Summary data for Kalsbeek & Nutman "Anatomy of the Early Proterozoic Nagssugtoqidian Orogen, west Greenland, explored by reconnaissance SHRIMP U-Pb dating"

(1) Sample numbers refer to the files of the Geological Survey of Greenland. Data obtained in analytical sessions FK1-FK5 at the SHRIMP ionprobe at ANU, Canberra, form the basis of the manuscript.

(2) Lithology: Rock type checked in thin section. Homogeneous hypersthene bearing granitoids are referred to as 'charnockite' although in most cases it is not certain whether hypersthene originally was a magmatic mineral.

(3) Locality: See also locality map.

(4) Latitude and longitude in degrees, minutes and seconds.

(5) Weighted means were calculated as outlined in A. P. Nutman, *GEOLOGY*, v. 22, p. 571-573, 1994. Where only a few grains were analysed the precision of the results should be regarded with caution. However, the calculations support our claim that "for most of the 90 samples a reliable age was obtained with a precision better than 50 Ma".

(6) Best 7/6: Where the data were too scattered and discordant to calculate a weighted mean, the $^{207}Pb/^{206}Pb$ age is listed for the most concordant analysis.

(7) Estimate: If none of the analyses gave reliable concordant data an estimate (mostly a minimum age) is given.

field #	lithology	locality	lat.	long.	# of analyses	weighted mean(s)	best 7/6	estimate
mafic dykes								
GGU 158078	Kangamiut dyke	N of Kangamiut	655620	532912	12	2046 ±8		
GGU 413794	Kangamiut dyke	Itivdleq	663348	533000	7	2006 ±10		
field #	*lithology*	*locality*	*lat.*	*long.*	*# of analyses*	*prot. age*	*best 7/6*	*estimate*
Gneisses/granites								
GGU 298808	'charnockite'	Holsteinsborg	665624	534200	21	1921 ±10		ca.1820
GGU 269017	hbl-bi gneiss	N. Strømfjord	675806	510254	18	1913 ±12		
GGU 414415	granite sheet	Itivdleq	663300	530500	13	2492 ±12		
GGU 415316	granite	Lersletten	682218	521100	9			ca. 2750
field #	*lithology*	*locality*	*lat.*	*long.*	*#of analyses*	*prot. age*	*best 7/6*	*estimate*
413766, FK1	bi gneiss (A)	N. Strømfjord	674512	511200	4	2807±16		
415629, FK1	hy gneiss	W CNO, coast	671900	535218	4			>2500
413899, FK1	banded bi gn. (A)	Arfersiorfik	675424	503800	3	2807±22		
415622, FK1	bi gneiss	W NNO	681836	532800	4	2699±12		
413839, FK1	hy-bi gneiss	Ikertoq	665812	522900	4			>2600, c. 1850
413887, FK1	bi gneiss (A)	Arfersiorfik	675942	504342	4	1821±8		
413777, FK1	bi gneiss (A)	N. Strømfjord	674200	520100	3		2807±26	
413720, FK1	hy gneiss	N. Isortoq	671118	534900	17			≥2800,ca.1800
413738, FK1	bi gneiss (A)	N. Strømfjord	673800	514900	3			≥2800
413808, FK1	bi gneiss	W CNO	664048	522300	3	2740±6		
413747, FK1	pink granite (A)	N. Strømfjord	674324	512000	3	1796±11		
413870, FK1	banded bi gn. (A)	N. Strømfjord	674854	504648	3			>2700
413752, FK1	bi gneiss (A)	N. Strømfjord	673836	511100	3		2702±10	
413869, FK1	hbl-bi gneiss (P)	N. Strømfjord	674854	504648	4	1922±12		
413715, FK1	hy gneiss	N. Isortoq	671912	523700	14			≥2700,ca.1850
413876, FK1	gran. bi gn. (A)	N. Strømfjord	675024	512042	3		2747±13	
field #	*lithology*	*locality*	*lat.*	*long.*	*# of analyses*	*weighted mean(s)*	*best 7/6*	*estimate*
413805, FK2	hbl-bi gneiss	W SNO	664218	525900	3	2725±8		
413835, FK2	late pegmatite	Ikertoq	664906	522300	2		inh. 2724±60	
415642, FK2	'charnockite'	SW CNO	665824	534930	3	1835±16		
413740, FK2	mafic hbl-bi gn. (P)	N. Strømfjord	673754	514800	3	1936±14		
413711, FK2	hy gneiss	N. Isortoq	671606	530000	3	2867±16		
415518, FK2	red granite	E NNO	682630	505900	3			≥2750
413821, FK2	hbl-bi gneiss	Ikertoq	665054	522600	3			≥2750
415323, FK2	bi gneiss	W NNO	682218	521100	3			≥2850
413811, FK2	hbl-bi gneiss	Itivdleq	663054	532300	3	2729±11		
415573, FK2	'charnock.' dyke	SW CNO, coast	670248	534800	3			1800-1900
415632, FK2	hy gneiss	W CNO, coast	671448	535354	3		2745±24	
413801, FK2	gran. patch in dyke	W SNO	664854	524300	14	1785±6		
413709, FK2	hy gneiss	N. Isortoq	671448	531700	3			≥2600
415626, FK2	'charnockite'	W CNO, coast	672324	534924	4	1939±60 (6/38)		
413879, FK2	bi gneiss (A)	N. Strømfjord	675518	513212	3	2826±22		
414982, FK2	granite in shear	E CNO	672706	505900	4			ca. 1840
field #	*lithology*	*locality*	*lat.*	*long.*	*# of analyses*	*weighted mean(s)*	*best 7/6*	*estimate*
415603, FK3	dioritic band in 'A'	Arfersiorfik	680218	510900	3	2858±40		
413812, FK3	mylonitic gneiss	Itivdleq	663124	532600	3	2731±16		
415961, FK3	undef. granite	E SNO	665342	502000	3	2862±28		
415053, FK3	porph gran. in shear	NE SNO	670900	510200	4	2637±11		
415595, FK3	'charnockite'	N. Isortoq	670730	535400	3	1935±27		
415653, FK3	tonal. sheet in 652	S of Holsteinsborg	665024	532748	3	1891±34		
415637, FK3	'charnockite'	W CNO, coast	670718	535536	3	1930±14		
413804, FK3	schlieric bi gneiss	W SNO	664606	525200	3		2744±42	

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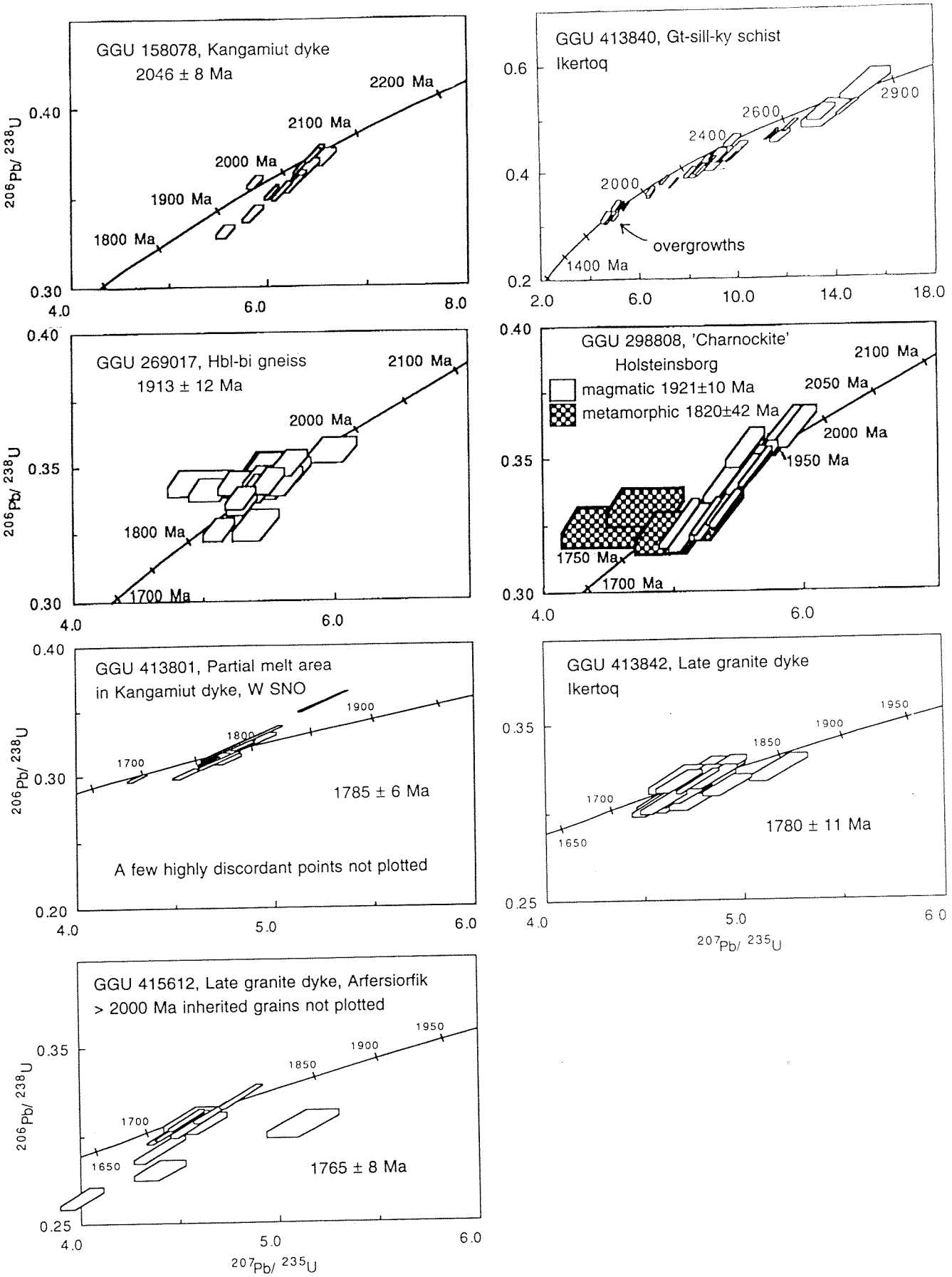
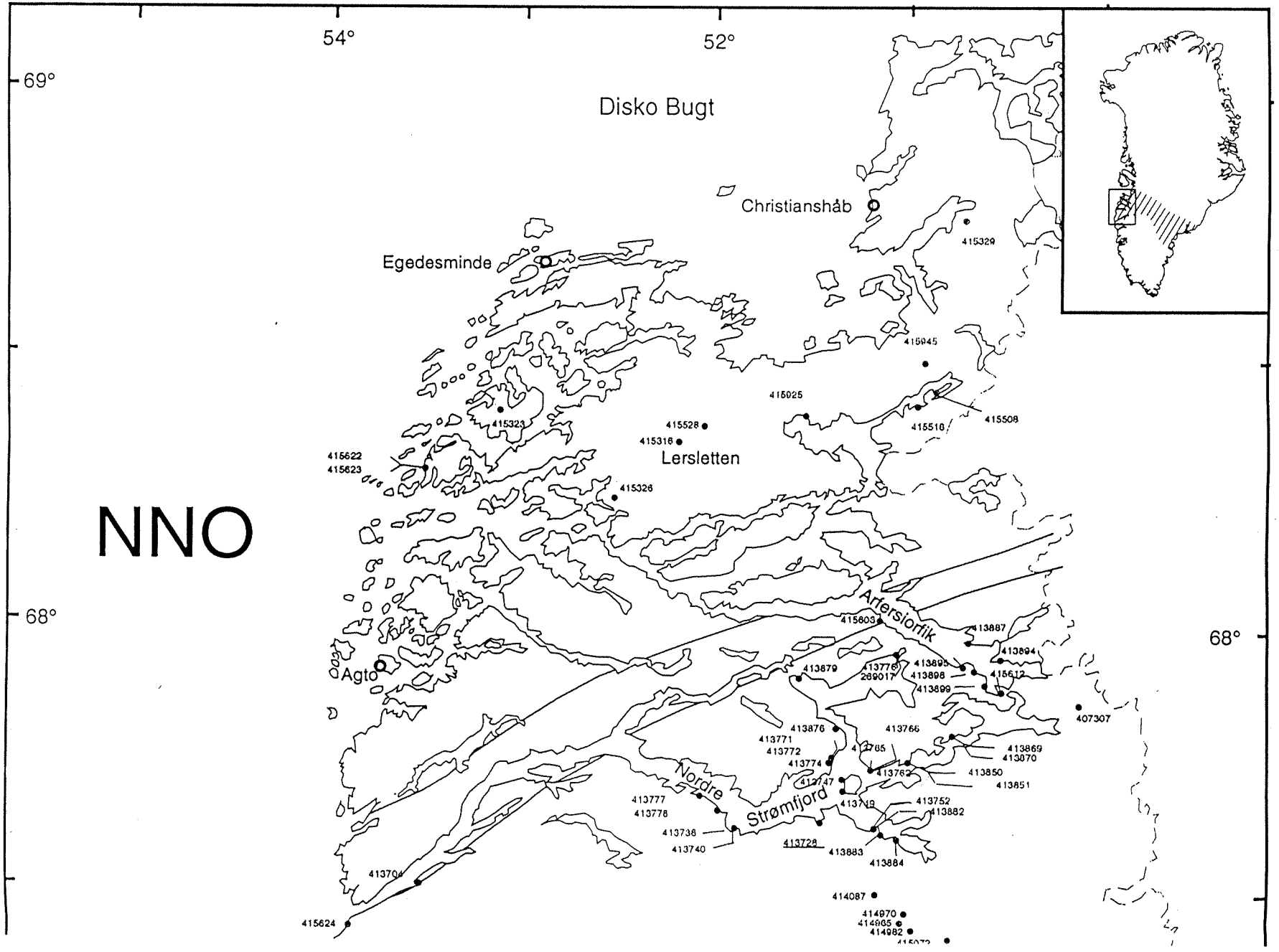
415326, FK3	bi gneiss	W NNO	681536	522800	3	2808±22		
413884, FK3	hbl-bi gneiss (P)	N. Strømfjord	673724	510424	3	1912±18		
413806, FK3	bi gneiss	W SNO	664106	525800	3	2712±9		
413762, FK3	hbl-bi gneiss (P)	N. Strømfjord	674454	511200	3	1913±11		
415624, FK3	hy gneiss	W CNO	672554	534554	3	2835±30		
414026, FK3	granodior., E SNO	intrudes 414032	670524	505400	4	1793±22,2693±16		
415631, FK3	gt. leucogranite	W CNO, coast	671354	535418	4			≥2700
413778, FK3	mafic hbl-bi gn. (P)	N. Strømfjord	674106	515700	3	met. 1821±7		
413850, FK3	mafic hbl-bi gn. (P)	N. Strømfjord	674554	510024	2		1946±16	
413749, FK3	hbl-bi gneiss (P)	N. Strømfjord	674236	512000	3	1949±20		
415638, FK3	'charnockite'	SW CNO, coast	670424	535700	4	1907±15		
415623, FK3	porph. granite	W NNO	681836	532800	2	2688±23		
field #	*lithology*	*locality*	*lat.*	*long.*	*# of analyses*	*weighted mean(s)*	*best 7/6*	*estimate*
414087, FK4	banded hy gn.	E CNO	673218	510900	4			3000&2600?
414032, FK4	banded hbl-bi gn.	E SNO	670524	505400	4	2849±30		
415636, FK4	'charnockite'	SW CNO	670924	535518	3	1892±14		
414947, FK4	'charnockite'	E CNO	672324	505700	3	2815±37		
413704, FK4	banded hy gneiss	NW CNO	673136	532400	5	1932±14		
413765, FK4	pink granite (A)	N. Strømfjord	674500	511200	3			≥2500
413771, FK4	pink granite (A)	N. Strømfjord	674654	512200	3	1818±13		≥2600
415508, FK4	hbl-bi gneiss	E NNO	682806	505400	3	2840±14		
413722, FK4	hy gneiss	N. Isortoq	671430	533636	4		2828±21	ca.1850
413776, FK4	granitic gn. (A)	N. Strømfjord	675824	510300	3		2819±30	
413894, FK4	late granite dyke	Arfersiorfik	675724	503236	5			ca.1800
415650, FK4	metagabbro/diorite	S. of Holsteinsborg	665154	533548	4	1891±21		
413796, FK4	granitic gneiss	W SNO	664948	524000	3			Proterozoic?
415072, FK4	porph. granite	E CNO	672636	505000	4	1834±15		
413882, FK4	hbl-bi gneiss (P)	N. Strømfjord	673848	510912	3	1886±8		
415646, FK4	'charnockite'	S. of Holsteinsborg	665454	532706	3	1923±8		
415652, FK4	banded hy gneiss	S. of Holsteinsborg	665024	532748	3	1917±21		
413826, FK4	banded bi gneiss	Ikertoq	665542	523000	5			≥2700
413838, FK4	banded hy gneiss	Ikertoq	665812	522900	3	2701±6		
413818, FK4	bi gneiss	Ikertoq	665218	522700	3			≥2550
field #	*lithology*	*locality*	*lat.*	*long.*	*# of analyses*	*weighted mean(s)*	*best 7/6*	*estimate*
413895, FK5	pink gran. gn. (A)	Arfersiorfik	675700	504542	4			ca.1800,≥2650
413851, FK5	pink gran. gn. (A)	N. Strømfjord	674554	510024	6	1821±8		
413842, FK5	late granite dyke	Ikertoq	665442	522300	16	1780±11		
413772, FK5	hbl-bi gneiss (P)	N. Strømfjord	674648	512200	4	1936±20		
414944, FK5	'charnockite'	E CNO	672100	505600	3	2771±33		
414970, FK5	'charnockite'	E CNO	672854	510100	3			≥2750
413898, FK5	hbl-bi gneiss (P)	Arfersiorfik	675624	504018	3	1943±37		
415612, FK5	late granite dyke	Arfersiorfik	675354	503312	17	1765±8		
415639, FK5	'charnockite'	SW CNO	670048	535030	3	1902±10		
415649, FK5	'charnockite'	S . of Holsteinsborg	665230	533754	4			early Prot.
415329, FK5	granitic gneiss	Christianshåb	684806	504300	3	2738±21		≥2800
413832, FK5	hbl-bi gneiss	Ikertoq	665712	523100	4	1851±32		≥2600
415945, FK5	meta-andesite?	E NNO	683048	505700	4			Ca.2000?
413883, FK5	bi gneiss (A)	N. Strømfjord	673748	510754	3	2775±8		
415630, FK5	'charnockite'	W CNO, coast	671354	535418	9	1834±29		≥2550
field #	*lithology*	*locality*	*lat.*	*long.*	*# of analyses*	*weighted mean(s)*	*best 7/6*	*estimate*
414925, FK6	'charnockite'	SE CNO	682542	513300	3	2837±34		
414965	porph. granite	SE CNO	672800	510036	10	1912±11		
407113	'charnockite'	NE of Holsteinsborg	665830	525600	9	1904±14		

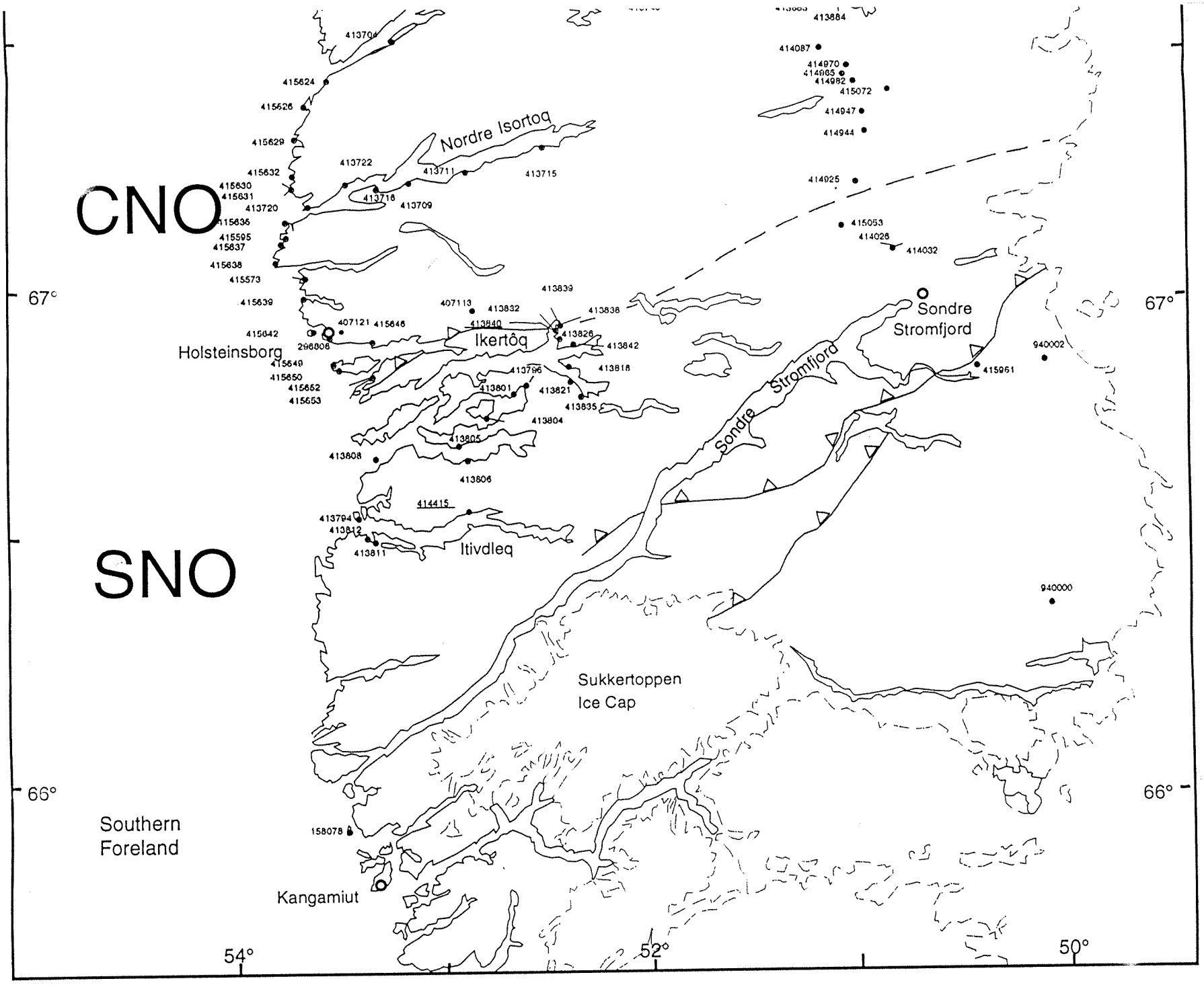
407121	granite	Holsteinsborg	665624	533700	4	1887±12		
field #	*lithology*	*locality*	*lat.*	*long.*	*# of analyses*	*oldest detrital*	*main detr.*	*youngest detr.*
sediments								
GGU 407307	sill. schist	inner Arfersiorfik	675230	501300	40	3	2.00-2.08	1.95?
GGU 413840	gt+sill+ky schist	Ikertoq	665654	523200	30	2,85	2.4-2.35	2.1?
GGU 413728	gt-sill schist	N. Strømfjord	673930	512618	31	2,66	2.00-2.08	1.95?
GGU 413716	gt quartzite	N. Isortoq	671618	525500	21	2,94	2.63-2.69	
GGU 415528	micaschist	Lersletten	682412	520236	8		ca. 2800?	


GGU 158078, Kangamiut dyke
2046 ± 8 Ma
2200 Ma
2100 Ma
2000 Ma
1900 Ma
1800 Ma
0.40
0.30
4.0
6.0
8.0
GGU 413840, Gt-sill-ky schist
Ikertoq
2900
2600
2400
2000
overgrowths
1400 Ma
0.6
0.4
0.2
2.0
6.0
10.0
14.0
18.0
GGU 269017, Hbl-bi gneiss
1913 ± 12 Ma
2100 Ma
2000 Ma
1800 Ma
1700 Ma
0.40
0.35
0.30
4.0
6.0
GGU 298808, 'Charnockite'
Holsteinsborg
magmatic 1921±10 Ma
metamorphic 1820±42 Ma
2100 Ma
2050 Ma
2000 Ma
1950 Ma
1750 Ma
1700 Ma
0.40
0.35
0.30
4.0
6.0
GGU 413801, Partial melt area
in Kangamiut dyke, W SNO
1900
1800
1700
1785 ± 6 Ma
A few highly discordant points not plotted
0.40
0.30
0.20
4.0
5.0
6.0
GGU 413842, Late granite dyke
Ikertoq
1950
1900
1850
1700
1650
1780 ± 11 Ma
0.35
0.25
4.0
5.0
6.0
GGU 415612, Late granite dyke, Arfersiorfik
> 2000 Ma inherited grains not plotted
1950
1900
1850
1700
1650
1765 ± 8 Ma
0.35
0.25
4.0
5.0
6.0
206Pb/ 238U
207Pb/ 235U

Nagssugtoqidian age data



NNO


CNO
SNO
Nordre Isortoq
Ikertôq
Holsteinsborg
Sondre Stromfjord
Sondre Stromfjord
Itivdleq
Sukkertoppen Ice Cap
Southern Foreland
Kangamiut
67°
66°
54°
52°
50°
413704
415624
415626
415629
415632
415630
415631
413720
415636
415595
415637
415638
415573
415639
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407121
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298808
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415650
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413709
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415053
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940002
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940000