



#534

HELIOS 1 + 2

74-07~~7~~A-07A

76-003A-07A

COUNT RATE HOURLY AVERAGE

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1. INTRODUCTION:

The documentation for this data set was originally on paper, kept in NSSDC's Data Set Catalogs (DSCs). The paper documentation in the Data Set Catalogs have been made into digital images, and then collected into a single PDF file for each Data Set Catalog. The inventory information in these DSCs is current as of July 1, 2004. This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system. The information existing in the DSCs is now not needed for locating the data files, but we did not remove that inventory information.

The offline tape datasets have now been migrated from the original magnetic tape to Archival Information Packages (AIP's).

A prior restoration may have been done on data sets, if a requestor of this data set has questions; they should send an inquiry to the request office to see if additional information exists.

2. ERRATA/CHANGE LOG:

NOTE: Changes are made in a text box, and will show up that way when displayed on screen with a PDF reader.

When printing, special settings may be required to make the text box appear on the printed output.

Version	Date	Person	Page	Description of Change
01				
02				

3 LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC INFORMATION SYSTEM:

<http://nssdc.gsfc.nasa.gov/nmc/>

[NOTE: This link will take you to the main page of the NSSDC Master Catalog. There you will be able to perform searches to find additional information]

4. CATALOG MATERIALS:

- a. Associated Documents To find associated documents you will need to know the document ID number and then click here.
<http://nssdcftp.gsfc.nasa.gov/miscellaneous/documents/>

- b. Core Catalog Materials

HELIOS-B

HOURLY AVG COUNT RATE DATA

76-003A-07A SPHE-00688

This data set has been restored. There were originally two 9-track, 800, & 1600 BPI tapes written in ASCII. There is one restored tape. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tapes were created on a PDP computer and the restored tapes were created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D numbers are as follows:

DR#	DS#	D#	FILES	TIME SPAN
-----	-----	-----	-----	-----
DR004820	DS004820	D047380	1	01/06/76 - 12/31/78
		D066087	2	12/31/78 - 03/08/80

HELIOS-A

HOURLY AVG COUNT RATE DATA

74-097A-07A SPHE-00691

THIS DATA SET HAS BEEN RESTORED. THERE WERE ORIGINALLY FOUR 9-TRACK, 1600 BPI TAPES, WRITTEN IN ASCII. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN IBM 360 COMPUTER AND THEY WERE RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR004810	DS004810	D047379	1	12/11/74 - 12/31/76
		D066084	2	01/01/77 - 12/31/79
		D066085	3	12/31/79 - 12/31/81
		D066086	4	12/31/81 - 12/31/83

REQ. AGENTDEW
SARRAND NO.V0133
V0287ACQ. AGENTHKH
HKH

HELIOS 1 & 2

COUNT RATES HOURLY AVG

097A
74-~~079A~~-07A

76-003A-07A

This data set catalog consists of four tapes for Helios 1 data and two tapes for Helios 2 data. The D tapes are 800 BPI, ASCII, 9-track with one file of data and the C tapes are 1600 BPI, ASCII, 9-track with one file of data. The tapes were created on an DEC PDP 11/45 computer. The D and C numbers along with the time spans are as follows:

74-079A-07A

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-47379	C-22206	12/11/74 - 12/31/76
D-66084	C-24773	01/01/77 - 12/31/79
D-66085	C-24774	12/31/79 - 12/31/81
D-66086	C-24775	12/31/81 - 12/31/83

76-003A-07A

D-47380	C-22207	01/16/76 - 12/31/78
D-66087	C-24476	12/31/78 - 03/08/80

Institut für Reine und Angewandte Kernphysik
der Christian-Albrechts-Universität Kiel
- R. Müller-Mellin -

19-01/17-01H
76-003A-07A

2300 Kiel, den Jan. 22, 1982
Olshausenstraße 40/60, Gebäude N 20 a
Fernschreiber 292979 ifki
Telefon: Sammel-Nr.: 8801
bei Durchwahl: 880- 3227
RMM/lg

NSSDC - Tape Specification

Experiment	HELIOS 1/2 Exp. 6 COSMIC RAY Universität Kiel
Contents	Counting Rates (Hourly Averages)
Density	800 BPI
Track	9
Parity	ODD
Mode	ASC II
Files	1
Machine	DEC PDP-11/45

Tape Structure

Tape Header Block
Science Data Block
:
:
:
Science Data Block
EOF Block
EOF Block
EOF Block

Tape Header Block Format

In column "Format" the FORTRAN Format convention is used. The PDP 11 word length is 16 bit, i.e. one word can accomodate 2 ASCII characters.

In column "Contents" the underline symbol " " represents a space (ASCII-Code 40_{octal}).

Word	Data Type	Format	Contents
1-3	Literal	3A2	HELIOS
4	Integer	I2	S/C number (1 or 2)
5-20	Literal	16A2	_EXPERIMENT_6_UNIVERSITAET_KIEL_
21-24	Literal	4A2	START: _ _
25-26	Integer	I4	Year (e.g. 1976)
27-28	Integer	I4	Day of year (e.g. _345)
29-30	Integer	I4	Hour (e.g. __ 23)
31-32	Integer	I4	Minute (e.g. __ 12)
33-36	Literal	4A2	STOP: _ _ _
37-38	Integer	I4	Year
39-40	Integer	I4	Day of year
41-42	Integer	I4	Hour
43-44	Integer	I4	Minute
45-51	Literal	7A2	VERSION: _ _ _ _ _
52	Integer	I2	Program Version (e.g. _1)

Science Data Block Format

Word	Data Type	Format	Contents
1-2	Integer	I4	Start time of averaging interval: year
3-4	"	"	day of year
5-6	"	"	hour
7-8	"	"	minute
9-10	"	"	Stop time of averaging interval: year
11-12	"	"	day of year
13-14	"	"	hour
15-16	"	"	minute
17-22	Real	E12.5	Count rate P 4-13
23-28			Standard deviation P 4-13
29-34			P13-27
25-40			P13-27
41-46			P27-37
47-52			P27-37
53-58	"	"	" P37-51
59-64			P37-51
65-70			P>51
71-76			P>51 st rev?

Range	Real	E12.5	Count rate A 2-4
77-82			Standard deviation A 2-4
83-88			A 4-13
89-94			A 4-13
95-100			A13-27
101-106			A13-27
107-112	"	"	" A13-27
113-118			A27-37
119-124			A27-37
125-130			A37-48
131-136			A37-48
137-142			A >48
143-148			A >48 St dev?
149-154	"	"	" E 0.3-0.8
155-160			E 0.3-0.8
161-166			E 0.8-2
167-172			E 0.8-2 St dev?
173-1720	9 repetitions of words		1-172

Filler data are indicated by -9999.9, on the ASCII tape represented as - 0.99999 E+04.

The acronyms for the rate channels are composed of a letter (P for protons, A for alpha particles and E for electrons) and an indication of the energy range in MeV/nucleon for protons and alpha particles resp. MeV for electrons.

The counting rates are given as particles/m² sec sr MeV/N, except for the integral channels P>51 and A>48 which are given as particles/m² sec sr.

The 1 hour averaging interval is sliding, i.e. it does not start and stop on the hour. This was made to accommodate the instrumental time resolution at low bit rates, where accumulation periods can be as long as 43.2 minutes. Furthermore it can happen at low bit rates, that successive averaging intervals appear to overlap in time. This is caused by the fact that rate channels are accumulated on board the S/C in three different groups with different but overlapping start and stop times for the three accumulation periods. At low bit rates, when the length of the accumulation period is of the same order as the averaging interval, this overlap appears also in this data set. However, the rate channels, which are accumulated during a period other than the one indicated by "Start time of averaging interval" and "Stop time of averaging interval" are marked with filler data, so that for any given rate channel, there is no time overlap indeed.

Note that due to the measurement technique (range measurement) the energy boundaries for the electron channels E 0.2-0.8 and E 0.8-2 are only rough estimates.

HELIOS 2

HELIOS 2 PARTICLE E6_KUNOW

76-003A-07B - SPHE-00769

This dataset has been ingest to CD Write Once. The data was downloaded from /raid/ftp/spacecraft_data/Helios2/particele/e6_kunow data is written in ASCII format. KD number along with the time spans and tape as follows:

KD#	TIME SPAN
KD023223	01/16/76 - 03/14/80

h-cr

BRIEF DESCRIPTION
Cosmic Ray Particles
(Principal Investigator: Kunow)

HELIOS-A and -B spacecrafts were the pair of deep space probes developed by the Federal Republic of Germany (FRG) in a cooperative program with NASA. The purpose of the mission was to make pioneering measurements of the interplanetary medium from the vicinity of the earth's orbit to 0.3 AU.

The objective of experiment (E6) was to study high-energy, charged, cosmic-ray particles of solar, planetary, and galactic origin in interplanetary space. Protons and alpha particles with energies >1.3 MeV/nucleon, and electrons >0.3 MeV were measured within interplanetary space over the range from 0.3 to 1.0 AU. The instrument, a particle telescope with 55-deg field of view, consisted of five semiconductor detectors, one sapphire Cherenkov counter, and one scintillation counter, all enclosed by an anticoincidence cylinder. The telescope was calibrated prior to launch using radioactive sources, particle accelerators, and ground-level muons. It measured protons and alpha particles in six channels (1.3-3.3, 3.3-13, 13-27, 27-37, 37-45, and >45 MeV/nucleon) and electrons in five energy channels (0.3-0.8, 0.8-2, 2-3, 3-4, and >4 MeV). For more detail see pp.253-257 of Raumfahrtforschung, v.19, n. 5, 1975.

The h-a-cr*.dat and h-b-cr*.dat files contains hourly averaged fluxes of electrons, protons and alpha particles in the MeV ranges. The files were written in ASCII-codes. Each record contains 10 hourly averages. The differential fluxes (particles/sq.m, s, sr, MeV) cover, in several bands, the energy range 0.3-2.0 MeV for electrons, 4.0-51 MeV for protons, and 2.0-48 MeV for alpha particles. Also provided are the integral fluxes of alphas above 48 MeV, and protons above 51 MeV. For some of the energy channels, the standard deviations of the averages are also provided. Each file is preceded by a header record, providing the start and stop times of the data in the file.

For h-a-cr*.dat files:
Time Coverage: 1974/12/11 - 1983/12/31

For h-b-cr*.dat files:
Time Coverage: 1976/01/16 - 1980/03/08

File Header Block Format:

Word	Data Type	Format	Contents
1-3	Literal	3A2	HELIOS
4	Integer	I2	S/C number (1 or 2)
5-20	Literal	16A2	_EXPERIMENT_6_UNIVERSITAET_KIEL_
21-24	Literal	4A2	START:___
25-26	Integer	I4	Year (e.g. 1976)
27-28	Integer	I4	Day of year (e.g. _345)
29-30	Integer	I4	Hour (e.g. __23)
31-32	Integer	I4	Minute (e.g. __12)
33-36	Literal	4A2	STOP:___
37-38	Integer	I4	Year (e.g. 1976)
39-40	Integer	I4	Day of year (e.g. _346)
41-42	Integer	I4	Hour (e.g. __23)
43-44	Integer	I4	Minute (e.g. __10)
45-51	Literal	7A2	VERSION:_____
52	Integer	I2	Program Version (e.g. _1)

Science Data Block Format:

word	Data Type	Format	Contents
1-2	Integer	I4	Start time of averaging interval: year
3-4	"	"	day of year
5-6	"	"	hour
7-8	"	"	minute
9-10	"	"	Stop time of averaging interval: year
11-12	"	"	day of year
13-14	"	"	hour
15-16	"	"	minute
17-22	Real	E12.5	Count rate P 4-13 protons
23-28	"	"	Standard deviation P 4-13 "
29-34	"	"	" P 13-27 "
35-40	"	"	" P 13-27 "
41-46	"	"	" P 27-37 "
47-52	"	"	" P 27-37 "
53-58	"	"	" P 37-51 "
59-64	"	"	" P 37-51 "
65-70	"	"	" P >51 "
71-76	"	"	" P >51 "
77-82	"	"	" A 2-4 alpha particles
83-88	"	"	" A 2-4 "
89-94	"	"	" A 4-13 "
95-100	"	"	" A 4-13 "
101-106	"	"	" A 13-27 "
107-112	"	"	" A 13-27 "
113-118	"	"	" A 27-37 "
119-124	"	"	" A 27-37 "
125-130	"	"	" A 37-48 "
131-136	"	"	" A 37-48 "
137-142	"	"	" A >48 "
143-148	"	"	" A >48 "
149-154	"	"	" E 0.3-0.8 electrons
155-160	"	"	" E 0.3-0.8 "
161-166	"	"	" E 0.8-2 "
167-172	"	"	" E 0.8-2 "
173-1720	9 repetitions of words 1-172		

The acronyms for the rate channels are composed of a letter and an indication of the energy range in MeV/nucleon for protons and alpha particles respectively. MeV for electrons.

The counting rates are given as particles/m² sec sr MeV/N, except for the integral channels P>51 and A>48 which are given as particles/ m² sec sr.

- Note: 1. Negative rates (-0.99999E+04) indicate missing or invalid data.
 2. The energy boundaries for the electron channels E 0.2-0.8 and E 0.8-2 are only rough estimates.

\$NOP
\$NOP
\$NOP ***** DE1 *****
\$EXE TPLIST BS

047379
12/11/74 - 12/31/76

INPUT PARAMETERS ARE: AS SR=1=2

TAPE NO. 1 FILE NO. 1
RECORD 1 LENGTH 104
HELIOS 1 EXPERIMENT 6 UNIVERSITAET KIEL START: 1974 345 21 7STOP: 1976 366 20 29VERSION:
1

TAPE NO. 1 FILE NO. 1
RECORD 2 LENGTH 344G
1974 345 21 71974 345 22 8-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04 0.34351E+00 0.4590
4E+00-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04 0.43291E+02 0.24901E+02 0.00000E+00 0.00000E+
00 0.00000E+00 0.00000E+00-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-
0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04 1974 345 21 331974 345 22 7-0.99999E+04-0.99999
E+04 0.18549E+00 0.37863E+00-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+0
4-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+0
4-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04 0.12167E+04 0.26550E+03 0.17664E+03 0.39498E+02 1974
345 21 531974 345 22 7 0.43230E+01 0.36969E+01-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-
0.28387E+00 0.75866E+00 0.24640E+04 0.10035E+03-0.99999E+04-0.99999E+04-0.99999E+04-0.99999E+04-0.
99999E+04-0.99999E+04 0.00000E+00 0.00000E+00 0.00000E+00 0.00000E+00 0.27761E+03 0.33682E+02-0.999
99E+04-0.99999E+04-0.99999E+04-0.99999E+04 1974 345 22 81974 345 23 7 0.54166E+01 0.20043E+01
0.36581E+00 0.42030E+00 0.63686E+00 0.65757E+00 0.26637E+00 0.35595E+00 0.25907E+04 0.49834E+02 0.4
3213E+02 0.12060E+02 0.60188E+00 0.66823E+00 0.00000E+00 0.00000E+00 0.00000E+00 0.00000E+00 0.0000
0E+00 0.00000E+00 0.29594E+03 0.16843E+02 0.10198E+04 0.11622E+03 0.19314E+03 0.32647E+02 1974 345
23 71974 345 23 59 0.65563E+01 0.23685E+01 0.10431E+01 0.75587E+00 0.00000E+00 0.00000E+00 0.46
096E+00 0.50295E+00 0.25975E+04 0.53503E+02 0.22810E+02 0.94309E+01 0.71954E+00 0.78643E+00 0.00000
E+00 0.00000E+00 0.66577E+00 0.72329E+00 0.24680E+00 0.40574E+00 0.27644E+03 0.17454E+02 0.84121E+0
3 0.11241E+03 0.19403E+03 0.34849E+02 1974 346 0 01974 346 1 59 0.65959E+01 0.15701E+01 0.109
34E+01 0.51430E+00 0.19047E+00 0.25453E+00 0.33557E+00 0.28361E+00 0.25270E+04 0.34876E+02 0.48380E
+02 0.90314E+01 0.00000E+00 0.00000E+00 0.18161E+00 0.20948E+00 0.22322E+00 0.27679E+00 0.10780E+00
0.17722E+00 0.27041E+03 0.11409E+02 0.10947E+04 0.85224E+02 0.18798E+03 0.22796E+02 1974 346 1 5
91974 346 2 59 0.69693E+01 0.22823E+01 0.00000E+00 0.00000E+00 0.13261E+01 0.95068E+00 0.20133E+
00 0.31067E+00 0.25216E+04 0.49267E+02 0.33296E+02 0.10606E+02 0.60470E+00 0.67106E+00 0.42413E+00
0.45314E+00 0.00000E+00 0.00000E+00 0.17307E+01 0.10042E+01 0.31803E+03 0.17497E+02 0.92362E+03 0.1
1039E+03 0.15394E+03 0.29091E+02 1974 346 2 591974 346 3 39 0.65880E+01 0.28430E+01 0.21619E+0
0 0.42006E+00 0.19270E+01 0.14619E+01 0.72103E+00 0.75321E+00 0.26655E+04 0.65171E+02 0.21439E+02 0
10856E+02 0.00000E+00 0.00000E+00 0.72779E+00 0.75720E+00 0.00000E+00 0.00000E+00 0.00000E+00 0.00
00E+00 0.29220E+03 0.21578E+02 0.82824E+03 0.13616E+03 0.15856E+03 0.38456E+02 1974 346 5 311974
346 6 31 0.34208E+01 0.15225E+01 0.27243E+00 0.34473E+00 0.00000E+00 0.00000E+00 0.12168E+00 0.
22996E+00 0.21408E+04 0.43335E+02 0.19830E+02 0.77779E+01 0.00000E+00 0.00000E+00 0.37720E+00 0.406
09E+00 0.11245E+01 0.83653E+00 0.45647E+00 0.49104E+00 0.23776E+03 0.14442E+02 0.99298E+03 0.10899E
+03 0.10967E+03 0.23381E+02 1974 346 6 311974 346 7 31 0.58471E+01 0.20423E+01 0.32968E+00 0.3
9147E+00 0.18803E+01 0.11107E+01 0.64052E-01 0.17119E+00 0.22127E+04 0.45092E+02 0.34780E+02 0.1063
5E+02 0.00000E+00 0.00000E+00 0.87209E+00 0.63752E+00 0.00000E+00 0.00000E+00 0.20576E+00 0.33827E+
00 0.23461E+03 0.14683E+02 0.99440E+03 0.11259E+03 0.14874E+03 0.28108E+02

***** JOB DONE.
\$WEO LPS

\$\$
\$EXE TPNRCF BS

30040	31056	34465	33460	25505	32060	30040	32056	34071	32063
25505	31060	30040	32056	31063	31461	25505	31060	30040	30456
30062	30066	25505	31060	30040	33056	30460	34070	25505	30060
30040	33056	34066	31462	25505	30060	30040	30056	30060	30060
25505	30060	30040	30056	30060	30060	25505	30060	30040	30056
30060	30060	25505	30060	30040	30056	30060	30060	25505	30060
30040	30056	30060	30060	25505	30060	30040	30056	30060	30060
25505	30060	30040	31056	32471	32071	25505	31460	30040	30456
34066	31464	25505	31060	30040	30456	30460	34071	25505	32060
30040	30456	33061	31062	25505	31460	30040	30456	31471	32061
25505	31460	30040	31456	33062	33464	25505	31060	34461	32067
31440	32464	20040	31462	20040	33440	34461	32067	31440	32464
20040	31462	20040	34465	34040	33056	32465	31466	25505	30460
30040	31056	33063	32470	25505	30460	30040	30456	32060	30463
25505	30460	30040	33456	32465	33470	25505	30060	30040	30056
30060	30060	25505	30060	30040	30056	30060	30060	25505	30060
30040	32056	30066	33071	25505	30060	30040	32456	31060	32471
25505	30060	30040	31056	34465	32467	25505	32060	30040	32456
32463	31460	25505	31060	30040	31056	34062	30061	25505	31060
30040	34456	31464	34460	25505	30460	30040	33456	34461	32065
25505	30060	30040	33456	33070	31464	25505	30060	30040	30056
30060	30060	25505	30060	30040	30056	30060	30060	25505	30060
25505	33056	32466	33467	25505	30060	30040	33456	31462	34462
30040	33056	30040	31056	33064	30070	25505	30060	30040	32056
32460	32067	25505	30060	30040	31056	33067	32064	25505	31460
30040	30456	32067	32065	25505	31060	30040	34056	30464	30462
25505	31460	30040	30456	31061	30464	25505	31460	30040	30456
32071	31460	25505	31460	30040	31456	34064	34464	25505	31060
34461	32067	31440	33064	20040	30040	20040	30040	34461	32067
31440	33064	20040	30440	20040	34465	30040	3056	34465	34465
25505	30460	30040	30456	33465	30460	25505	30460	30040	30456
34460	32063	25505	30460	30040	32456	32061	30063	25505	30060
30040	30456	30071	33464	25505	30060	30040	31056	32065	31465
25505	30060	30040	31456	32463	33465	25505	30060	30040	31056
31470	30466	25505	30060	30040	31056	31065	30067	25505	32060
30040	31456	34064	33067	25505	31060	30040	32056	31470	30070
25505	31060	30040	34456	31460	32061	25505	30460	30040	30056
30060	30060	25505	30060	30040	30056	30060	30060	25505	30060
30040	30456	30470	30466	25505	30060	30040	31056	34460	34064
25505	30060	30040	31056	31462	31062	25505	30060	30040	31056
33067	34467	25505	30060	30040	30456	33460	30070	25505	30060
30040	30456	33467	31062	25505	30060	30040	31056	30067	30464
25505	31460	30040	30456	32061	34460	25505	31060	30040	30456
34460	33464	25505	32060	30040	34056	31065	32062	25505	31060
30040	30456	33470	34071	25505	31460	30040	31056	33462	33071
25505	31060	34461	32067	31440	33064	20040	30440	20040	34465
34461	32067	31440	33064	20040	31056	34062	31462	25505	30040
33071	31471	25505	30460	30040	31056	34062	30056	30060	30060
30040	30056	30060	30060	25505	30060	30040	30056	30060	34456
25505	30060	30040	30456	31063	30466	25505	30460	30040	34056
30065	34066	25505	30060	30040	31056	30460	31463	25505	30060
30040	31456	30061	33466	25505	30060	30040	31056	31065	33061
25505	32060	30040	32056	31071	33466	25505	31060	30040	31456
31063	33071	25505	31060	30040	30456	33060	33060	25505	31060
30040	33056	32060	30067	25505	30060	30040	33056	30467	33060
25505	30060	30040	32056	32062	31461	25505	30060	30040	32056
31465	32061	25505	30060	30040	30056	30060	30060	25505	30060
30040	30056	30060	30060	25505	30060	30040	30456	31467	33460
25505	30460	30040	30456	30060	31064	25505	30460	30040	31456
34061	31460	25505	31460	30040	30456	32067	33471	25505	31060
30040	34456	31462	31066	25505	31460	30040	30456	30061	34463
25505	31460	30040	30456	31465	32071	25505	31460	30040	31056
30071	30471	25505	31060	34461	32067	31440	33064	20040	31040
20040	34465	34461	32067	31440	33064	20040	31440	20040	34463
30040	33056	34065	30070	25505	30460	30040	31056	32070	30063
25505	30460	30040	31056	33061	34461	25505	30060	30040	32056
30062	33060	25505	30060	30040	30456	31071	30067	25505	30460