

HAIS:
Heads of Arctic & Antarctic IPY Secretariats

HAIS – 2

Draft **Minutes** (as of 15 February)

The second HAIS meeting was held 1-2 February 2007 at the Danish Polar Center in Copenhagen, Denmark.

Chair of the meeting was Henning Thing, DPC. The meeting was split into sessions, and the chairs of these sessions were: Henning Thing, David Hik and Olav Orheim.

Participants: See List of participants, Appendix 1

1: **OPENING**

1.1 Welcome and introductions

Director Hanne Petersen welcomed participants to DPC, and Henning Thing welcomed as HAIS-2 Chair and gave some practical information. As a few participants were unable to attend HAIS-1, there was a round of self introductions.

1.2 Adoption of the agenda

After adding 'National reports' under 2.5.9, the agenda was adopted.

1.3 Minutes from HAIS-1

Draft Minutes (as of 22 October 2006) had been circulated without any additional comments. This draft together with all HAIS-1 agenda papers were also mad available at:

<http://classic.ipy.org/national/>

The Minutes were approved.

1.4 The Chair's Brief

Henning Thing reviewed progress made on HAIS-1 agenda items, and noted also that most of these issues will be further discussed at HAIS-2.

2: MAIN ISSUES

2.1 Legacies

IPY legacies beyond project level were agreed at HAIS-1 as a key area for HAIS (in addition to exchange of operational information).

2.1.1 IPY legacies: Next steps

Following his paper (and ppt presentation) at HAIS-1, David Hik briefly presented his paper on 'Some thoughts about the next steps for securing the Legacy of IPY' as an introduction to further discussions, see Appendix II.

Conclusions from the discussion:

- *HAIS to stimulate the development of IPY legacies beyond project level,*
- *HAIS offering the IPY Joint Committee (JC) assistance in developing such legacies, and if asked, to form a Legacy Task Force using the HAIS as a discussion forum and outcome to be reported to JC.*

Action: Hik, Nilsson, Rogne to produce a legacy paper to the JC.

Deadline: 8 February

2.1.2 SAON: Sustained Arctic Observing Network

The need for a well coordinated and sustained Arctic observing network that meets scientific and societal needs has been identified at numerous international meetings and in several high profile reports. There is a strong consensus that scientific understanding of the changing Arctic system and its global connections and consequences requires improved Arctic region observing capabilities that are linked to global observing activities.

The Arctic Council Ministerial Meeting (October 2006) had requested AMAP '*to cooperate with other AC working groups and other partners in efforts to create a coordinated Arctic observing network, that meets identified societal needs*'.

AMAP together with IASC and IPY have followed up the AC request by informal consultations, included a meeting on 24-25 January 2007 in Tromsø, Norway, where representatives of some major organisations initiated preliminary discussions of a strategy for creating a Sustained Arctic Observing Network (SAON).

Odd Rogne presented the outcome of the Tromsø meeting, which is also available as Appendix III.

As to next steps, the SAON Coordinating Group aims at a major workshop in November 2007 inviting representatives of ongoing and planned observing networks who are interested and willing to contribute to developing and maintaining SAON.

The SAON Coordinating Group was seeking a host for this workshop, and they also envisaged a need for a SAON Secretariat.

H AIS concluded that this initiative meets the needs identified at H AIS-1, and encouraged the SAON Coordinating Group to move forward as planned. This is a comprehensive and complex initiative that requires good working relations with both ongoing observing networks as well as global networks, and will need a 'neutral energy centre' for implementation.

Further, they also noted that several IPY proposals focussed on Arctic observations and should be invited to the workshop.

2.1.3 Arctic Policy Legacy

At H AIS-1, some ideas on an IPY legacy within the Arctic policy area were voiced and Ragnar Baldursson, Iceland agreed to present some thoughts at H AIS-2.

The Antarctic Treaty text had been circulated prior to the meeting, whereas Baldursson's introduction was oral.

The Antarctic Treaty is a legacy of the previous IPY (e.g. the IGY). However, this treaty is of less use as a model for the Arctic because the areas are so different (except for a polar environment). In the Arctic you have national borders, towns and other regular settlements etc.

Arctic Council is the policy body for the Arctic; e.g. the forum for cooperation between Arctic states with permanent participants (indigenous peoples) and a number of other nations and organisations as observers.

Several issues are not covered by the Arctic Council (legal issues, resources etc.), and you will also have to consider on which issues you are likely to reach consensus.

As for IPY and the Arctic research community, it would be logical to focus on issues being important for carrying out research projects and promote them to the Arctic Council. Some of these issues have already been discussed such as better access to all parts of the Arctic, and with reference to SAON: The initiation was an AC request.

The Arctic Council has a rotating chairmanship, and the country chairing usually has a programme for the issues they wish to promote during their period. At present (and during IPY) Norway is chairing, and any issues should be raised with the Chair.

The discussion revealed two issues being important to scientists: Access and Observations. Further, it was noted that Arctic Parliamentarians held annual meetings, and is a forum to raise policy issues.

2.1.4 Funding for International Polar Research.

Funding of IPY projects are to a large extent based on national funding, with national funding agencies and their procedures. Implementing international polar research projects based on this structure creates difficulties, which has been demonstrated in IPY.

Paul Egerton introduced this issue pointing to the complexity of multinational funding as such funding is based on national priorities and reviews. Polar research adds to this complexity as expensive infrastructure often is required.

In addition to national funding, there are other funding structures which could be grouped into the following:

- Regional (example: the Nordic Council of Ministers)
- Supranational (example: the EU Framework Programme)
- International/intergovernmental (UN)

Like the national funding agencies, these bodies have their own priorities.

At European level, they had started a discussion of a 'European Model' called 'Idealized European Programmes and Implementation Cycle'. After a European testing period, it could be tested for a wider application.

This issue will also be discussed during ASSW, and the outcome there should be included in the next HAIS paper.

During the discussion several models for international funding cooperation were mentioned, such as IGFA (International Group of Funding Agencies); e.g. representatives of (mostly) national funding agencies coming together and discussing funding of global change research.

IODP (Integrated Ocean Drilling Programme), which require an expensive drilling ship and equipment (e.g. beyond the resources of an individual country).

AC (Arctic Council) had some less successful experience in pooling national funds into a common fund.

Although it may seem farfetched at this stage, we should have a vision of an 'International Polar Fund' and describe how it could come about and how it could work.

Initiating any progress requires bringing people together (in casu: representatives of funding agencies and some leading scientists with international experience) starting to discuss this issue in an open and structured way. HAIS can be a forum for preparing that to happen.

Conclusion:

In spite of all problems associated with this issue, the need is there and it should be explored with a view to creating an IPY legacy.

The issue should be presented as a short and well structured overview paper, and discussed further at the next regular HAIS meeting. Paul Egerton was encouraged to draft such a paper.

Did IPY use the best approach and structure? Was asked as it has some bearing on the funding success. However, it was agreed to postpone that discussion for a review of IPY, which should be undertaken after IPY.

2.1.5 Arctic Portal

The Arctic Portal is an IPY endorsed project as well as endorsed by the Arctic Council (but not responsible). It is already operative and you can visit at:

<http://www.arcticportal.org>

Ragnar Baldursson gave a presentation of the Arctic Portal and its potential for:

- Public & Private Networking
- Science, Monitoring & Data Management
- Education & Outreach
- Media & Entertainment
- Economy, commerce etc.

In an IPY legacy context, he pointed to the Arctic Portal's potential for accessible preservation of IPY-records.

His presentation is available as Appendix IV, and the portal itself can be viewed at the web site mentioned above.

2.1.6 ICARP II Up-date

IPY projects are short-term, whereas ICARP II projects have a decadal perspective. There has been a good contact between these two planning processes, so several projects will start up as IPY projects and continue as ICARP II projects.

ICARP II started as a planning process similar to the IPY process, but with a long-term perspective. Ten working groups drafted initial science plans, which were discussed and reviewed at the ICARP II conference (in Copenhagen, Denmark in November, 2005) The science plans can be downloaded from the IASC and AOSB web sites (see: <http://www.iasc.se>)

Discussions of the ICARP II implementation started at an ICARP II workshop in Potsdam, Germany last autumn. Participants were WG chairs and representatives of the sponsoring organisations with a view to transforming the science plans into manageable projects.

Reports to be released in the near future:

- Conference Report, and
- Project Implementation Reports

The HAIS noted this information, and in particular that the established science organisations are ready to carry on science projects initiated during IPY and thereby taking care of the IPY legacy at research project level.

2.1.7 Maintaining the IPY Momentum

The official launch in Paris and many national launch events will ensure a first wave of attention. If these events go well, we will have established a baseline familiarity with what IPY is and why it is happening. But awareness of IPY is only one step and two years is along window of time to maintain IPY visibility.

Chris Elfring had prepared a discussion paper addressing this issue. Unfortunately, she was unable to attend the meeting. However, her discussion paper is available as Appendix V. Her paper also includes an addendum by Paul Uhler, US NAS on 'Comments on Access to

Scientific Literature’, which is both part of maintaining the IPY momentum during IPY and a legacy issue.

Chris Elfring listed some key questions (see Appendix V) for participants to discuss.

In general, the HAIS were very concerned about this issue, and it was agreed to exchange information on events, and revisit this issue at future meetings.

The IPY EOC sub-committee is a body that works continually with IPY outreach (and education). IPO and EOC will meet 2 March 2007, and a plan for outreach activities for the next 24 months is on their agenda.

Other comments:

The World Environmental Day will be held in Norway 5 June 2007, and there will be a Polar Day, which will promote IPY and polar research.(www.unep.org/wed)
In Norway, there is also a ‘Research Week’ promoting science to the public. Polar research will be featured.

Arctic Portal was also mentioned as a venue for preliminary science reporting, and thereby reaching out to a broad community.

Conclusion:

HAIS will re-visit this issue at coming meetings as they are directly (or at least indirectly) involved in maintaining the IPY momentum.

Further, IPO will continuously record coming events on the IPY web site, and all HAIS are encouraged to provide inputs.

2.2 Funding

2.2.1 Project Funding

At HAIS-1 it was agreed to identify the real funding situation for each IPY project, and doing so in a direct cooperation between the HAIS (having direct contact with Project leaders in their country) and the IPO.

Since then, the IPO has been considering how this best could be done, and Henning Thing at DPC offered a web based registration system. The system is based on a simple registration form (only necessary information to give an overview.)

Information about this solution had been circulated widely, and all HAIS are encouraged to promote it to all Project leaders and others.

The IPY Funding Survey registration is located at:

<http://www.ipy.dk/fundingstatus.htm>

This service has been in operation since November last year, and 48 consortia have reported back. When the funding decisions are made public in Canada and the USA, the funding status information is likely to be significantly improved.

Conclusion:

All HAIS were encouraged to promote this service in their contact with Project leaders as it would be of mutual benefit to have this information.

Henning Thing and the DPC were warmly thanked for their assistance.

David Carlson added the following information:

IPO encourages the use of the funding status web site. However, some PIs reports directly to the IPO and consequently there is a delay in getting an up-dated status on the mentioned web site.

At present, we have 50 projects with substantial funding, and 120 with partial funding. As information comes in from more countries, projects will move from the partial funding category to substantial funding.

After the clustering, there are 228 projects, 170 research projects and 58 EOC and 1 data. A few projects have been withdrawn, and there are also a few with no information.

There is a European bias in the information available, partly because of missing information from Canada and USA.

There is also a bias in leadership of the projects.

In March, IPO will go back to the remaining projects to clarify the final funding situation for this year.

Some other information from this discussion:

- Scientists in IPY projects are coming from 63 countries,
- National committees have been established in 38 countries, and 20 of them have their own web site,
- Projects vary in size. For instance China has packed all their projects into one programme. ("PANDA")

This type of information will be added in the media package, which will be made available for the launch events.

2.2.2 Funding of IPO

There are many contributions to the IPO:

- Cash from: UK, Germany, Netherlands, Norway and USA
- Staff secondments from: Norway and Sweden
- In-kind: Denmark, Germany and Iceland

At present, the priority need is full funding of a data coordinator. Partial funding is already in hand from Norway and Canada. However, €50.000 over 2 years is missing.

The Sub-committees are our financial orphans. WMO helped out on the observational group, and the EOC rely on the host where the meeting is being held.

H AIS are kindly requested to help with travel funds for members coming from their countries.

2.2.3 National Implementation of IPY Data Policy.

Olav Orheim had circulated an e-mail to all H AIS asking how they planned to implement the IPY data policy in their country.

Chris Elfring, USA had responded in writing, copied to the whole H AIS group.

At the meeting, the following information was provided:

Canada has established a national data management committee. If project leaders or participants did not comply with the data policy requirements, they will lose their funding for next year.

Canada had also realized the need for strengthening the data management by providing 7 mills. CAD as seed money for existing data centres.

Another issue that had come up was a proposal for having a 2 years data embargo period.

The Netherlands had not asked about data management when scientists were making funding proposals, but they had underlined in their grant letter that people had to comply with the IPY data policy.

As data handling requires some extra resources, they had added 2 % to the original project funds, a central data budget of 2.4 % of total project funding. The embargo period had also been an issue in the Netherlands.

USA: See answer from Chris Elfring, circulated earlier.

Norway had ended up with a similar situation as for the Netherlands.

United Kingdom has engaged an IPY-UK data coordinator for the two years of IPY field work (funding NERC and BAS). All UK projects have to use established data repositories, and the data coordinator will be tasked to:

- ensure that these diverse IPY data sets have appropriate metadata, and
- that these data, whilst physically located all over UK are entirely transparent and readily available to any user.

IPO had requested information from all Project leaders as to where their data would be deposited. So far, about 40 responses had been received.

2.3 Launch Events

The official launch event will be held 1 March in Paris with ICSU as the local organizer. Details are available (and will be up-dated) on the IPY web site.

Also information on national and other launches will be found on this web site, so all H AIS are encouraged to provide information.

Some ideas on web casts from the high North and South Pole were uncertain for the time being due to technical challenges. Hopefully, this problem will be resolved by pre-recording.

Japan will have an opening Symposium, whereas Russia will have a launch with AARI and the Russian Geographical Society in charge. Norway has invited a large number of school children to downtown Oslo for building snow sculptures. The theme will be climate, and the slogan will be: 'Bring us the winter back'. HRH the Crown Prince and the Prime Minister will attend.

2.4 IPY Communication and Information.

The main event in this area is the launch of the new IPY web site, the address is: <http://www.ipy.org>

(Information on the previous web site is available at: <http://classic.ipy.org>)

The idea behind the new web site was: 'Get in, get interested, and get out' or in other words: Far more easy to use.

Additional information:

- The web site contains a gallery for free use
- The IPY Brochure can be used by all countries by translating the text into your own language
- The new web site has also a potential as communication link between national web sites and the IPY web site.

Olav Orheim informed that Norway will also have a new version of their web site (in Norwegian, English, Sami and Russian). They have also bought a photo gallery that will be made available free of charge to all IPY use.

2.5 Other issues

2.5.1 HAIS Objectives and Members

At HAIS-1, the text below was initially agreed, and to be revisited at HAIS-2:

'Objectives are to provide a platform to:

- Provide support and enhance capacity amongst national Secretariats
- Develop and facilitate collaboration among IPY countries
- Discuss common/practical challenges with the view to achieving/facilitating resolution
- Develop advice for consideration/implementation by IPO/JC
- Share information about international, national, and regional IPY programs and initiatives
- Assist each other in meeting common objectives.

Members are national representatives who are active members in the planning and implementation of IPY programs within their own nation.'

Conclusion: HAIS-2 agreed to this text.

2.5.2 HAIS: Arctic & Antarctic

After HAIS-1 all national Antarctic IPY secretariats were:

- informed about HAIS-1
- asked to consider what would be useful for them, quoting options mentioned under 5.3 in the HAIS-1 Minutes.

No responses had been received.

Suggestions:

The Executive Director of SCAR should be invited to HAIS meetings.

David Carlson will explore a possibility to have a HAIS meeting in the southern hemisphere.

2.5.3 HAIS and IPY JC

The IPY JC knows about HAIS, but as they have not had any meeting after HAIS-1 they have not had any opportunity to discuss the relationship.

The JC will start discussing IPY legacies, which could be a positive interface between JC and HAIS. As reported under 2.1.1 HAIS will produce a statement or discussion paper for JC to consider.

As both JC and HAIS will end their activities in a few years, all legacies have to be firmly anchored in existing and permanent organisations like IASC and SCAR,

2.5.4 Post IPY Conference Planning

A group under the JC had been discussing this issue, and J Cynan Ellis-Evans had circulated a draft plan, see Appendix VI. Dave Carlson introduced the paper as Cynan Ellis-Evans was unable to attend.

The HAIS appreciated this overview and had no direct suggestions for changes. They found the overview very useful, also for related conference activities.

Other comments:

- Information about a possible Youth conference was given. However, the specifics were missing.
- AFOPS and PAG are likely to organize an IPY conference/workshop in 2009
- IASC/SCAR conference as the mid-term event was supported
- The main summing-up event should be in 2010, which also should contain early science outputs
- 'Closing Ceremony', 1 March 2009 was suggested to 'sign-off' the IPY field seasons

- 2011-2012: IPY Policy Conclusions (AC, ATCM, Arctic Parliamentarians)

2.5.5 Extending the IPY Field Season

Some discussions had been ongoing on extending the IPY field season, and the HAIS were invited to comment.

Several countries assumed that the projects they were responsible for would continue beyond IPY as the work would not be completed in the IPY period.

However, the main question is:
Should we officially extend IPY?

Some answers to this question were:

- Not change the formal name (IPY 2007-2008)
- Not logical to change before we have started
- JC (ICSU and WMO) should listen to views on such needs by the scientists before discussing any extensions
- Some IPY projects address issues requiring even decadal field seasons, or long-term legacies. However, the home for such activities should be established science organisations
- Individual IPY projects have to decide their own cut-off time
- IPY has to be seen as a singular event; 2-3 years of intensive activity

2.5.6 Nordic IPY Magazine

The national committees in the Nordic countries have initiated this magazine with DPC as the editor. The contents will be IPY activities involving two or more of the Nordic countries. The first issue (in English) will be published 28 February.

As this magazine also will be available electronically, Henning was asked to circulate it in the HAIS group.

2.5.7 Nordic Polar Lexicon

This will be a contribution to the IPY written in English and translated into Nordic languages. The initiative could be of interest to any country.

Lars Nilsson introduced this initiative with examples from other science areas. The basic idea is to explain science to the general public on the internet, and doing so by using animations to a large extent.

Lars Nilsson was encouraged to come back with further information at the next regular HAIS meeting.

2.5.8 New IPY Countries

Hajime Ito mentioned that JARE celebrated its 50th anniversary this year as it was being established for taking part in the previous IPY (IGY).

He noted that scientists from several nations new to polar research would take part in IPY, and this could be the seed for regular polar research activity in some of these nations. He encouraged all HAIS to note these phenomena and offer assistance, if the new nations should ask.

2.5.9 National Reports

Canada presented an overview of their IPY funding. However, as this information is not public yet, details are not included in these Minutes.

43 projects will receive funding, and they have a budget of 90 mill. CAD plus infrastructure. They have many and diverse IPY activities, which best can be studied on their web site. They also expressed a willingness to share 'whatever we have'.

Iceland will focus on cyberspace in promoting IPY science. All research in Iceland is regarded as polar research, so the coverage is expected to be comprehensive.

Norway has strong political support as the present government has a focus on northern regions and the Arctic. The Norwegian chairmanship of the Arctic Council is also very helpful for getting attention to the IPY. A new and improved web site is likely to be available 15 February and officially on March 1.

The international indigenous peoples' launch event will be 14 February in Kautokeino, Norway.

On 1 March several launch events are planned in addition to the main event in Oslo: Tromsø (Minister of Environment), Longyearbyen (School children will have the day off), Ny-Ålesund (international happening as there are research stations from several countries) from the Troll Station in Queen Mauds Land in Antarctica transmitting alive.

Denmark has put all their activities on their web site and all HAIS were encouraged to visit. Kangerlussuaq in Greenland will be the 'IPY Service Station' for researchers working in Greenland.

Sweden is concerned with getting an overview of all their polar research, including IPY. They have no funds ear-marked IPY, so IPY proposals have to compete in a regular way as to funding.

Their launch event will be at the Ice Hotel in Jukkasjärvi, to which they have invited 30 ambassadors and other high profile people. The contents include key note speakers and a virtual expedition to the polar regions. There will be a polar research expedition travelling around.

They are very interested in creating IPY legacies.

Finland will have their launch 3 March, based on scientific presentations and other events like IPY stamps, coins etc. Teachers are one of their targeted groups, and a teachers' tour to Svalbard is in planning. An Arctic Science Exhibition will be held at the Arctic Centre in Rovaniemi.

As to projects, they have 7 projects funded by regular budgets (like in Sweden). They are a partner in the Kinnvika expedition.

More details are available on their web site.

Russia has got 250 mills. Rubles as funding for 2007. Their projects are grouped in three main geographical areas:

- Arctic Ocean and the marginal seas
- Tiksi (together with Finland and USA)
- Svalbard: field station and renting their own building in Ny-Ålesund.

It is now also officially confirmed that the tax for foreign IPY vessels in Russian waters has been cut by 50 %. Further, they have been working on simplifying the access application procedure for making it as short as possible.

A lot of information is available at the IPY Eastern Arctic Sub-office web site, which you will find at:

<http://www.ipyeaso.aari.ru>

There you will also find all Arctic Ocean ships and deployments, environmental conditions during IPY etc.

The Netherlands

About 50 % of their projects have already started. At their web site, there is a calendar of IPY events (EOC, most activities in Dutch), so details can be studied there. There will be a polar year start web site (a portal of relevant links – a Dutch version of UK “mystart.co.uk”). There is a new polar year web site hosted by a national radio/internet network combining all Dutch web logs during IPY including audio and video fragments. For primary school there will be an educational interactive web site (launch April) in partnership with the Climate Change College.

Poland 10 projects have been accepted for funding, and 12 more projects are expected to get funded (decision in a few weeks). Most of the field research will be carried out at their Hornsund station in Svalbard (initiated during the last polar year) and at their Antarctic station. Most of their IPY activity will be in 2008.

United Kingdom

J Cynan Ellis-Evans had circulated an overview to all prior to the meeting as he was unable to attend. Some highlights from his report:

Royal Society has agreed to match the US funding support for IPO - £ 24 K per year. The Society will also fund a new IPY-UK web site. They are interested in hosting an International IPY Discussion Meeting in 2009. UK launch event: 26 February, opened by HRH Princess Anne. A travelling exhibition “Ice Station Antarctica” developed by Natural History Museum and BAS will go on a world tour next year. Funding status still ongoing – over 50 % already funded. Some projects have had to modify their plans as international partners have not been funded.

European Polar Board

A ‘European Polar Year’ is in planning consisting of several activities: A brochure which will be released at their launch event, an EOC workshop aiming at European teaching material, possibly a joint cruise to Svalbard.

An IPY Conference chaired by Jørn Thiede and Sverker Sørlin. A network of European communication officers.

The FP 7 has ‘Aurora Borealis’ (new European polar research vessel) launch in combination with a series of workshops.

ESF is supporting a European IPY web site at AARI, see: <http://www.euroipy.org>

2.6 Next Meeting

A short side meeting during ASSW was agreed and focussing on a few specific issues.

Chairs: Olav Orheim and David Hik.

Volker has checked with the ASSW organisers, and the option we have is 15 March at 18-20. This is just after Science Day has ended, so we assume it would have to be a 'working dinner meeting'.

Next regular meeting was preliminary agreed to be held in September. More exact time and place to be agreed at ASSW. Possibilities mentioned were having a meeting in combination with an Antarctic meeting in India or added on to a JC meeting.

As to India, according to Colin Summerhayes that meeting will be less suitable as attendants will mainly be policy people.

When and where the next JC meeting will be held will be decided at their meeting in early March.

3: Information Section

The intention with this section is to provide a market place for useful information and information sources for the HAIS.

Issues in this section is not planned to be discussed at the meeting.

Members are encouraged to propose such items for future meetings.

3.1 Reports from IPY Sub- Committees.

These reports are directly useful for your national sub-committees and for you as a HAIS to monitor. Other members of your IPY community may be interested as well, including your national IPY committee.

In order to facilitate a good information flow, you should establish links from your national web site to the IPY/IPO web site, as well as including information about them in your national newsletter or other communication.

3.2 IHY 2007

IHY 2007 – UN Kick-off Ceremony and Conference was held 19-20 February, 2007 in Vienna, Austria.

The starting date of the International Heliophysical Year (IHY) was set to 19 February.

The HAIS were informed earlier about this event, as well as guided to their web site at: <http://www.lesis.obspm.fr/IHY/kickOFF/pages/registration.html>

3.3 Data Survey

IPY Project Coordinators have been requested to fill out a short IPY survey of data requirements and plans at:

http://nside.org/forms,ipy_data_registration.html