

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

Annual financial report for the year 2020-01-01 – 2020-12-31

The EISCAT Council and the Director for the Association submits herewith the annual report for 2020.

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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 People's Republic of China in 2007.

The EISCAT Associates at 2020-12-31 are: China Research Institute of Radiowave Propagation (People's Republic of China), National Institute of Polar Research (Japan), Norges forskningsråd (Norway), Suomen Akatemia (Finland), UK Research and Innovation (United Kingdom of Great Britain and Northern Ireland) and Vetenskapsrådet (Sweden).

The now-running EISCAT Agreement came into force 2017-06-20, 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 geospace, in the high latitude atmosphere, and in the coupling between the high and low latitudes and altitudes. 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 new system, EISCAT_3D, is currently being constructed.

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 systems operated reliably throughout the year and 1 918 hours were accounted in 2020 (2 043 hours in 2019).

Common Programmes amounted to 49% (52%) of the operations. Special Programmes amounted to 44% (44%) and other operations amounted to 7% (4%) of the total hours.

CNRS-IRAP (France), DLR-SO (Germany), IRA-NASU (Ukraine), JHUAPL (USA), KASI (South Korea) and KOPRI (South Korea) have Affiliate agreements and totally 52 hours (12 hours) were accounted to the affiliates. Both DLR-SO and JHUAPL joined the Association as Affiliates during 2020. The Peer-Review Programme made it possible for user groups from P. R of China, France, Germany, Norway and Russia to run experiments, at no cost, on the systems. Peer-Review time amounted to 72 accounted hours (58 hours).

Future operation and scientific development

The current EISCAT systems are ready for users. These include the EISCAT Svalbard Radar, Heating and the UHF and VHF radars with the possibility to run the VHF in tristatic mode by using the antennas in Kiruna and Sodankylä for reception.

The new EISCAT_3D radar system is being constructed. EISCAT_3D will replace the current UHF and VHF radar systems. The new system comprises three phased arrays working together. These will be built in Finland, Norway and Sweden. The new EISCAT_3D system will be ready for users by the end of 2022. The old UHF and VHF radar systems will be decommissioned at that time.

Project activities

The two ongoing European Commission funded projects, ENVRI-FAIR and EOSC-Hub continued throughout the year.

Two new European Commission funded projects will start in 2021, EGI-ACE and PITHIA-NRF. EGI-ACE, “EGI Advanced Computing for EOSC”, is under *the Implementing the European Open Science Cloud* call and will start in January 2021 and will run for 30 months. EISCATs involvement is for five person months and about 650 kSEK in project funds. PITHIA-NRF, “Plasmasphere Ionosphere Thermosphere Integrated Research Environment and Access services: a Network of Research Facilities” is under the *Integrating and opening research infrastructures of European interest* call. The project will start in April 2021 and will run for four years. EISCATs involvement is for about four staff-years and 6 MSEK in project funds. EISCAT will be involved in various tasks in the PITHIA-NRF project, including leading the Transnational Access part.

EISCAT_3D project

The ongoing EISCAT_3D Stage 1 (E3DS1) construction project is progressing well, and all major industry contracts are now in place and mass-production of most sub-systems have started. The parts needed for installation in Skibotn in autumn 2021 will have all been manufactured well before the need date. Production of the units for Finland and Sweden have also started. Since the installation is delayed, some of these units will need to be stored in factory before shipped to the designated locations.

The problem related to the Swedish site was resolved towards the end of the year and, providing that the tender for ground works will prove successful, the third EISCAT_3D site will be prepared during 2021 such that it is ready for system installation in 2022.

The overall schedule remains untouched meaning that the Chinese manufacturer of the antenna system will install it in Norway in 2021 followed by installations in Finland and Sweden in 2022. The radar electronics, which are produced in Finland and Sweden, will be installed in the antenna systems directly after. Since the COVID-19 pandemic is still ongoing, a crucial milestone will be the shipment, and subsequent arrival of the units and the Chinese crew, to Norway for installation of the antenna system during summer 2021. If this fails due to border restrictions, then there will be a further delay in the project. Since the installation of the antenna system require reasonable weather conditions, it could mean a full season delay.

The third tendering round for the buildings resulted finally in multiple bids and a vendor could be chosen. It will be the same contractor, from Finland, providing turnkey buildings at all three EISCAT_3D locations, starting with constructions in Norway summer 2021.

The work of the Council and its committees

Due to COVID-19 all Council and Committee meetings were held digitally. Council met in spring and autumn and the meetings were chaired by Prof. Ingrid Mann. In addition to regular matters, Council decided to start the process of hiring a new Director to join in 2023. Council decided also to extend the employment of the current Director, Dr. Craig Heinselman for one more year. Dr. Heinselman's employment will now end 2022-12-31. At the end of the year, Prof. Mann handed over the chairpersonship to Prof. Anita Aikio from Finland. Prof. Aikio will be the Council Chairperson for two years, 2021 - 2022.

The regular Council committees, the Administrative and Finance Committee (AFC) and the Scientific Advisory Committee (SAC) both had two digital meetings each during the year.

Budget development during the year

The 2020 operations ended below the budgeted target. This was much due to users travel restrictions. Likewise, the same restrictions meant almost no travels by EISCAT staff resulting in a substantial cost reduction. A substantial water leak in the building on Svalbard resulted in major repairs. The leak was accepted as damage by the insurance company and a partial coverage of the repair cost is expected in 2021.

Since staff needs on Svalbard are now only two persons, one of the staff quarters were sold leaving two remaining. The selling of the accommodation added income.

Two new Affiliates joined the Association. The Institute for Solar-Terrestrial Physics of the German Aerospace Center (DLR-SO), Germany, joined in January and the Johns Hopkins University Applied Physics Laboratory LLC (JHUAPL), USA, joined in April. Both paid operating contributions in 2020 and DLR-SO made also a payment towards EISCAT_3D.

The Japanese Associate, National Institute of Polar Research, could finally commit to EISCAT_3D funding and three instalments from Japan were received.

In summary, less operating costs and more income meant that the year ended in a net profit.

The long-term budget plan

The long-term budget plan remains on a challenging but feasible level. The operating cost implications for the *new EISCAT*, with EISCAT_3D as the main system on the mainland, are well understood and with the doubling of the annual contribution from at least the Nordic countries, mean that the first years in the five-year plan can be balanced, though with less operations than optimal. Additional income via grants or other revenues will be needed to better utilise the new investments.

The result for 2020 and profit/loss handling

The year ended in a net profit of 3 118 kSEK, which will be added to the designated surplus fund for use in subsequent years.

PROFIT AND LOSS ACCOUNTS

in thousands of Swedish Crowns

	Note 1	2020	2019
Income from operations			
Grants received	Note 2	93 961	122 166
Revenue from operations	Note 3	0	0
Other income from operations	Note 4	81	173
		<u>94 042</u>	<u>122 340</u>
Expenses from operations			
Operation costs	Note 5	-7 797	-6 748
Administration costs		-2 711	-4 207
Personnel costs	Note 6	-26 021	-26 390
Depreciation of fixed assets		-8 799	-8 938
		<u>-45 328</u>	<u>-46 283</u>
Operating profit/loss		48 714	76 056
Financial items			
Interest income		203	675
Other financial income and cost		-7 520	4 645
		<u>-7 317</u>	<u>5 320</u>
Other items			
Income from sold inventory		2 462	1 640
Net profit/loss for the year		43 859	83 016
Changes in designated funds	Note 7		
Net profit/loss for the year		43 859	83 016
Use of designated investment funds		-43 087	-69 177
Use of other designated funds		-216	435
Allocation of unused designated investment and other funds		2 562	-11 710
Net profit/loss for the year after redistributions		3 118	2 564

BALANCE SHEET

in thousands of Swedish Crowns

		2020	2019
ASSETS			
<i>Fixed assets</i>			
Tangible fixed assets	Note 8		
Buildings		55 223	53 263
Radar systems		149 536	108 287
Equipment and tools		2 115	2 258
		<u>206 874</u>	<u>163 808</u>
Current assets			
Receivables		37 479	8 585
Prepayments and accrued income	Note 9	3 179	2 201
Cash at bank and in hand	Note 10	313 546	246 678
		<u>354 203</u>	<u>257 463</u>
Total assets		561 078	421 271
CAPITAL AND LIABILITIES			
Capital			
Funds invested	Note 11	206 874	163 808
Designated funds	Note 12	44 682	38 135
Net income for the year after redistribution		3 118	2 564
		<u>254 674</u>	<u>204 506</u>
Current liabilities			
Accounts payable, trade		22 362	6 998
EISCAT_3D build grants received but not used	Note 13	279 303	202 873
External project grants received but not used	Note 14	3 777	6 465
Other liabilities		961	430
		<u>306 404</u>	<u>216 765</u>
Total capital and liabilities		561 078	421 271

STATEMENT OF CASH FLOWS

in thousands of Swedish Crowns

	2020	2019
Operating activities		
Operating result before financial items	48 714	76 056
Transfer from funds invested	8 799	8 938
Interest received	203	675
Financial income and cost	-7 520	4 645
Other income and cost	2 462	1 640
Increase/decrease of receivables	-28 894	75 970
Increase/decrease of prepayments and accrued income	-978	1 490
Increase/decrease of creditors and liabilities	89 638	28 623
Adjustment for items not included in cash flow	6 329	-4 469
Cash flow from operations	118 754	193 569
Investment activities		
Investments in tangible assets	-51 886	-78 115
Cash flow from investment activities	-51 886	-78 115
Cash flow for the year	66 868	115 454
Liquid assets at the beginning of the year	246 678	131 223
Liquid assets at the end of the year	313 546	246 678

NOTES	2020	2019	2020	2019
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 (for 2017 onwards, bokföringsnämnden allmänna råd och vägledning, BFNAR 2012:1 K3).				
All amounts are in thousands of Swedish kronor (SEK) unless otherwise stated.				
Income				
Received grants are reported as income in the period when they were claimed or received. Conditional grants are recognised as income when the associated conditions have been met. Income and revenue from operations, which include own-account funds, are reported as income when they were claimed or received. Grants and other income in foreign currencies have been accounted in the amounts estimated to be received, based on individual assessment.				
Employee benefits				
Ongoing remuneration to employees, either direct employed or provided via host agreements, in the form of salaries, social security, contributions to pension schemes and staff related insurances are accounted as personnel costs. Other remunerations, in cash, like travel subsistences or as benefits in-kind, like clothing, training and health care are also accounted as personnel costs. Overhead cost on host provided personnel is considered as external services accounted as administration cost.				
Financial income				
Dividends and interest income are accounted when credited the account.				
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 - 30 years and Equipment and tools 1 - 5 years.				
Note 2 Grants received				
The Associates contributed to the operation during the year in accordance with the EISCAT agreement. The Affiliates contributed according to agreed annual commitments. Income from European Commission (EC) funded projects were also accounted as received grants. The E3DS1 project started 2017-09-01 and the resulting projects costs were covered by the Associates (see Note 13) and other funds. Received project grants from the Associates are first accounted as prefinancing. Project costs are thereafter covered by withdrawals from prefinancing and at that time accounted as income from operations.				
Associates			24 328	23 887
Affiliates			904	819
Project grants, EC			2 401	2 761
Project grant, E3DS1			66 328	94 699
			93 961	122 166
Accumulated Associate contributions status as of 2020-12-31				
Annual contributions included and for 2020, Finland, Japan (as in-kind), Norway and Sweden were credited for providing E3DS1 project-related funds. These sums are used for EISCATs ownership and time-share calculation				
Associate P. R. of China			49 434	45 490
Associate Finland			132 376	113 946
Associate Japan			100 595	97 610
Associate Norway			251 539	222 635
Associate Sweden			262 717	238 538
Associate UK			315 284	312 715
Previous Associates			382 168	382 168
			1 494 113	1 413 102
Note 3 Revenue from operations				
The Association can, at rates related to the costs involved and as available, sell observation hours to Associates, Affiliates and other parties. Income from such selling of time are considered to be revenue. In 2020, no time-buyers used the systems.				
Income from time-buyers			0	0
Note 4 Other income from operations				
The Association supports visiting users by offering site accommodation and equipment hosting for either campaign brought instruments or for longer deployments. Educational support is done by providing teachers and/or other resources (like laboratory support). Associates and/or user-groups contribute occasionally to system improvements by funding, of own interest, certain repairs or hardware changes.				
Accommodation			44	104
Instrument hosting agreements			21	21
Educational support			16	35
Other income			0	13
			81	173
Note 5 Operations				
The annual operating target for all systems together is about 2 500 active (high power mode) hours. For 2020, the budget assumed 2 468 hours and the outcome became 1 863 hours. Passive hours come in addition. Such hours have a minimal effect on cost since the systems do not draw more electricity than in an off mode. Accounted hours are usually lower than the sum of operating hours since some systems have a charge rate that is less than 1-to-1.				
Active hours (high-power), per system			<i>Hours</i>	<i>Hours</i>
EISCAT Svalbard Radar			700	731
UHF system			743	750
VHF system			330	378
Heating system			91	96
			1 863	1 955
Passive hours (receive only)				
Kiruna receiver system			134	202
Sodankylä receiver system			134	202
			268	403

	2020	2019
<i>Accounted hours</i>	<i>Hours</i>	<i>Hours</i>
Common programmes	946	1 070
Special programmes	848	894
Other hours	125	79
	<u>1 918</u>	<u>2 043</u>

Distribution of special programme hours between Associates

Associate P. R. of China	0	76
Associate Finland	131	82
Associate Japan	132	134
Associate Norway	111	154
Associate Sweden	180	199
Associate UK	205	157
All Associates, AA-runs	91	94
	<u>848</u>	<u>894</u>

Distribution, other hours

Affiliates	52	12
EISCAT staff and tests	0	8
Per-reviewed campaigns	73	59
Time-buyers	0	0
	<u>125</u>	<u>79</u>

Note 6 Personnel costs and average number of employees

The Association employs directly Headquarters and most project staff, currently about 15 positions, including the Director. Of these, five are on shorter-term project employments. The Headquarters is located in Kiruna, Sweden. The personnel working at the Kiruna (Sweden), Sodankylä (Finland), Svalbard and Tromsø (Norway) sites are normally 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 the Arctic University of Norway (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	2 087	2 037
Other personnel, employed and provided via site contracts	15 915	16 272
Social security contributions amounted to of which for pension costs	7 843	7 469
	<u>3 943</u>	<u>3 451</u>
Other personnel costs	177	612

The Director, Dr. Craig Heinselmann, started his employment 2013-01-01. His current employment contract ends 2021-12-31. It will be extended one year.

Of the pension costs, 380 kSEK (354 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 and Affiliates, do not receive remunerations from the Association. Travel expenses in connection with Council and committee meetings are normally covered by the Associates and Affiliates. The Association reimburses though the travel costs for Committee Chairpersons and external members.

	2020	2019
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Salaries and emoluments and average number of staff per country

Finland		
Salaries and emoluments	704	706
Average number of staff - men and women	1 + 0	1 + 0
Norway (including Svalbard)		
Salaries and emoluments	4 605	5 685
Average number of staff - men and women	8 + 0	8 + 0
Sweden		
Salaries and emoluments	12 693	11 919
Average number of staff - men and women	15 + 2	15 + 2

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)	10 + 4	10 + 4
Directors	1 + 0	1 + 0

Note 7 Changes in designated funds

Positive numbers - use of designated funds. Negative - transfer to the designated reserves or funds for later use.

Net profit/loss for the year	43 859	83 016
EISCAT_3D financial gains/losses taken in project finances	6 329	-4 469
Changes to capital operating reserve	74	-1 375
Changes to decommissioning fund	-1 651	-2 479
Changes to E3D construction reserve	-2 116	-3 176
Changes to funds invested	-43 087	-69 177
Changes to spare parts reserve	13	4
Changes to surplus fund	-303	219
	<u>3 118</u>	<u>2 564</u>

Note 8 Tangible fixed assets

Changes in tangible fixed assets.

Buildings		
Opening acquisition value	94 576	46 021
Acquisitions during the year	2 456	48 707
Disposals during the year	-632	-152
Closing acquisition value	96 400	94 576
Opening accumulated depreciation	-41 313	-40 963
Depreciations during the year	-495	-502
Disposals during the year	632	152
Closing accumulated depreciation	-41 177	-41 313
Closing residual value	55 223	53 263
Radar systems		
Opening acquisition value	365 705	337 357
Acquisitions during the year	48 455	28 348
Disposals during the year	-8	0
Closing acquisition value	414 152	365 705
Opening accumulated depreciation	-257 417	-250 047
Depreciations during the year	-7 206	-7 371
Disposals during the year	8	0
Closing accumulated depreciation	-264 616	-257 417
Closing residual value	149 536	108 287

	2020	2019
Equipment and tools		
Opening acquisition value	36 345	35 652
Acquisitions during the year	975	1 061
Disposals during the year	-1 014	-368
Closing acquisition value	36 306	36 345
Opening accumulated depreciation	-34 087	-33 391
Depreciations during the year	-1 097	-1 065
Disposals during the year	993	368
Closing accumulated depreciation	-34 191	-34 087
Closing residual value	2 115	2 258
Sum tangible fixed assets	206 874	163 808

Note 9 Prepayments and accrued income

Resources in staff and direct costs spent in ongoing externally funded projects are covered by accrued income until settled by submission of periodic report claims. In 2020, the ENRVI-FAIR and EOOSC-hub projects continued throughout the year.

Prepaid rents	9	9
Prepaid insurances	789	798
Accrued income, previous projects	0	0
Accrued income, ENRVI-FAIR project	638	780
Accrued income, EOOSC-hub project	1 672	544
Other items	70	69
	<u>3 179</u>	<u>2 201</u>

Note 10 Bank balances status

Nordea	313 546	246 678
Cash in hand	0	0
	<u>313 546</u>	<u>246 678</u>

Note 11 Funds invested status

Buildings	55 223	53 263
Radar Systems	149 536	108 287
Equipment and Tools	2 115	2 258
	<u>206 874</u>	<u>163 808</u>

Note 12 Designated funds

The designated funds are divided into eight funds and reserves. The capital operating and spare parts reserves are used to manage required purchases between years, including unbudgeted ones. The surplus fund is used to manage overall profits and losses between years. The other funds are earmarked for specific purposes.

Capital operating reserve	3 057	3 131
E3D construction reserve	8 425	6 309
Decommissioning fund	6 576	4 924
Equipment repair fund	754	754
Investment fund	7 753	7 753
Restructuring reserve	4 101	4 101
Spare parts reserve	84	97
Surplus fund	13 931	11 065
	<u>44 682</u>	<u>38 135</u>

Note 13 EISCAT_3D build grants received but not used

The construction project, E3DS1, started 2017-09-01 and its first phase, Stage 1, will be completed in 2022. Most Associates have now committed to its realisation. E3DS1 specific funding payments from Japan, Finland and Norway were received in 2020. Associate funds are kept as prefinancing until used in the project. Funds spent are deducted from the different funding sources in accordance with the agreed funding plan. United Kingdom contributed to the construction project during 2017-2018 and the funds were also used during that period.

Changes in EISCAT_3D build grants received but not used

Associate Finland		
Opening balance	20 555	41 109
Received during the year	36 817	0
Used during the year	-14 424	-20 555
Closing balance	42 948	20 555

Associate Japan		
Opening balance	0	0
Received during the year	23 765	0
Used during the year	0	0
Closing balance	23 765	0

Associate Norway		
Opening balance	121 470	66 381
Received during the year	78 398	88 280
Used during the year	-23 288	-33 191
Closing balance	176 580	121 470

Associate Sweden		
Opening balance	56 379	67 332
Received during the year	0	30 000
Used during the year	-18 509	-40 953
Closing balance	37 870	56 379

E3DS1 project finances, gains/losses		
Opening balance	4 469	0
Changes during the year	-6 329	4 469
Closing balance	-1 861	4 469

Sum EISCAT_3D received build grants	279 303	202 873
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Note 14 External project grants received but not used

All externally funded projects work with prefinancing. For European Commission projects, these are in EUR's. The prefinancing is used to cover reported and approved costs. ENRVI_Plus were financially concluded during 2020.

ENRVI-FAIR H2020 prefinancing	2 667	2 777
ENRVI_Plus H2020 prefinancing	0	1 539
EOOSC-hub prefinancing	1 110	2 149
	<u>3 777</u>	<u>6 465</u>

EISCAT, 2021-04-27

Dr. Tomas Andersson

Dr. Mervyn Freeman

Prof. Hiroshi Miyaoka

Prof. Kenneth Ruud

Dr. Kati Sulonen

Prof. Jian Wu



Dr. Craig Heinselman
Director

Our audit report was issued on 2021-06-14.
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Authorised Public Accountant

EISCAT, 2021-04-27



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EISCAT, 2021-04-27

Dr. Tomas Andersson

Handwritten signature of Mervyn Freeman, consisting of the letters 'MP' followed by a stylized flourish.

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EISCAT, 2021-04-27

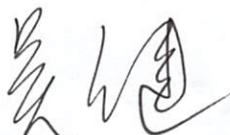
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Auditor's report

To the council of EISCAT Scientific Association, corporate identity number 897300-2549

Report on the annual accounts

Opinions

We have audited the annual accounts of EISCAT Scientific Association for the year 2020.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of EISCAT Scientific Association as of 31 December 2020 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The statutory administration report is consistent with the other parts of the annual accounts.

Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the *Auditor's Responsibilities* section. We are independent of EISCAT Scientific Association in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Responsibilities of the council and the director

The council and the director are responsible for the preparation of the annual accounts and that they give a fair presentation in accordance with the Annual Accounts Act. The council and the director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts, the council and the director are responsible for the assessment of the association's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the council and the director intends to liquidate the association, to cease operations, or has no realistic alternative but to do so.

Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts.

MMW



As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of the association's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the association's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the council and the director.
- Conclude on the appropriateness of the councils' and the director's use of the going concern basis of accounting in preparing the annual accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the association's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the association to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual accounts, including the disclosures, and whether the annual accounts represent the underlying transactions and events in a manner that achieves fair presentation.

We must inform the council, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

Report on other legal and regulatory requirements

Opinions

In addition to our audit of the annual accounts, we have also audited the administration of the council and the director of EISCAT Scientific Association for the year 2020. The council and the director have not acted in contravention of the statutes.

Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the *Auditor's Responsibilities* section. We are independent of EISCAT Scientific Association in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

A handwritten signature in blue ink, appearing to be 'MAJ', is located at the bottom left of the page.



Responsibilities of the Council and the director

The council and the director are responsible for the association's organization and the administration of the association's affairs.

Auditor's responsibility

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the council or the director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the association, or
- in any other way has acted in contravention of the Annual Accounts Act or the statutes.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the association.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the association's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion.

Gävle, 14 June 2021

Öhrlings PricewaterhouseCoopers AB

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

Annika Wedin

Authorized Accountant