



A Plan for Capturing Gravity Field Change using AG

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Initial Idea for a Number of Absolute Gravimeter Sites to Monitor Geoid Change – suggestions and modifications welcomed

- Biannual sites, four groups; two done on alternate years
- Quinquennial sites, five groups; one done each year



Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image USDA Farm Service Agency

Google



Biannual (two groups on alternate years):

Group B1: National backbone (to show stability)

RALEIGH AA, MIAMI AB, NEW ORLEANS AA, MCDONALD AB, SUNSPOT AB, PINYON FLAT AA, QUINCY HELIPORT, PENDLETON AA, BOULDER AG*. Optional COLUMBUS AA, ATLANTA AA, substitute BLACKSBURG AA for Raleigh. Backbone nominally includes some other Biannual sites below.

★ Group B2: Northern-tier of CONUS for GIA

EASTPORT AA, BOSTON AB, OTTAWA AA*, SAULT STE. MARIE AB, SIOUX FALLS AA, BISMARCK A, GREAT FALLS AB, NEWPORT AA, VICTORIA PGC*. Optional Lansing AA, SARANAC LAKE AA, substitute PENTICTON AA for Newport.

Group B3: Two North-south GIA transects. Both lines extend south passed hinge line.

○ B3a: CHURCHILL AA, THOMPSON AA, FLIN FLON AA, GRAND RAPIDS AA, PINAWA URL-B, INTERNATIONAL FALLS AA, WAUSAU AA, IOWA CITY AA, ROLLA AA. Optional DULUTH AA and Gillam.

○ B3b: KUUJUARAPIK GEOM, LA GRANDE 1, EASTMAIN RELAIS, LOUISE, VAL D'OR, ALGONQUIN ARO, BUFFALO AA, PITTSBURGH AA, WASHINGTON AA*, DUCK AA.. Option substitute GREAT FALLS PARK AA for Washington.

▲ Group B4: Southeast Alaska plus Yukon:

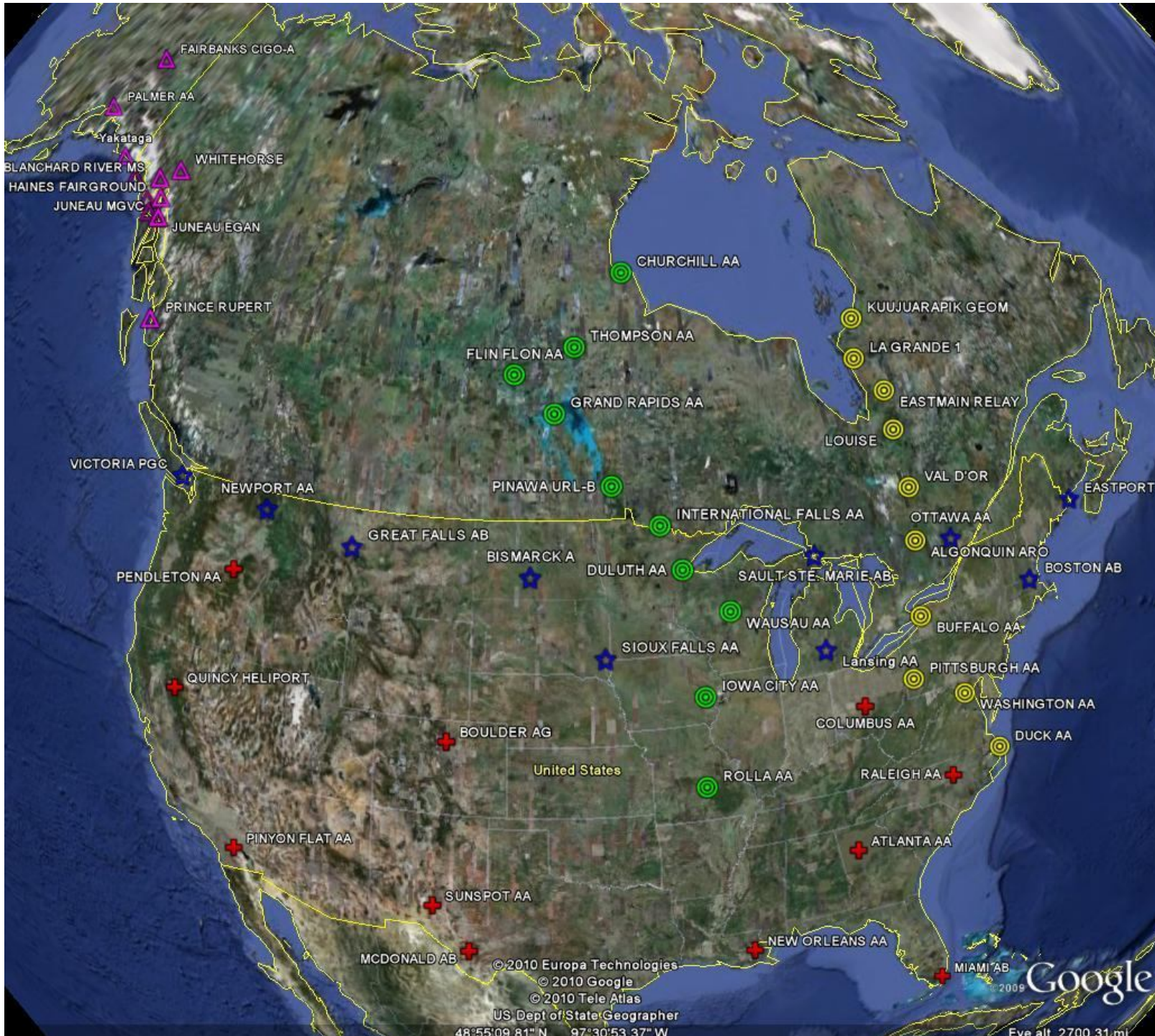
JUNEAU EGAN, JUNEAU MENDENHALL, WHITEHORSE, HAINES FAIRGROUND, BLANCHARD RIVER MS, Yakataga. Optional RUSSELL ISLAND, GUSTAVUS BARTLETT COVE, Yakutat, PRINCE RUPERT. Add PALMER AA and FAIRBANKS CIGO-A for more Alaska coverage.

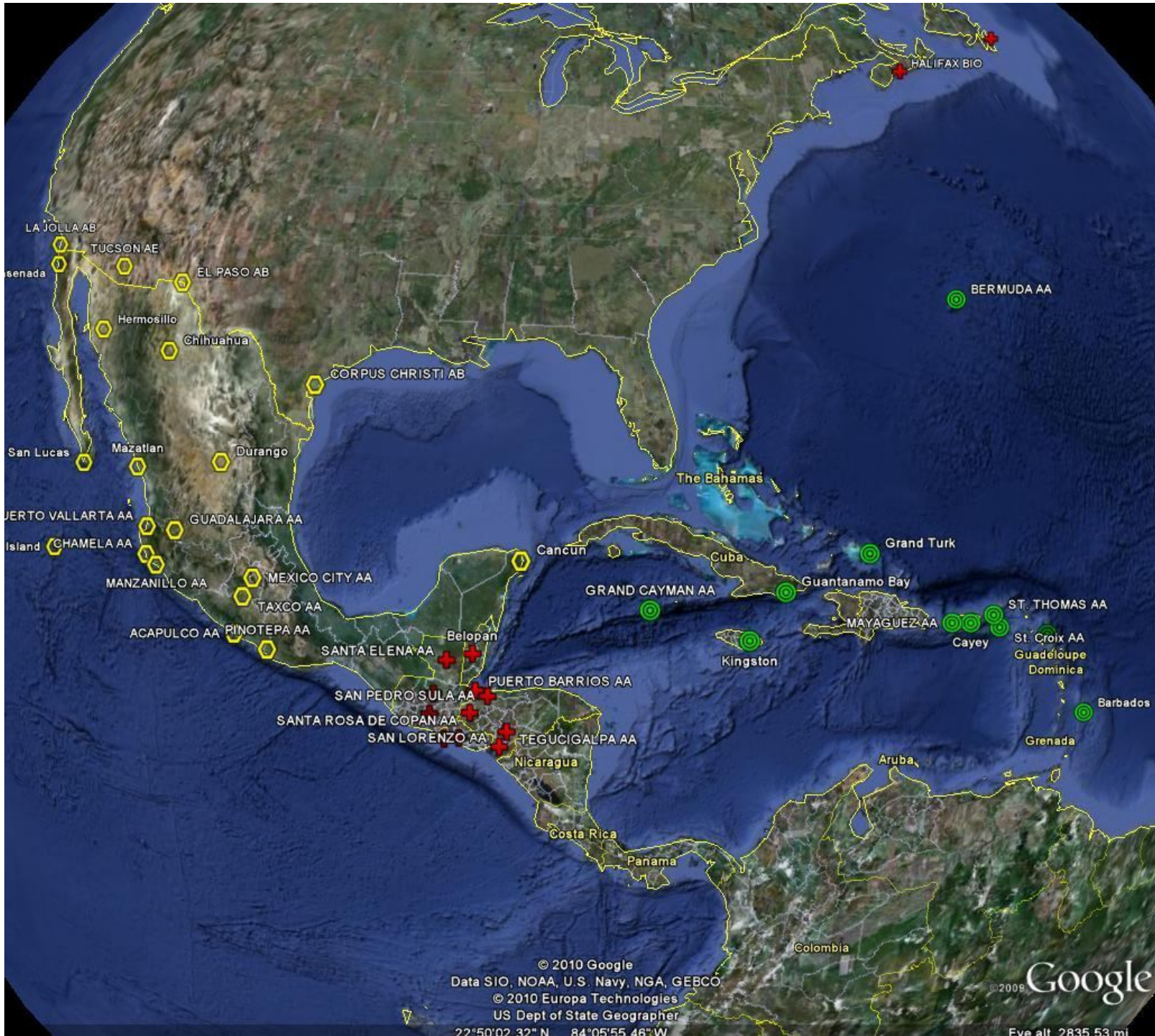


Quinquennial (one group per year)

- Group Q1: Guatemala/Honduras Triple Junction:
SANTA ELENA AA, PUERTO BARRIOS AA, GUATEMALA CITY AA, COBAN AA,
SAN PEDRO SULA AA, SANTA ROSA DE COPAN AA. Optional: TEGUCIGALPA AA, SAN LORENZO
AA, ACAJUTLA AA, SAN SALVADOR AA, Belmopan
- ★ Group Q2: Alaska: PALMER AA, FAIRBANKS CIGO-A (& AB), KODIAK AA, Nome, Barrow, Kobuk,
TAKOTNA, Bethel, Sourdough, ILIAMNA, Sand Point, Dutch Harbor, Adak. Option substitute King
Salmon for Iliamna, add in some of UAF N-S transect sites (need tent).
- Group Q3: Pacific & Caribbean Islands:
 - Q3a: MAUI AA, OAHU AB, KAUAI AA, Mauna Kea (or HVO), MIDWAY AA, PAGO PAGO AA (& AB),
GUAM AA, Saipan. Optional OAHU AA, PEARL HARBOR AA, Wake Island, Kwajalein.
 - Q3b: MAYAGUEZ AA, ST. THOMAS AA (& ab), GRAND CAYMAN AA, BERMUDA AA, St. Croix,
Kingston, Cayey. Optional Grand Turk, Barbados, Antigua, Guantanamo Bay, St. John.
- Group Q4: Mexico co-operation:
MEXICO CITY AA, ACAPULCO AA, GUADALAJARA AA, PINOTEPA AA, TAXCO AA, MANZANILLO AA,
CHAMELA AA, PUERTO VALLARTA AA, Cancun, Mazatlan, Socorro Island, Cabo San Lucas,
Durango, Chihuahua, Hermosillo, Ensenada. In US, add CORPUS CHRISTI AB, EL PASO AB,
TUCSON AE*, LA JOLLA AB*.
- Group Q5: Canada support for GIA: Sites to be determined by in co-operation with Canadian
agencies. Suggested sites: ST. JOHN'S AA, HALIFAX BIO, YELLOWKNIFE, SCHEFFERVILLE VAULT,
PENTICTON AA, Iqaluit, RESOLUTE, INUVIK, SASKATOON VAULT, FT. VERMILLION.

Groups B 1-4



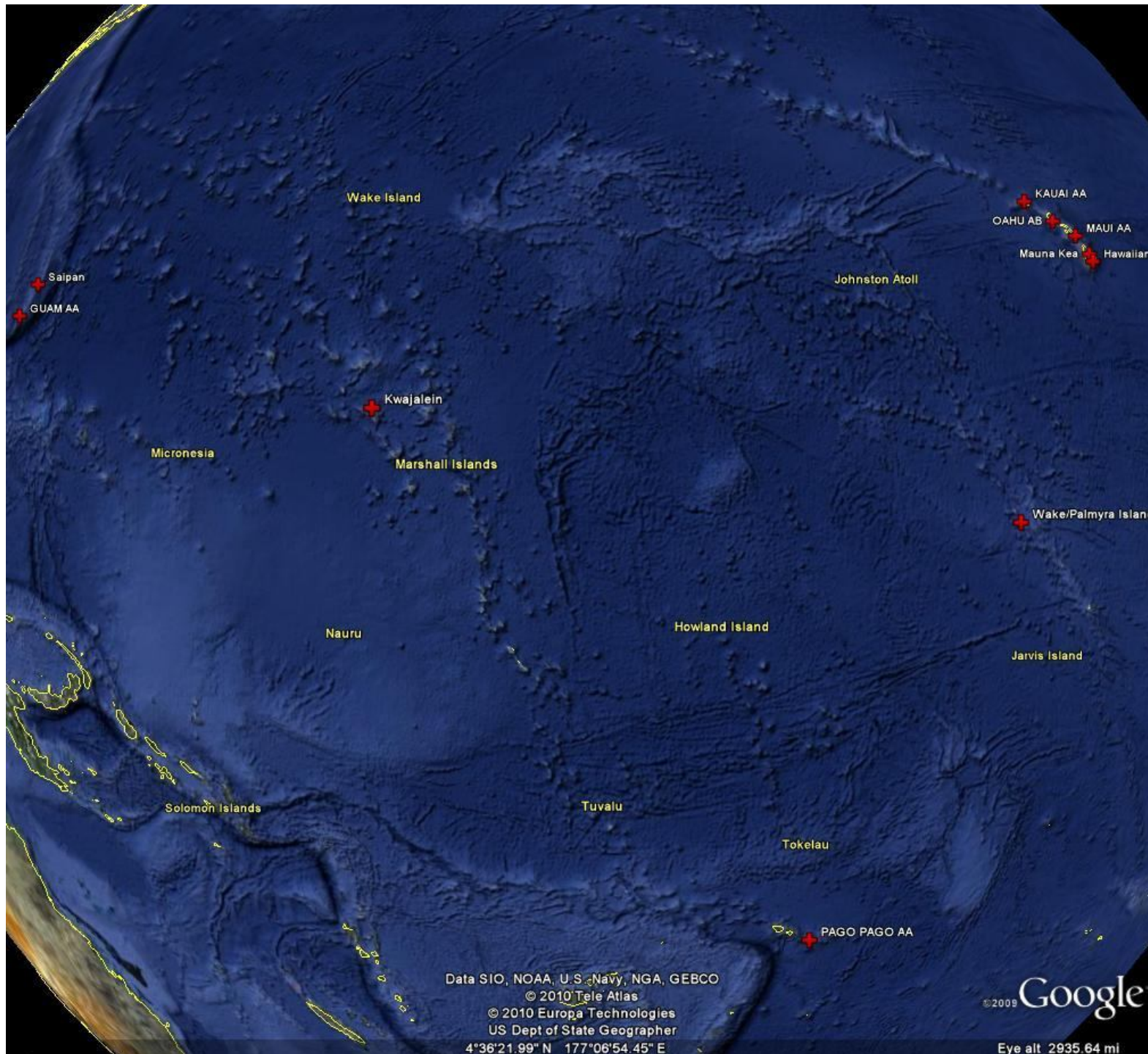


Groups
Q1, Q3b
, Q4

Groups Q2 & Q5



Group Q3a





Each Group above requires about two months of field work (well, maybe three months for both parts of Group 3's). So that is about six to seven months in field plus about a month each for in-Boulder preparations plus a month for annual maintenance.



Thank You.

I will now fend off questions.