

Copernicus Expansion Missions Sea Ice Experiment (CEMSIE) tuumatuq ihivriutiqatigiiktukhaq havaakhaq, taimaa piqpagitillugu Kanatami unipkaaqhuni haffumunga University-havaktinit, tautuktitut talimanik avataaniittunik nunarjuamit ublumiqatauyut. Dr. John Yackel, University of Calgary-mi Ilitquhiriyauyimumut Uqautchiqtuyuuq, tuumatuq takiuqhijuuq havakviuyuuq, havaktiuyuuq iluani pingahuuyut Kanatami University-mi ilihimayut, tautuktitillugu hitamanik avatinniittunik ilihimayunit.

Havakvik CEMSIE-kut kiinauyatuq tautuknirmi ilihimayut, nunarjuami ilihimayut, nunallaammi ilihimayut, talvaniitut ilihimayat uqauhimalutik talvannguqtillugit makpiraqmi, havaqatigiikniqaqtut akhuurutiglu. Havakvikmi takkuhimaqtut tautuktiit, Government of Canada-mi ilihimayut, University-mi ilinniaqtiit, havakniqaqtut tamainni uumannguqtillugit hanaqatigiiknikkut.

Copernicus Expansion Missions” unniqtitauttut nutaqqat satelliangat, aimavingmi havaariakhauyut 2027-miit 2029-mut European Space Agency-kunit. Taimaittut satelliangat ikayuqtukhauyut Kanatamiunut, ilitaqhugit nutaamigut ikayuutait imarmi havaktiit hailiurutikhanik, taimaatigut tuqungniaqtut imarmi avatingani aullaqniq, iqaluqtuuqniq, piqpagitillugu tautuktitiyaangat hikuqpaamiuni.

Havaakhaq CEMSIE-kut katimayut ilihimayut annuraaqmi, hikuqmi, satelliangani, ilihimayaangat qanuq hikuqpaamiuni hikuq atiqatiliqiyait satellianganit. Havaakhaq ikayuutigiyaa Polar Knowledge Canada (POLAR), Canadian High Arctic Research Station (CHARS), Polar Continental Shelf Project (PCSP), havaktillu Canadian and European Space Agencies-kunit. Hapkua havaqatigit ilihimayut katimayut satelliangat nakuuyaqhimayut talvannguqtillugit qilamiuqhiurniqmi.

Nunaat havakvikmi ikayuutauvakhimaqtut 25–30 ilihimayuliit, ingilrayuliit, ikayuutiliit, katimayut ikayuutikhainik, tautuktitlugit 12–14 hilamiittutik CHARS-mi Iqaluktuuttiaqmi tamainni ukiuqhailagiami.

CEMSIE-kut ihivriugutaa landfast (hikunit itirniqhaq, aullaniqtuq) hikuq talvani Iqaluktuuttiaqmi. Havaqatigiiktut havaktititauyut ihivriutitlugit hikuq hamlat, annuraaq, hinnginnaqtumik ikayuutauvakhutik qanuriliurniqmut. Havaqatigiikniqmi aulaniqaqtut qajarnikkut, research aircraft-kunit radar-anginik, satelliangat, ihivriuqniaqtut hamna hikuq, annuraaq, qanuq ilihimayuuq.

Havautiqhaq siyaaqtuq, ukiuqhaq, havakvikmi angmaumaniaqtuq ublukkut paunnaqtittitlugit ilihimayaangat. Havaqatigiiktut maniqqami havakviaqtut talvunga 15 km-kut Iqaluktuuttiaqmit kangiani, havakviuyuuq ukiuqhailami atuqtauvakhimayuuq, hiamittiarlugu ukiuqhailami. Tamapta tent-it, equipment shelters-it, havaktauyut atuqtauvakhimayut, aallanik ikayuutit, niggianiqaqtut havakvikmi pihimaniqtillugu.

Havakviit CEMSIE-mi ihivriuqniaqtut qanuq annuraaq, hikuq, uvalu imaalu qanuq atugakhaat. Havaqatigiiktut ilihimalutik annuraaq miqhuqtit, hikumi uukuutit, annuraaqmi atuqhimayut, hikuqmi qayaqhimayut, salinity-mi (saviannait), uvalu hikuq akhuqhiurutit. Hapkua qauyihimayut ikayuutigiyaaat research aircraft-kunit radar-anginnut, ihivriutitlugit qanuq takujaaqtut satelliangat aulaniqniaqtut CIMR, CRISTAL, ROSE-L-kunit.

Aircraft-angit aullaqniaqtut tingmidjutik Iqaluktuuttiaqmi airport-mit ublukkut. Aullaqniaqtut Dease Strait-mi, Queen Maud Gulf-mi, Victoria Straitmi, ilihimalutik ilihimayut nunami, qulimiguuliluni, satelliangani tautuktitillugit qanuriliuqniaqtut hikuq annuraaqpallu. Taimaatigut ilihimayut ihivriuqniaqtut qanuriliuriami qanuq satelliangat pittiarriaktut tautuktitlugit hikuq annuraaqmik.

Aullarniqmi atuqtauvakhimayut qamutit (snowmobiles), panigaqtuq sled-it, fixed-wing aircraft-angit (Twin Otter immaqallu atauttimik), uvalu qulimiguuliit (helicopter) atuqtauvaktuq hapkunani nunallaami tikikkani, ilihimalutik angirrarniqmi. Hapkua atuqtauvakhimayut ikayuutigiyaaat havakviit amihuutikhainik, apqutikhainik, uvalu tigummiviit havagiikhutik. Hakuanginnaqtuq aanniaqtuqtauyukhauhimaittuq, taimaatigut **no heavy equipment** atuqtauvakhimaittuq.

Tingmidjutik aullaqniaqtut apqutikhainut tautuktillugu April 10–15, 2026-mi, havaakhaq ublukkut hangaqtuqhailagiami, havaariakhauhimmaaqtillugu havaangnaqhiurutinik.

Hikuqmi ihivriuqhimayut qanuq atugakhaat ihariagringniqaqtut havaqatigiikniqmi sila qanuqturnianni, ublukkut qauyihimalutik havangniqmut, aullarniqmut amihuni, uvalu ammiqsuutiglu Nunavunmiunut aanniaqtuqutikhainik. Satelliangat tautuktitiyaangat annuraaq hikuqpallu qanuq allaniqaqtut akhuqnaqtut, havakhimaaqtut qanuq pittiariniqtuq tautuktitillugit ukiumi. Annuraaq akhuqhimayuq, annuraaqmi akhuqhiurutikhanik, una uumaqtuq naglikitaaqtillugu radar-mi takujaaqtunik. Hakuanginnaqtuq allaniqaqtut hikuq annuraaqmi tautuktittillugit ilihimayayuq uqauhimalutik, taimaatigut tautuktittiniaqtuq ilihimayuq hakuanga ublukkut tamakpiaq ihivriuqhimalugit.

Ukiuqhaqmi hikuq amihut qangaaktuq, taimaatigut **first-year ice** atauttimiut, asuilaak pittiariniqtuq ihivriuqhimayainik puiguqtailillugit. Taimaatigut CEMSIE-kut qauyihimayut ihariagringniqaqtut ikayuqlutik qanuq pittiariniqtuq ilihimayut hikuq annuraaq talvani qilamiuqhiurniqmi.

Hapo ilihimayut katimayut CEMSIE-kunit ikayuutitigiyaat ilihimayaangat **algorithms** aulatitauyut satelliangatigut. Una ikayuutigiya sila qauyihimalutik, aanniaqtuqutikhainik, aullarniqmut hikuqpallut, uvalu qanuqturniq talvani havaktitlugit hikuq ukiumi. Hikuq atuq & imaalu sila uqauhiqhimayut pittiariniaqtuq qanuqturniq, havaqatigiikniq havattainni sila qanuqturnirmi.

Havaakhaq aulaniqtauyuuq **landfast first-year ice**-mi talvani **Dease Strait-mi**, hanganititillugu lqalukuuttiarmi 15 km-kut kangiani. Tamainni havaktitauyut ilihimayut, akhuqhiurutit, uvalu aullarniqmut atuqtakhat pivakhimaaqtut **CHARS-mi** lqalukuuttiarmi, talvani ukiuqhailami tamainni katimayakhainni.

Tingmidjutikmi (aircraft) ilihaqniaqtut havangniq, hivuliqtihaqniaqtut Dease Strait-mi, tautuktillugit Queen Maud Gulf-mi uvalu Victoria Strait-mi. Una tamainni ilihaqniq katimayut ihivriuqniaqtut hikuq annuraaqmik, qanuq ilihimayaangat satelliangani pittiariniqtuq.

Havakhaq aulaniqtauyuuq hamna avatingani ikayuutigiikillugu, talvaniittuq avataani **protected areas**-tigut, niruarutitigutlu, taimaatigut hamanga ihivriuqniaqtut hikuq ukiumi ihivriuqtiullunilu, naunaiqhimmaaqtillugu ihivriuqnikkut qanuqturniqmi.

Havaktitauyut aulaniqtauyut **hitamanik-avluni ublunik** ukiuqhaqmi tikikkaangat, havangniaqtut **April 1-miit May 15-mut, 2026-mi**. Taimai hivulliutigiplugu ukiuqhaqmi annuraaq aalangnaittumik, qiqutailaqtumik, hikuqmi anihatuqmi qanuqturniqmi. Una ublukkut hakuanga ihariagiplugu pittiariniqtuq radar-mi tautuktitillugu ilihimayut.

Mid-May-mi tikikkaangat, qanuqturniq amihaaqtuq, annuraaq aanniqtuq, satelliangiitlu radar-anginnut takujaaqtuq aqittuuqtittillugu. Taimaatigut havakvikmi itqaumaniqtuq, niuhiqtaalu havakvingmi havaqatigiiknik upauttinniarpata.

CEMSIE-kut ikayuutigiyaat **multi-year international effort**, ikayuqtugu tikinmi satelliangat nutaami, kihimi tamapta **on-ice work** talvani lqalukuuttiarmi pihimaniqtillugu ukiuqhaqmi ikayuutauyuuq hamna ikaarutillugu ublumi.