

EISCAT Scientific Association  
Registered as a Swedish non-profit organisation  
Organisation number: 897300-2549

Annual report for the financial year 2010-01-01 – 2010-12-31

The EISCAT Council and the Director for the Association submits herewith the annual report for 2010.

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## **ADMINISTRATION REPORT**

### **Ownership, organisation and objective**

The EISCAT Scientific Association was established in 1975 through an agreement between six European organisations. Japan joined in 1996 and the Peoples Republic of China in 2007.

The EISCAT Associates at 2010-12-31 are: China Research Institute of Radiowave Propagation (Peoples Republic of China), Deutsche Forschungsgemeinschaft (Germany), National Institute of Polar Research (Japan), Natural Environment Research Council (United Kingdom of Great Britain and Northern Ireland), Norges forskningsråd (Norway), Solar-Terrestrial Environment Laboratory, Nagoya University (Japan), Suomen Akatemia (Finland), and Vetenskapsrådet (Sweden).

A new EISCAT Agreement came into force 2007-01-01, with all Associates making long term funding commitments to the Association. The Association has its formal seat in Kiruna, Sweden, and is registered as a non-profit organisation.

The aim of the Association is to make significant progress in the understanding of physical processes in the high latitude atmosphere by means of experimental programmes generally conducted using the incoherent scatter radar technique, which may be carried out as part of wider international projects. For this purpose, the Association has developed, constructed, and now operates, a number of radar facilities at high latitudes. At present, these comprise a system of stations at Tromsø (Norway), Kiruna (Sweden), Sodankylä (Finland), and Longyearbyen (Svalbard).

The Association is fully funded by the Associates but additional operations may also be funded by short term additional contributions from both Associate and non-Associate bodies. Depending on the available funding, scientific priorities and operational targets are adjusted on an annual basis.

The EISCAT Council is charged with the overall administration and supervision of the Association's activities. The Council appoints a Director, who is responsible for the daily management and operation of the facilities of the Association.

### **Operation and scientific development**

The EISCAT Radars delivered a full programme of operations for the user community and operated reliably throughout the year with only minor interruptions due to equipment or operational problems.

The various EISCAT radars operated for a total of 3 496 accounted hours (3 688 hours in 2009).

The UHF tristatic runs, first envisaged to not be possible after July 2010, could continue also after that date since the mobile operators that bought that frequency allocation did not start using it during the year. Consequently, some Common Programmes as well as Special

Programme could be run in the tristatic mode (transmit/receive in Tromsö and receive only in Kiruna and Sodankylä).

Common Programmes amounted to 42% (43%) of the operations. Special Programmes amounted to 37% (40%) and other operations amounted to 21% (17%) of the total hours.

Scientists from France, Ukraine and Russia paid for the use of the facilities. Totally 254.5 hours (298.5 hours) were run on behalf of these countries. Both Ukraine and Russia have Affiliate agreements. Additionally, the European Space Agency (ESA) used the infrastructure for a coordinated tracking campaign of objects PROBA-1, METOP-A, JASON\_2, GRACE-1, ENVISAT and CRYOSAT\_2 in November and December. Totally 28.27 hours were run on behalf of, and paid by, ESA.

The EISCAT\_3D planning continued during the year and the EU Framework Programme 7 bid for a preparatory phase, submitted in December 2009, was successful such that a new EU supported project, the FP7 EISCAT\_3D\_2 preparatory phase could start 2010-10-01. It is a four year project with a total budget volume of 6 MEUR and eight partners. EISCAT is both a partner and coordinator for the project. The budgeted expected support from EU for the EISCAT involvement amounts to 1.25 MEUR spread over the four years. The EU grant for the whole project is 4.5 MEUR, which is channelled through the coordinator.

The goal of the preparatory phase project is to resolve the remaining legal, financial and technical questions which must be addressed before the construction of the EISCAT\_3D system.

A new development undertaken in the year was the project proposed by the Chinese Associate, China Research Institute of Radiowave Propagation (CRIRP), to build a third antenna system on Svalbard with dual mode capabilities. The antenna would be used for EISCAT regular radar use and for Chinese operations such as coordinated VLBI measurements together with mainland China antennas. The EISCAT involvement is to do the initial feasibility studies for a possible build on Svalbard. The work is contracted out to consultants and the cost is reimbursed from CRIRP.

### **Future operation and scientific development**

During 2011, EISCAT will continue to support the wide range of existing and new programmes proposed by the various Associates' scientific communities, including the hosting of user-supplied equipment.

Tristatic runs will likely be possible to be done some more months and will be encouraged. The small Demonstrator receive-only array built in connection with the previous EISCAT\_3D project, the design study, will be tilted downwards such that the array points at the E region and meteor heights 80-120 km instead of its present direction to F-region around 300 km above the VHF transmitter in Tromsö. If the sensitivity is adequate, it could be a valuable option for many users with interest in the lower regions. The modification will be ready summer 2011.

The three other radar systems, UHF in monostatic mode, VHF and the Svalbard Radar continues undisturbed. The Heating facility has been modernised and can also now be used as a magnetospheric radar.

### **The work of the Council and its committees**

The Council had two ordinary meetings under the leadership of the Chairperson, Dr. Kirsti Kauristie: in June, Tokyo, Japan and in November, Cambridge, United Kingdom. At the end of year, the Council Chairpersonship was taken over by Dr. Tomas Andersson, Vetenskapsrådet, Sweden. He will serve for two years. The Council Advisory Group had two meetings under the leadership of the Chairperson, Dr. Kirsti Kauristie: in April, Stockholm, Sweden and in October, Helsinki, Finland. The Scientific Oversight Committee had two meetings under the leadership of the Chairperson, Prof. Ruiyuan Liu: in March, Nagoya, Japan and in September, St. Petersburg, Russia,

Council considered regular business matters, including the continued EISCAT\_3D work and the third antenna proposal. Council decided also to assign 200 hours peer-reviewed pool of time (PP programme) opened for users around the world and to allocate 100 kSEK annually for a regularly occurring radar school. Both actions were implemented in the 2011 budget. The financial implications from potential departure of Associates in 2012 resulted in proactive measures both involving work in improving the income side as well as reducing operating costs to be included in the 2012 budget onwards.

The transfer of the UK Associateship from the Science and Technology Facilities Council (STFC) to the Natural Environment Research Council (NERC) was finalised during the first months of the year meaning that NERC is from 2010-01-01 the UK Associate.

### **Budget development during the year**

The 2010 operations ended just below the operating target set for the year and the operations went without any major technical issues. The application for the EISCAT\_3D preparatory phase was done partially by external writers, paid as consultancy. The management travel continued at a very high rate. Income from bank interest continued on a low level. Active placements generated reasonable return that compensated from the marginal bank interest income. The income side continued to benefit from the relatively weak SEK-currency and generated, due to the Associate commitments in local currencies and annual payments in the first half of the year, additional income. The strengthening of SEK during the latter part of the year created though some exchange rate losses.

### **The long-term budget plan**

The long-term budget plan is difficult due to the current known funding shortage from 2012 onwards. For 2011, we plan for a normal year and the overall operating target can likely be maintained. The 2012 budget will include substantial cost reductions, including a reduced staff complement, and the operations from then on will be more directly tied to received contributions.

### **The result for 2010 and the deficit handling**

The year was balanced by covering the deficit, -83 kSEK, from the Restructuring reserve.

**PROFIT AND LOSS ACCOUNTS**

in thousands of Swedish Crowns

	Note 1	<b>2010</b>	<b>2009</b>
Associate contributions	Note 2	24 248	26 586
Other operating income		3 219	6 180
		<hr/>	<hr/>
		27 467	32 766
Operation costs		-6 243	-5 257
Administration costs		-4 413	-4 517
Personnel costs	Note 3	-17 854	-17 706
Depreciation of fixed assets		-1 214	-2 198
		<hr/>	<hr/>
		-29 724	-29 677
<i>Operating profit/loss</i>		-2 257	3 089
Interest income		52	85
Other financial income and cost		-41	-622
Own reserves and funds	Note 4	949	-1 335
		<hr/>	<hr/>
		960	-1 871
<i>Profit/loss after financial items</i>		-1 297	1 217
Appropriations	Note 5	83	-3 415
Transfer from funds invested	Note 6	1 214	2 198
		<hr/>	<hr/>
		1 297	-1 217
<i>Net profit/loss for the year</i>		0	0

**BALANCE SHEET**

in thousands of Swedish Crowns

		<b>2010</b>	<b>2009</b>
<b>ASSETS</b>			
<u>Fixed assets</u>			
<i>Tangible fixed assets</i>	Note 7		
Buildings		3 557	3 843
Radar systems		748	821
Equipment and tools		1 664	2 099
		<hr/> 5 968	<hr/> 6 764
<u>Current assets</u>			
Receivables		3 050	3 871
Prepayments and accrued income	Note 8	1 129	640
Cash at bank and in hand	Note 9	24 711	19 222
		<hr/> 28 889	<hr/> 23 733
<i>Total assets</i>		<b>34 858</b>	<b>30 496</b>
<b>CAPITAL AND LIABILITIES</b>			
<u>Capital</u>			
Funds invested	Note 10	5 968	6 764
Funds held on reserve	Note 11	17 312	18 763
		<hr/> 23 280	<hr/> 25 526
<u>Long term liabilities</u>			
Long term liabilities	Note 12	0	0
<u>Current liabilities</u>			
Liabilities, trade	Note 13	11 425	4 469
Provisions	Note 14	0	155
Other liabilities		152	345
		<hr/> 11 578	<hr/> 4 970
<i>Total capital and liabilities</i>		<b>34 858</b>	<b>30 496</b>
<i>Pledged assets</i>		<b>0</b>	<b>0</b>
<i>Contingent liabilities</i>		<i>none</i>	<i>none</i>

**STATEMENT OF CASH FLOWS**

in thousands of Swedish Crowns

	<b>2010</b>	<b>2009</b>
<u>Operating activities</u>		
Operating result before financial items	-2 257	3 089
Transfer from funds invested	1 214	2 198
Interest received	52	85
Currency exchange rate changes	-57	-658
Extra ordinary income and cost	15	36
Increase/decrease of receivables	821	-2 148
Increase/decrease of prepayments and accrued income	-489	-30
Increase/decrease of creditors and liabilities	6 608	-2 252
<i>Cash flow from operations</i>	<i>5 907</i>	<i>321</i>
<u>Investment activities</u>		
Investments in tangible assets	-419	-1 469
<i>Cash flow from investment activities</i>	<i>-419</i>	<i>-1 469</i>
<i>Cash flow for the year</i>	<i>5 488</i>	<i>-1 148</i>
<i>Liquid assets at the beginning of the year</i>	<i>19 222</i>	<i>20 370</i>
<i>Liquid assets at the end of the year</i>	<i>24 711</i>	<i>19 222</i>

## NOTES

2010 2009

**Note 1 Accounting principles**

The accounting and valuation principles applied are consistent with the provisions of the Swedish Annual Accounts Act and generally accepted accounting principles (bokföringsnämnden allmänna råd och vägledningar).

All amounts are in thousands of Swedish kronor (SEK) unless otherwise stated.

**Receivables**

Receivables are stated at the amounts estimated to be received, based on individual assessment.

**Receivables and payables in foreign currencies**

Receivables and payables in foreign currencies are valued at the closing day rate. Where hedging measures have been used, such as forwarding contracts, the agreed exchange rate is applied. Gains and losses relating to operations are accounted for under other financial income and cost.

**Bank accounts in foreign currencies**

Bank balances in foreign currencies are valued at the closing day rate.

**Fixed assets**

Tangible fixed assets are stated at their original acquisition values after deduction of depreciation according to plan. Assets are depreciated systematically over their estimated useful lives. The following periods of depreciation are applied: Buildings 5 - 50 years, Radar systems 3 - 20 years and Equipment and tools 1 - 5 years.

**Note 2 Associate contributions**

The Associates contributed to the operation during the year in accordance with the agreement. The commitments are in local currencies. The received contributions have been accounted in SEK.

	<u>2010</u>
CRIRP (P. R. of China)	2 849
DFG (Germany)	1 732
NIPR (Japan)	1 768
RCN (Norway)	5 745
SA (Finland)	3 371
STFC (United Kingdom)	3 384
VR (Sweden)	5 400
	<u>24 248</u>

Accumulated contributions status as of 2010-12-31

	<u>1976 - 2010</u>
Previous Associates	190 074
CRIRP (P. R. of China)	13 457
DFG (Germany)	190 480
NIPR (Japan)	68 671
RCN (Norway)	140 121
SA (Finland)	62 188
STFC (United Kingdom)	217 775
VR (Sweden)	113 429
	<u>996 196</u>

**Note 3 Personnel costs and average number of employees**

The Association employs directly the Headquarters staff, currently about six positions, including the Director. The Headquarters is located in Kiruna, Sweden. The personnel working at the Kiruna (Sweden), Sodankylä (Finland), Svalbard and Tromsø (Norway) sites are not employed by the Association. Instead, the personnel are provided via site contracts by the Swedish Institute of Space Physics (Kiruna site staff), Oulu University (Sodankylä staff) and Tromsø University (Tromsø and Svalbard staff). The Association refunds all expenses related to the provided staff, as well as an additional overhead.

**Personnel costs in total**

Salaries and emoluments paid to the Director	1 286	1 240
Other personnel, employed and provided via site contracts	10 971	11 031
Social security contributions amounted to of which for pension costs	4 106	3 944
	2 086	1 992

The Director, Dr. Esa Turunen, started his employment 2009-01-01. His employment contract with Council is for three years.

Of the pension costs, 333 kSEK (320 kSEK) relates to the Director. He and all other directly employed staff are included in ITP like occupational pension plans. For the personnel provided via site contracts, the pension plans are handled by their respective employer.

The members of the board (EISCAT Council) and members of committees, who represents Associates, do not receive remunerations from the Association. Travel expenses in connection with Council and committee meetings are normally covered by the Associates. For the Council Advisory Group, the Association cover meeting and travel costs.

**Salaries and emoluments and average number of staff per country**

<b>Finland</b>		
Salaries and emoluments	1 029	1 528
Average number of staff - men and women	2 + 0	3 + 0
<b>Norway (including Svalbard)</b>		
Salaries and emoluments	5 818	5 370
Average number of staff - men and women	10 + 0	9 + 0
<b>Sweden</b>		
Salaries and emoluments	5 410	5 372
Average number of staff - men and women	7 + 1	8 + 1

**Members of the board and Directors at year-end - men and women**

The board consist of delegations from every Associate country each having a Delegate (formal member) and up to two Representatives.

Board members (EISCAT Council)	12 + 4	12 + 4
Directors	1 + 0	1 + 0

**Note 4 Own reserves and funds**

Transactions involving own reserves and funds.

Capital Operating reserve		
Budgeted transfer to the reserve	-884	-1 614
Transfer from the reserve	419	1 469
Investments made	-419	-2 040
External projects reserve		
Project(s) complete, funds released	0	1 504
Restructuring reserve		
Budgeted restructuring costs	0	1 500
Spare parts reserve		
Budgeted transfer to the reserve	-28	-28
Transfer from the reserve	109	9

	2010	2009
<b>Investment fund</b>		
Budgeted transfer to the fund	0	-2 000
<b>Surplus fund</b>		
Budgeted transfer from the fund	4 196	4 062
Budgeted transfer to the fund	-2 445	-4 196
<i>Sum own reserves and funds</i>	949	-1 335
<b>Note 5 Appropriations</b>		
The outcome for this year became a deficit relative to the budget amounting to -83 kSEK. The deficit was covered by own reserves from the surplus fund. The 2009 outcome resulted in a surplus (3 415 kSEK), which was put in the investment fund.		
<b>Note 6 Transfer from funds invested</b>		
The depreciation cost is covered by funds from Capital - funds invested		
<b>Note 7 Tangible fixed assets</b>		
Changes in tangible fixed assets during 2010.		
<b>Buildings</b>		
Opening acquisition value	42 374	42 237
Acquisitions during the year	8	137
Disposals during the year	0	0
Closing acquisition value	42 382	42 374
Opening accumulated depreciation	-38 531	-38 242
Depreciations during the year	-295	-289
Disposals during the year	0	0
Closing accumulated depreciation	-38 825	-38 531
Closing residual value	3 557	3 843
<b>Radar systems</b>		
Opening acquisition value	244 484	244 381
Acquisitions during the year	59	103
Disposals during the year	0	0
Closing acquisition value	244 542	244 484
Opening accumulated depreciation	-243 662	-242 340
Depreciations during the year	-132	-1 323
Disposals during the year	0	0
Closing accumulated depreciation	-243 795	-243 662
Closing residual value	748	821
<b>Equipment and tools</b>		
Opening acquisition value	33 057	31 925
Acquisitions during the year	352	1 229
Disposals during the year	-398	-98
Closing acquisition value	33 011	33 057
Opening accumulated depreciation	-30 958	-30 283
Depreciations during the year	-787	-586
Disposals during the year	398	-89
Closing accumulated depreciation	-31 347	-30 958
Closing residual value	1 664	2 099
<i>Sum tangible fixed assets</i>	5 968	6 764

**Note 8 Prepayments and accrued income**

The main buildings and systems insurance for 2010 was paid in December. Costs relating to the Antenna III feasibility work were invoiced in February 2011 and the EISCAT\_3D\_2 project costs spent in 2010 will be claimed from EU in April 2012.

Prepaid rents	92	91
Prepaid insurances	139	460
Accrued income	462	0
Other items	437	89
	<u>1 129</u>	<u>640</u>

**Note 9 Bank balances status**

Nordea	24 709	19 220
Cash in hand	2	2
	<u>24 711</u>	<u>19 222</u>

**Note 10 Funds invested status**

Buildings	3 557	3 843
Radar Systems	748	821
Equipment and Tools	1 664	2 099
	<u>5 968</u>	<u>6 764</u>

**Note 11 Funds held on reserve**

Investments were made a bit below the budgeted expectation. More spare parts than budgeted were acquired. Both actions were budget neutral since the differences were covered by reserve transfers. The deficit for this year (-83 kSEK) were taken from the surplus fund. The other transfers were as budgeted.

Capital operating reserve	1 834	1 369
Equipment repair fund	754	754
External projects reserve	0	0
Investment fund	7 971	7 971
Restructuring reserve	4 101	4 101
Spare parts reserve	290	371
Surplus fund	2 362	4 196
	<u>17 312</u>	<u>18 763</u>

**Note 12 Long term liabilities**

No long term liabilities. The Association is fully funded by the Associates.

**Note 13 Liabilities, trade**

The EISCAT\_3D\_2 preparatory phase project started 2010-10-01. The project is financed by EU's European Commission through the Framework Programme 7 scheme. The contract stipulates that a percentage of the total financing is withheld as contingency and kept in a guarantee fund with the Commission. The first prefinancing, minus the contingency, were received in October. The guarantee fund will be released at the end of the project, 2014-09-30.

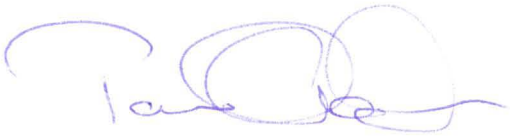
EISCAT_3D_2 guarantee fund, whole project	2 023	0
EISCAT_3D_2 prefinancing, EISCAT share	5 120	0
Liabilities, trade	4 282	4 469
	<u>11 425</u>	<u>4 469</u>

**Note 14 Provisions**

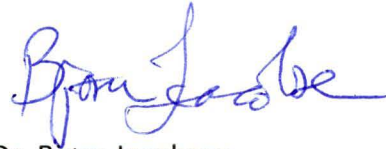
None in 2010. In 2009 the provision referred to an erroronus cost debit.

Provisions	0	155
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Helsinki 2011-05-31



Dr. Tomas Andersson



Dr. Bjørn Jacobsen



Dr. Hiroshi Miyaoka



Dr. Michael Schultz



Dr. Kati Sulonen

Prof. Jian Wu



Dr. Karin Zach



Dr. Esa Turunen  
Director

Our audit report was issued on 2011-06-13



Mrs. Annika Wedin  
Authorised Public Accountant



## Audit report

### To the council of EISCAT Scientific Association

Corporate identity number 897300-2549

I have audited the annual accounts, the accounting records and the administration of the council and the director of EISCAT Scientific Association for the year 2010. These accounts and the administration of the association and the application of the Annual Accounts Act when preparing the annual accounts are the responsibility of the council and the director. My responsibility is to express an opinion on the annual accounts and the administration based on my audit.

I conducted my audit in accordance with generally accepted auditing standards in Sweden. Those standards require that I plan and perform the audit to obtain reasonable assurance that the annual accounts are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the accounts. An audit also includes assessing the accounting principles used and their application by the council and the director and significant estimates made by the council and the director when preparing the annual accounts as well as evaluating the overall presentation of information in the annual accounts. As a basis for my opinion concerning discharge from liability, I examined significant decisions, actions taken and circumstances of the association in order to be able to determine the liability, if any, to the council or the director. I also examined whether any council member or the director has, in any other way, acted in contravention of the Annual Accounts Act or the statutes. I believe that my audit provides a reasonable basis for my opinion set out below.

The annual accounts have been prepared in accordance with the Annual Accounts Act and give a true and fair view of the association's financial position and results of operations in accordance with generally accepted accounting principles in Sweden.

The statutory administration report is consistent with the other parts of the annual accounts.

The council and the director have not acted in contravention of the statutes.

Gävle, 13 June 2011

A handwritten signature in blue ink, appearing to read 'Annika Wedin', is written over a light blue horizontal line.

Annika Wedin  
Authorized Public Accountant