

USGS International Polar Year Proposals as of 3/30/05

	Title	Principal Investigator(s)		Study Area		Location	Cooperators	Scope of Work
				Antarctic	Arctic			
1	World Energy Project	<i>Tom Ahlbrandt/ Energy Team/ CR Don Gautier/Energy Team / WR</i>	ahlbrandt@usgs.gov gautier@usgs.gov		Arctic	United states, Canada, Greenland, Norway, Russia, Arctic Ocean	Norwegian Universtiy of Science and Technology, Statoil, ExxonMobil, Energy Information Administration, British Petroleum, Chevron Texaco, HIS Energy, Petro Canada, Geological Surveys of Denmark and Greenland, Department of Energy, Department of Defense	Energy resource assessments
2	Long Range Radio Frequency Tags for Polar and Brown Bear Research	<i>Steve Amstrup / ASC Dick Shideler Lori Quakenbush</i>	steven_amstrup@usgs.gov dick_shideler@fishgame.state.ak.us lori_quakenbush@fishgame.state.ak.us		Arctic	Arctic coast of Alaska	USGS, Alaska Department of Fish and Game, University of Alaska Fairbanks	Wildlife population and habitat assessment
3	Polar Bear survival in a vanishing sea ice environment	<i>Steven Amstrup / ASC George Durner / ASC David Douglas / ASC Geoff York / ASC</i>	steven_amstrup@usgs.gov		Arctic	Arctic coast of Alaska	Russian Academy of Sciences Canadian Wildlife Service UA-Fairbanks North Slope Borough US Fish & Wildlife Service	Wildlife monitoring
4	Eastern Prairie Population Canada Goose Research	<i>David Anderson / MN CRU</i>	dea@umn.edu		Arctic	Cape Churchill, Manitoba, Canada, and adjacent areas in Wapusk National Park	Mississippi Flyway Council, U.S. Fish and Wildlife Service, Canadian Wildlife Service, Manitoba Conservation, Minnesota Department of Natural Resources, Iowa Department of Natural Resources, Missouri Department of Conservation, Arkansas Game and Fish Commission, Illinois Department of Conservation, the Wildlife Management Institute, Parks Canada (Wapusk National Park)	Wildlife monitoring and assessment
5	APGS - Antarctic Pathogen Genomic Survey	<i>David S. Blehert / USGS Rebecca Cole / USGS Hon S. Ip / USGS Valerie Shearn-Bochsler / USGS</i>	dblehert@usgs.gov rebecca_cole@usgs.gov hip@usgs.gov vsb@svm.vetmed.wisc.edu	Antarctic		Palmer Station, Anvers Island, Antarctic Peninsula	USGS, Wisconsin Cooperative Wildlife Research Unit ; Polar Oceans Research Group, Sheridan, MT	Molecular techniques will be used to characterize the genomes of etiological agents affecting the health of Antarctic shorebirds and to monitor for changes in the species and population structure of polar region pathogens.

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6	Freshwater input and transport of selected water-quality constituents to the Beaufort Sea	<i>Tim Brabets / ASC Robert Holmes / WHOI Jim McClelland / WHOI</i>	tbrabets@usgs.gov rholmes@mbi.edu jmccllelland@mbi.edu		Arctic	North Slope of Alaska, Colville, Kuparuk, and Sagavanirktok Rivers, Northwest Canada Mackenzie River	University of Alaska, Fairbanks, Water Resource Center, International Arctic Research Center, University of Alaska Fairbanks, Bureau of Land Management, US Fish and Wildlife Service, Marine Biology Laboratory - Woods Hole, Massachusetts, Water Survey of Canada/Environment Canada	Flow modeling and water quality assessment
7	Influence of Large River Deltas on Arctic Processes - emphasis on periods of global warmth and links between Arctic paleoceanography and global climate	<i>Tim Brabets / ASC</i>	tbrabets@usgs.gov		Arctic	Deltas of the Colville, Yukon-Kushikwlm, and Copper Rivers, Alaska; Severnaya Dvina, Pechora, Ob, Yenisey, Koruy, Lena, Indigirka, and Kolyma Rivers of Russia and Mackenzie Rivers of	USGS - Glaciology, Fairbanks, Alaska, Domaine Universitaire, Cedex, France, State Oceanographic Institute, Moscow, Russia	Water quality assessment
8	An institutional/economic analysis of Alaska and Federal land management agencies in a changing climate	<i>Nina Burkardt / FORT Berton Lee Lamb / FORT Lynne Koontz / FORT</i>	Nina_Burkardt@usgs.gov		Arctic	Alaska	USFWS, NPS, USFS, State of Alaska	Economic analysis
9	Geologic assessment of the occurrence of gas hydrates within the Circum-Arctic	<i>Tim Collett / Energy / CR Tom Lorenson / Coastal & Marine / WR</i>	tcollett@usgs.gov tlorenson@usgs.gov		Arctic	Circum-polar	University of Alaska, Fairbanks DOE, BLM, MMS Natural Resources Canada Geological Survey of Norway Geological Survey of Denmark Institute of Natural Gases, VNIIGAZ, Russia Moscow State University, Russia VNIIOkeangeologia, Russia	Energy resource assessments
10	Cenozoic Paleoclimate History of The Arctic	<i>Thomas M. Cronin / GD / ER Harry Dowsett / GD / ER</i>	tcronin@usgs.gov hdowsett@usgs.gov		Arctic	Central Arctic Ocean	USGS, NSF, Duke University, NASA, Integrated Ocean Drilling Program	Climate history for climate modeling
11	Surficial Processes in the Arctic - Understanding a Changing Environment	<i>Janet Curran / ASC Chris Waythomas / ASC Larry Hinzman / UAF Jim McNamara / BSU</i>	jcurran@usgs.gov chris@usgs.gov ffdh@uaf.edu jmcnamara@usgs.gov		Arctic	Alaska North of Arctic Circle	University of Alaska and Boise State University	Watershed GIS and modeling/surficial processes

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12	Coastal erosion in Arctic and sub-Arctic Alaska	<i>Janet Curran / ASC</i>	jcurran@usgs.gov		Arctic	Coastal regions of Alaska along the Bering and Chukchi Seas	AWI / Arctic Coastal Dynamics Program USGS Coastal and Marine Program	Coastal erosion assessment
13	Gamburtsev Aerogeophysical Mapping of Bedrock and Ice Targets (GAMBIT)	<i>Carol Finn / CIC / Denver Robin Bell / LDEO Michael Studinger / LDEO Prasad Gogineni, & David Braatan (U. of Kansas) Linda Hayden (Elizabeth City State University)</i>	cfinn@usgs.gov	Antarctic	Arctic	East Antarctica	John Goodge (U. Minn., Duluth), Detlef Damaske (German Geological Survey), Chris Wilson (U. Melbourne), Wilfried Jokat (Alfred Wegener Institute)	Areogeophysical survey
14	Science for a Changing Climate - Alaska, Federal Land Management Agencies and the Future	<i>Joan Fitzpatrick / CRDO Denver</i>	jfitz@usgs.gov		Arctic	Alaska	FWS, NPS, USFS, UAF, State of Alaska Environment Canada	Ecological succession modeling and monitoring networks
15	Bring the Aerial Photography Resources of the 20th Century into the 21st.	<i>Cheryl A. Hallam / ERG Daniel Sechrist / ERG</i>	challam@usgs.gov dsechrist@usgs.gov	Antarctic	Arctic		USGS, Gateway Antarctica, University of Canterbury, Christchurch, New Zealand	Digital data creation (aerial photographs) and dissemination
16	Polar Data Display and Dissemination Tools for the 21st Century	<i>Cheryl A. Hallam / ERG Daniel Sechrist / ERG Douglas Tallman / WGSC</i>	challam@usgs.gov dsechrist@usgs.gov dtallman@usgs.gov	Antarctic	Arctic		USGS, University of New Hampshire, National Science Foundation, SCAR Geographic Information Expert Group members	Data dissemination
17	National Ice Core Lab (NICL) support of U.S. West Antarctica Drilling Program	<i>Geoff Hargreaves / NICL John Rhoades / NICL</i>	ghargreaves@usgs.gov jfrhoades@usgs.gov	Antarctic		West Antarctica	NSF and ESF	Ice core acquisition
18	Geochemical evaluation of changes in major parameters of climate change	<i>Todd Hinkley / NICL</i>	thinkley@usgs.gov	Antarctic	Arctic	Antarctica Greenland	Geological Survey of Japan and University of Milan Bicocca, Italy	Climate history
19	Determination of natural environmental baselines of poisonous trace metals	<i>Todd Hinkley / NICL</i>	thinkley@usgs.gov	Antarctic	Arctic	Antarctica Greenland	Geological Survey of Japan and University of Milan Bicocca, Italy	Baseline levels of poisonous trace metals
20	Pathogenic Microorganisms in Migratory Birds: Genetic Characteristics and the Potential for Disease Transmissions to the Arctic	<i>Erik Hofmeister / USGS J. Christian Franson / USGS</i>	Ehofmeister@usgs.gov chris_franson@usgs.gov		Arctic	Eastern Russia, Alaska, Scandinavia	Scandinavian and Russian scientists and colleagues in USGS and USFWS	Wildlife genetics
21	Permafrost in Alaska: Present, and Future	<i>Leslie Holland-Bartels /ASC</i>	lholland-bartels@usgs.gov		Arctic	Alaska	Alaska Division of Geological and Geophysical Surveys, University of Alaska-Fairbanks	Permafrost boundaries/GIS

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22	CRYSTAL - South Pole Seismic Array	<i>Bob Hutt / ASL Rhett Butler / CONT Kent Anderson / CONT</i>	Rhett@iris.edu kanderson@usgs.gov	Antarctica	Arctic	South Pole	IRIS, USGS, New Mexico Tech, NSF, RPSC	Seismic monitoring, whole-earth geophysics
23	Breeding and postnesting ecology of sea ducks along the Beaufort Sea, Alaska	<i>Paul Flint / USGS Margaret Peterson /</i>	paul_flint@usgs.gov margaret_petersen@usgs.gov		Arctic	Beaufort Sea Alaska		Wildlife monitoring
24	Hydrology of Arctic regions from satellite passive and active microwave observations	<i>Edward G. Josberger / WWSC</i>	ejosberg@usgs.gov		Arctic	Arctic Ocean and land masses	Other USGS & US French Space Agency Univ. of Bergen, NO	Snow cover monitoring using satellite and microwave
25	Volumetric changes of the glaciers and ice fields southern Alaska	<i>Edward G. Josberger / WRD WA District</i>	ejosberg@usgs.gov		Arctic	Alaska	BLM, Altarum Institute, USGS Civil Applications Committee	Glacier monitoring / mass balance
26	Bacterial and bacteriophage interactions and the impact these interactions have on the geochemical and nutrient cycles in polar regions	<i>John T. Lisle / FISC</i>	jlisle@usgs.gov	Antarctic	Arctic		USGS, Montana State University, College of Charleston, NSF	Microbial assessment and impact to geochemical processes
27	Measurement and diagnosis of polar geomagnetic activity	<i>Jeffery J. Love / HAZ / Denver</i>	jlove@usgs.gov	Antarctic		Geomagnetism	NSF, NOAA, Intermagnet, Academic institutions, IPY and IHY	Geomagnetic observatory
28	Remeasurement of IGY Glaciers	<i>R.S. March / WRD AK Field E.J. Josberger / WRD WA District B.F. Molnia / GD / ER</i>	rsmarch@usgs.gov ejosberg@usgs.gov bmolnia@usgs.gov		Arctic	South Gulf Coastal Glaciers of Alaska	Gephysical Institute, Fairbanks and Juneau, Alaska, National Park Service, University of Alaska, National Snow and Ice Data Center	Glacier change analysis / mass balance
29	Augmentation of USGS Benchmark Glaciers in Alaska	<i>R.S. March / WRD AK Field</i>	rsmarch@usgs.gov		Arctic	Alaska	University of Alaska, Fairbanks and Juneau, Alaska, National Park Service, University of Alaska, World Glacier Monitoring System, National Snow and Ice Data Center	Glacier monitoring /mass balance
30	GLIMS Alaska Regional Center	<i>R.S. March / WRD AK Field Jeff Kargel / ASTRO</i>	rsmarch@usgs.gov jkargel@usgs.gov		Arctic	Alaska	UA Fairbanks and Juneau NPS (Denali) GLIMS Program	Data dissemination
31	Glacier Volume Changes in the Gulf Alaska	<i>R.S. March / WRD AK Field E.J. Josberger / WRD WA District B.F. Molnia / GD / ER</i>	rsmarch@usgs.gov ejosberg@usgs.gov		Arctic	South Gulf Coastal Glaciers of Alaska	UA Fairbanks and Juneau NPS (Denali) University of Alaska, GeoData Center National Snow and Ice Data Center	Glacier monitoring / mass balance

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32	Development of Arctic Monitoring Site, Transact and associated Landscape Vegetation Databases	<i>Carl Markon / ASC Skip Walker / UAF</i>	markon@usgs.gov ffdaw@uaf.edu		Arctic	Circumpolar Arctic and near Arctic environments	ABR Inc., Fairbanks, AK USDA Forest Service Puerto Rico GEOLAB, UMR6042 CNRS, France Department of Geography, Finland	Landcover monitoring
33	Arctic and Sub-Arctic Decision Support System	<i>Carl Markon / ASC Skip Walker / UAF</i>	markon@usgs.gov ffdaw@uaf.edu		Arctic	Circumpolar Arctic and Associated Boreal Watersheds	University of Alaska, Fairbanks Laboratoire THEMA, CNRS, France Helmut Epp, NWT Centre for Remost Sensing, Yellowknife, Canada ABR Inc, Fairbanks, AK NORUT Information Technology Ltd, Norway	Decision support system
34	Arctic/Boreal Hydrological Interactions	<i>Carl Markon / ASC Tim Brabets / ASC</i>	markon@usgs.gov tbrabets@usgs.gov		Arctic	Deltas of the Colville, Yukon-Kushikwlm, and Copper Rivers, Alaska; Severnaya Dvina, Pechora, Ob, Yenlsey, Koruy, Lena, Indigirka, and Kolyma Rivers of Russia and Mackenzie Rivers of	University of Alaska, Fairbanks State Oceanographic Institute, Moscow, Russia ABR Inc, Fairbanks Alaska USDA Forest Service, Puerto Rico	Landcover and hydrologic monitoring
35	Integrative Vegetative Studies in the Arctic Environment	<i>Carl Markon / ASC</i>	markon@usgs.gov		Arctic	Circumpolar		Landcover monitoring
36	Time Series Vegetation Analysis over the Arctic Landscape	<i>Carl Markon / ASC Brad Reed / EDC / CONT Madeleine Griselin / CNRS</i>	markon@usgs.gov reed@usgs.gov madeleine.griselin@univ-fcomte.fr		Arctic	Circumpolar	Laboratoire THEMA, France, UAF, NORUT Information Technology, Norway, Institute of of Tromso, Norway, USGS EROS Data Center	Landcover analyses
37	History of Polar Science Component Antarctica throughout it's Scientific Age of Discovery	<i>Tony K. Meunier / ERG</i>	tmeunier@usgs.gov	Antarctic		South Polar Region	Ohio State University, NSF, US State Department	Information synthesis
38	High-Resolution Mapping of the Polar Regions for the 21st Century: A GIS/Remote Sensing Collaboration	<i>Jerry Mullins / GD / HQ Michelle Rogan / U. Cant. Cheryl Hallam / ERG</i>	jmullins@usgs.gov michelle.finnemore@canterbury.ac.nz challam@usgs.gov	Antarctic	Arctic	New Zealand Canada Norway	USGS University of Canterbury, NZ North circumpolar nations	High resolution imagery
39	Integrated monitoring for assessing regional changes in the carbon cycle in Arctic watersheds	<i>Peter Murdoch / WRD</i>	pmurdoch@usgs.gov		Arctic	Alaska	Carbon Cycle Interagency Working Group (CCIWG), USGS Forest Service Global Change Program, Forest Inventory and Analysis Programs, NRCS Natural Resources Inventory, NOAA Arctic Research Program, NSF, PARTNERS project coordinator, Marine Biological Laboratory, Wood Hole, MA, Environment Canada	Carbon monitoring

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40	Interactive Polar Information Gateway	<i>Douglas Nebert, HQ/GIO Cheryl Morris CR/GIO</i>	ddnebert@usgs.gov cmorris@usgs.gov	Antarctic	Arctic		USGS Alaska, University of Alabama, GeoMatics, Natural Resources, Canada	Data dissemination and visualization
41	Global Climate Change and Salmon Pan-Arctic Migration Modeling	<i>Jennifer Nielsen / ASC</i>	jennifer_nielsen@usgs.gov		Arctic	North Circum-polar	USGS ASC, NASA, University of Alaska, fairbanks, University of New Hampshire, Amherst, University of Guelph, Russian Telemetry Research Laboratory, Magadan	Invasive pathway modeling (salmon)
42	Improving breeding population indices of Lesser and Taverner's Canada Geese	<i>John Pearce / USGS</i>	john_pearce@usgs.gov		Arctic			Wildlife monitoring and assessment
43	Winter Range of Adelie Penguins as related to Sea Ice in Antarctica	<i>Christine Ribic / WI CoopCRU</i>	caribic@wisc.edu	Antarctic		Palmer Station (Antarctic Peninsula), and Cape Crozier (Ross Island)	British Antarctic Survey (BAS), Landcare Research New Zealand, Hokaiido University, Japanese Antarctic Program, NASA	Wildlife monitoring and assessment
44	An exploration of the Amundsen Sea Coast for Adelie Penguin colonies using remote sensing	<i>Christine Ribic / WI Coop CRU</i>	caribic@wisc.edu	Antarctic		The Amundsen Sea	Polar Oceans Research Group, Landcare Research New Zealand, Australian Antarctic Division, University of Wisconsin-Madison	Wildlife monitoring and assessment
45	Adaptive Symbiosis as a Mechanism of Survival of Antarctic Plants	<i>Rusty Rodriguez / WERC</i>	rusty_rodriguez@usgs.gov	Antarctic	Arctic	Palmer Peninsula Devon Island	Montana State University, Bozman Walla Walla Academy, Walla Walla, WA	Plant life history
46	Paleotemperature and paleoenvironmental records archived in ice from Gulkana Glacier, Alaska: Global linkage to other ice core records from mid latitude glaciers	<i>Paul F. Schuster / NRP / CO Dennis Trabant / WRD / AK Field Rod March / WRD / AK Field</i>	pschuste@usgs.gov dtrabant@usgs.gov rsmarch@usgs.gov		Arctic	Gulkana Glacier	USGS; AK District, WI District, WDMRL; BRR WR, Isotope lab; BRR ER, Isotope lab, Chinese Academy of Sciences	Climate history
47	Response of Fish and Wildlife to Ecological Change on the Arctic Coastal Plain, Alaska	<i>Joel A. Schmutz / ASC Paul Flint / ASC Carl Markon / ASC Gary Clow / ESD / CO Steve Frenzel / ASC</i>	joel_schmutz@usgs.gov paul_flint@usgs.gov markon@usgs.gov clow@usgs.gov sfrenzel@usgs.gov		Arctic	Arctic Coastal Plain / Alaskan North Slope	Department of Wildlife Management, Alaska, US Fish and Wildlife Service, Alaska	landcover and wildlife assessment

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48	Carbon and Nutrient Transport and Cycling in the Mackenzie River, Canada	<i>Rob Striegl / WRD George Aiken / WRD Paul Schuster / WRD</i>	rstriegl@usgs.gov graiken@usgs.gov pschuste@usgs.gov		Arctic	Mackenzie River, Canada	Water Survey of Canada, University of Montreal, Yale University, PARTNERS project, Marine Biological Laboratory, Woods Hole, MA	Carbon monitoring
49	Circumpolar Assessment of the Quantity, Chemical Character, and Biological Reactivity of Organic Carbon in Permafrost Soils	<i>Rob Striegl / WRD George Aiken / WRD Kimberly Wilckland Paul Schuster</i>	rstriegl@usgs.gov graiken@usgs.gov kpwick@usgs.gov pschuste@usgs.gov		Arctic	North Slope of Alaska, and the Canadian, Nordic and Siberian Arctic	Finnish Environmental Institute, Helsinki, Uppsala University, Sweden, Yale University, Marine Biological Laboratory, Woods Hole, MA; Russian colleagues associated with the PARTNERS project; Water Survey of Canada	Carbon assessment
50	Using genetic markers to determine populations status and management strategies of migratory birds	<i>Sandra L. Talbot / USGS</i>	sandy_talbot@usgs.gov			Alaska		Wildlife genetics
51	Toxicogenomic analysis of mercury impacts on salmonine population in Arctic regions of North America	<i>Donald Tillitt / USGS Cathy Richter / USGS</i>	dtillitt@usgs.gov crichter@usgs.gov		Arctic	Alaska, Yukon Territory, Northwest Territory, and Quebec	USGS, USFWS, Alaska, Department of Fisheries and Oceans - Canada	Fish genetics
52	Conservation Genetics of the Bog Birch (<i>Betula nana</i>) - Population Structure in the Context of a Changing Arctic Environment	<i>Rocky Ward / USGS BRD</i>	rward@usgs.gov		Arctic	Circumpolar regions of the northern hemisphere	USGS, other agencies, universtiy-based researchers, other countries, etc. To be identified	Floral genetics
53	Development and Application of Genetic Markers Useful in the Monitoring of Species Composition in the Patagonian and Antarctic Toothfish Fisheries	<i>Rocky Ward / USGS BRD</i>	rward@usgs.gov	Antarctic		Southern Ocean	USGS, other agencies, universtiy-based researchers, other countries, etc. To be identified	Fish genetics
54	Increased disease risk among arctic fish species	<i>James Winton / WERC</i>	jim_winton@usgs.gov		Arctic	Alaska, Northern Canada	University of Washington UAF, Oregon State Univ. AK Dept. of Fish & Game Canada Dept. of Fisheries & Oceans	Fish disease / risk assessment

