EARTH IMAGES

NIMBUS-7 CZCS CATALOGUE

USER GUIDE

LEDA Earth Images, ESRIN, Frascati

CONTENTS

1 ..... INTRODUCTION
2 ..... CONTRIBUTING STATIONS
3 ..... ACCESSING THE CATALOGUE
4 ..... RUNNING A SEARCH
4.1 ..... General Characteristics of the Database
4.2 ..... On Entering the Catalogue
4.3 ..... CZCS Record Description
5 ..... EXITING THE CATALOGUE

. INTRODUCTION

Details of remotely sensed satellite imagery from the *NIMBUS-7 Coastal-Zone Color Scanner (CZCS)* mission, acquired principally by three receiving stations in Europe, are housed in the LEDA catalogue at Earthnet, ESRIN.

Geographical coverage extends from the Equator to beyond the Arctic Circle encompassing most of the North Atlantic Ocean and the Mediterranean Sea. In terms of land, the imagery covers the whole of Europe and northwest Africa.

The catalogue also contains a variety of CZCS images from other parts of the world.

For all enquiries and data orders please contact the following address:

Multi Mission User Service
ESRIN
Via Galileo Galilei
FRASCATI 00044 (Rm)
Italy

Tel: 06 – 94180372 / 94180360
Tx: 610637 esrin i
Fax: 06 – 94180361

. CONTRIBUTING RECEIVING STATIONS

The receiving stations which have contributed to this archive are :

- **Maspalomas Satellite Station, Gran Canaria, Spain**
- **Dundee University, Dundee, Scotland**
- **Centre de Mètéorologie Spatiale, Lannion, France**
- **Plus various datasets from NASA held at the Joint Research Centre, Ispra, Italy**

The coverage from the European stations can be seen on *Fig. 2.1.*

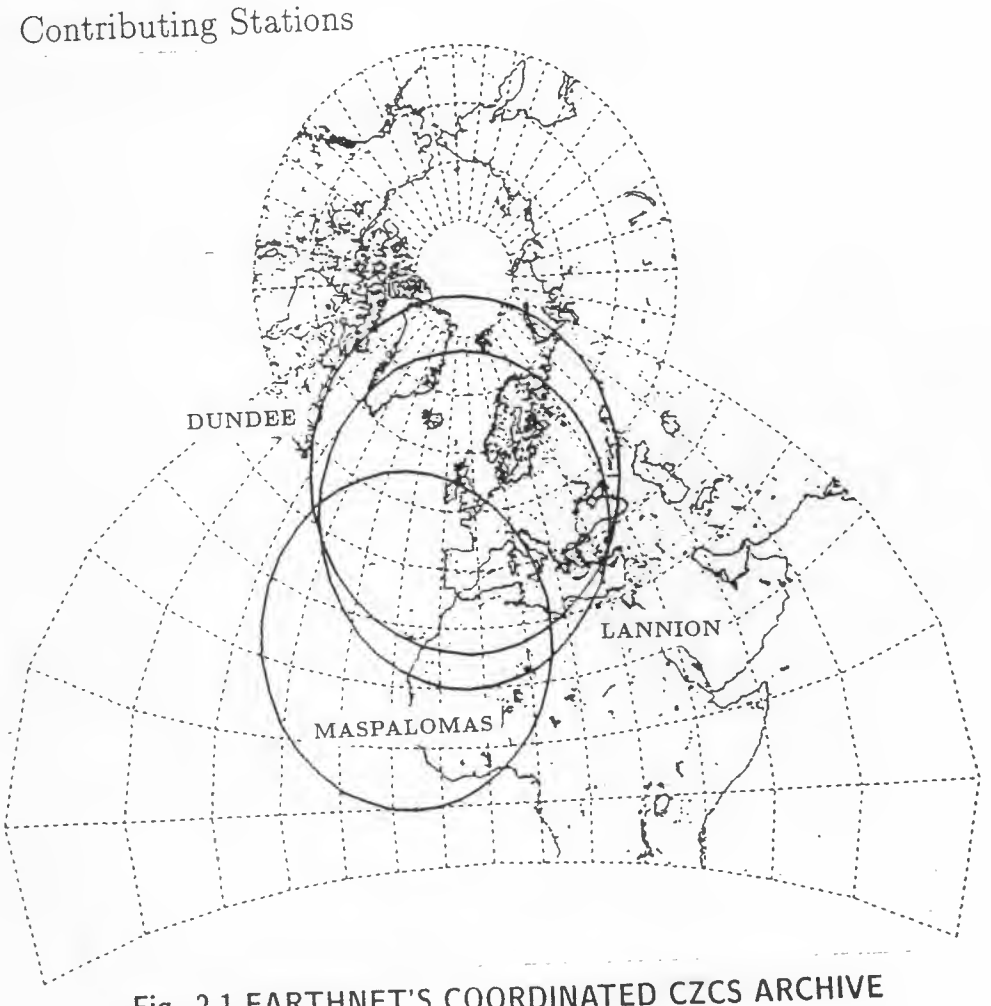

Fig. 2.1 EARTHNET'S COORDINATED CZCS ARCHIVE

. ACCESSING THE CATALOGUE

The LEDA catalogue (which includes CZCS, AVHRR, LANDSAT and MOS data) may be accessed in one of four ways :

- **X25 LINK**
  - The international number for LEDA (on-Line Earthnet Data Availability) is **0222 265001472510**. The DTE address of the calling machine must first be supplied to Earthnet for security checking. This method of access is free.

- **SPAN** – Space Physics Analysis Network
  - Use SET HOST EPOCAT and logon as CATALOGUE (no password). This method of access is free. EPOCAT address : 28.956 or 29628

- **ESA Prototype International Directory (ESA PID)**
  - The Master Directory can be accessed via **SPAN**, **Direct Dial** or by **Internet**. For details contact the *ESA PID User Support Office* at ESRIN at the following numbers:
    Tel : +39 6 94180367
    Fax : +39 6 94180361

- **ESA-QUEST**
  - There is a nominal charge for this method of access. For access details, contact the *QUEST Help Desk* at ESRIN at the following number:
    Tel : +39 6 941801

. RUNNING A SEARCH

4.1 GENERAL CHARACTERISTICS OF THE DATABASE

Each retrievable record in the CZCS database represents 2 minutes of archived raw imagery (approx. 770 km north/south by 1600 km east/west). To find appropriate datasets the user is led through a sequence of menus in a logical order. The normal procedure would be to define first the geographical area of interest; followed by the required date ranges; then other image parameters; conduct the search; and select the most suitable output format.

Each menu choice is represented by an acronym which endeavours to reflect the command/parameter it represents (eg. ST=station, VA=view angle). To minimise input during a search, a sensible default is provided for many parameters (eg. stations=all, maximum view angle=30 deg.). All data entered by the user are retained for the entire search unless specifically modified.

On-line help is available **at all times** during a search, both generally and locally. For the GENERAL HELP, type "H" at any time and for the help specific to the actual stage of the search, type "?". "?" pressed at command level will display a menu equating the acronyms to the commands, which are basically self-explanatory; "?" typed mid-way into a command will result in a more detailed local explanation, eg.: if choosing a station and the user either does not know or has forgotten the station code, after entering "ST<CR>" followed by "?", a list of the stations and their codes will result (*Fig. 4.1* shows and explains the GENERAL HELP options).

If the user wants to specify a Multi-command Strings in a single line, it is important that if the Command line includes a multi range option (eg. "DD"), he must types the command line separating the options with the "+" and "++" characters as described in the following two examples:

If the user is situated under the TOP LEVEL menu he can types:

1) ''NI+GS+PN+3000,1500+DD+780401,790403++SH''

2) ''NI+GS+PN+3000,1500+DD+780401,790403+780501,790503+SH''

GENERAL HELP MENU

Command	Function
H	Display this List of Commands
?	Display LOCAL Help Message
*	Return to Previous Menu
TO	Return to Top Level Menu
EX	EXIT from CZCS but Remain in LEDA
EN	END Session - EXIT from Database
#	Show Parameter Range Limits
DF	Assign Default Values
<CR>	Assign Default Values/Return to Menu after Input
+	Separator for Multi-command Strings
<	Set Short Form of Message
>	Set Long Form of Message

Fig. 4.1

4.2 ON ENTERING THE CATALOGUE

After the normal connection to the catalogue (via X25,SPAN, etc.), the user is invited to insert a *Username* (it is important to specify it, because the catalogue will be able to create the user's output files). Now the user is led in the LEDA catalogue (*Fig. 4.2*), and if the user chooses the "NI" command for the NIMBUS-7 section, the TOP LEVEL menu appears (*Fig. 4.3*). This menu offers general items connected with the database such as news and a documentation on how to use the catalogue.

LEDA OPTIONS

Command	Function
LA	Enter LANDSAT Catalogue (MSS, TM and RBV)
TI	Enter TIROS Catalogue (AVHRR and TOVS)
MO	Enter MOS Catalogue (not implemented)
NI	Enter CZCS Catalogue
H	General Help Message

Fig. 4.2

TOP LEVEL MENU

Command	Function
NW	General News
OD	On-line Documentation for the Catalogue
GS	Geographic Selection - select image parameters
H	General Help Message
?	Local Help Message
*	Return to Previous Menu

Fig. 4.3

These introductory options represent the following:

- **'NW'** news concerning both the catalogue itself and the CZCS instrument.
- **'OD'** online documentation describing the function of the catalogue and its various menus.
- **'GS'** geographic selection - conduct a search of the database.

Typing "GS" or just "<CR>" (since it is the default) evokes the GEOGRAPHIC SELECTION Menu (*Fig. 4.4*). This menu lets the user define the search area in one of three ways - via the latitude/longitude of the desired point ("PN") or of the geographic range of the desired area ("LL"), or else via the Landsat track/frame co-ordinates ("TF"). The latter method is useful for those already familiar with the Landsat system/catalogue. Further refining of the coverage may be obtained via this menu by setting the view angle limit, "VA". To summarise on screen the attributes already chosen, type "SH".

Note that latitudes and longitudes should be input in units of hundredths of degrees with north and east positive and south and west negative. For example the point 48.03 N 1.52 W becomes 4803,-152.

GEOGRAPHIC SELECTION MENU

Command	Function
LL	Latitude/Longitude Range
PN	Single Latitude/Longitude Point
TF	Landsat WRS-2 Track/Frame Range
VA	Maximum Acceptable View Angle
DD	Acquisition Date Range
ST	Stations Required
WT	Minimum Percentage of Water
S4	Maximum Saturation in Band 4
PR	Product Level
SH	Show Selected Parameters
OU	Selection and Output
H	General Help Message
?	Local Help Message
*	Return to Previous Menu

Fig. 4.4

These represent:

- **'LL'** Defines an area on the globe by specifying MINIMUM and MAXIMUM latitudes and longitudes
  (Enter "MIN-LAT,MAX-LAT,MIN-LONG,MAX-LONG" of required area in this order).

Latitudes are in the range -80 to +80 degrees north. Longitudes are in the range -180 to +180 degrees east.
Both coordinates MUST BE IN UNITS OF DEGREES*100 !
If the user doesn't specify an area, the following default value is assigned : " -8000,8000,-18000,18000".
Example:

- ▷▷ To define an area of 5 degrees south to 15.05 degrees north by 350 to 5 degrees east the following input is necessary:
  -500,1505,-1000,500<CR>

- ▷ **'PN'** Defines a geographic point by entering a latitude and longitude in units of DEGREES*100.
  Latitude must be defined as degrees north (-80 TO +80) and longitude as degrees east (-180 TO +180).
  There is not default value for this parameter so the user MUST SPECIFY IT typing a valid geographic point (Enter "LAT,LONG" values in this order).
  Examples:
  - ▷▷ To define a point with lat 40 north and long 12 east enter: 4000,1200<CR>
  - ▷▷ To define a point with lat 20.56 south and long 349 east (i.e. 11 west) enter: -2056,-1100<CR>

- ▷ **'TF'** LANDSAT WRS-2 track and frame numbers may be entered as a reference for geographical coverage (Enter track and frame range on WRS-2 "MIN-TRACK,MAX-TRACK,MIN-FRAME, MAX-FRAME" in this order).
  This option is oriented to users that have enough practice with the LANDSAT search rules.
  The allowed values are included between the following ranges:
  - ▷▷ "1" to "233" for TRACKS
  - ▷▷ "1" to "120" for FRAMES
    Example:
    For tracks 190-195 and frames 30-34 enter:
    190,195,30,34<CR>

- ▷ **'VA'** Specifies the angle between the sub-satellite vector and the swath limit.
  So zero degrees represents the sub-satellite track, 55 degrees represents the maximum view angle (3000km total swath).
  NOTE that the AVHRR ground resolution deteriorates with increasing view angle.
  To reduce search time and minimise output listing it is recommended that a narrow view angle be specified (e.g. 10 degrees). Default value is "30".

- **'DD'** enter a date range in the form year/month/day (YYMMDD). 2 ranges are possible. The user may enter this command in three ways:

  - all on one line using the concatenator "+" between ranges

    eg. `DD+820601,820630+830701,830730<CR>`

  - by typing "DD <CR>" and entering the date range/s as prompted on the subsequent lines. If a second range is not required, just type "<CR>" in reply to the prompt.

  - all on one line using the concatenator/carriage return '+' after the first range:
    `DD+820601,820630+<CR>`
    NOTE, that if the user doesn't specify the date range/s, the default value will be included between the following values:
    '780101' (Minimum date).
    '861231' (Maximum date).

- **'ST'** requires the input of the station numerical code. To obtain a listing of the station codes, type "ST" followed by "?". Default is the two principal stations (Frascati, and Maspalomas) (coded no.s '1' and '3' respectly).

- **'WT'** enter the minimum acceptable percentage of water. Default is 0% (of the total image).

- **'S4'** enter the maximum acceptable percentage of saturated water pixels in Band 4 (the most easily saturated band). Default is 100% (of the total image).

- **'PR'** which product level is required. The default is '0' and '1'=CRT (corrected radiance and temperature).

- **'SH'** will show all the parameters you have selected so far. Any of these may be changed by re-entering them.

- **'OU'** conduct a search according to the given parameters. You are then presented with the OUTPUT OPTIONS Menu.

- **'H'** general help message - may be selected at any time during a search.

- '?' local help message - may be selected at any time during a search.

- '*' will return the user to any previous menu at any point during the search whilst retaining any parameters already selected or changed.

When satisfied, the user selects "OU", the database search is performed and the user is passed to the OUTPUT OPTIONS Menu (*Fig. 4.5*). To display the retrieved records, command "TT", "FU", "TS" or "FS" will invoke the PAGING Menu (*Fig. 4.6*). Morover, is been added a new command "CS", that will generate an output file containing the *CEOS IEF* data (*CEOS IEF file format*). The printout will later be posted to the user (providing he has supplied address details).

A full description of a CZCS record is given in Section 4.3.

OUTPUT OPTIONS MENU

Command	Function
TT	Terminal Listing of Complete Search (abbreviated details)
FU	Fully Detailed Terminal Listing
LP	Off-line Print of Complete Search (full details)
SS	Select a Subset from Complete Search
TS	Terminal Listing of Subset (abbreviated details)
FS	Fully Detailed Terminal Listing of Subset
LS	Off-line Print of Subset (full details)
CS	Off-line Print of complete search (Ceos IEF format)
OH	Order Handling - go to next menu
H	General Help Message
?	Local Help Message
*	Return to Previous Menu

Fig. 4.5

PAGING MENU

Command	Function
FP	Display First Page
PP	Display Previous Page
NP	Display Next Page
H	General Help Message
?	Local Help Message
*	Return to Previous Menu

Fig. 4.6

4.3 CZCS RECORD DESCRIPTION

Each record may be viewed as *full details* or as *abbreviated details* which is simply a subset of the first. Below is a concise description of the information contained in a CZCS record at *full details*:

NO.	**Reference Number**	Sequential Number for Sorting and Order Handling
DATE	**Acquisition Date**	Expressed in Year, Month, Day (YYMMDD)
ORB	**Orbit Number**	Since Satellite Launch
CZCS START		Start Time of Scene (GMT) in Hours, Minutes and Seconds (HHMMSS)
CZCS END		Stop Time of Scene (GMT), in Hours, Minutes and Seconds (HHMMSS)
CT	**Time Coverage Flag**	"**OK**"= Complete North/South (time) Coverage of Selected Geographical Area "******" = Partial Coverage
CL	**Longitude Coverage Flag**	As Above for East/West (longitude)
QL	**Quick–Look Flag**	"**Y**" = Classified Quick–Look is OK "**N**" = Classified Quick–Look not OK (meaning the classification results should not be trusted)
%WT	**Water**	Total Percentage of Water Pixels in Image (derived from Band 5)
%S4	**Saturated Water**	Total Percentage of Water Pixels Saturated in Band 4 (percent of entire image)
DQ	**Data Quality Flag**	"**0**" = Very Good "**1**" = Average "**2**" = Below Average
BL	**Bad Lines**	Number of Bad/Missing Lines in Image
TILT	**Tilt Angle**	Value of Tilt Angle in Degrees (-20° to +20°)
GAIN	**Gain Level**	"**0**" = No Gain "**3**" = Maximum
CORNERS LANW,LONW, LANE,LONE, LASW,LOSW, LASE,LOSE	**Lat. & Long. of image Corners at 40 deg. View Angle**	in Degrees N Latitude x 100 and Degrees E Longitude x 100
% WATER WTNW,WTNE, WTSW,WTSE	**Water**	Percentage Water Pixels in 4 Quadrants

% SAT.B4 S4NW,S4NE, S4SW,S4SE	**Saturated**	Percentage of Water Pixels Saturated in Band 4 in 4 Quadrants
TMIN	**Start Time of Area**	User Defined Geographical Area
TMAX	**Stop Time of Area**	User Defined Geographical Area
ARID	**Archive ID**	Archive Optical Disk Reference Number
SUN AZ	**Sun Azimuth**	at Image Centre
SUN EL	**Sun Elevation**	at Image Centre
IMAGE CENTRE	**Lat. & Long. of Image Centre**	in Degrees N Latitude x 100 and Degrees E Longitude x 100
SCENE ID	**Scene identification**	
STATION	**Acquisition Station**	"**FRA**" = Frascati (**1**) "**SFL**" = NASA (**2**) "**MPS**" = Maspalomas (**3**)

The retrieved records are presented in chronological order, with the most recent first, within 4 groups:

1) CT=OK, CL=OK

2) CT=**, CL=OK

3) CT=OK, CL=**

4) CT=**, CL=**

. EXITING THE CATALOGUE

Once the user has completed a search, he has three options:

1) he may return to the TOP LEVEL menu to enter further requests by typing 'TO';
2) he may exit the CZCS catalogue but remain in LEDA by typing 'EX';
3) he may end the catalogue search completely by typing 'EN'.

Note that these three options are available at any time during a catalogue search, even when numerical parameters are being requested.

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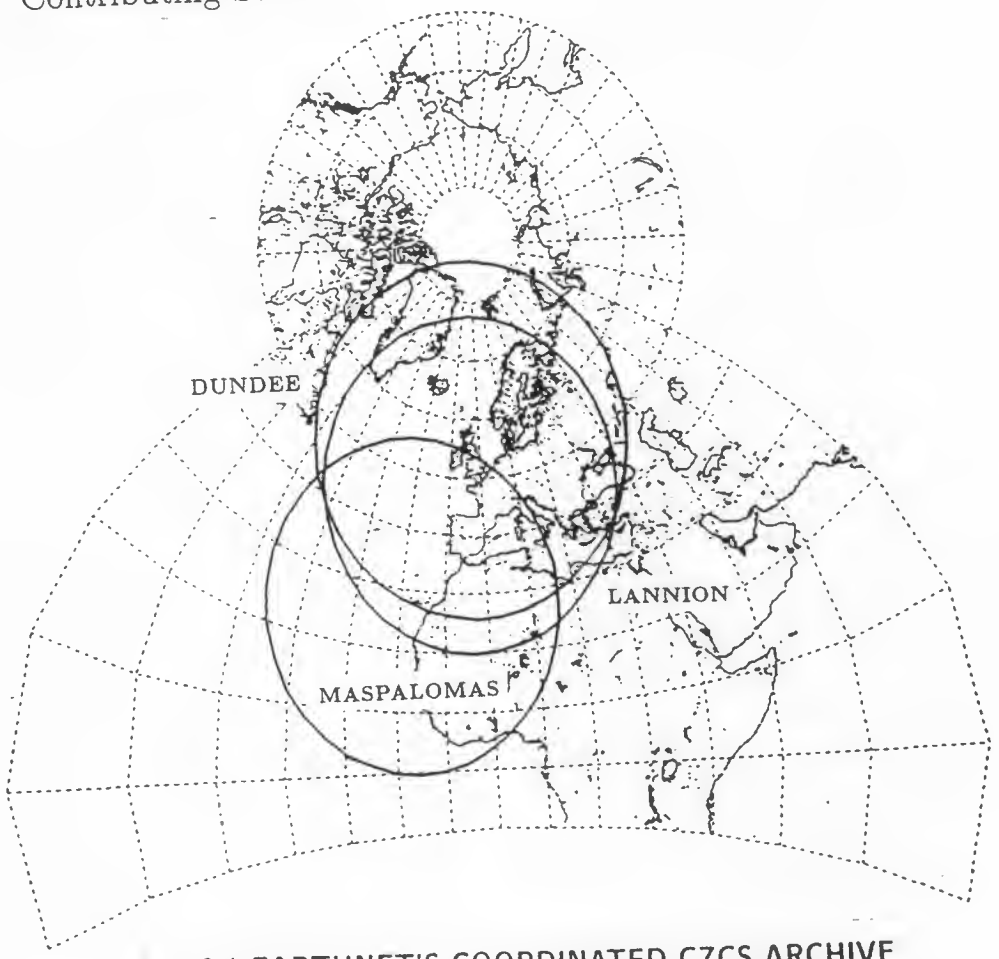
Contributing Stations



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. RUNNING A SEARCH

4.1 GENERAL CHARACTERISTICS OF THE DATABASE

Each retrievable record in the CZCS database represents 2 minutes of archived raw imagery (approx. 770 km north/south by 1600 km east/west). To find appropriate datasets the user is led through a sequence of menus in a logical order. The normal procedure would be to define first the geographical area of interest; followed by the required date ranges; then other image parameters; conduct the search; and select the most suitable output format.

Each menu choice is represented by an acronym which endeavours to reflect the command/parameter it represents (eg. ST=station, VA=view angle). To minimise input during a search, a sensible default is provided for many parameters (eg. stations=all, maximum view angle=30 deg.). All data entered by the user are retained for the entire search unless specifically modified.

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If the user wants to specify a Multi-command Strings in a single line, it is important that if the Command line includes a multi range option (eg. "DD"), he must types the command line separating the options with the "+" and "++" characters as described in the following two examples:

If the user is situated under the TOP LEVEL menu he can types:

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GENERAL HELP MENU

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+	Separator for Multi-command Strings
<	Set Short Form of Message
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Fig. 4.1

4.2 ON ENTERING THE CATALOGUE

After the normal connection to the catalogue (via X25,SPAN, etc.), the user is invited to insert a *Username* (it is important to specify it, because the catalogue will be able to create the user's output files). Now the user is led in the LEDA catalogue (*Fig. 4.2*), and if the user chooses the "NI" command for the NIMBUS-7 section, the TOP LEVEL menu appears (*Fig. 4.3*). This menu offers general items connected with the database such as news and a documentation on how to use the catalogue.

LEDA OPTIONS

Command	Function
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TI	Enter TIROS Catalogue (AVHRR and TOVS)
MO	Enter MOS Catalogue (not implemented)
NI	Enter CZCS Catalogue
H	General Help Message

Fig. 4.2

TOP LEVEL MENU

Command	Function
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OD	On-line Documentation for the Catalogue
GS	Geographic Selection - select image parameters
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Fig. 4.3

These introductory options represent the following:

- **'NW'** news concerning both the catalogue itself and the CZCS instrument.
- **'OD'** online documentation describing the function of the catalogue and its various menus.
- **'GS'** geographic selection - conduct a search of the database.

Typing "GS" or just "<CR>" (since it is the default) evokes the GEOGRAPHIC SELECTION Menu (*Fig. 4.4*). This menu lets the user define the search area in one of three ways - via the latitude/longitude of the desired point ("PN") or of the geographic range of the desired area ("LL"), or else via the Landsat track/frame co-ordinates ("TF"). The latter method is useful for those already familiar with the Landsat system/catalogue. Further refining of the coverage may be obtained via this menu by setting the view angle limit, "VA". To summarise on screen the attributes already chosen, type "SH".

Note that latitudes and longitudes should be input in units of hundredths of degrees with north and east positive and south and west negative. For example the point 48.03 N 1.52 W becomes 4803,-152.

GEOGRAPHIC SELECTION MENU

Command	Function
LL	Latitude/Longitude Range
PN	Single Latitude/Longitude Point
TF	Landsat WRS-2 Track/Frame Range
VA	Maximum Acceptable View Angle
DD	Acquisition Date Range
ST	Stations Required
WT	Minimum Percentage of Water
S4	Maximum Saturation in Band 4
PR	Product Level
SH	Show Selected Parameters
OU	Selection and Output
H	General Help Message
?	Local Help Message
*	Return to Previous Menu

Fig. 4.4

These represent:

- **'LL'** Defines an area on the globe by specifying MINIMUM and MAXIMUM latitudes and longitudes
  (Enter "MIN-LAT,MAX-LAT,MIN-LONG,MAX-LONG" of required area in this order).

Latitudes are in the range -80 to +80 degrees north. Longitudes are in the range -180 to +180 degrees east.
Both coordinates MUST BE IN UNITS OF DEGREES*100 !
If the user doesn't specify an area, the following default value is assigned : " -8000,8000,-18000,18000".
Example:

- ▷▷ To define an area of 5 degrees south to 15.05 degrees north by 350 to 5 degrees east the following input is necessary:
  -500,1505,-1000,500<CR>

- ▷ **'PN'** Defines a geographic point by entering a latitude and longitude in units of DEGREES*100.
  Latitude must be defined as degrees north (-80 TO +80) and longitude as degrees east (-180 TO +180).
  There is not default value for this parameter so the user MUST SPECIFY IT typing a valid geographic point (Enter "LAT,LONG" values in this order).
  Examples:
  - ▷▷ To define a point with lat 40 north and long 12 east enter: 4000,1200<CR>
  - ▷▷ To define a point with lat 20.56 south and long 349 east (i.e. 11 west) enter: -2056,-1100<CR>

- ▷ **'TF'** LANDSAT WRS-2 track and frame numbers may be entered as a reference for geographical coverage (Enter track and frame range on WRS-2 "MIN-TRACK,MAX-TRACK,MIN-FRAME, MAX-FRAME" in this order).
  This option is oriented to users that have enough practice with the LANDSAT search rules.
  The allowed values are included between the following ranges:
  - ▷▷ "1" to "233" for TRACKS
  - ▷▷ "1" to "120" for FRAMES
    Example:
    For tracks 190-195 and frames 30-34 enter:
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- ▷ **'VA'** Specifies the angle between the sub-satellite vector and the swath limit.
  So zero degrees represents the sub-satellite track, 55 degrees represents the maximum view angle (3000km total swath).
  NOTE that the AVHRR ground resolution deteriorates with increasing view angle.
  To reduce search time and minimise output listing it is recommended that a narrow view angle be specified (e.g. 10 degrees). Default value is "30".

- **'DD'** enter a date range in the form year/month/day (YYMMDD). 2 ranges are possible. The user may enter this command in three ways:

  - all on one line using the concatenator "+" between ranges

    eg. `DD+820601,820630+830701,830730<CR>`

  - by typing "DD <CR>" and entering the date range/s as prompted on the subsequent lines. If a second range is not required, just type "<CR>" in reply to the prompt.

  - all on one line using the concatenator/carriage return '+' after the first range:
    `DD+820601,820630+<CR>`
    NOTE, that if the user doesn't specify the date range/s, the default value will be included between the following values:
    '780101' (Minimum date).
    '861231' (Maximum date).

- **'ST'** requires the input of the station numerical code. To obtain a listing of the station codes, type "ST" followed by "?". Default is the two principal stations (Frascati, and Maspalomas) (coded no.s '1' and '3' respectly).

- **'WT'** enter the minimum acceptable percentage of water. Default is 0% (of the total image).

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- '?' local help message - may be selected at any time during a search.

- '*' will return the user to any previous menu at any point during the search whilst retaining any parameters already selected or changed.

When satisfied, the user selects "OU", the database search is performed and the user is passed to the OUTPUT OPTIONS Menu (*Fig. 4.5*). To display the retrieved records, command "TT", "FU", "TS" or "FS" will invoke the PAGING Menu (*Fig. 4.6*). Morover, is been added a new command "CS", that will generate an output file containing the *CEOS IEF* data (*CEOS IEF file format*). The printout will later be posted to the user (providing he has supplied address details).

A full description of a CZCS record is given in Section 4.3.

OUTPUT OPTIONS MENU

Command	Function
TT	Terminal Listing of Complete Search (abbreviated details)
FU	Fully Detailed Terminal Listing
LP	Off-line Print of Complete Search (full details)
SS	Select a Subset from Complete Search
TS	Terminal Listing of Subset (abbreviated details)
FS	Fully Detailed Terminal Listing of Subset
LS	Off-line Print of Subset (full details)
CS	Off-line Print of complete search (Ceos IEF format)
OH	Order Handling - go to next menu
H	General Help Message
?	Local Help Message
*	Return to Previous Menu

Fig. 4.5

PAGING MENU

Command	Function
FP	Display First Page
PP	Display Previous Page
NP	Display Next Page
H	General Help Message
?	Local Help Message
*	Return to Previous Menu

Fig. 4.6

4.3 CZCS RECORD DESCRIPTION

Each record may be viewed as *full details* or as *abbreviated details* which is simply a subset of the first. Below is a concise description of the information contained in a CZCS record at *full details*:

NO.	**Reference Number**	Sequential Number for Sorting and Order Handling
DATE	**Acquisition Date**	Expressed in Year, Month, Day (YYMMDD)
ORB	**Orbit Number**	Since Satellite Launch
CZCS START		Start Time of Scene (GMT) in Hours, Minutes and Seconds (HHMMSS)
CZCS END		Stop Time of Scene (GMT), in Hours, Minutes and Seconds (HHMMSS)
CT	**Time Coverage Flag**	"**OK**"= Complete North/South (time) Coverage of Selected Geographical Area "**" = Partial Coverage
CL	**Longitude Coverage Flag**	As Above for East/West (longitude)
QL	**Quick–Look Flag**	"**Y**" = Classified Quick–Look is OK "**N**" = Classified Quick–Look not OK (meaning the classification results should not be trusted)
%WT	**Water**	Total Percentage of Water Pixels in Image (derived from Band 5)
%S4	**Saturated Water**	Total Percentage of Water Pixels Saturated in Band 4 (percent of entire image)
DQ	**Data Quality Flag**	"**0**" = Very Good "**1**" = Average "**2**" = Below Average
BL	**Bad Lines**	Number of Bad/Missing Lines in Image
TILT	**Tilt Angle**	Value of Tilt Angle in Degrees (-20° to +20°)
GAIN	**Gain Level**	"**0**" = No Gain "**3**" = Maximum
CORNERS LANW,LONW, LANE,LONE, LASW,LOSW, LASE,LOSE	**Lat. & Long. of image Corners at 40 deg. View Angle**	in Degrees N Latitude x 100 and Degrees E Longitude x 100
% WATER WTNW,WTNE, WTSW,WTSE	**Water**	Percentage Water Pixels in 4 Quadrants

% SAT.B4 S4NW,S4NE, S4SW,S4SE	**Saturated**	Percentage of Water Pixels Saturated in Band 4 in 4 Quadrants
TMIN	**Start Time of Area**	User Defined Geographical Area
TMAX	**Stop Time of Area**	User Defined Geographical Area
ARID	**Archive ID**	Archive Optical Disk Reference Number
SUN AZ	**Sun Azimuth**	at Image Centre
SUN EL	**Sun Elevation**	at Image Centre
IMAGE CENTRE		
	Lat. & Long. of Image Centre	in Degrees N Latitude x 100 and Degrees E Longitude x 100
SCENE ID	**Scene identification**	
STATION	**Acquisition Station**	"**FRA**" = Frascati (**1**) "**SFL**" = NASA (**2**) "**MPS**" = Maspalomas (**3**)

The retrieved records are presented in chronological order, with the most recent first, within 4 groups:

1) CT=OK, CL=OK
2) CT=**, CL=OK
3) CT=OK, CL=**
4) CT=**, CL=**

. EXITING THE CATALOGUE

Once the user has completed a search, he has three options:

1) he may return to the TOP LEVEL menu to enter further requests by typing 'TO';
2) he may exit the CZCS catalogue but remain in LEDA by typing 'EX';
3) he may end the catalogue search completely by typing 'EN'.

Note that these three options are available at any time during a catalogue search, even when numerical parameters are being requested.