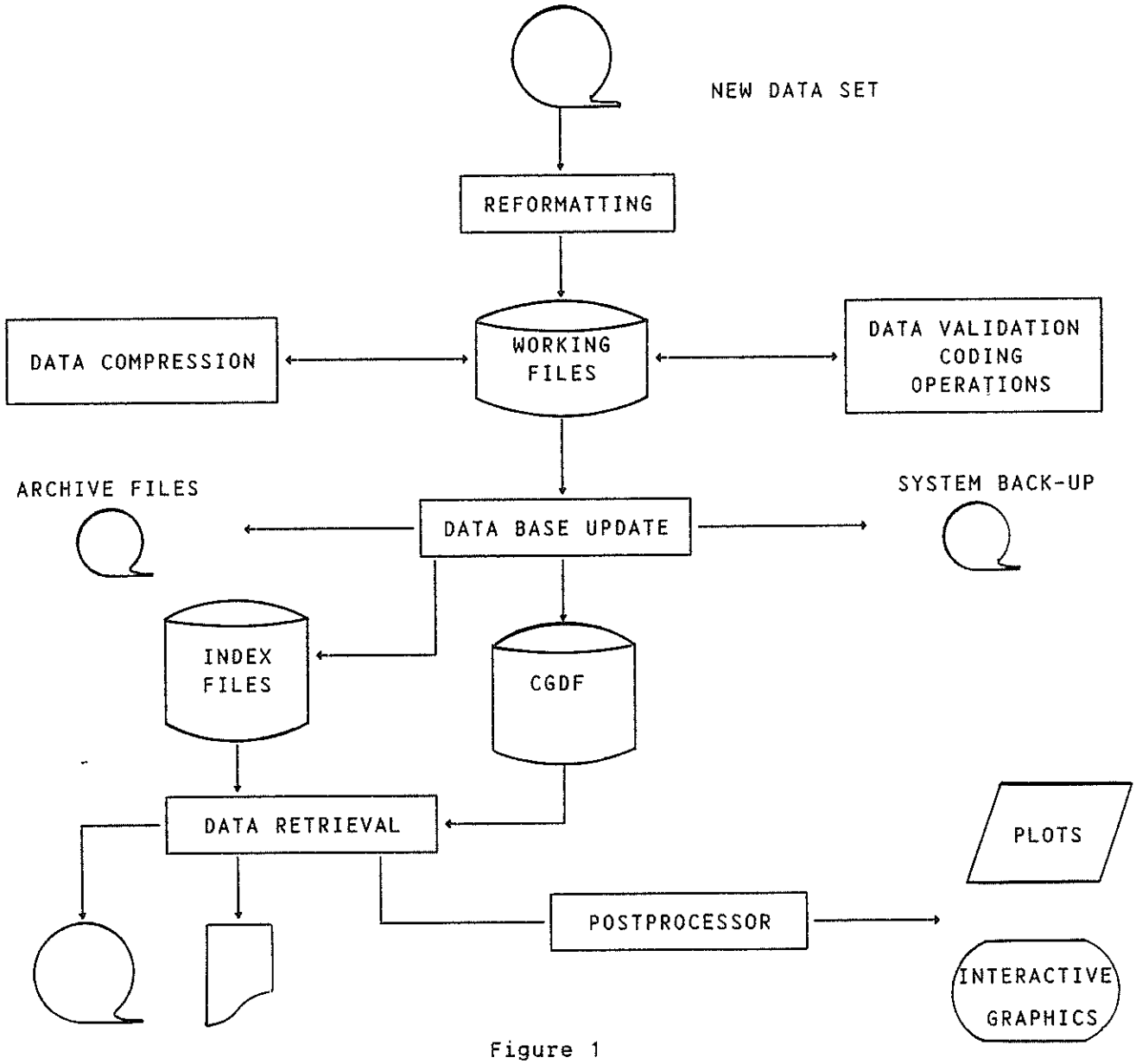


Figure 1

II - FILES DESCRIPTION

A - DATA FILES

- *ARCHIVE FILES*

Stored on several high density magnetic tapes (6250 bpi), one file per source, record length is 160 characters, 32 records per physical block. Tapes are logically numbered from 1 to N in the system (presently, current number is 8). Each time a new source is added in the system, a new file is added at the end of the current tape if there is enough room for it, else a new tape is used. The logical tape number and file number of each source are managed through INDEXSOURCES file ; The available room on current tape is put in SYSTMASTER file (described below).

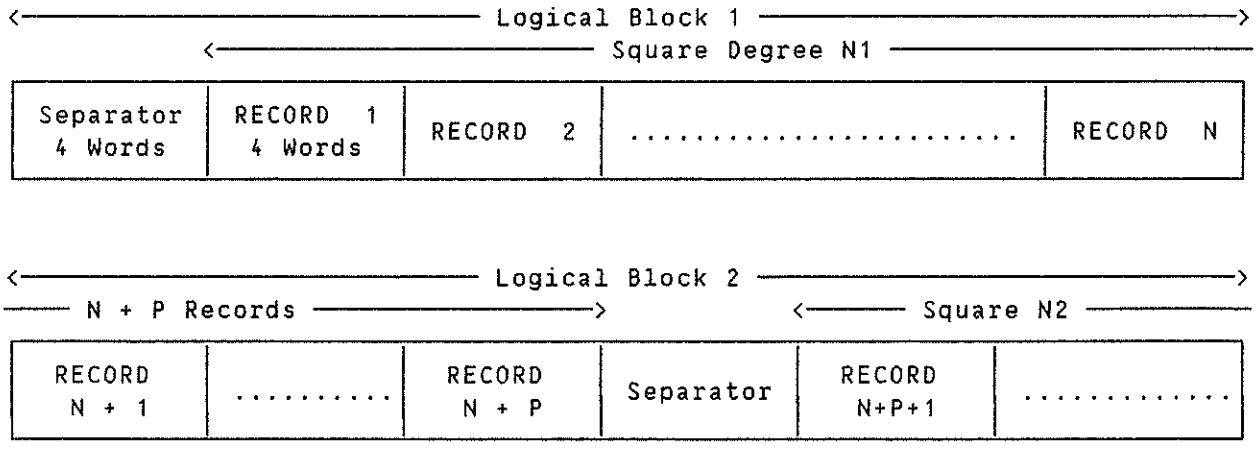
Neither deletions nor reorganizations are performed on these tapes, files are logically deleted by zeroing their pointers in INDEXSOURCES.

Updating a source (after evaluation, readjustment...) is made by adding the new version at the end of current tape and logically deleting old version.

- *CGDF*

Direct access file on disk, each gravity measurement (logical record) being 4 60-bit words long (30 bytes). Inside the file, records are sorted by ten-degrees square, square degree, source number.

Logical organization :



The beginning of each square degree is reached through a pointer (word address in CGDF) stored in INDEXDEGREES (see below). There is no space left for empty square degrees at the creation or reorganization of the file. Adding new records is performed by storing points of new square degrees or new points in existing square degrees in overflow blocks at the end of the file. Deletions

of records is done by positionning a flag, updating is made in place. The whole file is periodically reorganized, by reordering records belonging to a same square degree and physically deleting flagged records.

Records description :

- *Separator* :

  . First word : number of preceeding square degree
  . Second word: pointer to overflow records (0 if not)
  . Third word : number of following square degree
  . Fourth word: number of records in following square

- *Data Record* :

  . First word :
    - Square degree number (ten-degrees square number + a value from 0 to 99)
    - Latitude and longitude, values to be added to integer degree values derived from the square degree number (in 1/10 000 degree)
    - Elevation Type

  . Second word :
    - Altitude of the Station
    - Free-Air Anomaly
    - Bouguer Anomaly
    - Index to reference station in INDEXSOURCES

  . Third word :
    - Country Code
    - Source Number - pointer to INDEXSOURCES
    - Sequence Number - referring to Archive File
      que 2.67...exist in complete record in Archive File.
    - Flags : if terrain correction, isostatic anomaly, density other than 2.67... exist in complete record in Archive file.
    - Classification flag

  . Fourth word:
    - Standard deviations on free-air and Bouguer anomalies
    - pointers (word addresses in CGDF) to preceeding and following records of the same source

B - INDEX FILES

- *INDEXDEGREES* :

  Direct access file on disk, one logical block per ten-degrees square or 100 individual square degrees, each of them being described by :

  - a pointer to CGDF : address of the first record of this square
  - the number of data records in the square
  - the number of overflow sequences
  - number of next square containing data

Although some of these informations seem to be redundant with those in Separator Records in CGDF, they are useful in many data base operations, avoiding the great number of disk access needed for CGDF exploration (ex: world map of holdings)

- *INDEXSOURCES* :

Direct access file with indirect access to all general informations about an individual source.
At the first level, in reserved logical blocks at the beginning of the file, each source is described by :

- the source number, 7 characters :

  . ch. 1 : indicating if it is land data or marine data

  . ch. 2-4: country code
    - code of the country which made the cruise if marine data
    - code of the country if national survey
    - code of the continent if the source spreads over several countries within a continent
    - 999 otherwise, worldwide data

  . ch. 5-7: used to individualize sources with same heading characracters

- a pointer to the second part of the file, consisting of the word address in INDEXSOURCES of the beginning of the logical record describing this source

- the length of this logical record

This level allows quasi-direct access to the variable length source logical records using standard FORTRAN 77 direct access routines.

At the second level lie the sources descriptions themselves, the logical record being composed of a fix-length header followed by variable-length information.

- Header description :

  . BGI source number (see before)
  . Old source number (ex: DMA source number)
  . number of stations
  . minimum and maximum of latitude and longitude
  . minimum and maximum of Free-Air and Bouguer anomalies
  . number of evaluated stations and min-max of standard deviations
  . number of points with terrain correction, isostatic anomaly..
  . Coded representation of logical tape number and file number of Archive File
  . classification status
  . pointers to the first and the last record of the source in CGDF
  . address of plain language description
  . number of reference stations used in the survey, address of the first one
  . number of countries concerned, address of the first one
  . number of different elevation types in the survey and address

Addresses are relative to the beginning of the variable lentgh part.

- Variable lentgh part :

. plain language description with editing indications

Ex : J.E. CASE J. BARNES
TRANS-ANDEAN GRAVITY DATA
UNIVERSITY OF MISSOURI
1970

. reference station code numbers, with number of stations related to it
. country codes with number of points in each of them
. elevation type codes with number of measures of each kind.

C - WORKING FILES

- *PREPDATA* :

This direct-access disk file is used to store the new sources after reformatting and during validation. Each record represents a gravity measurement in standard format (160 characters). A table at the beginning of the file allows to separate the different sources during the validation process within the file and keeps track of the operations already done on them (number of corrections, plots or not...)

- *READYDATA* :

Sequential disk file where the data are stored, awaiting for integration in CGDF. Records are already in compressed form. Each time a source is considered as valid, it is appended at the end of this file.

D - ANNEX FILES

- *SYSTMASTER* :

Direct access disk file of which the first record is in fact a table which is loaded in memory by most programs of the system. It contains all useful informations for the system management such as total number of gravity measurements, land and marine sources, lentghs of CGDF, current logical archive tape number, available room on it, CGDF creation date, ...

Following records keep track of system interrogations and data extractions.

- *REFERENCE STATIONS FILE* :

Contains reference stations descriptions in digital form :

. Station name
. ACIC number
. adopted gravity
. estimated accuracy
. latitude and longitude
. elevation
. country code
. net
. parent base
. cross references
. microform reference

Complete station descriptions are stored on microforms.

- *NOMPAYS* :

Country names description file, contains for each country :

. a country code (réf. 2)
. the code of the sovereign country in case of dependancy
. the plain language country name

This file is mainly used for editing purposes.

- *WDBIDENT AND WDBPOINT* :

Two direct access disk files (segment descriptions and points) which give the coordinates of the segments describing coasts lines, international boundaries,rivers....
The internal hierarchical organization allows to extract the needed information (inside a given polygon) by themes (coasts lines, rivers, lakes) and rank (major lake, minor lake...)
These files, used in all the graphical processes are in fact a filtered and reorganized version of US' World Data Bank II.

III - SOFTWARE :

All the programs and subroutines in these modules are written in standard FORTRAN 77. Whenever possible we avoided the use of the particularities of the computers used at BGI (CDC Cyber 750) i.e. sixty-bit words, ten character words. When unavoidable, care was taken to choose record lengths multiple of a byte length in bits (Ex:240 bits for records in CGDF).

Communications between the users and the system are controlled by procedures. A master procedure first asks for the user's password, checks it and then loads needed procedures and execution files depending on the access authorizations given by the password.

A - PREPROCESSING

- *REFORMATTING* :

This preliminary step - needed for transforming original (contributor's) data format in standard format (160 characters) by reordering data fields and performing possible conversions on coordinates (degrees, minutes to decimal degrees, feet to meters..) or on gravity values (to IGSN71 system) - creates new records in PREPDATA file.

- *DATA VALIDATION* :

Data verification and records correction/deletion is done by means of a set of automated tools :

- Recomputation of gravity anomalies according to BGI standards and display of statistical repartition of differences observed between computed and original values allow to detect possible errors on latitude or altitude of the gravity stations (not always corrigible).

- Plotting station positions helps in correcting conversion errors (sign of longitude..) and/or indicates the need for a datum change (origin meridian..).

- Drawing contoured anomaly maps may highligth data discrepancies.

Corrections and record deletions resulting from these operations are made by updating PREPDATA file.

- *CODING* :

Coding is the addition of informations needed for future use in the system such as attribution of a country code to individual measurements and of a BGI number to the source (a source with both land stations and marine measurements being cut in two new sources), use of a uniform numbering system for reference stations (ACIC), acquisition of plain language source description.

The most time-consuming operation is represented by the attribution of country codes in the case of a source spreading over several countries. For this purpose, an interactive graphical procedure has been written allowing to display station locations together with coasts lines and international boundaries. The operator can code either individual records, a set of points belonging to a polygon, or all remaining non-coded stations.

B - FILES CREATION, MAINTENANCE AND UPDATING

Only a few of the existing programs are detailed here, the techniques employed for pointer creation and management, files sorting, error management, data compression... are quite commonly used. Their complete description belongs more to the domain of programming techniques. One may consult the text-books given in references (3) to (5) for additional information.

- Data compression, archive file creation (on disk-copy to tape being made by a distinct procedure) and source descriptor record creation are done by the same program from PREPDATA file which is then scratched; READYDATA being updated.

- Addition of READYDATA to CGDF is done by :
  . sorting READYDATA (already sorted by source) by square degree numbers,
  . adding records from READYDATA to CGDF, filling first the last logical block, then appending new blocks. Overflow pointers inside CGDF are accordingly updated, as it is done for INDEXDEGREES information,
  . intra-source chains are created and referring pointers in INDEXSOURCES too, (see header description),
  . first level of INDEXSOURCES (pointers only) is sorted by source number.

  A new back-up tape of the data base and index files is created allowing a fast restoration of the system in case of computer failure.

C - DATA RETRIEVAL

- *EXTRACTION KEYS*

Level 1 . Geographical Area, extended to polygon appartenance (up to now, polygon description is limited to 20 vertices)

Level 2 . Land and/or Marine data

Level 3 . Appartenance to a set of Source Numbers, a wild-card character can be used to describe this set,

Ex : "1510002,*512***,/" meaning : source 1510002 plus all sources with country code 512 .

To enter his retrieval specifications, the user goes through a menu (interactive procedure), each level may be bypassed, choices made at a certain level may be restricted only by subsequent levels. Access to classified data is possible only if paasword allows it. This menu also asks the user to select among data fields (Two standard output formats being proposed -see Annex A and Annex B)

- *ACCESS PATHS*

. If Level 1 is active, access to CGDF is made through INDEXDEGREES; if Level 2 and/or 3 are also active, data records extracted from CGDF pass through a series of tests on country code and/or source number and/or elevation type to be retained.

. If Level 1 is inactive (no geographical area defined), INDEXSOURCES is explored (first level only), wanted source descriptions are decoded, then data are extracted from CGDF following the chain of pointers initialized in the source descriptor.

- *FORMAT OF OUTPUT FILE*

- 60 characters from CGDF (see Annex B)

- 160 characters from Archive Files (Annex A)
In this case, the real output file from the interactive interrogation procedure is only a set of pointers to Archive (from INDEXSOURCES) merged with sequence numbers (from CGDF). Off-line, this file is sorted out and used as input file to a batch process which extracts data from Archive Files.

In each case, the source descriptors of selected records may be edited as given in Annex C.

D - POSTPROCESSOR :

This software module contains all BGI routines with graphical purpose :

- Contouring of a randomly reparted set of points by triangulation
- Interpolation of a regular grid from such a data set
- Contouring of a regular grid
- Line smoothing
- Filtering
- Editing (titles, frames..)
- Access to WDBIDENT and WDBPOINT
- A set of mapping projections
- Display on an interactive graphic terminal or a plotter.....

CONCLUSION

As long as the Gravity Data Base is concerned, no important changes will be made to the system in the near future. A similar system is planned to be built at BGI before the end of year 1984 for altimetry data. Its structure will be very close to the one which has been described here. Moreover, it is foreseen that the index file needed to access SEASAT 1 and GEOS 3 altimeter data geographically will be in fact an extension of the gravity data base

equivalent, both data bases being interrogated through the same procedures, some menus being added to the existing ones.

Another foreseen developpement concerns the communications between these data bases and the graphic postprocessor. This processor would be able of handling data from different sources by means of a particular file format in which the information is preceeded by heading records describing data fields contents and format (also using file handling capabiblities of FORTRAN 77).

REFERENCES

(1) Gravimetric Data Management at BGI (J.F. ISAAC) International Symposium, Management of Geodetic Data, August 1981, Copenhagen

(2) BGI Bulletin d'Information No 50

(3) BGI Bulletin d'Information No 53

(4) Bases de Données : Méthodes pratiques, Daniel Martin, DUNOD Informatique

(5) Principles of Interactive Computer Graphics, Newman & Sproull, McGraw-Hill.

ANNEX A

ARCHIVE FILES
RECORD DESCRIPTION
160 CHARACTERS

Col. 1- 7 B.G.I. Source number

8- 12 Block number
Col. 8-10 = 10 Square degree
Col. 11-12 = 1 Square degree

13- 19 Latitude (Unit : 1/10 000 degree)

20- 27 Longitude (Unit : 1/10 000 degree) (- 180 to + 180 degree)

28 Accuracy of position
The site of the gravity measurement is defined in a circle of radius R
0 = No information on the accuracy
1 = R <= 20 M (approximately 0'01)
2 = 20 < R <= 100
3 = 100 < R <= 200 (approximately 0'1)
4 = 200 < R <= 500
5 = 500 < R <= 1000
6 = 1000 < R <= 2000 (approximately 1')
7 = 2000 < R <= 5000
8 = 5000 < R
9 ...

29 System of position
0 = Unknown
1 = Decca
2 = Visual observation
3 = Radar
4 = Loran A
5 = Loran C

6 = Omega or VLF

7 = Satellite

9 = Solar/Stellar (With sextant)

Col. 30- 31 Type of observation

A minus sign distinguishes the pendulum observations from the gravimeter ones.

0 = Current observation of detail or other observation of a 3rd or 4th order network

1 = Observation of a 2nd order national network

2 = Observation of a 1st order national network

3 = Observation being part of a national calibration line

4 = Individual observation at sea

5 = Mean observation at sea obtained from a continuous recording

6 = Coastal ordinary observation (Harbour, Bay, Sea-side...)

7 = Harbour base station

32 Elevation type

1 = Land

2 = Subsurface

3 = Ocean surface

4 = Ocean submerged

5 = Ocean bottom

6 = Lake surface (above sea level)

7 = Lake bottom (above sea level)

8 = Lake bottom (below sea level)

9 = Lake surface (above sea level with lake bottom below sea level)

A = Lake surface (below sea level)

B = Lake bottom (surface below sea level)

C = Ice cap (bottom below sea level)

D = Ice cap (bottom above sea level)

E = Transfer data given

33- 39 Elevation of station (0.1 M)

This field will contain depth of ocean (positive downward) if col. 32 contains 3, 4, or 5

Col. 40 Accuracy of elevation (E)

0 = Unknown
1 = E <= 0.1 M
2 = .1 < E <= 1
3 = 1 < E <= 2
4 = 2 < E <= 5
5 = 5 < E <= 10
6 = 10 < E <= 20
7 = 20 < E <= 50
8 = 50 < E <= 100
9 = E Superior to 100 M

41- 42 Determination of the elevation

= No information
0 = Geometrical levelling (bench mark)
1 = Barometrical levelling
2 = Trigonometrical levelling
3 = Data obtained from topographical map
4 = Data directly appreciated from the mean sea level
5 = Data measured by the depression of the horizon (marine)

Type of depth (if Col. 32 contains 3, 4 or 5)

1 = Depth obtained with a cable (meters)
2 = Manometer depth
4 = Corrected acoustic depth (corrected from Mathews' tables, 1939)
5 = Acoustic depth without correction obtained with sound speed 1500 M/Sec. (or 820 Brasses/sec)
6 = Acoustic depth obtained with sound speed 800 Basses/Sec (or 1463 M/Sec)
9 = Depth interpolated on a magnetic record
10 = Depth interpolated on a chart

43- 44 Mathews'zone

When the depth is not corrected depth, this information is necessary.

For example : zone 50 for the eastern Mediterranean Sea

Col. 45- 51 Supplemental Elevation

Depth of instrument, lake or ice, positive downward from surface

52- 59 Observed gravity (0.01 mgal)

60 Information about gravity

1 = Gravity with only instrumental correction

2 = Corrected gravity (instrumental and Eotvos correction)

3 = Corrected gravity (instrumental, Eotvos and cross-coupling correction)

4 = Corrected gravity and compensated by cross-over profiles

61 Accuracy of gravity (e)

When all systematic corrections have been applied

0 = E <= 0.05

1 = .05 < E <= 0.1

2 = 0.1 < E <= 0.5

3 = 0.5 < E <= 1.

4 = 1. < E <= 3.

5 = 3. < E <= 5.

6 = 5. < E <= 10.

7 = 10. < E <= 15.

8 = 15. < E <= 20.

9 = 20. < E

62 System of numbering for the reference station

This parameter indicates the adopted system for the numbering of the reference station

1 = for numbering adopted by IGSN 71

2 = BGI

3 = Country

4 = DMA

63- 69 Reference station

This station is the base station to which the concerned station is referred

70- 76 Calibration information (station or base)

This zone will reveals the scale of the gravity network in which the station concerned was observed, and allow us to make the necessary corrections to get an homogeneous system

Col. 77- 81 Free air anomaly (0.1 mgal)

82- 86 Bouguer anomaly (0.1 mgal)
Simple bouguer anomaly with a mean density of 2.67. No terrain correction

87- 88 Estimation standard deviation free air anomaly (mgal)

89- 90 Estimation standard deviation bouguer anomaly (mgal)

91- 92 Information about terrain correction
Horizontal plate without bullard's term
0 = No topographic correction
1 = CT computed for a radius of 5 km (zone H)
2 = CT 30 km (zone L)
3 = CT 100 km (zone N)
4 = CT 167 km (zone 02)
11 = CT computed from 1 km to 167 km
12 = CT 2.5 167
13 = CT 5.2 167

93- 96 Density used for terrain correction

97-100 Terrain correction (0.1 mgal)
Computed according to the previously mentioned radius (Col. 91-92) & density (Col. 93-96)

101-103 Apparatus used for measurements of G
0.. Pendulum apparatus constructed before 1932
1.. Recent pendulum apparatus (1930-1960)
2.. Latest pendulum apparatus (After 1960)
3.. Gravimeters for ground measurements
in which the variations of G are equilibrated or detected using the following methods :
30 = Torsion balance (Thyssen...)
31 = Elastic rod
32 = Bifilar system
4.. Metal spring gravimeters for ground measurements
42 = Askania (GS-4-9-11-12), Graf
43 = Gulf, Hoyt (Helical spring)

44 = North American
45 = Western
47 = LaCoste-Romberg
48 = LaCoste-Romberg, Model D (microgravimeter)

5.. Quartz spring gravimeter for ground measurements
51 = Norgaard
52 = GAE-3
53 = Worden ordinary
54 = Worden (additional thermostat)
55 = Worden world wide
56 = Gak
57 = Canadian gravity meter, sharpe
58 = GAG-2

6.. Gravimeters for underwater measurements (at the bottom of the sea or of a lake)
60 = Gulf
62 = Western
63 = North American
64 = LaCoste-Romberg

7.. Gravimeters for measurements on the sea surface or at small depth (submarines..)
70 = Graf-Askania
72 = LaCoste-Romberg
73 = LaCoste-Romberg (on a platform)
74 = Gal and Gal-F (used in submarines) Gal-M
75 = AMG (USSR)
76 = TSSG (Tokyo surface ship gravity meter)
77 = GSI sea gravity meter

Col. 104 Conditions of apparatus used
1 = 1 Gravimeter only (no precision)
2 = 2 Gravimeters (no precision)
3 = 1 Gravimeter only (without cross-coupling correction)
4 = 2 Gravimeters (influenced by the cross-coupling effect) with the same orientation
5 = 2 Gravimeters (influenced by the cross-coupling effect) in opposition
6 = 1 Gravimeter (compensated for the cross-coupling effect)
7 = 1 Gravimeter non subject to cross-coupling effect

8 = 3 Gravimeters

Col. 105 Information about isostatic anomaly

0 = No information

1 = Information exists but is not stored in the data bank

2 = Information exists and is included in the data bank

106-107 Type of the isostatic anomaly

0.. Pratt-Hayford hypothese

01 = 50 km including indirect effect (Lejay's tables)

02 = 56.9 km

03 = 56.9 km including indirect effect

04 = 80 km including indirect effect

05 = 96 km

06 = 113.7 km

07 = 113.7 km including indirect effect

1.. Airy hypotheses (equality of masses or pressures)

10 = T = 20 km (Heiskanen 's tables, 1931)

11 = T = 20 km including indirect effect (Heikanen's tables 1938 or Lejay's)

12 = T = 30 km (Heiskanen's tables, 1931)

13 = T = 30 km including indirect effect

14 = T = 40 km

15 = T = 40 km including indirect effect

16 = T = 60 km

17 = T = 60 km including indirect effect

6.....

65 = Vening Meinesz hypothesis "modified Bouguer anomaly" (Vening Meinesz, 1948)

108-112 Isostatic anomaly a (0.1 mgal)

113-114 Type of the isostatic anomaly B

115-119 Isostatic anomaly B

120-122 Velocity of the ship (0.1 knot)

123-127 Eotvos correction (0.1 mgal)

Col.	128-131	Year of observation
	132-133	Month
	134-135	Day
	136-137	Hour
	138-139	Minute
	140-145	Numbering of the station (original)
	146-148	Country code (B.G.I.)
	149	Flag (internal use)
	150-154	Original source number (ex. D.M.A. Code)
	155-160	Sequence number

Note 1 : Theoretical gravity (g0) :
The approximation of the closed form of the gravity formula 1967 is used for theoretical gravity at sea level :
$g0 = 978031.85*(1 + 0.005278895*\sin^2(\text{phi}) + .000023462*\sin^4(\text{phi}))$ mgal

Note 2 : Free air anomaly
To reduce gravity to sea-level, we use the normal gradient of gravity or "free-air" correction : + 0.3086*H mgal ; H is in meters and positive down to the geoid. The free air anomaly is derived from :
g + 0.3086*H-g0

Note 3 : Simple bouguer anomaly
The simple bouguer anomaly is derived from : g + 0.3086*H - 0.1119*H-g0,
The term 0.1119*H is the attraction of an infinite flat plate, thickness H and with standard density 2.67 g/cm^3

Note 4 : Formulas used in computing free-air and bouguer anomalies

Elev Type	Situation	Formulas
1	Land Observation	FA = g + 0.3086*H - g0 BO = FA - 0.1119*H
2	Subsurface	FA = g + 0.2238*D2 + 0, 3086*(H-D2) BO = FA - 0.1119*H
3	Ocean surface	FA = g - g0 BO = FA + 0.06886*H (H = depth of ocean positive downward from surface)
4	Ocean submerged	FA = g - 0.2225*D2 - g0 BO = FA + 0.06886*H (D2 = depth of instrument positive downward) (H = depth of ocean positive downward)
5	Ocean bottom	FA = g - 0.2225*D1 - g0 BO = FA + 0.06886*D1 (D1 = depth of ocean positive downward)
6	Lake surface (above sea level)	FA = g + 0.3086*H - g0 BO = FA - 0.04191*D1 - 0.1119*(H-D1) (D1 = depth of lake positive downward)
7	Lake bottom (above sea level)	FA = g + 0.08382*D1 + 0.3086*(H-D1) - g0 BO = FA - 0.04191*D1 - 0.1119*(H-D1)
8	Lake bottom (below sea level)	FA = g + 0.08382*D1 + 0.3086*(H-D1) - g0 BO = FA - 0.04191*D1 - 0.06999*(H-D1)
9	Lake surface (above sea level with bottom below sea level)	FA = g + 0.3086*H - g0 BO = FA - 0.04191*H - 0.06999*(H-D1)
A	Lake surface (below sea level)	FA = g + 0.3086*H - g0 BO = FA - 0.1119*H + 0.06999*D1
B	Lake bottom (surface below sea level)	FA = g + 0.3086*H - 0.2248*D1 - g0 BO = FA - 0.1119*H + 0.06999*D1 (D1 = depth of lake positive downward)
C	Ice cap (bottom below sea level)	FA = g + 0.3086*H - g0 BO = FA - 0.03843*H - 0.07347*(H-D1) (D1 = depth of ice positive downward)
D	Ice cap (bottom above sea level)	FA = g + 0.3086*H - g0 BO = FA - 0.03843*D1 - 0.1119*(H-D1) (D1 = depth of ice)

ANNEX B
CGDF RECORD DESCRIPTION
60 CHARACTERS

Col. 1 Classification code - 0 if not classified

2- 8 B.G.I. source number

9-15 Latitude (unit = 1/10 000 degree)

16-23 Longitude (unit = 1/10 000 degree)

24 Elevation type

1 = Land
2 = Subsurface
3 = Ocean surface
4 = Ocean submerged
5 = Ocean bottom
6 = Lake surface (above sea level)
7 = Lake bottom (above sea level)
8 = Lake bottom (below sea level)
9 = Lake surface (above sea level with lake bottom below sea level)
A = Lake surface (below sea level)
B = Lake bottom (surface below sea level)
C = Ice cap (bottom below sea level)
D = Ice cap (bottom above sea level)
E = Transfer data given

25-31 Elevation of the station (0.1 M)
This field will contain depth of ocean (positive downward) if col. 24 contains 3, 4 or 5.

32-36 Free air anomaly (0.1 mgal)

37-38 Estimation standard deviation free air anomaly (mgal)

39-43 Bouguer anomaly (0.1 mgal)
Simple bouguer anomaly with a mean density of 2.67 - No terrain correction.

Col. 44-45 Estimation standard deviation bouguer anomaly (mgal)

46 System of numbering for the reference station
1 = IGSN 71
2 = BGI
3 = Country
4 = DMA

47-53 Reference Station

54-56 Country code

57 1 : Measurement at sea with no depth given
0 : otherwise

58 Information about terrain correction
0 = no information
1 = terrain correction exists in the archive file

59 Information about density
0 = no information or 2.67
1 = density $\neq$ 2.67 given in the archive file

60 Information about isostatic anomaly
0 = no information
1 = information exists but is not stored in the archive file
2 = information exists and is included in the archive file.

ANNEX C

EXAMPLE OF SOURCE DESCRIPTOR

Source number : 2000004

Land data from Africa

Origin D.M.A. 25

Number of stations : 77

Archive : 03007

TITLE							
E.C. BULLARD							
GRAVITY MEASUREMENTS IN EAST AFRICA							
CAMBRIDGE UNIVERSITY							
1936							

GEOGRAPHICAL EXTENSION	LATITUDE -90 - 90 DEGREES	LONGITUDE -180 - 180 DEGREES
MINIMUM	-9.6000	29.3667
MAXIMUM	4.9333	40.1167

TYP	NB STAT	C	C	COUNTRY NAME	NB STAT	REFERENCE	NB STA
1	77	050		ZAIRE	9	4 320	25
		048		UGANDA	12	4 1220	52
		043		SUDAN	2		
		022		KENYA	23		
		045		TANZANIA	31		

ANOMALIES	MINIMUM	MAXIMUM	NB EVAL	MIN EVAL	MAXI EVAL
FREE AIR	-131.9	91.1	77	4	4
BOUGUER	-237.9	-20.4	77	4	4

STATIONS WITH DENSITY # 2.67	0
STATIONS WITH TOPOGRAPHIC CORRECTION	0
STATIONS WITH ISOSTATIC ANOMALY 1	0
STATIONS WITH ISOSTATIC ANOMALY 2	0

PART II

LIST OF PUBLICATIONS DEALING WITH GRAVITY MATTERS RECEIVED AT B.G.I.

GRAVITATION

FIELD THEORY

GRAVITATIONAL CONSTANT
NEWTONIAN THEORY
RELATIVISTIC THEORY
POISSON EQUATIONS
GREEN FORMULAS
HARMONIC FUNCTIONS
LEGENDRE FUNCTIONS
LAME FUNCTIONS
DIRICHLET PROBLEM
POISSON INTEGRAL
LEVEL SURFACES
PLUMB LINES
VERTICAL GRAVITY GRADIENT
GRAVITY GRADIENT TENSOR

GLOBAL MODEL DETERMINATION

HARMONIC COEFFICIENTS
ZONAL TERMS
RESONANCE TERMS
SINGLE LAYER
DOUBLE LAYER
MASS POINTS
PERTURBATION THEORY
KAULA EXPANSION
HARMONIC ANALYSIS OF GRAVITY

TIDAL THEORY

THIRD BODY PERTURBATION
TIDE GENERATING POTENTIAL
HONKASALO TERM
DOODSON EXPANSION

EARTH ROTATION
LIOUVILLE EQUATIONS
PRECESSION
NUTATION
FREE NUTATION THEORY
DIURNAL NUTATION
POLAR MOTION
WOBBLE THEORY
CHANDLER THEORY
GRAVIMETRIC TIDES
ZONAL TIDES
LOVE NUMBERS
MOLODENSKY LIQUID-CORE PROBLEM

GEODESY

POSITIONING

LEVELLING
DYNAMIC HEIGHT
ORTHOMETRIC HEIGHT
NORMAL HEIGHT
TRIANGULATION
GEODIMETER
TELLUROMETER
SPIRIT LEVELLING
BAROMETRIC LEVELLING

SATELLITE

GEOMETRICAL GEODESY
SEMI-DYNAMICAL METHODS
DYNAMICAL METHODS

SATELLITE TECHNIQUES

LASER
DOPPLER

OPTICAL
INTERFEROMETRY
VLBI
RADAR
ALTIMETER
INERTIAL NAVIGATION
SEA POSITIONING

ASTROGEODESY

ASTROGRAVIMETRIC LEVELLING
LAPLACIAN POINTS
HORIZONTAL ANGLES
VERTICAL ANGLES
DATUM
DATUM SHIFT

GEODETIC REFERENCE SYSTEM

THREE-D GEODESY
NORMAL POTENTIAL
NORMAL GRAVITY
SERIES EXPANSION
SPHERICAL HARMONICS
CLAIRAUT THEORY
TERRESTRIAL SYSTEM
CELESTIAL SYSTEM
STATION COORDINATES

GLOBAL GRAVITY MODELS

GM-GEOCENTRIC GRAVITATIONAL CONSTANT
MODEL COMPARISON
GRADIOMETRY
SATELLITE TO SATELLITE TRACKING
GRAVIMETRIC GEOID
SATELLITE GEOID
ASTROGEODETIC GEOID

PHYSICAL GEODESY

ANOMALOUS FIELD
GEOID DEFINITION
DISTURBING POTENTIAL
GRAVITY ANOMALY DEFINITION
BRUN'S FORMULA
STOKES INTEGRAL
HOTINE INTEGRAL
INVERSE STOKES PROBLEM
VENING-MEINESZ
HILBERT SPACE
COLLOCATION
SPECTRAL COMBINATION
COVARIANCE FUNCTION
DEGREE VARIANCES
SAMPLING FUNCTIONS
MOLODENSKY THEORY
HEIGHT ANOMALY
FOURIER METHODS

PLANETOLOGY

MOON
MARS
VENUS
MERCURY
JUPITER
SATURN
URANUS
NEPTUNE
PLUTO
LUNAR LIBRATION

ALTIMETRY

ALTIMETRIC GEOID
SEA SURFACE HEIGHT

GRAVIMETRY

APPARATUS

TORSION BALANCE
GRADIOMETER
SEA GRAVIMETER
INERTIAL PLATFORM
ACCELEROMETER
INERTIAL NAVIGATION
CALIBRATION
COMPARISON
INSTRUMENTAL ERRORS

INTERNATIONAL NETWORKS

IGSN 71
EUROPE
AFRICA
ASIA
AMERICA
PACIFIC
WORLDWIDE NETWORK

SEA MEASUREMENTS

Oceanic Area Names
BOREHOLE GRAVITY MEASUREMENTS
DENSITY MEASUREMENTS

TIDES

STATION RECORDING
TIDAL ANALYSIS
TIDAL COEFFICIENTS
LOADING EFFECT

MEASUREMENT REDUCTIONS

INSTRUMENTAL DRIFT
NETWORK ADJUSTMENT
TIDAL CORRECTIONS
ATMOSPHERIC CORRECTION
LEVELLING CORRECTION

GRAVITY REDUCTIONS

TERRAIN CORRECTION
ISOSTATIC REDUCTION

GEOPHYSICS

INTERPRETATION METHODS

2-DIM BODY
3-DIM BODY
GRAVITY GRADIENT
SECOND DERIVATIVE
UPWARD-DOWNWARD CONTINUATION
RESIDUAL MAP
FOURIER TRANSFORM
TRANSFER FUNCTIONS

CORRELATION TOPOGRAPHY

ISOSTATIC MODELS
FLEXURAL MODELS
RHEOLOGY
POSTGLACIAL UPLIFT
BATHYMETRY

CORRELATION GEOLOGY

SHIELDS
SEDIMENTARY BASINS
RIDGES
MARGINS

CORRELATION SEISMOLOGY

VOLCANOLOGY-EARTHQUAKES
P-WAVE DENSITY
S-WAVE RIGIDITY
CRUST MODELS
MANTLE
CORE

CORRELATION MAGNETIC FIELD

PALEOMAGNETISM
GLOBAL MAGNETIC FIELD
AGE

PLATE TECTONICS

SUBDUCTION ZONES
RIFTS
ISLAND ARCS

TEMPORAL VARIATIONS

SECULAR GEOPOTENTIAL VARIATIONS
RECENT CRUSTAL MOVEMENTS
VERTICAL MOVEMENTS
HORIZONTAL MOVEMENTS
STRESS TENSOR
STRAIN TENSOR

NUMERICAL ANALYSIS

NUMERICAL INTEGRATION

QUADRATURE FORMULAS
DIFFERENTIAL SYSTEMS
PARTIAL DIFFERENTIAL EQUATIONS

SPECTRAL ANALYSIS

CONVOLUTION
AUTOCORRELATION
CROSS CORRELATION
FOURIER-FFT
FOURIER SERIES
FILTERING
SPHERICAL HARMONIC ANALYSIS

ADJUSTMENT METHODS

LEAST SQUARES COLLOCATION
SEQUENTIAL COLLOCATION
STEPWISE COLLOCATION
WIENER-HOPF EQUATION

STATISTICAL METHODS

FACTOR ANALYSIS
CANONICAL ANALYSIS
CORRESPONDANCE ANALYSIS

SPHERICAL HARMONICS

RECURSIVE FORMULAS
INTEGRALS
DERIVATIVES
PRODUCT SUM CONVERSION
TRANSLATION-ROTATION

CLENSHAW SUMMATION

MATRIX PROBLEMS

MATRIX INVERSION

EIGEN VALUES

PSEUDO-INVERSE

GRAPHICS

POLYNOMIAL INTERPOLATION

SPLINES

REGULAR GRID CONTOURING

IRREGULAR GRID CONTOURING

MASKING-HASHING

SCREENING

CURVE FITTING

SURFACE APPROXIMATION

DATA BASE MANAGEMENT

Miscellaneous

BIBLIOGRAPHY

NATIONAL REPORT

International Organism Names

Country Names

RECORD : 1
Comparison of Some Methods for the Detailed Representation of the Earth's Gravity Field
TSCHERNING C.C.
REVIEWS OF GEOPHYSICS AND SPACE PHYSICS
VOL. 19,NO 1,PAGES 213-221
DATE : 02-1981
/GEODESY/PHYSICAL GEODESY/ANOMALOUS FIELD/STOKES INTEGRAL/HILBERT SPACE/
/COLLOCATION/VENING MEINESZ/

RECORD : 2
A Characterization of the Inverse Gravimetric Source Problem Through Extremal Measures
ANGER G.
REVIEWS OF GEOPHYSICS AND SPACE PHYSICS
VOL. 19,NO. 2,PAGES 299-306
DATE : 05-1981
/GEOPHYSICS/INTERPRETATION METHOD/

RECORD : 3
Gravity and Height Variations Connected with the Current Rifting Episode in Northern Iceland
TORGE W.
TECTONOPHYSICS
71,PAGES 227-240
DATE : 1981
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/VOLCANOLOGY & EARTHQUAKES/

RECORD : 4
Free-Air Gravity over the Hoggar Massif,Northwest Africa:Evidence for Alteration of the Lithosphere
CROUGH S.T.
TECTONOPHYSICS
77,PAGES 189-202
DATE : 1981
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/GEOLOGY/ISOSTATIC MODELS/

RECORD : 5
ZUR SCHATZUNG VON ANOMALIE-GRADVARIANZENAUS LOKALEN EMPIRISCHEN KOVARIANZFUNKTIONEN
WENZEL H.G./ARABELOS D.
Z.F.V.
106.Jahrgang.Heft 5,PAGES 234-243
DATE : 05-1981
/GEODESY/PHYSICAL GEODESY/COVARIANCE FUNCTION/ALTIMETRIC GEOID/

RECORD : 6
ZUR GEOIDBESTIMMUNG DURCH KOMBINATION VON SCHWEREANOMALIEN UND EINEN KUGELFUNKTIONSMODELL MIT HILFE VON INTEGRALFORMELN
WENZEL H.G.
Z.F.V.
106.Jahrgang.Heft 3,PAGES 102-111
DATE : 03-1981
/GEODESY/PHYSICAL GEODESY/GEOID/STOKES INTEGRAL/COVARIANCE FUNCTION/
/SPECTRAL COMBINATION/

RECORD : 7
Gravity Measurements in South-East Scotland
LAGIOS E./HIPKIN R.G.
GEOPHYSICAL JOURNAL OF THE ROYAL ASTRONOMICAL SOCIETY
NO 65,PAGES 505-506
DATE : 1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/SCOTLAND/

RECORD : 8
Seasat Altimeter Observations of Dynamic Topography in the Gulf Stream Region
CHENEY R.E./MARSH J.G.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 86,NO. C1,PAGES 473-483
DATE : 01-1981
/GEODESY/GLOBAL GRAVITY MODELS/ALTIMETRIC GEOID/SEA SURFACE HEIGHT/OCEANOGRAPHY/

RECORD : 9
Mean Earth Ellipsoid Determined From Seasat 1 Altimetric Observations
WEST G.B.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 87,NO. B7,PAGES 5538-5540
DATE : 07-1982
/GEODESY/ALTIMETRY/ALTIMETRIC GEOID/GEODETIC REFERENCE SYSTEM/
/REFERENCE ELLIPSOID/

RECORD : 10
Information Theory Lateral Density Distribution for Earth Inferred From Global Gravity Field
RUBINCAM D.P.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 87,NO. B7,PAGES 5541-5552
DATE : 07-1982
/GEOPHYSICS/INTERPRETATION METHODS/INVERSE TECHNIQUES/

RECORD : 11
A Multilayer Model of Time Dependent Deformation Following an Earthquake on a Strike Slip Fault
COHEN S.C.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 87,NO. B7,PAGES 5409-5421
DATE : 07-1982
/GEOPHYSICS/DIRECT SIMULATION/STRESS-STRAIN TENSOR/

RECORD : 12
Comparison Data for Seasat Altimetry in the Western North Atlantic
CHENEY R.E.
NASA TECHNICAL MEMORANDUM
NO.82069,18 PAGES
DATE : 01-1981
/GEODESY/ALTIMETRY/SEA SURFACE HEIGHT/OCEANOGRAPHY/ALTIMETRIC GEOID/

RECORD : 13
Results of Clinometric Observations of Earth Tides in 1978-1979 at the KSIAZ Station NO. 0906
CHOJNICKI T.
INSTITUTE OF GEOPHYSICS, POLISH ACADEMY OF SCIENCES
F-7,146,PAGES 3-101
DATE : 1981
/GRAVIMETRY/GRAVITY TIDES MEASUREMENTS/STATION RECORDING/

RECORD : 14
Stability Investigations of Various Representations of the Gravity Field
GERSTL M./RUMMEL R.
REVIEWS OF GEOPHYSICS AND SPACE PHYSICS
VOL. 19,NO. 3,PAGES 415-420
DATE : 08-1981
/GEODESY/PHYSICAL GEODESY/COVARIANCE FUNCTION/SAMPLING FUNCTIONS/GRAVITATION/
/MASS POINT/HARMONIC FUNCTIONS/

RECORD : 15
Local and Global Gravity Field Representation
GROTEN E.
REVIEWS OF GEOPHYSICS AND SPACE PHYSICS
VOL. 19,NO. 2,PAGES 407-414
DATE : 08-1981
/GEODESY/PHYSICAL GEODESY/HOTINE INTEGRAL/

RECORD : 16
A Comparison of Geodetic Doppler Satellite Receivers
ARCHINAL B.A.
OHIO STATE UNIVERSITY
REP. NO. 340,107 PAGES
DATE : 11-1982
/GEODESY/POSITIONNING/DOPPLER/

RECORD : 17
Results of Researches on the International Geophysical Projects

ACADEMY OF SCIENCES OF THE USSR, SOVIET GEOPHYSICAL COMMITTEE
206 PAGES
DATE : 1979
/GRAVIMETRY/APPARATUS/RELATIVE GRAVIMETERS/CALIBRATION/

RECORD : 18
Planetary Density Model and Normal Gravity Field of the Earth
KARTVELISHVILI K.M.
ACADEMY OF SCIENCES OF THE USSR, SOVIET GEOPHYSICAL COMMITTEE
92 PAGES
DATE : 1982
/GEODESY/GEODETIC REFERENCE SYSTEM/REFERENCE ELLIPSOID/NORMAL POTENTIAL/
/SERIES EXPANSION/CLAIRAUT THEORY/

RECORD : 19
The Concept of a Solution of Fundamental Reverse Geodetic Problem in the
Gauss-Kruger Projection
PANASIUK J.
GEODEZJA I KARTOGRAFIA
TOM XXXI ZESZYT 1, PAGES 3-20
DATE : 1982
/GEODESY/GEODETIC REFERENCE SYSTEM/REFERENCE ELLIPSOID/

RECORD : 20
Geodesy and Mathematics
MORITZ H.
DATE : 1981
/GEODESY/PHYSICAL GEODESY/BOUNDARY VALUE PROBLEM/

RECORD : 21
A Variational Principle for Molodensky's Liquid-Core Problem
MORITZ H.
BULLETIN GEODESIQUE
NO. 56, PAGES 364-380
DATE : 1982
/GRAVITATION/EARTH ROTATION/NUTATION/POLAR MOTION/MOLODENSKY LIQUID-CORE PROBLEM/

RECORD : 22
Deflection and Gravity Anomaly Prediction for Inertial Positioning Using Collocation
FORSBERG R./TSCHERNING C.C.
2ND INT. SYMP. ON INERTIAL TECHNOLOGY FOR SURVEYING & GEODESY,BANFF,JUNE 1-5 81
PREPRINT GEODETIC INSTITUTE, DENMARK
15 PAGES
DATE : 1981
/GEODESY/POSITIONNING/INERTIAL NAVIGATION/PHYSICAL GEODESY/COLLOCATION/
/GRAVITY ANOMALY/DEVIATION OF VERTICAL/

RECORD : 23
Extent of Archaean and Late Proterozoic Rocks under the Ice Cap of Princess Elizabeth Land, Antarctica, Inferred from Geophysics
WELLMAN P./WILLIAMS J.W.
BMR JOURNAL OF AUSTRALIAN GEOLOGY & GEOPHYSICS
VOL. 7,NO. 3,PAGES 213-218
DATE : 09-1982
/GEOPHYSICS/CORRELATION/MAGNETIC FIELD/ICE CAP/ANTARCTIC/

RECORD : 24
Magnetotelluric Profiles in the McArthur Basin of Northern Australia
CULL J.P.
BMR JOURNAL OF AUSTRALIAN GEOLOGY & GEOPHYSICS
VOL. 7,NO. 4,PAGES 275-286
DATE : 12-1982
/GEOPHYSICS/CORRELATION/E.M. METHODS/AUSTRALIA/

RECORD : 25
Combined Seismic-Gravity Interpretation over the Donnybrook Anticline, Central Queensland
ANFILOFF V.
BMR JOURNAL OF AUSTRALIAN GEOLOGY & GEOPHYSICS
VOL. 7,NO. 4,PAGES 303-314
DATE : 12-1982
/GEOPHYSICS/CORRELATION/SEISMOLOGY/AUSTRALIA/

RECORD : 26
Final Report on the Observations & Computations Carried out in the 2nd European Doppler Observation Campaign (EDOC-2)
BOUCHER C./PAQUET P./WILSON P.
VERLAG DES INSTITUTS FUR ANGEWANDTE GEODASIE, FRANKFURT AM MAIN
REIHE B:ANGEWANDTE GEODASIE, HEFT NO. 255,112 PAGES
DATE : 1981
/GEODESY/POSITIONING/DOPPLER/

RECORD : 27
Comparison of GEOS-3 Altimetry with a Recent Gravimetric Geoid in the North Sea
WEBER G./WENZEL H.G.
ANNALES DE GEOPHYSIQUE
TOME 37, FASC. 1, PAGES 107-112
DATE : 1981
/GEODESY/GLOBAL GRAVITY MODELS/MODEL COMPARISON/GRAVIMETRIC GEOID/
/ALTIMETRIC GEOID/

RECORD : 28
Intercomparisons of Earth Models by Means of Lumped Coefficients
KLOKOCNIK J./POSPISILOVA L.
PLANETARY SPACE SCIENCES
VOL. 29,NO. 6, PAGES 653-671
DATE : 1981
/GEODESY/GLOBAL GRAVITY MODELS/SATELLITE MODELS/

RECORD : 29
Radar Altimeter Waveform Modeled Parameter Recovery
HAYNE G.S.
NASA TECHNICAL MEMORANDUM
NO. 73294, 57 PAGES
DATE : 08-1981
/GEODESY/ALTIMETRY/ALTIMETER/NUMERICAL ANALYSIS/SPECTRAL ANALYSIS/
/FOURIER TRANSFORMS/CURVE FITTING/

RECORD : 30
Etude de l'influence des facteurs extérieurs sur le facteur d'échelle des gravimètres SHARPE (SS.2)
KOZIAKOVA K.J./MAIEVSKA M./ROUKAVICHNIKOV R.B./TERGUER L./TCHAPO G.
ACADEMY OF SCIENCES OF THE USSR, SOVIET GEOPHYSICAL COMMITTEE
110 PAGES
DATE : 1974
/GRAVIMETRY/APPARATUS/RELATIVE GRAVIMETER/CALIBRATION/INSTRUMENTAL ERRORS/

RECORD : 31
Levantamento Gravimetrico da Ilha de Santa Catarina
GEMAEL C.
BOLETIM DA UNIVERSIDADE FEDERAL DO PARANA
GEODESIA NO. 25, 16 PAGES
DATE : 1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/BRAZIL/

RECORD : 32
Sampling Function and Finite Element Method Representation of the Gravity Field
SCHMIDT H.F.
REVIEWS OF GEOPHYSICS AND SPACE PHYSICS
VOL. 19, NO. 3, PAGES 421-436
DATE : 08-1981
/GRAVITATION/FIELD THEORY/HARMONIC FUNCTIONS/GEODESY/PHYSICAL GEODESY/
/SAMPLING FUNCTIONS/NUMERICAL ANALYSIS/FINITE ELEMENT MODEL/

RECORD : 33
Marées dans une Terre sphériquement non symétrique
MOLODENSKII M.S.
BULLETIN D'INFORMATION, MAREES TERRESTRES
NO. 86,PAGES 5498-5514
DATE : 12-1981
/GRAVITATION/TIDES/SOLID TIDES/

RECORD : 34
Influence de la nutation forcée de la Terre sur les résultats des observations de marées
MOLODENSKII S.M.
BULLETIN D'INFORMATION, MAREES TERRESTRES
NO. 86, PAGES 5515-5520
DATE : 12-1981
/GRAVITATION/TIDES/NUTATION/LOVE NUMBERS/

RECORD : 35
Parametrization of the Tidal Triggering of Earthquakes
VAN RUYMBEKE M./DUCARME B./DE BECKER M.
BULLETIN D'INFORMATION, MAREES TERRESTRES
NO. 86, PAGES 5521-5544
DATE : 12-1981
/GRAVIMETRY/GRAVITY TIDES MEASUREMENTS/TIDAL ANALYSIS/GEOPHYSICS/CORRELATION/
/VOLCANOLOGY & EARTHQUAKES/NUMERICAL ANALYSIS/SPECTRAL ANALYSIS/
/STATISTICAL METHODS/

RECORD : 36
L'influence de l'océan et de la viscosité du manteau sur la nutation de la terre
MOLODENSKII S.M.
BULLETIN D'INFORMATION, MAREES TERRESTRES
NO. 86, PAGES 5545-5565
DATE : 12-1981
/GRAVITATION/TIDES/OCEAN TIDES/NUTATION/GEOPHYSICS/CORRELATION/MANTLE/

RECORD : 37
Etablissement d'une banque des données gravimétriques du Massif Armoricain et duMassif Central
OGIER M./ROUX V.
BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES, DPT. GEOPHYSIQUE
NO. 81 SGN 427 GPH,17 PAGES
DATE : 06-1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/FRANCE/NUMERICAL ANALYSIS/
/DATA BASE MANAGEMENT/

RECORD : 38
Rapport d'implantation des bases gravimétriques portuaires du réseau RGF 80
DUPONT F./OGIER M.
BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES, DPT. GEOPHYSIQUE
NO. 82 SGN 040 GPH,21 PAGES
DATE : 01-1982
/GRAVIMETRY/NATIONAL NETWORK/FRANCE/

RECORD : 39
Regional Plate Tectonics and the Evolution of Australia's Passive Continental Margins
FALVEY D.A./MUTTER J.C.
BMR JOURNAL OF AUSTRALIAN GEOLOGY & GEOPHYSICS
VOL. 6, NO. 1, PAGES 1-30
DATE : 03-1981
/GEOPHYSICS/PLATE TECTONICS/MARGINS/AUSTRALIA/

RECORD : 40
Crustal Reactions Resulting from the Mid-Pliocene to Recent Continent-Island Arc Collision in the Timor Region
JOHNSTON C.R./BOWIN C.O.
BMR JOURNAL OF AUSTRALIAN GEOLOGY & GEOPHYSICS
VOL. 6, NO. 3, PAGES 223-244
DATE : 09-1981
/GEOPHYSICS/PLATE TECTONICS/SUBDUCTION ZONES/INDONESIA/INDIAN OCEAN/

RECORD : 41
Results of a Seismic Survey in the Southern Denison Trough, Queensland, 1978-79
BAUER J.A./DIXON O.
BMR JOURNAL OF AUSTRALIAN GEOLOGY & GEOPHYSICS
VOL. 6, NO. 3, PAGES 213-222
DATE : 09-1981
/GEOPHYSICS/CORRELATION/SEISMOLOGY/MAGNETIC FIELD/AUSTRALIA/

RECORD : 42
Anomalies in Thickness of the Lithosphere in the Northwest Pacific
TOMODA Y./FUJIMOTO H.
JOURNAL OF THE SEISMOLOGIC SOCIETY OF JAPAN
NO. 34, PAGES 189-195
DATE : 1981
/GEOPHYSICS/CORRELATION/SEISMOLOGY/CRUST MODELS/

RECORD : 43
Maps of Gravity Anomalies & Bottom Topography in the Western Pacific and Reference Book for Gravity and Bathymetric Data
TOMODA Y./FUJIMOTO H.
BULLETIN OF THE OCEAN RESEARCH INSTITUTE OF TOKYO
NO. 14, 158 PAGES
DATE : 03-1982
/GRAVIMETRY/SEA MEASUREMENTS/INTERNATIONAL NETWORK/PACIFIC/

RECORD : 44
Precise Calibration of Scale Values of LaCoste & Romberg Gravimeters and International Gravimetric Connections along theCircum-Pacific Zone
NAKAGAWA I./NAKAI S./SHICHI R./TAJIMA H./IZUTUYA S./KONO Y./HIGASHI T./ET AL.
GEOPHYSICAL INSTITUTE, KYOTO UNIVERSITY
117 PAGES
DATE : 03-1983
/GRAVIMETRY/APPARATUS/RELATIVE GRAVIMETER/CALIBRATION/INTERNATIONAL NETWORK/ /PACIFIC/

RECORD : 45
Zur Genauigkeit Gravimetrisch Bestimmter Absoluter und Relativer Geoidhohen
HECK B./GRUNINGER W.
VERLAG DER BAYERISCHEN AKADEMIE DER WISSENSCHAFTEN
REIHE A, THEORETISCHE GEODASIE HEFT NO. 97/34 PAGES
DATE : 1983
/GRAVITATION/GLOBAL MODELS DETERMINATION/COMBINED METHOD/

RECORD : 46
Relativistic Perturbations of an Earth Satellite
ASHBY N./BERTOTTI B.
PREPRINT, 9 PAGES
DATE : 01-1983
/GRAVITATION/FIELD THEORY/RELATIVISTIC THEORY/PERTURBATION THEORY/

RECORD : 47
An Inertial Survey Adjustment Program : Implementation and Validation
MILBERT D.G.
N.O.A.A. TECHNICAL REPORT
NOS 97 NGS 26,84 PAGES
DATE : 11-1982
/GEODESY/POSITIONING/INERTIAL NAVIGATION/

RECORD : 48
On the Compensation of Geoid Anomalies Due to Subducting Slabs
McADOO D.C.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 87,NO. B10, PAGES 8684-8692
DATE : 10-1982
/GEOPHYSICS/CORRELATION/PLATE TECTONICS/SUBDUCTION ZONES/

RECORD : 49
Gezeitenmessungen mit zwei Askania-Gravimetern in Potsdam
DITTFELD H.J./VARGA P.
MITTEILUNG DES ZENTRALINSTITUTS FUR PHYSIK DER ERDE
NO. 1127, 4 PAGES
DATE : 1983
/GRAVIMETRY/APPARATUS/RELATIVE GRAVIMETER/

RECORD : 50
Variation of the Line of Sight in the NI002 Leveling Instrument due to Temperature Change
POETZSCHKE H.
N.O.A.A. TECHNICAL MEMORANDUM
NOS NGS 38, 13 PAGES
DATE : 04-1983
/GEODESY/POSITIONING/LEVELLING/

RECORD : 51
Gravity Anomalies in the Northwestern Pacific and their Geophysical Interpretation
TOMODA Y./FUJIMOTO H.
PROCEEDINGS OF THE JAPAN ACADEMY
VOL. 57, SER. B, NO. 10, PAGES 359-361
DATE : 1981
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/

RECORD : 52
Free Air and Bouguer Gravity Anomaly in the West Pacific Calculated from Sea Gravity Data Obtained by T.S.S.G. (1963-1980)
TOMODA Y./FUJIMOTO H.
JOURNAL OF THE GEODETY SOCIETY OF JAPAN
VOL. 26, NO. 4, PAGES 258-266
DATE : 1980
/GRAVIMETRY/SEA MEASUREMENTS/

RECORD : 53
Gravity Anomalies in the Western Pacific and Geophysical Interpretation of their Origin
TOMODA Y./FUJIMOTO H.
JOURNAL OF PHYSICS OF THE EARTH
VOL. 29,PAGES 387-419
DATE : 1981
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/CORRELATION/TOPOGRAPHY/ISOSTATIC MODELS/
/FLEXURAL MODELS/

RECORD : 54
Residual Gravity Anomalies of the Hawaiian Seamounts and Anomalies of the Thickness of Lithosphere
TOMODA Y./FUJIMOTO H./MATSUMOTO T./KONO Y.
JOURNAL OF THE SEISMOLOGIC SOCIETY OF JAPAN
NO. 35, PAGES 293-301
DATE : 1982
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/SEISMOLOGY/

RECORD : 55
Superconducting Gravimeter of Novel Design
FUJIMOTO H./TOMODA Y.
JOURNAL OF THE GEODETIC SOCIETY OF JAPAN
VOL. 26, NO. 2, PAGES 75-81
DATE : 1980
/GRAVIMETRY/APPARATUS/ABSOLUTE GRAVIMETER/

RECORD : 56
A Discussion of World-wide Measurements of Tidal Gravity with Respect to Oceanic interactions, Lithosphere Heterogeneities, Earth's Flattening & Inertial forces
MELCHIOR P./DE BECKER M.
PHYSICS OF THE EARTH AND PLANETARY INTERIORS
NO. 31, PAGES 27-53
DATE : 1983
/GRAVIMETRY/GRAVITY TIDES MEASUREMENTS/STATION RECORDING/LOADING EFFECT/

RECORD : 57
Establishment of a Baseline over the Sea
BADELLAS A./SAVAIDIS P./IFANTIS J.
INT. SYMP. ON GEODETIC NETWORKS & COMPUTATIONS,I.A.G., MUNICH,1981
DEPARTMENT OF GEODETIC ASTRONOMY UNIVERSITY OF THESSALONIKI
NO. 11, PAGES 166-172
DATE : 1982
/GEODESY/POSITIONING/BASELINE/GREECE/

RECORD : 58
Establishment of a First Order Gravity Network in Northern Greece
ARABELOS D./KARRINTI J.M./MAVRIDIS L.N.
INT. SYMP. ON GEODETIC NETWORKS & COMPUTATIONS,I.A.G., MUNICH, 1981
DEPARTMENT OF GEODETIC ASTRONOMY UNIVERSITY OF THESSALONIKI
NO. 10, PAGES 69-78
DATE : 1982
/GRAVIMETRY/NATIONAL NETWORK/GREECE/

RECORD : 59
Establishment of a High Precision Gravity Network in the Area of Thessaloniki
BADELLAS A./GOUNARIS A./MAVRIDIS L.N.
DEPARTMENT OF GEODETIC ASTRONOMY UNIVERSITY OF THESSALONIKI
NO. 16, PAGES 493-501
DATE : 1982
/GRAVIMETRY/NATIONAL NETWORK/GREECE/

RECORD : 60
An Electronic Device for the Determination of Temperature During
Electromagnetic Distance Measurements
BADELLAS A./STAVRIDIS D./SAVAIDIS P.
DEPARTMENT OF GEODETIC ASTRONOMY UNIVERSITY OF THESSALONIKI
NO. 9, PAGES 473-478
DATE : 1982
/GEODESY/POSITIONING/TRIANGULATION/

RECORD : 61
Terrestrial Refraction and Vertical Temperature Gradient
MAVRIDIS L.N.
DEPARTMENT OF GEODETIC ASTRONOMY UNIVERSITY OF THESSALONIKI
NO. 13, PAGES 519-522
DATE : 1982
/GEODESY/POSITIONING/LEVELLING/

RECORD : 62
Gravimetric Geoid Determination for the Area of Greece
ARABELOS D./MAVRIDIS L.N./TZIAVOS I.
DEPARTMENT OF GEODETIC ASTRONOMY UNIVERSITY OF THESSALONIKI
NO. 12, PAGES 203-204
DATE : 1982
/GEODESY/GLOBAL GRAVITY MODEL/GRAVIMETRIC GEOID/GREECE/

RECORD : 63
Transportable Absolute Gravity Meter
MURAKAMI M./TAJIMA K.
BULLETIN OF THE GEOGRAPHICAL SURVEY INSTITUTE
JAPAN, VOL. XXVII,PAGES 1-10
DATE : 11-1982
/GRAVIMETRY/APPARATUS/ABSOLUTE GRAVIMETER/

RECORD : 64
The Use of Baseline Measurements and Geophysical Models for the Estimation of Crustal Deformations and the Terrestrial Reference System
BOCK Y.
OHIO STATE UNIVERSITY
REPORT NO. 337, 208 PAGES
DATE : 12-1982
/GEODESY/POSITIONING/BASELINE/GEODETIC REFERENCE SYSTEM/GEOPHYSICS/
/TEMPORAL VARIATIONS/RECENT CRUSTAL MOVEMENTS/

RECORD : 65
Adjustment of LaCoste and Romberg Gravimeter Observations
CHIN M.
1980 AGU SPRING MEETING
PREPRINT N.O.A.A.
8 PAGES
DATE : 1980
/GRAVIMETRY/MEASUREMENTS REDUCTIONS/INSTRUMENTAL DRIFT/

RECORD : 66
A New Method for Near-Topographic Correction in Gravity Surveys
KLINGELE E.
PAGEOPH
VOL. 119, 7 PAGES
DATE : 1981
/GRAVIMETRY/GRAVITY REDUCTIONS/TERRAIN CORRECTION/

RECORD : 67
On Isostasy at Atlantic-Type Continental Margins
KARNER G.D./WATTS A.B.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 87,NO. B4, PAGES 2923-2948
DATE : 04-1982
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/CORRELATION/TOPOGRAPHY/BATHYMETRY/
/GEOLOGY/MARGINS/ATLANTIC OCEAN/

RECORD : 68
On the Tectonics of the Himalaya and the Tibet Plateau
WANG C.Y./SHI Y./ZHOU W.H.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 87,NO. B4, PAGES 2949-2957
DATE : 04-1982
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/CORRELATION/PLATE TECTONICS/
/TOPOGRAPHY/RHEOLOGY/SEISMOLOGY/CHINA/

RECORD : 69
The Distribution of Intraplate Volcanism in the Pacific Ocean Basin : a Spectral Approach
RIBE N.M./WATTS A.B.
GEOPHYSICAL JOURNAL OF THE ROYAL ASTRONOMICAL SOCIETY
NO. 71, PAGES 333-362
DATE : 1982
/GEOPHYSICS/CORRELATION/VOLCANOLOGY/PLATE TECTONICS/AGE/TOPOGRAPHY/BATHYMETRY/

RECORD : 70
Carta Gravimetrica do Rio Amazonas
GEMAEL C./DALMOLIN Q.
BOLETIM DA UNIVERSIDADE FEDERAL DO PARANA
GEODESIA NO. 27,8 PAGES
DATE : 1982
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/BRAZIL/

RECORD : 71
Gravity Field of the Northwest Pacific Ocean Basin and its Margin - Aleutian Island, Arc-Trench System
WATTS A.B.
LAMONT-DOHERTY GEOLOGICAL OBSERVATORY OF COLUMBIA
CONTRIBUTION NO. 2242
DATE : 19
/GRAVIMETRY/SEA MEASUREMENTS/TERRESTRIAL MEASUREMENTS/PACIFIC OCEAN/

RECORD : 72
Gravity Field of the Northwest Pacific Ocean Basin and its Margin : Kuril Island Arc-Trench System
WATTS A.B./KOGAN M.G./BODINE J.H.
LAMONT-DOHERTY GEOLOGICAL OBSERVATORY OF COLUMBIA
CONTRIBUTION NO. 2726
DATE : 19
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/SEA MEASUREMENTS/PACIFIC OCEAN/

RECORD : 73
Gravity Field of the Northwest Pacific Ocean Basin and its Margin : Hawaii and Vicinity
WATTS A.B.
LAMONT-DOHERTY GEOLOGICAL OBSERVATORY OF COLUMBIA
CONTRIBUTION NO. 2214
DATE : 19
/GRAVIMETRY/SEA MEASUREMENTS/TERRESTRIAL MEASUREMENTS/PACIFIC OCEAN/

RECORD : 74
Gravity Field of the Northwest Pacific Ocean Basin and its Margin : Philippine Sea
WATTS A.B.
LAMONT-DOHERTY GEOLOGICAL OBSERVATORY OF COLUMBIA
CONTRIBUTION NO. 2311
DATE : 19
/GRAVIMETRY/SEA MEASUREMENTS/TERRESTRIAL MEASUREMENTS/PACIFIC OCEAN/

RECORD : 75
Free-air Gravity Field of the Southwest Pacific Ocean
WATTS A.B./KOGAN M.G./MUTTER J./KARNER G.D./DAVEY F.J.
LAMONT-DOHERTY GEOLOGICAL OBSERVATORY OF COLUMBIA
CONTRIBUTION NO. 3142
DATE : 19
/GRAVIMETRY/SEA MEASUREMENTS/TERRESTRIAL MEASUREMENTS/PACIFIC OCEAN/

RECORD : 76
A Gravity Interpretation of the Benue Trough, Nigeria
ADIGHIJE C.I.
TECTONOPHYSICS
NO. 79, PAGES 109-128
DATE : 1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/GEOLOGY/PLATE TECTONICS/RIFTS/
/NIGERIA/

RECORD : 77
Geodynamics of Burma and Andama-Nicobar Region, on the Basis of Tectonic Stresses and Regional Seismicity
KUMAR S.
TECTONOPHYSICS
NO. 79, PAGES 75-95
DATE : 1981
/GEOPHYSICS/CORRELATION/PLATE TECTONICS/GEOLOGY/SEISMOLOGY/INDIA/BURMA/

RECORD : 78
The Newtonian Gravitational Constant : an Index of Measurements
GILLIES G.T.
BUREAU INTERNATIONAL DES POIDS ET MESURES
RAPPORT 82/9,83 PAGES
DATE : 1982
/GRAVITATION/FIELD THEORY/GRAVITATIONAL CONSTANT/BIBLIOGRAPHY/

RECORD : 79
Survey Report on Project 79/17 High Resolution Digital Seismic Survey in the Northern North Sea
DOBINSON A.
INSTITUTE OF GEOLOGICAL SCIENCES
REPORT NO. 124
DATE : 12-1981
/GRAVIMETRY/SEA MEASUREMENTS/UNITED KINGDOM/

RECORD : 80
Operations Report on Project 81/06 A Regional Geophysical Survey in the Bristol Channel and South West Approaches
BRETT C.P.
INSTITUTE OF GEOLOGICAL SCIENCES
REPORT NO. 122
DATE : 12-1981
/GRAVIMETRY/SEA MEASUREMENTS/UNITED KINGDOM/

RECORD : 81
Operations Report on Project 81/05 A Geophysical Survey in the Eastern English Channel
BRETT C.P.
INSTITUTE OF GEOLOGICAL SCIENCES
REPORT NO. 121
DATE : 12-1981
/GRAVIMETRY/SEA MEASUREMENTS/UNITED KINGDOM/

RECORD : 82
The Darfur Swell, Africa : Gravity Constraints on its Isostatic Compensation
CROUGH S.T.
GEOPHYSICAL RESEARCH LETTERS
VOL. 8,NO. 8, PAGES 877-879
DATE : 08-1981
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/SUDAN/

RECORD : 83
Geophysical Expression of Appalachian-Caledonide Structures on the Continental Margins of the North Atlantic
HAWORTH R.T.
CANADIAN SOCIETY OF PETROLEUM GEOLOGISTS
MEMOIR 7, PAGES 429-446
DATE : 1981
/GEOPHYSICS/GEOLOGY/MARGINS/CORRELATION/ATLANTIC/CANADA/

RECORD : 84
The Canadian Atlantic Margin : A Passive Continental Margin Encompassing an Active Past
HAWORTH R.T./KEEN C.E.
TECTONOPYSICS
NO. 59, PAGES 83-126
DATE : 1979
/GEOPHYSICS/GEOLOGY/MARGINS/SHIELDS/PLATE TECTONICS/CANADA/

RECORD : 85
Pan-African Ocean Closure and Continental Collision in the Hoggar-Iforas Segment, Central Sahara
CABY R./BERTRAND J.M.L./BLACK R.
PRECAMBRIAN PLATE TECTONICS
PAGES 407-434
DATE : 1981
/GEOPHYSICS/CORRELATION/GEOLOGY/SHIELDS/PLATE TECTONICS/AFRICA/

RECORD : 86
A New Method of Computing Geopotential Fields
MOON W.
GEOPHYSICAL JOURNAL OF THE ROYAL ASTRONOMICAL SOCIETY
NO. 67, PAGES 735-746
DATE : 1981
/GEOPHYSICS/INTERPRETATION METHODS/3-DIMENSION BODY/2-DIMENSION BODY/

RECORD : 87
The Gravity Field of the North Frisian Islands and the Adjacent Mainland
PLAUMANN S.
JOURNAL OF GEOPHYSICS
NO. 45, PAGES 343-347
DATE : 1979
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/CORRELATION/GEOLOGY/GERMANY WEST/

RECORD : 88
The Minimum Mean Square Estimation Error Principle in Physical Geodesy (Stochastic and Non-Stochastic Interpretation)
SANSO F.
7 TH SYMPOSIUM ON MATHEMATICAL GEODESY, 4 TH HOTINE SYMP., ITALY, JUNE 8-10 1978
BOLLETINO DI GEODESIA E SCIENZE AFFINI
NO. 2, ANNO XXXIX, PAGES 111-129
DATE : 1980
/GRAVITATION/PHYSICAL GEODESY/HILBERT SPACE/COLLOCATION/COVARIANCE FUNCTION/

RECORD : 89
The Gravity Nets for a Regional Gravimetric Survey in the Rhenish Massif
PLAUMANN S.
GEOLOGY JB.
E 16, PAGES 5-18
DATE : 1979
/GRAVIMETRY/NATIONAL NETWORK/GERMANY WEST/

RECORD : 90
Internal Collocation
SANSO F.
ISTITUTO DI GEODESIA TOPOGRAFIA E FOTOGRAMMETRIA
NO. 265, 52 PAGES
DATE : 1980
/GRAVITATION/PHYSICAL GEODESY/COLLOCATION/

RECORD : 91
Synthesis of Kriging Estimation Methods
BLAIS J.A.R.
MANUSCRIPTA GEODAETICA
VOL. 7, PAGES 325-352
DATE : 1982
/NUMERICAL ANALYSIS/ADJUSTMENT METHODS/KRIGIN/

RECORD : 92
Sea Surface Topography from a Combination of Gradiometry and Precise Satellite Altimetry
SCHWARZ K.P.
MARINE GEODESY
VOL. 5, NO. 1, PAGES 1-17
DATE : 1981
/GEODESY/ALTIMETRY/SEA SURFACE TOPOGRAPHY/GRADIOMETRY/

RECORD : 93
The Solution of the Inverse Gravity Potential Problem for Cylindrical Bodies
BRODSKY M.A.
GEOPHYSICAL JOURNAL OF THE ROYAL ASTRONOMICAL SOCIETY
NO. 66, PAGES 727-732
DATE : 1981
/GEOPHYSICS/INTERPRETATION METHODS/INVERSE PROBLEM/

RECORD : 94
Investigaciones Gravimetricas Recientes en las regiones del Lago de Maracaibo y de los Andes Venezolanos
BENITEZ R./BOSCH W./BRAVO D./DREWES H./FONSECA A.
SIMPOSIUM NEOTECTONICA EN VENEZUELA, MARACAIBO, NOVIEMBRE 1981
PREPRINT
20 PAGES
DATE : 19
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/TEMPORAL VARIATION/VENEZUELA/

RECORD : 95
Geodynamics of the Baikal-Stanovoy Seismic Belt
LIU H.S.
PHYSICS OF THE EARTH AND PLANETARY INTERIORS
NO. 31, PAGES 77-82
DATE : 1983
/GEOPHYSICS/SEISMOLOGY/SEISMICITY/TEMPORAL VARIATION/STRESS TENSOR/STRAIN TENSOR/
/USSR/

RECORD : 96
Bibliographia Geodaetica

BIBLIOGRAPHIA GEODAETICA
VOL. 19, NO. 5,PAGES 299-370
DATE : 1981
/BIBLIOGRAPHY/GEODESY/

RECORD : 97
Cruise Report on Project 81/02 a Shallow-water Regional Geophysical Survey on the East Coast of England
MOULD A.S.
INSTITUTE OF GEOLOGICAL SCIENCES
REPORT NO. 118, 22 PAGES
DATE : 06-1981
/GRAVIMETRY/SEA MEASUREMENTS/UNITED KINGDOM/

RECORD : 98
Operations Report on Project 81/04 A Regional Geophysical Survey in the Northern North Sea
BRETT C.P.
INSTITUTE OF GEOLOGICAL SCIENCES
REPORT NO. 120, 15 PAGES
DATE : 12-1981
/GRAVIMETRY/SEA MEASUREMENTS/UNITED KINGDOM/

RECORD : 99
Operations Report on Project 81/03 A Regional Geophysical Survey in the Southern North Sea
BRETT C.P.
INSTITUTE OF GEOLOGICAL SCIENCES
REPORT NO. 119, 24 PAGES
DATE : 12-1981
/GEOPHYSICS/SEA MEASUREMENTS/UNITED KINGDOM/

RECORD : 100
Availability List of Geodetic Information

N.O.A.A.
15 PAGES
DATE : 03-1983
/BIBLIOGRAPHY/GEODESY/

RECORD : 101
A Combination of Electrical Resistivity, Seismic Refraction, and Gravity Measurements for Groundwater Exploration in Sudan
VAN OVERMEEREN R.A.
GEOPHYSICS
VOL. 46, NO. 9, PAGES 1304-1313
DATE : 09-1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/CORRELATION/SUDAN/

RECORD : 102
Collected Papers Geodetic Survey

SURVEYS AND MAPPING BRANCH
231 PAGES
DATE : 1981
/NATIONAL REPORT/GEODESY/CANADA/

RECORD : 103
Corrections Applied by the National Geodetic Survey to Precise Leveling Observations
BALAZS E.I./YOUNG G.M.
N.O.A.A. TECHNICAL MEMORANDUM
NOS NGS 34, 12 PAGES
DATE : 06-1982
/GEODESY/POSITIONING/LEVELLING/

RECORD : 104
Atlas of Isoseismal Maps of Australian Earthquakes
EVERINGHAM I.B./McEWIN A.J./DENHAM D.
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS
BULLETIN 214, 11 PAGES
DATE : 1982
/GEOPHYSICS/SEISMOLOGY/SEISMICITY/AUSTRALIA/

RECORD : 105
Determination of Plumb Line Curvature by Astronomical and Gravimetric Methods
GROTEN E.
N.O.A.A. TECHNICAL MEMORANDUM
NOS NGS 30, 17 PAGES
DATE : 02-1981
/GRAVITATION/FIELD THEORY/PLUMB LINES/GEODESY/POSITIONING/
/ASTROGRAVIMETRIC LEVELLING/

RECORD : 106
Mémoire explicatif de la carte gravimétrique du Maroc (provinces du Nord) au 1/500 000
VAN DEN BOSCH J.W.H.
NOTES ET MEMOIRES DU SERVICE GEOLOGIQUE DU MAROC
NO. 234 BIS, 219 PAGES
DATE : 1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/INTERPRETATION METHODS/GEOLOGY/
/MOROCCO/

RECORD : 107
Cartes gravimétriques de la République Centrafricaine
ALBOUY J./GODIVIER R.
OFFICE DE LA RECHERCHE SCIENTIFIQUE ET TECHNIQUE OUTRE-MER
NOTICE EXPLICATIVE NO. 90, 8 PAGES
DATE : 1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/CENTRAL AFRICAN REPUBLIC/

RECORD : 108
Crustal Loading Affecting VLBI Sites
SCHERNECK H.G.
UNIVERSITY OF UPPSALA INSTITUTE OF GEOPHYSICS
DEPT. OF GEODESY, REPORT NO. 20, 64 PAGES
DATE : 1983
/GEODESY/POSITIONING/VLBI/GEOPHYSICS/TEMPORAL VARIATION/CRUSTAL LOADING/

RECORD : 109
Gravity in Greenland - a Review of Available Data
FORSBERG R.
PREPRINT
GEODAETISK INSTITUT, CHARLOTTENLUND, DENMARK, 5 PAGES
DATE : 19
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GREENLAND/

RECORD : 110
Report of the Geodetic Works in Japan During the Period from January 1979 to December 1982

18th I.U.G.G. GENERAL ASSEMBLY, HAMBURG,15-27 AUGUST, 1983
NATIONAL REPORT
51 PAGES
DATE : 1983
/NATIONAL REPORT/JAPAN/

RECORD : 111
Report on the Gravimetry in Japan During the Period from July 1978 to March 1982

INTERNATIONAL GRAVITY COMMISSION, TOKYO,7-15 MAY 1982
NATIONAL REPORT
72 PAGES
DATE : 1982
/NATIONAL REPORT/JAPAN/

RECORD : 112
A Preliminary Geothermal Evaluation of the Mokapu Peninsula on the Island of Oahu, Hawaii
COX M.E./CUFF K.E./LIENERT B.R./SINTON J.M./THOMAS D.M.
HAWAII INSTITUTE OF GEOPHYSICS
NO. HIG-82-2, 45 PAGES
DATE : 01-1982
/GEOPHYSICS/HEAT FLOW/HAWAII/

RECORD : 113
Catalogue of Journals Received by WDC B1 between January and December 1981

WORLD DATA CENTER B1
ISSUE 46,16 PAGES
DATE : 01-1982
/BIBLIOGRAPHY/INTERNATIONAL ORGANISMS/

RECORD : 114
A Regional Gravity Base Station Network for Indonesia
ADKINS J./SUKARDI S./SAID H./UNTUNG M.
GEOLOGICAL SURVEY OF INDONESIA
SERI GEOFISIKA NO. 6,85 PAGES
DATE : 1978
/GRAVIMETRY/NATINAL NETWORK/INDONESIA/

RECORD : 115
Processing of Gravity Data at Sea and their Geophysical Interpretation in the Region of the Western Pacific
FUJIMOTO H.
BULLETIN OF THE OCEAN RESEARCH INSTITUTE UNIVERSITY OF TOKYO
NO. 8, 81 PAGES
DATE : 10-1976
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/BATHYMETRY/SUBDUCTION ZONES/JAPAN/

RECORD : 116
Digitale Signalverarbeitung in der Rechnergstutzten Kartographie
FISCHER E.U.
VERLAG DES INSTITUTS FUR ANGEWANDTE GEODASIE FRANKFURT AM MAIN
REIHE C - DISSERTATIONEN HEFT NO. 278, 114 PAGES
DATE : 1982
/NUMERICAL ANALYSIS/GRAPHICS WORKS/SPECTRAL ANALYSIS/FILTERING/

RECORD : 117
Geodatische und Meteorologische Untersuchungen der Terrestrischen Refraktion uber dem Inlandeis des Enderby-Landes (Ostanrtarktis)
DITTRICH G./HELBIG A.
GEODATISCHE UND GEOPHYSIKALISCHE VEROFFENTLICHUNGEN
BERLIN, REIHE III HEFT 48, 245 PAGES
DATE : 1981
/GEODESY/POSITIONING/ANTARCTICA/

RECORD : 118
Research of Seismicity in Seismic Zones of Less Activity (Central Cuba)

ACADEMY OF SCIENCES OF THE USSR SOVIET GEOPHYSICAL COMMITTEE
135 PAGES
DATE : 1983
/GEOPHYSICS/SEISMOLOGY/SEISMICITY/CUBA/

RECORD : 119
Geodesy in Australia

18 th I.U.G.G. General Assembly, Hamburg, 15-27 August, 1983
AUSTRALIAN ACADEMY OF SCIENCE
NATIONAL REPORT FOR 1979-83/23 PAGES
DATE : 1983
/GEODESY/NATIONAL REPORT/AUSTRALIA/

RECORD : 120
Report of Special Study Group 4.66 "Management of Geodetic Data" for the Period Dec. 1979-June 1983
TSCHERNING C.C.
18 TH I.U.G.G. General Assembly, Hamburg, August 1983
PREPRINT
12 PAGES
DATE : 1983
/NUMERICAL ANALYSIS/DATA BASE MANAGEMENT/

RECORD : 121
On Determination of the Gravity Constant and Variations of some Fine Gravitational Effects
BOULANGER Yu.D./SAGITOV M.U.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 5-7
DATE : 1973
/GEODESY/GLOBAL GRAVITY MODEL/GEOCENTRIC GRAVITATIONAL CONSTANT/

RECORD : 122
Detection of Extraterrestrial Gravitational Radiation
BRAGINSKIJ V.B./ZELDOVITCH Ya.B./RUDENKO V.N.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 8-18
DATE : 1973
/GRAVITATION/

RECORD : 123
Determination of the Gravity Constant in Budapest
RENNER Ya.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 19-21
DATE : 1973
/GRAVITATION/FIELD THEORY/GRAVITATIONAL CONSTANT/

RECORD : 124
On One Correction in determination of the Cavendish Constant
SAGITOV M.U./KEZHUTIN N.G.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 22-25
DATE : 1973
/GRAVIMETRY/APPARATUS/TORSION BALANCE/

RECORD : 125
Influence of Swinging Oscillations on the Motion of a Torsion Pendulum
KARAGIOZ O.V./VORONKOV V.V./IZMAJILOV V.P.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 26-31
DATE : 1973
/GRAVIMETRY/APPARATUS/TORSION BALANCE/

RECORD : 126
Effect of Microseisms on the Torsion Balance
TARAKANOV Yu.A./KARATSUBA V.B.K.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 32-37
DATE : 1973
/GRAVIMETRY/APPARATUS/TORSION BALANCE/

RECORD : 127
On Modulation Measurement Technique for Gravitation Potential Second Derivatives
KOLESNIKOVA E.M./KOLOSNITSYN N.I.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 38-43
DATE : 1973
/GRAVITATION/FIELD THEORY/GRAVITY GRADIENT TENSORS/GRAVIMETRY/APPARATUS/
/GRADIOMETER/

RECORD : 128
An Experiment on the Determination of a General Law for Vibration Attenuation
SAGITOV M.U./CHESNOLOVA T.S.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 44-47
DATE : 1973
/GRAVIMETRY/APPARATUS/GRADIOMETER/

RECORD : 129
On Correction of the Principle of Equivalence
BRAGINSKY V.B./PANOV V.I.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 48-51
DATE : 1973
/GRAVIMETRY/APPARATUS/TORSION BALANCE/

RECORD : 130
Fused Silica as a Material for Gravitational Instruments
POPOV E.I.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 52-58
DATE : 1973
/GRAVIMETRY/APPARATUS/

RECORD : 131
Torsional Oscillation Tests-Stands for Investigation of Highly Sensitive
Gravimetric and Accelerometric Instrumentation
BELOKOPYTOV P.M./ BOEVKIN V.I./NIKONOV B.S./PAVLOV Yu.N./TOLSTOUSOV G.N.
ACADEMY OF SCIENCES ON THE USSR SOVIET GEOPHYSICAL COMMITTEE
PAGES 59-62
DATE : 1973
/GRAVIMETRY/APPARATUS/GRADIOMETER/

RECORD : 132
Ehrenberg Range Airborne Magnetic and Gamma-Ray Spectrometer Survey, NT 1976 -
Operational Report
MUTTON A.J.
BUREAU OF MINERAL RESOURCES
AUSTRALIA, REPORT 232, BMR MICROFORM MF161
DATE : 1981
/GEOPHYSICS/MAGNETIC FIELD/AUSTRALIA/

RECORD : 133
A Technical Evaluation of the Honeywell ELAC - Echograph LAZ 72 SOUNDER
COCHRANE N.A./BURKE R.
FISHERIES AND OCEANS CANADA
MICROFORMS
DATE : 1982
/GRAVIMETRY/SEA MEASUREMENTS/ECHOSOUNDER/

RECORD : 134
Canadian Technical Report of Hydrography and Ocean Sciences NO. 5

FISHERIES AND OCEANS CANADA
MICROFORMS
DATE : 1982
/BIBLIOGRAPHY/CANADA/

RECORD : 135
Gravity Anomalies of the Eastern Mediterranean
OSELCI H.F.
BULLETIN OF MINERAL RESEARCH EXPLORATION INSTITUTE OF TURKEY
NO. 80, PAGES 54-92
DATE : 1973
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/CORRELATION/TOPOGRAPHY/
/ISOSTATIC MODELS/TURKEY/MEDITERRANEAN SEA/

RECORD : 136
A New Method of Computation of the Isostatic Anomaly and its Application to the Rhine Graben
BERNABE Y.
PHYSICS OF THE EARTH AND PLANETARY INTERIORS
NO. 27, PAGES 151-157
DATE : 1981
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/

RECORD : 137
National Report Seismology and Physics of the Earth's Interior for 1979-1982

18th GENERAL ASSEMBLY OF THE I.U.G.G., HAMBURG, 1983
CZECHOSLOVAK ACADEMY OF SCIENCES
55 PAGES
DATE : 1983
/NATIONAL REPORT/CZECHOSLOVAKIA/

RECORD : 138
Gravity Study of "Qum" Salt Dome in Iran
AGHSHAHI E./ZOMORRODIAN H.
JOURNAL OF THE EARTH AND SPACE PHYSICS
VOL. 10, NO. 1 & 2, PAGES 22-24
DATE : 12-1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/IRAN/

RECORD : 139
On the Asiatic Tidal - Gravity Profiles
SADEGHI A.A.
JOURNAL OF THE EARTH AND SPACE PHYSICS
VOL. 8, NO. 1 & 2, PAGES 1-11
DATE : 12-1979
/GRAVIMETRY/GRAVITY TIDES MEASUREMENTS/TIDAL ANALYSIS/TIDAL COEFFICIENTS/IRAN/

RECORD : 140
On the Variation of the Earth - Tides Deformations before the Seisms
SADEGHI A.A.
JOURNAL OF THE EARTH AND SPACE PHYSICS
VOL. 8, NO. 1 & 2, PAGES 85-86
DATE : 12-1979
/GRAVIMETRY/GRAVITY TIDES MEASUREMENTS/GEOPHYSICS/CORRELATION/EARTHQUAKES/IRAN/

RECORD : 141
Marine Geophysics Unit List of Reports General Series
NIBSET L.
INSTITUTE OF GEOLOGICAL SCIENCES
REPORT NO. 107, 36 PAGES
DATE : 19
/GRAVIMETRY/SEA MEASUREMENTS/UNITED KINGDOM/

RECORD : 142
Hungarian IAG Report for the General Assembly of IUGG, Hamburg, 1983

18th GENERAL ASSEMBLY OF I.U.G.G., HAMBURG, 1983
HUNGARIAN REPORT
34 PAGES
DATE : 1983
/NATIONAL REPORT/HUNGARY/

RECORD : 143
Report of the Nigeria Association of Geodesy on Geodetic Activities in Nigeria 1979-1983

18th GENERAL ASSEMBLY OF I.U.G.G., HAMBURG, 1983
DATE : 08-1983
/NATIONAL REPORT/NIGERIA/

RECORD : 144
China National Report on Geodesy

18th GENERAL ASSEMBLY OF I.U.G.G., HAMBURG, 1983
DATE : 1983
/NATIONAL REPORT/CHINA/

RECORD : 145
The Basic Network for a Regional Gravity Survey of Northern Bavaria
PLAUMANN S.
GEOLOGISCHE JAHRBUCH
E 24, PAGES 3-13
DATE : 1982
/GRAVIMETRY/NATIONAL NETWORK/GERMANY WEST/

RECORD : 146
Topographic-Isostatic World Maps of the Effect of the Hayford Zones 10 to 1 for the Airy-Heiskanen and Pratt-Hayford Systems
NISKANEN E./KIVIOJA L.
ANNALES ACADEMIAE SCIENTIARUM FENNICAE
SERIES A, III. GEOLOGICA-GEOGRAPHICA 28,28 PAGES
DATE : 1951
/GRAVIMETRY/GRAVITY REDUCTION/ISOSTATIC REDUCTION/

RECORD : 147
Establishment of a High-Precision Gravity Network in the Area of Eastern Macedonia
ARABELOS D./KARRINTI J.M./MAVRIDIS L.N.
18TH GENERAL ASSEMBLY OF I.U.G.G., HAMBURG, 1983
PREPRINT
12 PAGES
DATE : 1983
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/HIGH PRECISION NETWORK/NUMERICAL ANALYSIS/
/ADJUSTMENT METHODS/GREECE/

RECORD : 148
Analysis of Gravity Measuring Result and its Tectonic Interpretation in the EastChina Sea
XU J./LIU S./ZHU Z./LIU G.
18TH GENERAL ASSEMBLY OF I.U.G.G., HAMBURG, 1983
PREPRINT
9 PAGES
DATE : 08-1983
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/CRUST MODELS/CHINA SEA/

RECORD : 149
The Gravity Field and Crustal Structure of Iran
DEHGHANI G.A./MAKRIS J.
18TH GENERAL ASSEMBLY OF I.U.G.G., HAMBURG, 1983
PREPRINT
17 PAGES
DATE : 1983
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/TOPOGRAPHY/ISOSTATIC MODELS/
/SEISMOLOGY/CRUST MODELS/GEODESY/GLOBAL GRAVITY MODEL/GRAVIMETRIC GEOID/IRAN/

RECORD : 150
Il Campo della Gravita in Italia : Carte delle Anomalie Topografico-isostatiche
BALLARIN S.
13TH GENERAL ASSEMBLY OF I.U.G.G., BERKELEY, 1963
BOLLETTINO DI GEODESIA E SCIENZE AFFINI
ANNO XXII, NO. 3, 16 PAGES
DATE : 1963
/GRAVIMETRY/GRAVITY REDUCTIONS/ISOSTATIC REDUCTION/ITALY/

RECORD : 151
The Negative Gravity Field Over the 85°E Ridge
LIU C.S./SANDWELL D.T./CURRAY J.R.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 87,NO. B9, PAGES 7673-7686
DATE : 09-1982
/GEOPHYSICS/SEISMOLOGY/TOPOGRAPHY/FLEXURAL MODELS/CORRELATION/INDIAN OCEAN/

RECORD : 152
Recent Results of Precise Gravity Measurements and Levellings in Northern Iceland
TORGE W.
EARTH EVOLUTION SCIENCES
NO. 2, PAGES 146-147
DATE : 1982
/GEOPHYSICS/TEMPORAL VARIATION/VERTICAL CRUSTAL MOVEMENTS/GRAVIMETRY/
/TERRESTRIAL MEASUREMENTS/HIGH PRECISION NETWORK/ICELAND/

RECORD : 153
Gravity and Height Variations During the Present Rifting Episode in Northern Iceland
TORGE W./KANNGIESER E.
JOURNAL OF GEOPHYSICS
NO. 47, PAGES 125-131
DATE : 1980
/GEOPHYSICS/TEMPORAL VARIATION/VERTICAL CRUSTAL MOVEMENTS/GRAVIMETRY/
/TERRESTRIAL MEASUREMENTS/HIGH PRECISION NETWORK/ICELAND/

RECORD : 154
The West-African Craton Margin in Eastern Senegal : a Seismological Study
DORBATH C./DORBATH L./LE PAGE A./GAULON R.
ANNALES GEOPHYSICAE
VOL. 1, NO. 1, PAGES 25-36
DATE : 1983
/GEOPHYSICS/CORRELATION/SEISMOLOGY/CRUST MODELS/GEOLOGY/SENEGAL/

RECORD : 155
Gravity Anomalies, Seismic Structure and Geothermal History of the Central Alps
KISSLING E./MUELLER ST./WIENER D.
ANNALES GEOPHYSICAE
VOL. 1, NO. 1, PAGES 37-46
DATE : 1983
/GEOPHYSICS/CORRELATION/SEISMOLOGY/MANTLE/HEAT FLOW/SWITZERLAND/

RECORD : 156
Gravity Bases in Central Africa
SUTTON G.H.
NATURE
NO. 4530, PAGES 435-436
DATE : 08-1956
/GRAVIMETRY/INTERNATIONAL NETWORK/AFRICA/

RECORD : 157
Gravity Survey in the Congo
HERRINCK P.
NATURE
VOL. 172, PAGE 258
DATE : 08-1953
/GRAVIMETRY/NATIONAL NETWORK/ZAIRE/

RECORD : 158
A Gravity Survey in the Reydarfjordur Area, Eastern Iceland, with Interpretation
SCHOENHARTING G./PALMASON G.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 87,NO. 88, PAGES 6419-6422
DATE : 08-1982
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/CORRELATION/SEISMOLOGY/ICELAND/

RECORD : 159
Relationships between the Petrophysical Properties density, Seismic Velocity,
Heat Generation, and Mineralogical Constitution
RYBACH L./BUNTEBARTH G.
EARTH AND PLANETARY SCIENCE LETTERS
NO. 57, PAGES 367-376
DATE : 1982
/GEOPHYSICS/CORRELATION/SEISMOLOGY/DENSITY CORRELATION/HEAT FLOW/

RECORD : 160
Underground Gravity Survey in Alpine Regions
HUSSAIN A./WALACH G./WEBER F.
GEOPHYSICAL PROSPECTING
VOL. 29,NO. 3, PAGES 407-425
DATE : 06-1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/DENSITY MEASUREMENTS/GRAVITY REDUCTIONS/
/AUSTRIA/

RECORD : 161
Statistical Analysis of the Gravity Method of Calculating the Depth to the
Pre-Cenozoic Surface in Yucca Flat, Nevada Test Site
BRETHAUER G.E./HEALEY D.L./MILLER C.H.
GEOPHYSICAL PROSPECTING
VOL. 29,NO. 3, PAGES 31-38
DATE : 06-1981
/GEOPHYSICS/INTERPRETATION METHODS/U.S.A./

RECORD : 162
Gravity Study Along the Kavali-Udipi Deep Seismic Sounding Profile in the Indian Peninsular Shield
KAILA K./BHATIA S.C.
TECTONOPHYSICS
NO. 79, PAGES 129-143
DATE : 1981
/GEOPHYSICS/SEISMOLOGY/DENSITY CORRELATION/GEOLOGY/SHIELDS/CORRELATION/INDIA/

RECORD : 163
The Interpretation of the Major Non-Hydrostatic Anomalies of the Earth
TARAKANOV Y.A./CHEREVKO T.N./KARAGIOZ O.V.
PHYSICS OF THE EARTH AND PLANETARY INTERIORS
NO. 31, PAGES 54-58
DATE : 1983
/GEOPHYSICS/INTERPRETATION METHODS/GRAVITATION/GLOBAL MODELS/DETERMINATION/
/MASS POINTS/

RECORD : 164
Large-Scale Density Heterogeneities in the Mantle
TARAKANOV Y./CHEREVKO T.N.
PHYSICS OF THE EARTH AND PLANETARY INTERIORS
NO. 25, PAGES 390-395
DATE : 1981
/GEOPHYSICS/INTERPRETATION METHODS/MANTLE/

RECORD : 165
Results of Clinometric Observations of Earth Tides in 1979-1980 at the Ksiaz Station no. 0906
CHOJNICKI T.
INSTITUTE OF GEOPHYSICS POLISH ACADEMY OF SCIENCES
F-8 (153), 73 PAGES
DATE : 1982
/GRAVIMETRY/GRAVITY TIDES MEASUREMENTS/STATION RECORDING/

RECORD : 166
Global Analysis of Earth Tide Observations of KAPG in Obninsk, Potsdam, Pecny, Tihany and Sofia
DITTFELD H.J./SIMON Z./VARGA P./VENEDIKOV A./VOLKOV V.A.
LORAND EOTVOS GEOPHYSICAL INSTITUTE OF HUNGARY
STUDY OF THE EARTH TIDES, BULLETIN NO. 4, 94 PAGES
DATE : 1981
/GRAVIMETRY/GRAVITY TIDES MEASUREMENTS/TIDAL COEFFICIENTS/TIDAL ANALYSIS/

RECORD : 167
Cartographic Work in Japan (1976-1978)

BULLETIN OF THE GEOGRAPHICAL SURVEY INSTITUTE, JAPAN
VOL. XXV, PART 1, PAGES 1-20
DATE : 03-1981
/NATIONAL REPORT/JAPAN/

RECORD : 168
New Aspects in the Inversion of Gravity Profiles by Polynomial Method
BALDI P.
GEOPHYSICAL PROSPECTING
VOL. 29, NO. 3, PAGES 426-431
DATE : 06-1981
/GEOPHYSICS/INTERPRETATION METHODS/INVERSE PROBLEM/

RECORD : 169
Isostasy of the Southern Mid-Atlantic Ridge : Long-Wavelength and Short-wavelenght effects
KOSTOGLODOV V.V./KOGAN M.G./MAGNITSKAYA E.I.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 86, NO. B9, PAGES 7825-7841
DATE : 09-1981
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/ISOSTATIC MODEL/RIDGES/

RECORD : 170
Marine Navigation with the LaCoste and Romberg Inertial Platform
VALLIANT H.D.
GEOPHYSICS
VOL. 46, NO. 10, PAGES 1469-1470
DATE : 10-1981
/GEODESY/POSITIONING/INERTIAL NAVIGATION/

RECORD : 171
Seamount Loading and Stress in the Ocean Lithospheren 2. Viscoelastic and Elastic-Viscoelastic Models
LAMBECK K./NAKIBOGLU S.M.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 86, NO. B8, PAGES 6961-6984
DATE : 08-1981
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/SEAMOUNTS/

RECORD : 172
Crustal Structure of the Sunda Forearc Region West of Central Sumatra from Gravity Data
KIECKHEFER R.M./MOORE G.F./EMMEL F.J.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 86, NO. B8, PAGES 7003-7012
DATE : 08-1981
/GEOPHYSICS/CORRELATION PLATE TECTONICS/SUBDUCTION ZONES/ISLAND ARCS/

RECORD : 173
Reexamination of the Values Used as Constants in Calculating Rock Density from Borethole Gravity Data
ROBBINS S.L.
GEOPHYSICS
VOL. 46, NO. 2, PAGES 208-210
DATE : 02-1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/BOREHOLE GRAVITY MEASUREMENTS/
/DENSITY MEASUREMENTS/

RECORD : 174
Gravity Parameter Estimation from Large and densly Spaced Homogeneous Data Sets
RUMMEL R.
8TH HOTINE SYMP. ON MATHEMATICAL GEODESY, COMO, ITALY, SEPTEMBER 7-9, 1981
PREPRINT
14 PAGES
DATE : 19
/NUMERICAL ANALYSIS/ADJUSTMENT METHODS/LEAST SQUARE COLLOCATION/

RECORD : 175
A Comparison of Earth Models by their Higher Frequency Parts
SIMA Z./KLOKOCNIK J./HADRAVA P.
PREPRINT
19 PAGES
DATE : 02-1982
/GEODESY/GLOBAL GRAVITY MODEL/MODEL COMPARISON/

RECORD : 176
The Spacelike Molodensky Problem Including the Rotational Term of the Gravity Potential
BODE A./GRAFAREND E.W.
MANUSCRIPTA GEODAETICA
VOL. 6/PAGES 33-61
DATE : 1981
/GEODESY/PHYSICAL GEODESY/MOLODENSKY THEORY/

RECORD : 177
A Global Determination of the Earth's Gravity Field by Using Satellite-to-Satellite Tracking
KRYNSKI J.
BOLLETTINO DI GEODESIA E SCIENZE AFFINI
ANNO XL, NO. 3, PAGES 197-212
DATE : 1981
/GEODESY/GLOBAL GRAVITY MODEL/SATELLITE TO SATELLITE TRACKING/

RECORD : 178
The Use of Satellite-to-Satellite Tracking Data for Global Estimation of the Gravity Field
KRYNSKI J.
ARTIFICIAL SATELLITES PLANETARY GEODESY
VOL. 16, NO. 3, PAGES 53-62
DATE : 1981
/GEODESY/GLOBAL GRAVITY MODEL/SATELLITE TO SATELLITE TRACKING/

RECORD : 179
Bibliographie Générale des Marées Terrestres 1980-1981

BULLETIN DES MAREES TERRESTRES
SUPPLEMENT V, 12 PAGES
DATE : 1981
/BIBLIOGRAPHY/TIDES/

RECORD : 180
Isostasy and the Ambient State of Stress in the Oceanic Lithosphere
DAHLEN F.A.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 86, NO. B9, PAGES 7801-7807
DATE : 09-1981
/GEOPHYSICS/CORRELATION/TOPOGRAPHY/ISOSTATIC MODELS/LITHOSPHERE/

RECORD : 181
Venezuela Basin Crustal Structure
DIEBOLD J.B./STOFFA P.L./BUHL P./TRUCHAN M.
JOURNAL OF GEOPHYSICAL RESEARCH
VOL. 86, NO. B9, PAGES 7901-7923
DATE : 09-1981
/GEOPHYSICS/CORRELATION/SEISMOLOGY/CRUST MODEL/CORRELATION MAGNETIC FIELD/

RECORD : 182
The Use of Geodimeter AGA Mod. 700 in the Gravimetric Prospection
BONASIA V./PINGUE F.
BOLLETTINO DI GEODESIA E SCIENZE AFFINI
ANNO XL, NO. 3, PAGES 181-188
DATE : 1981
/GEODESY/POSITIONING/LEVELING/GEODIMETER/

RECORD : 183
A Convergence Problem in Collocation Theory
KRARUP T.
7TH SYMP. ON MATHEMATICAL GEODESY, 4TH HOTINE SYMP., ASSISI, ITALY, 1978
BOLLETTINO DI GEODESIA E SCIENZE AFFINI
ANNO XL, NO. 3, PAGES 225-240
DATE : 1981
/GEODESY/PHYSICAL GEODESY/HILBERT SPACE/COLLOCATION/

RECORD : 184
Gravity and Geodetic Networks for the Study of Crustal Deformations in Seismic Area (Ancona)
BALDI P./MARSON I.
BOLLETTINO DI GEODESIA E SCIENZE AFFINI
ANNO XL, NO. 3, PAGES 189-196
DATE : 1981
/GEODESY/POSITIONING/LEVELING/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/
/HIGH PRECISION NETWORK/GEOPHYSICS/TEMPORAL VARIATIONS/RECENT CRUSTAL MOVEMENTS/

RECORD : 185
Satellite Derived Geoids for Great Britain and Ireland
OLLIVER J.G.
SURVEY REVIEW
VOL. 26, NO. 202, PAGES 161-179
DATE : 10-1981
/GEODESY/SATELLITE GEOID/POSITIONING/DOPPLER/

RECORD : 186
Preliminary Bouguer Anomalies of Western North Greenland
WENG W.L.
RAPP. GRONLANDS GEOL. UNDERS.
99/ PAGES 153-154/
DATE : 1980
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GREENLAND/

RECORD : 187
A Gravity Map of Peary Land, North Greenland
FORSBERG R./
RAPP. GRONLANDS GEOL. UNDERS.
88/ PAGES 93-94/
DATE : 1979
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GREENLAND/

RECORD : 188
Preliminary Bouguer Anomalies of North-East Greenland
FORSBERG R./
RAPP. GRONLANDS GEOL. UNDERS.
106/PAGES 105-107/
DATE : 1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GREENLAND/

RECORD : 189
Subduction of the Caribbean Plate and Basement Uplifts in the Overiding South American Plate
KELLOGG J.N./BONINI W.E./
TECTONICS
VOL. 1/NO 3/PAGES 251-276/
DATE : 06-1982
/GEOPHYSICS/PLATE TECTONICS/SUBDUCTION ZONES/GRAVIMETRY/SOUTH AMERICA/

RECORD : 190
An Ancient Rift Complex and its Relation to Contemporary Seismicity in the New Madrid Seismic Zone
BRAILE L.W./KELLER G.R./HINZE W.J./LIDIAK E.G./
TECTONICS
VOL. 1/NO 2/PAGES 225-237/
DATE : 04-1982
/GRAVIMETRY/GEOPHYSICS/PLATE TECTONICS/RIFTS/SEISMOLOGY/MAGNETIC FIELD/USA/

RECORD : 191
Evidence for a Major Late Precambrian Tectonic Event (Rifting ?) in the Eastern Midcontinent Region, United States
KELLER G.R./BLAND A.E./GREENBERG J.K./
TECTONICS
VOL. 1/NO 2/PAGES 213-223/
DATE : 04-1982
/GRAVIMETRY/GEOPHYSICS/PLATE TECTONICS/RIFTS/MAGNETIC FIELD/SEISMOLOGY/USA/

RECORD : 192
Major Lineaments and the Lake Erie-Maryland Crustal Block
LAVIN P.M./CHAFFIN D.L./DAVIS W.F./
TECTONICS
VOL. 1/NO 5/PAGES 431-440/
DATE : 10-1982
/GRAVIMETRY/GEOPHYSICS/LITHOSPHERE/MAGNETIC FIELD/USA/

RECORD : 193
A Geophysical study of the Murchison Greenstone Belt, South Africa
DE BEER J.H./
REVISTA BRASILEIRA DE GEOCIENCIAS
VOL. 12/(1-3)/
DATE : 1982
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/GEOLOGY/SOUTH AFRICA/

RECORD : 194
The Gravimetric Information and the Archean Proterozoic Structural Framework of Eastern Brazil
HARALYI N.L.E./HASUI Y./
REVISTA BRASILEIRA DE GEOCIENCIAS
VOL. 12/(1-3)/
DATE : 1982
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/GEOLOGY/SHIELDS/BRAZIL/

RECORD : 195
The Pernambuco-Alagoas Massif, Northeast Brazil
NEVES B.B.B./SIAL A.N./RAND H.M./MANSO V.V./
REVISTA BRASILEIRA DE GEOCIENCIAS
VOL. 12/(1-3)/PAGES 240-250/
DATE : 1982
/GRAVIMETRY/GEOPHYSICS/GEOLOGY/SHIELDS/MAGNETIC FIELD/BRAZIL/

RECORD : 196
Geological and Metallogenic Patterns in the Archean and early Proterozoic of Bahia State, Eastern Brazil
DE FREITAS MASCARENHAS J./HAROLDO DA SILVA SA J./
REVISTA BRASILEIRA DE GEOCIENCIAS
VOL. 12/(1-3)/PAGES 193-214
DATE : 1982
/GRAVIMETRY/GEOPHYSICS/GEOLOGY/SHIELDS/BRAZIL/

RECORD : 197
Crustal Structure from the Pacific Basin to the Brazilian Shield between 12° and 30° South Latitude
OCOLA L.C./MEYER R.P./
GEOLOGICAL SOCIETY OF AMERICA BULLETIN
VOL. 84/PAGES 3387-3404/
DATE : 10-1973
/GEOPHYSICS/SEISMOLOGY/CRUST MODELS/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/PERU/

RECORD : 198
Gravity and Magnetic Investigations in the Guiana Basin, Western Equatorial Atlantic
COCHRAN J.R./
GEOLOGICAL SOCIETY OF AMERICA BULLETIN
VOL. 84/PAGES 3249-3268/
DATE : 10-1973
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/BASINS/MAGNETIC FIELD/FLEXURAL MODELS/
/ATLANTIC OCEAN/

RECORD : 199
Signification Structurale des Anomalies Gravimétriques de la Partie Sud du Craton de Sao Francisco (Brésil)
LESQUER A./DE ALMEIDA F.F.M./DAVINO A./LACHAUD J.C./MAILLARD P./
TECTONOPHYSICS
NO 76, PAGES 273-293
DATE : 1981
/GRAVIMETRY/TERRESTRIAL MEASUREMENTS/GEOPHYSICS/GEOLOGY/SHIELDS/
/INTERPRETATION METHODS/BRAZIL/

RECORD : 200
The Gravity Field of the U.S. Atlantic Continental Margin
GROW J.A./BOWIN C.O./HUTCHINSON D.R./
TECTONOPHYSICS
NO 59, PAGES 27-52
DATE : 1979
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/BASINS/MARGINS/ISOSTATIC MODELS/
/SEISMOLOGY/CRUST MODELS/

RECORD : 201
The Margin Between Senja and Spitsbergen Fracture Zones : Implications from Plate Tectonics
MYHRE A.M./ELDHOLM O./SUNDVOR E.
TECTONOPHYSICS
NO 89, PAGES 33-50
DATE : 1982
/GEOPHYSICS/SEISMOLOGY/MARGINS/PLATE TECTONICS/CRUST MODELS/GRAVIMETRY/
/ARCTIC OCEAN/

RECORD : 202
Asymmetric Geophysical Signatures in the Greenland-Norwegian and Southern Labrador Seasand the Eurasia Basin
VOGTP.R./KOVACS L.C./BERNERO C./SRIVASTAVA S.P.
TECTONOPHYSICS
NO 89, PAGES 95-160
DATE : 1982
/GEOPHYSICS/RIDGES/TOPOGRAPHY/PLATE TECTONICS/AGE/GRAVIMETRY/ARCTIC OCEAN/

RECORD : 203
The Canadian Basin : Aeromagnetic Constraints on Structure and Evolution
VOGT P.R./TAYLOR P.T./KOVACS L.C./JOHNSON G.L./
TECTONOPHYSICS
NO 89, PAGES 295-336
DATE : 1982
/GEOPHYSICS/MAGNETIC FIELD/BATHYMETRY/PLATE TECTONICS/GRAVIMETRY/ARCTIC OCEAN/

RECORD : 204
Continental Ridges in the Arctic Ocean : Lorex Constraints
SWEENEY J.F./WEBER J.R./BLASCO S.M.
TECTONOPHYSICS
NO 89, PAGES 217-237
DATE : 1982
/GEOPHYSICS/SEISMOLOGY/MAGNETIC FIELD/RIDGES/PLATE TECTONICS/GRAVIMETRY/
/ARCTIC OCEAN/

RECORD : 205
The Nansen Ridge, Arctic Ocean : Some Geophysical Observations of the Rift Valley at Slow Spreading Rate
KRISTOFFERSEN Y./
TECTONOPHYSICS
NO 89, PAGES 161-172
DATE : 1982
/GEOPHYSICS/BATHYMETRY/RIDGES/PLATE TECTONICS/FLEXURAL MODELS/GRAVIMETRY/
/ARCTIC OCEAN/

RECORD : 206
Abyssal Hills of the Eastern Central North Atlantic
RONA P.A./HARBISON R.N./BUSH S.A./
MARINE GEOLOGY
NO 16, PAGES 275-292
DATE : 1974
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/BASINS/SIESMOLOGY/MAGNETIC FIELD/
/ATLANTIC OCEAN/

RECORD : 207
Tectonic Fabric and Hydrothermal Activity of Mid-Atlantic Ridge Crest (lat 26°N)
RONA P.A./HARBINSON R.N./BASSINGER B.G./SCOTT R.B./NALWALK A.J./
GEOLOGICAL SOCIETY OF AMERICA BULLETIN
VOL. 87, PAGES 661-674
DATE : 05-1976
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/BATHYMETRY/MAGNETIC FIELD/RIFT/
/ATLANTIC OCEAN/

RECORD : 208
Caribbean Atlantic Geotraverse, NOAA-IDOE 1971, Report n° 3, Gravity
DORMAN L.M./BASSINGER B.G./BERNARD E./BUSH S.A./DEWALD O.E./LAPINE L.A./& AL.
NOAA TECHNICAL REPORT
ERL 277-AOML 11,PAGES 1-3
DATE : 08-1973
/GRAVIMETRY/SEA MEASUREMENTS/ATLANTIC OCEAN/

RECORD : 209
Continental Margin off Western Africa : Senegal to Portugal
UCHUPI E./EMERY K.O./BOWIN C.O./PHILLIPS J.D.
THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS BULLETIN
VOL. 60, NO 5, PAGES 809-878
DATE : 05-1976
/GRAVIMETRY/SEA MEASUREMENTS/GEOPHYSICS/MARGINS/ATLANTIC OCEAN/

RECORD : 210
Gravity Anomalies, Regional Elevation, and the Deep Structure of the North Atlantic
COCHRAN J.R./TALWANI M.
J.G.R.
VOL. 83, NO B10,
DATE : 10-1978
/GRAVIMETRY/GEOPHYSICS/TOPOGRAPHY/ATLANTIC OCEAN/

RECORD : 211
Statistical Characteristics of the Accuracy of Transformed Anomalous Gravitational Fields
KUBACKOVA L./KUBACEK L.
CONTRIBUTION GEOPHYSICS INSTITUTE OF THE SLOVAK ACEDEMIA OF SCIENCE
N° 11/PAGES 51-57
DATE : 1981
/GEODESY/PHYSICAL GEODESY/DISTURBING POTENTIAL/COVARIANCE FUNCTION/

RECORD : 212
Ellipsoidal Corrections for Geoid Undulation Computations Using Gravity Anomalies in a Cap
RAPP R.H.
J.G.R.
VOL. 86, NO B11, PAGES 10843-10848
DATE : 11-1981
/GEODESY/PHYSICAL GEODESY/STOKES INTEGRAL/

RECORD : 213
Statistics of Narrow Structures of the Gravity Field of the Earth. 1. General Theory
BERTOTTI B.
J.G.R.
VOL. 86, NO B11, PAGES 10835-10842
DATE : 11-1981
/GEODESY/PHYSICAL GEODESY/COVARIANCE FUNCTION/NUMERICAL ANALYSIS/
/SPECTRAL ANALYSIS/AUTOCORRELATION FUNCTION/CROSS CORRELATION FUNCTION/

RECORD : 214
Recent Advances in the Theory of the Geodetic Boundary Value Problem
SANSO F.
REVIEWS OF GEOPHYSICS AND SPACE PHYSICS
VOL. 19, NO 3, PAGES 437-449
DATE : 08-1981
/GEODESY/PHYSICAL GEODESY/MOLODENSKY THEORY/GEODETIC BOUNDARY VALUE PROBLEM/

RECORD : 215
Planar Geodetic Covariance Functions
MEIER S.
REVIEWS OF GEOPHYSICS AND SPACE PHYSICS
VOL. 19, NO 4, PAGES 673-686
DATE : 11-1981
/GEODESY/PHYSICAL GEODESY/COVARIANCE FUNCTION/NUMERICAL ANALYSIS/
/ADJUSTMENT METHOD/LEAST SQUARE COLLOCATION/

RECORD : 216
Deglaciation Related Features of the Earth's Gravity Field
NAKIBOGLU S.M./LAMBECK K.
TECTONOPHYSICS
72, PAGES 289-303
DATE : 1981
/GEOPHYSICS/TEMPORAL VARIATIONS/CRUSTAL LOADING/GLACIATION/