
Subject: IDL code to read MSU and HIRS in Level1b
Posted by [Yamout](#) on Wed, 18 Aug 2004 16:41:57 GMT
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Hi there,

Is there any kind human being who can help an illiterate student to read a few MSU and HIRS data of NOAA 1991. I have got them from www.saa.noaa.gov and they have some differences with LAC and GAC. I have ENVI with full version of IDL installed in PC with Windows NT. Any answer to my mail address would be highly appreciated.

Regards

Hossein

~~~~~

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Subject: Re: IDL code to read MSU and HIRS in Level1b  
Posted by [Yamout](#) on Fri, 20 Aug 2004 14:44:30 GMT  
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Dear Makr,

thank you for your response.

I have not ever touched TOVS data after 1991. It is not my problem to read those data. My problem is to read the TOVS data before 1995. I have ordered and downloaded one of the TOVS sensors called MSU and tired to read this data as is described in POD User's Guide. After many weeks of errors, I discovered that those data are in a "little bit" different format. But the problem now is that the differences are not the same as the notes from the automatic help mail from SAA. The following is the last so called help which could get from the robot there:

-----  
In response to your SAA Help Desk inquiry

E-Mail : Dear Hossein Yamout,

The only difference between the data from before and after January 1, 1995 is the record length. For data from prior to 1995, there were additional spare bytes at the end of each data record, effectively increasing the overall record length. In particular, for the line item you referenced, L5409101, which was for MSU data, you will want to look at section 4.3 of the POD Guide  
<http://www2.ncdc.noaa.gov/docs/podug/html/c4/sec4-3.htm>

If you look at table 4.3.2.1-1. titled Format of MSU data, you will see that pre-1995 data had spare bytes in byte locations 401 to 440 while the data starting in 1995 had spare bytes in byte locations 401 to 437. Otherwise, the formats are identical. If you are interested in the

other TOVS data types, they too had a record length change starting in 1995. The appropriate section of the POD Guide spells out the record length change for these data types as well. For SSU data, see <http://www2.ncdc.noaa.gov/docs/podug/html/c4/sec4-2.htm> and for HIRS data see <http://www2.ncdc.noaa.gov/docs/podug/html/c4/sec4-1.htm>

I hope this clarifies this matter for you.

Sincerely,  
CLASS Help Desk

-----  
The robot in SAA help desk have not realized that there is not only one different between the post and past level1b formats of TOVS data, but there are many others.

By the way, after so many weeks of mailing and now posting, I have received no one (among them many meteorologists in NOAA) which reply me with the word "sorry" somewhere in their mail. Apparently there are not so many people (even high experts in NOAA) who have ever used these data. The next question which would one make is, why they operate and produce so many satellite data which no one can / have used.

If you would like I can make a long list of meteorologists and satellite experts which I have sent a mail and have got "sorry" answer or no answer at all.

In the field of remote sensing I have been met many times some statements in which one claims that has done this or that but nobody can follow how it has been done or if it has ever been done as it is claimed. If it is calibration or correction of a satellite image or just some remotely sensed maps or other earth surface products.

So I suppose would enough for the time being. If you are still interested in this matter, just let me know.

Yours  
Hossein

~~~~~

Mark Hadfield wrote:

> Yamout wrote:

>

>> Dear Mark,

>>

>> thank you for your reply. As I said, I have ENVI with full version of
>> IDL unfortunately in PC (windows) platform. As you have written there
>> are some differences between the before and after 1995 formats. I have
>> asked SAA people and they can only send me such "helps" which I knew
>> already.

>

>

> So are you saying that you *can* read the post-1995 format? If so, how?

> Is there any possibility of your modifying the reader for the post-1995
> file so that it will cope with the difference in record length?
>
> Please be patient if the answers to these questions seem obvious to you,
> but I don't know much about ENVI. Please realise when you post questions
> to a news group that you need to give the readers enough information for
> them to help you.
>
> ---
> Mark Hadfield "Ka puwaha te tai nei, Hoesa tatou"
> m.hadfield@niwa.co.nz
> National Institute for Water and Atmospheric Research (NIWA)

Subject: Re: IDL code to read MSU and HIRS in Level1b
Posted by [David Fanning](#) on Fri, 20 Aug 2004 15:17:10 GMT
[View Forum Message](#) <> [Reply to Message](#)

Dear Yamout,

You write:

> After many
> weeks of errors, I discovered that those data are in a "little bit"
> different format. But the problem now is that the differences are not
> the same as the notes from the automatic help mail from SAA.

I am sorry if I have seemed to belittle your experience.
That was not my intention. Rather, I wanted to commiserate
with it. The weeks and weeks of frustration you have
experienced with satellite data is, in my experience,
par for the course. I've never known it to be anything
BUT frustrating. You can count on the directions being wrong.

I assure you there is someone, somewhere who has read
this data. It is your job to find him. He almost certainly
does NOT work on the help desk. Probably he is a low-level
flunky working for somebody on the committee who designed
this godawful data format. He probably *used* to be somebody,
but had an innovative idea once and got moved to the closet
office next to the boiler room for his pains. His name will
be the fourth or fifth on the list you get from the cousin
of the guy on the help desk of people that "might be able
to help, but probably not".

He probably wrote the program that reads the data in some
obscure language (you hope fervently wasn't COBOL), but
even that will help you. What you need is a simple file, a

program that reads the file, and a list of what the data looks like. Then you start randomly poking around until things start to make sense to you. It usually takes a while.

In the words of Barry Lopez, in my favorite story "Directions", from his `_Desert Notes_` book, it will be like this:

"You will need three or four days to follow it out. The last part will be on foot. Prepare for this. Prepare for the impact of nothing. Get on a regimen of tea and biscuits and dried fruit. On the third or fourth day, when you are ready to quit, you will know you are on your way. When your throat is so thick with dust that you cannot breathe you will be almost halfway there. When the soles of your feet go numb with the burning and you cannot walk you will know you have made no wrong turns. When you can no longer laugh at all it is only a little further. Push on.

"It will not be as easy as it sounds. ... [But] you will always know this: others have made it. The man you gave you the map has been here."

Good luck! :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: IDL code to read MSU and HIRS in Level1b
Posted by [David Fanning](#) on Fri, 20 Aug 2004 15:17:31 GMT
[View Forum Message](#) <> [Reply to Message](#)

Dear Yamout,

You write:

> After many
> weeks of errors, I discovered that those data are in a "little bit"
> different format. But the problem now is that the differences are not
> the same as the notes from the automatic help mail from SAA.

I am sorry if I have seemed to belittle your experience.

That was not my intention. Rather, I wanted to commiserate with it. The weeks and weeks of frustration you have experienced with satellite data is, in my experience, par for the course. I've never known it to be anything BUT frustrating. You can count on the directions being wrong.

I assure you there is someone, somewhere who has read this data. It is your job to find him. He almost certainly does NOT work on the help desk. Probably he is a low-level flunky working for somebody on the committee who designed this godawful data format. He probably **used** to be somebody, but had an innovative idea once and got moved to the closet office next to the boiler room for his pains. His name will be the fourth or fifth on the list you get from the cousin of the guy on the help desk of people that "might be able to help, but probably not".

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"It will not be as easy as it sounds. ... [But] you will always know this: others have made it. The man you gave you the map has been here."

Good luck! :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: IDL code to read MSU and HIRS in Level1b
Posted by [Yamout](#) on Fri, 20 Aug 2004 15:31:18 GMT
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Dear David,

thank you for your reply. It doesn't matter at all. What I have found beyond the worst is the robot in SAA, which compiles the "Help Desk" mails. What a World would be then, if a help seeker only met robots. I hope one day one time i could get the human one.

Goo luck for you also :-)

Hossein

~~~~~

David Fanning wrote:

> Dear Yamout,  
>  
> You write:  
>  
>  
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> laugh at all it is only a little further. Push on.  
>  
> "It will not be as easy as it sounds. ... [But] you will  
> always know this: others have made it. The man you gave  
> you the map has been here."  
>  
> Good luck! :-)  
>  
> Cheers,  
>  
> David  
>

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Subject: Re: IDL code to read MSU and HIRS in Level1b  
Posted by [R.G. Stockwell](#) on Fri, 20 Aug 2004 16:25:07 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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"Yamout" <hossein@uni-bonn.de> wrote in message  
news:cg55g6\$u3q\$2@f1node01.rhrz.uni-bonn.de...

> Dear David,  
>  
> thank you for your reply. It doesn't matter at all. What I have found  
> beyond the worst is the robot in SAA, which compiles the "Help Desk"  
> mails. What a World would be then, if a help seeker only met robots.  
> I hope one day one time i could get the human one.

> Goo luck for you also :-)  
> Hossein  
> ~~~~

I agree, the robots in comp.lang.idl-pvwave are much nicer.  
R. David Fanning is an excellent algorithm.

That reminds me of a story, back in grad school [ERROR: STORY #432134 file not found].

Regards,  
R. Stockwell

P.S. I take it that you are still unable to read the data, is that right?  
I'll take a look at it on the weekend and try to whip up a read routine.

---

Subject: Re: IDL code to read MSU and HIRS in Level1b  
Posted by [David Fanning](#) on Fri, 20 Aug 2004 16:33:24 GMT  
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R.G. Stockwell writes:

> I agree, the robots in comp.lang.idl-pvwave are much nicer.  
> R. David Fanning is an excellent algorithm.

The sarcasm chip was a real doozy to get working correctly.  
It took months and months! And even then we had a error  
rate that was over 38.4%, which was just barely under the  
the acceptable rate of 40% sanctioned by the Robot Builders  
of American. In the end, we had to put a capacitor in that  
would just make him go brain dead every 10th post or so.  
This gave him enough acceptable posts to keep him under  
the limit.

Cheers,

David

--

David Fanning, Ph.D.  
Fanning Software Consulting, Inc.  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Subject: Re: IDL code to read MSU and HIRS in Level1b  
Posted by [R.G. Stockwell](#) on Fri, 20 Aug 2004 16:50:23 GMT

---



"David Fanning" <davidf@dfanning.com> wrote in message  
news:MPG.1b8fd5be96a430e3989847@news.frii.com...  
> R.G. Stockwell writes:  
>  
>> I agree, the robots in comp.lang.idl-pvwave are much nicer.  
>> R. David Fanning is an excellent algorithm.  
>  
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> It took months and months! And even then we had a error  
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> Cheers,  
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> David  
>  
> --  
> David Fanning, Ph.D.  
> Fanning Software Consulting, Inc.  
> Coyote's Guide to IDL Programming: <http://www.dfanning.com/>  
>

The part I am really impressed with is the very low number of  
"crush kill destroy" occurrences. R. Stockwell has about a CKD incident  
every 10 spam emails, which has resulted in multiple meatware failures  
here at CoRA.

---

Subject: Re: IDL code to read MSU and HIRS in Level1b  
Posted by [David Fanning](#) on Fri, 20 Aug 2004 16:58:46 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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R.G. Stockwell writes:

> The part I am really impressed with is the very low number of  
> "crush kill destroy" occurrences. R. Stockwell has about a CKD incident  
> every 10 spam emails, which has resulted in multiple meatware failures  
> here at CoRA.

We programmed in an almost unlimited tolerance for  
dumb questions by having the robot learn from his

own experience. But what we can't seem to get right is the irritation factor when people want to get something for nothing. It's almost like there is a short circuit there. We are still investigating...

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Subject: Re: IDL code to read MSU and HIRS in Level1b

Posted by [Yamout](#) on Fri, 20 Aug 2004 17:24:08 GMT

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Dear Stockwell,

thank you very much for your posting.

I am illiterate PC user who has been programing since Comodore 64 with audio tapes. My first PC code was in FORTRAN in an Olivetti 8084 (I think so). Since then I have discovered how stupid I am, as I write some codes or architecture some more stupid excutables (in some cases even with GUI) in C# or more convenient in C++. IDL with all of its advantages (or perhaps also disadvantages) is a complete new world for me. I am trying to understand it since IDL 5.1 and have always discover more and more about the sense of its use.

It would be a nominal experience for such IDL users like me to discover more about the IDL society and their publicity.

Hope I have not caused a wasted weekend for you.

Yours

Hossein

~~~~~

R.G. Stockwell wrote:

> "Yamout" <hossein@uni-bonn.de> wrote in message
news:cg55g6\$u3q\$2@f1node01.rhrz.uni-bonn.de...

>

>> Dear David,

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>> beyond the worst is the robot in SAA, which compiles the "Help Desk"

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>
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> Regards,
> R. Stockwell
>
> P.S. I take it that you are still unable to read the data, is that right?
> I'll take a look at it on the weekend and try to whip up a read routine.
>
>
>

Subject: Re: IDL code to read MSU and HIRS in Level1b
Posted by [Mark Hadfield](#) on Sun, 22 Aug 2004 22:00:08 GMT
[View Forum Message](#) <> [Reply to Message](#)

Yamout wrote:

> Dear Mark,
>
> thank you for your response.

It was nothing, really.

I have been away (slaving in the olive grove) since midday Friday NZ time, so I have not had the pleasure of participating in this thread since then.

> I have not ever touched TOVS data after 1991. It is not my problem to
> read those data. My problem is to read the TOVS data before 1995.

OK, but you posted information about the *difference* between the data formats before and after 1 Jan 1995, so I naturally assumed this was relevant in some way.

> I have ordered and downloaded one of the TOVS sensors called MSU and
> tried to read this data as is described in POD User's Guide. After many
> weeks of errors, I discovered that those data are in a "little bit"
> different format. But the problem now is that the differences are not
> the same as the notes from the automatic help mail from SAA.

Ah. So you have written IDL code which should read the data, but it doesn't.

Do you actually know that your routine will read the data as described in the User's Guide? It might take some effort to verify this, but it would be nice to be able to start from some code that successfully reads *something*.

I suggest you get some coffee (or other legal drug of choice), the User's Guide and whatever "help" info you can, open up your code in the IDL editor, add some breakpoints, and work your way through the data, critically examining every number produced by every READ statement.

Look on the bright side: when you've finished you can post your code here and achieve instant fame and fortune. ... On second thoughts, forget about the fortune.

--

Mark Hadfield "Ka puwaha te tai nei, Hoesa tatou"
m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)
