

## **Ukiuqtaqtum Uataa Ikirahak Havaariyakhaq Qauyiharnikkut Nainaaqhimayuq**

Una Ukiuqtaqtum Uataa Ikirahak Havaariyakhaq (NPP) Amialikanmiutaaq U.S. Nunaryualimaaq Qauyiharvingit manngit ikayuqtauvaktut qauyihaghutik aallannguqpallianingit Ukiuqtaqtuq ukunanngat hivumuurnaqtumik qauyihagtakhait ilaliutigiangani hivituyumik naalaktukhat ilitquhiriyangit ilauhimayunut taryurmit, puqtuhiumik tukiliutilik 2-ikaakkut unipkaaliuqtut, ilagiyangit nunalingnit hulidjuhiit. Una qauyihagtuqtut aulapkainiaqtut umiarmi uumani *Akademik Ioffe*, munariyaat uumani One Ocean Expeditions. Alruyaqtigut ilitturnaqtut qauyiharniit ikayuutauniaqtuq taryum-hinaani hulidjuhikhait havaanut. Qauyiharnikkut ilauqatauhimayut ilaliutiniaqtut iliharyuaqtut iliahtunut, qauyihagtit, pitquhiliqiyit, titiraqtit, qunnialiutqinillu ilagiiktut.

Una NPP *Akademik Ioffe* qauyihagtit aullarlutik hamannat Qausuittuq uvani Niqiliqivik 23, 2018 mi, tikillutik Iqaluinnut uvani Aptilirvik 13 mi (Titirauya 1 mi). Qauyihagtit huliyunut umiarmiittut hulivangniarumik tamainnut umiaqtuqtunut. Nalunaiqhiniq, Unnarningit, Hitinianut Naunaiqhiiyut (CTD) naunaiyainingit unalu taryurmiuttat uumayuit kuvyit iqqaqpangniaqtangit 100 nm ubluummaanmiluuniit, hunali hivulliuniarumik. Aahiit huliyakhat, ilaliutigilugillu anurim naunaiyaiyut, qurluaqtut taryum imangit naunaiqhiilutik, unalu taryurmiuttat tingmiat kititiqtakhait pilutik.

**Qauyihainikkut hivunikhautikhamut kangiqhittaarianangit qanuq imait haffumani Kanatamiunit Ukiuqtaqtumi Qikiqtat Uguliriit (CAA) aallannguqtut uunnakpallialirami Ukiuqtaqtumi Nunangani**, atuqhugit aallatqiit nalunaiqhiiyut taryup-kigliagut qauyihagtit piliriakhaq qauyiharianangit aallannguqhimayut iluani hitamat (4) ilitturningit ininganit.

### **Ilitturniq 1: Imaup anginiqhautaa ilitquhiita utiqattaqtuniglu iluani CAA**

Qauyihagtiit qanilrukkut ihivriuqtakhaat angikliktiqhimayut halumayumik imait tutquumavingit iluani agyaqtauvaktut qulaanngat Ukiuqtaqtum Taryua uunnakpallialiramat Ukiuqtaqtumi. Auktuumilluaqhuni, kuukkat qurluarninga, uuminngalu aallannguqpalliauyut anurim ilitquhia taimaa angiklikpallialiqhuni halumayumik imait kititirninga iluani Ukiuqtaqtum uataa. Una CAA, unalu ahiinnaq Ukiuqtaqtum uataa Ikirahak, hivunikhautauvlunilu haffumani halumayut imait agyaqtuiniq Ukiuqtaqtum Taryuata uvunga North Atlantic, kihiani nalunaqtuq hivitunianut agyaqtuinnikkut imaup ilitquhiita. Tadsa qanurilinganingit iluani CAA ilittuqtauniaqtuq Niplautingit Imaup Nalunaiyainiq (ADCP) nalunaiqtangit, uumani tingmiannuanut (Titirauya 2 mi), unalu CTD.

### **Ilitturniq 2: Iiyingnut takunnaittut Nunaliit Ikaaqtut**

Hamna Ukiuqtaqtum imait uunnakpalliavlutik taryualu hikua qaangani nungutpalliavluni, qulaani taryum avatiqatigiikt aallannguqhuni, uumayuit amigaininngit amihuutait aallannguqtirniaqhutiktaut qilamik. Ihivriuriani nayaupaktangit umiaqtuqtut tumingit, uumayuit taryurmiuttat kuvyit iqqaqpangniaqhuni qaanganit imaup mikhaanut ( $\leq 100$  m). Kuvyit ilaliutait titiraqhimaniaqtangit. Una naunaiyaiyut kititiqhimaniaqtut naluaiyarvingmi qaangani FlowCam, naunaiqhiilaqtut qaffiuningillu kititilaqtut “ilaurutingit” iluani taryum imangani (Titirauya 3 mi). Tahapkuat mikiyunnuut ilait hiurauyut, kumaruit, uumayunilluuniit. Ilittupkaqpangniaqtavut takiyaqtumik ihivriurvikhaq iluani Lancaster Ikirahak (Qauyiharvik 323: Lancaster Ikirahak, 74.2, -79.75).

### **Ilitturniq 3: Auladjutinit Taryurmiuttat Tingmiat iluani Kanatamiunit Ukiuqtaqtumi Imangit**

Taryurmiuttat tingmiat amihuuningit auladjutingillu parnautilaqtangit amiqhailugu aallannguqtirniimaningit aallatqiillu taryurmiuttat avatiqatigiingnit. NPP ilitquhirilaqtangit auladjutingillu amihuuningillu taryurmiuttat tingmiat nalunaiqhiivlutik. Katudjigiiktut ukunanngat taryurmiuttat tingmiat ilagiiktut unalu qaanganit ilitquhiriyangit haffumani taryurmiuttat avataita naunaiyainiaqhutik ilittupkaihimalgiktaut nalunaiqhigaluangit. Una umiaryuaq pulaaqtaqtuq malikhimaniaqtangit ayurnaittumik, tautungnaqtumik maligautaanit nalunaiqhiinahuarlugit taryurmiuttat tingmiat naunaiqhiyut.

#### **Ilitturniq 4: Imaup Ilitquhiita Ilaurutingit Aktuqhimayangit Puyum Anianailaqutaa Hakugingnia Hakuirningalu**

Una ihuqhiniit ilahimagamit unalu ilaurutilgit iluaniittuni naimannaittut anianailaqutiit akhaluutim puyungillu iluani Ukiuqtaqtum Taryuata nunapta anirniqautiit ikiariit ihumaaluutaulluaqtangit tamarmiuyuk puyum anianailaqutaa, ilanganillu hakugingnia hakuirninga ukunani taryum unalu nunapta anirniqautiit ikiariit aturnaqtut ilagiyangit hilaup uunnakpallianingit. Ihivriutqangit akhaluutim puyungit naimannaittuq anianailaqutilik ilitturnaqhilaqtuq ihingit hakugingnia hakuirningalu uvunga nunapta anirniqautit ikiariitnut. Hamna Ukiuqtaqtuq takunnaqtuq hiammakpallialiqtuq uumani naimannaittuq anianailaqutik nunapta anirniqautit ikiariinni. Ilangit iyingnut takunnaittuq iluani taryum imangit naimannaittumik anianailaqutit niqinut ilagiyaat. Taamna iyingnut takunnaittuq hiaminningit naimannaittut anianailaqutit amihuukpat, taimaa hiamittilaaghuni nunapta anirniqautit ikiariinni. Una NPP ilitturnaqhuni hamna ihuqhiyuq ilahimagami unalu ilaurutilgit akhaluutim puyungit uumanilu naimannaittut anianailaqutingit naunaqhiyangit ihivriqhutik anurim imarmilu iluaniittumi naunaiyainikkut ingilrutaanit, uumanilu imap puuqpiaghimayut ilittuqhaiyut iyyungnut takunnaittut huliyaqhanit.

#### **Angmaumayuq Naunaiyainingit Atuagaq**

Nalunaiqhiinahuqtaqvut qauyihaghimayangit naunaiyaiyut kiuvingillu uumani NPP qaritauyakkut turaarutaata qunnialaaqtangit. Tamaat nalunaiqhiyangit ihivriutqangit tutquumahimaniaqtangit iluani NSF-ikayuqtauhimayuq Ukiuqtaqtumi Naunaiyaivingat (<https://arcticdata.io>) tamaita nalaumattiaqtumik Kanatamiunut Inuinnaillu qauyihaghimayangit qaritauyami iliuraiviannit, uumanilu Kanatamiunut Uumayuliqiyit taryurmiunit tingmiat iliuraiviannit qaritauyami.

#### **Tuhaumalaaqtut Ingilrutingit**

Una NPP qauyihagtut ikayuqtigiiktut aturniaqtangit malruk qauyihagturnikkut Tuhaumalaaqtut Ilittuqhiiyut (ADCP) nalunairvikhat: iliuraqhimayuq ADCP aulapkaiyuq uvannat 38 kHz unalu ADCP aulapkailaaqtuq uvannat 300 kHz, katilviuhimayuq uvunga CTD.

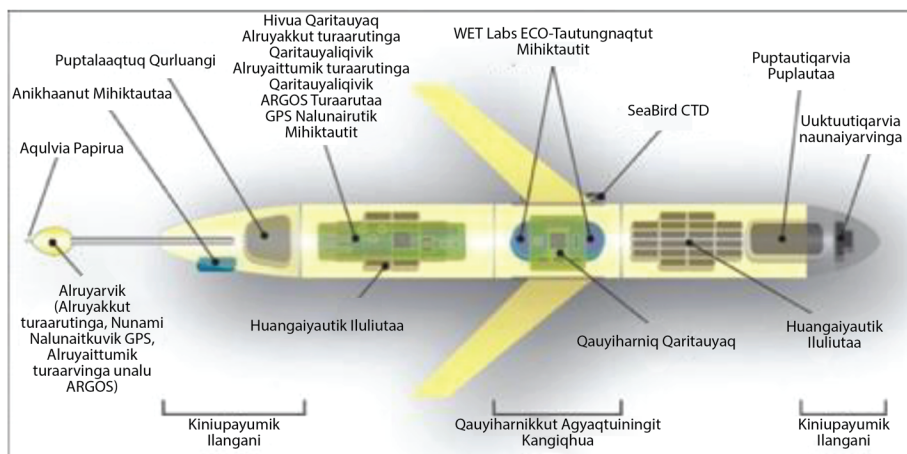
Una 38 kHz nalunairvik aulapkaihimaniaqtuq umiaq ikaaliqqat, kihimi malikhimayakhaat naunaiyarvinga umikhimaniaqtuq imailiuiqqat:

- 1) Taryurmiuttat amaammaktittiyuktut niryuutit ilitturnaqqat iluani 500 m ungahingnia umiarmit.
- 2) Iluani 5 km ungahingnia quyaginnaq Nunavut nunalingni.
- 3) Kivataanit hamannat Bylot Qikiqtami. Una naunaiyaivik atuinnaqhunnguyaangit anginitqiyaanit 5 km ungahingnia nunamit atulaittangit kangiqhunnuami, kangiqhurmi, takiyaaqtut kangiqhuit, ikirahaiillu.
- 4) Iluani Navy Board Kangiqhua, Eclipse Ikirahaa, Mittimataliglu, ihumagivlugit maligahuaqhugit ihumaaluutingit naunaiyaivinga amihuaryuit tuugaaliit ingilravakkamik uvannat Ikpiarjungmit Mittimatalingmut.
- 5) Amirilluaqhimayangit imait haffumani Bylot Qikiqtaq Utiquaqtut Tingmidjat Unaguiqhirvingit uuminngaluuniit Minnguirvit Kanatam Imangit.

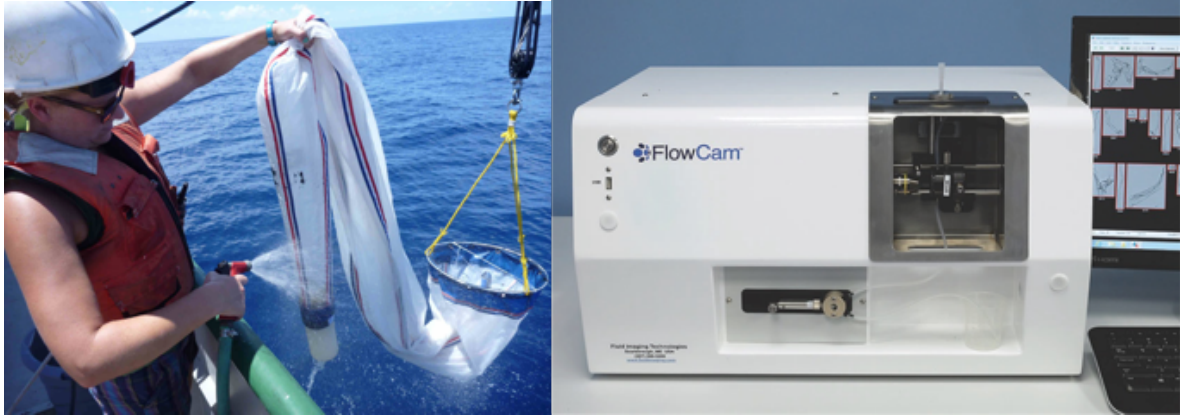
## Ilagiyangit I: Titigauyat



Titirauyaq 1 mi. Tukhiutiyangit umiaryuat tumingit.



Titirauyaq 2 mi. Taryumi Tingmiannuaq.



Titirauyaq 3 mi. Haumianni takunnaqtuq: Kumaruit kuvyingit igiyangit.  
Taliqpiangmi takunnaqtuq: Tautungnaqtuq iiyingnut takunnaittut ihivriuqtangit ilitturnaqtuq  
uumani FlowCam™.