Degree Heating Month Analysis

Vanessa

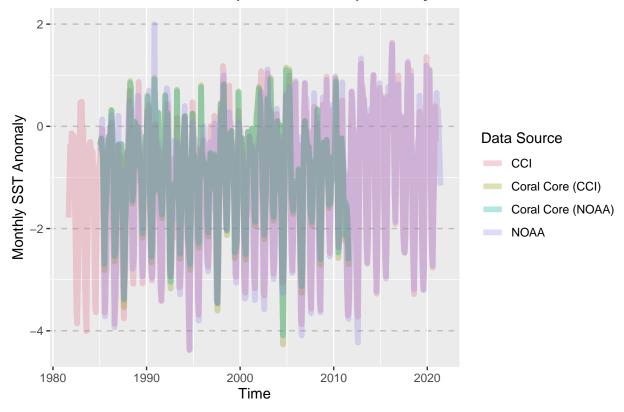
2021-09-30

 $\# \mathrm{Date}$ Range of Coral Cores

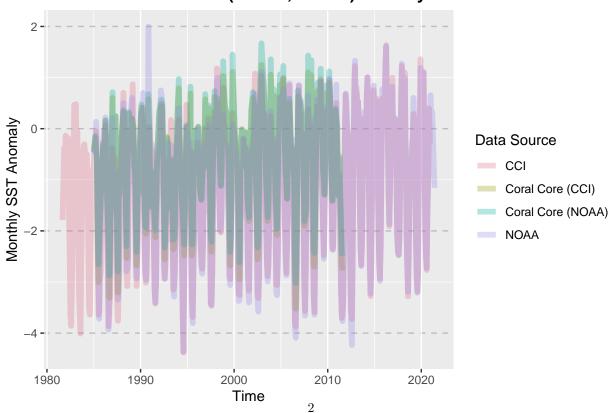
Site	Start Year	End Year
BRS05	1985	2011
BRS05	1985	2011
BRS07	1985	2011
BRS07	1985	2011
DAR Long	1985	2009
DAR Long	1985	2009
TNT	1985	1994
TNT	1985	1994
13TNT	2004	2013
13TNT	2004	2013
08TNT	1996	2008
08TNT	1996	2008
Wallabi Island	1985	1994
Wallabi Island	1985	1994

Degree Heating Month Anomaly Time Series Plots:

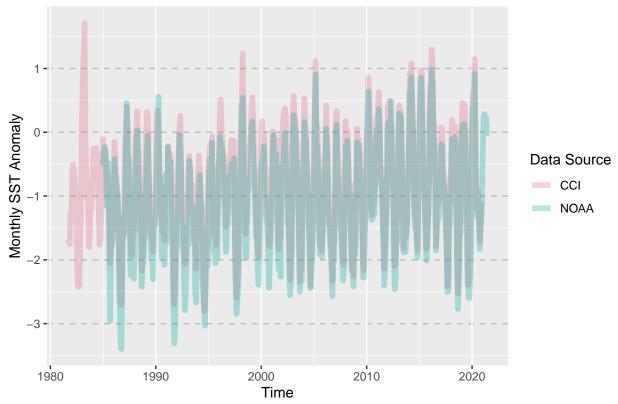
Time Series of BRS05 (-14.11, 123.54) Monthly SST Anomalies



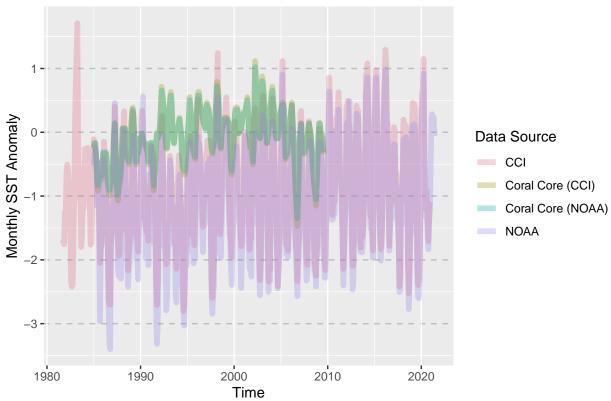
Time Series of BRS07 (-14.12, 123.55) Monthly SST Anomalies



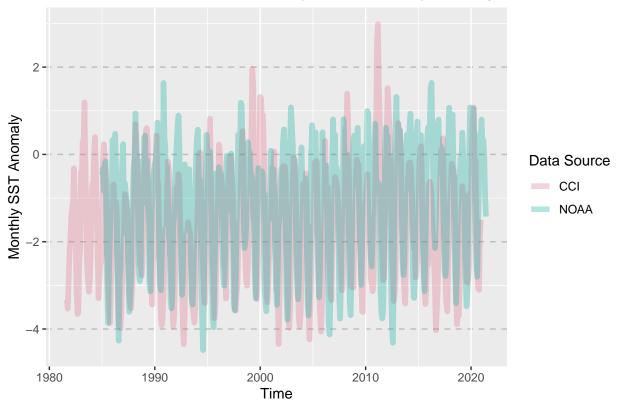


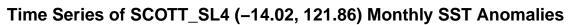


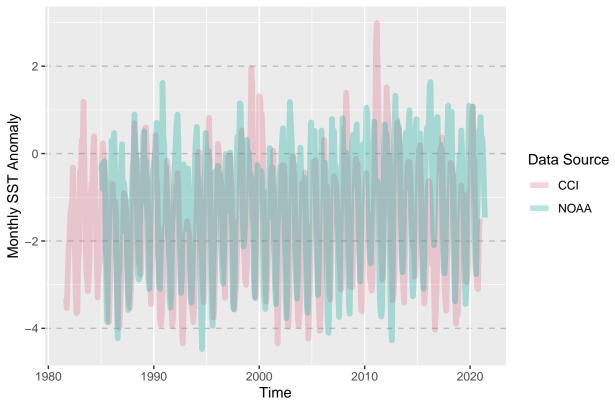




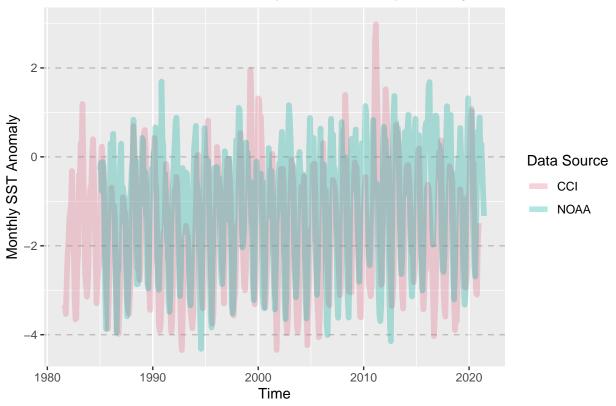




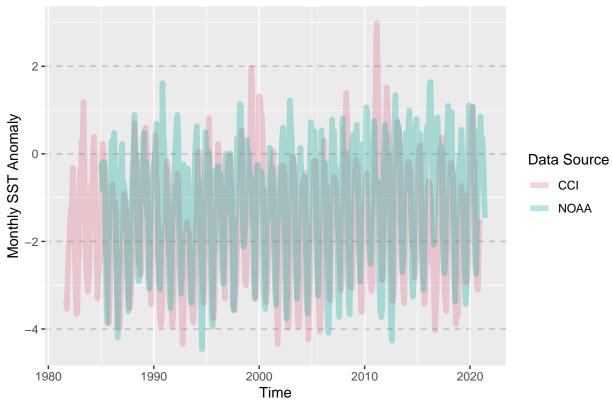


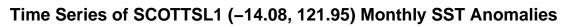


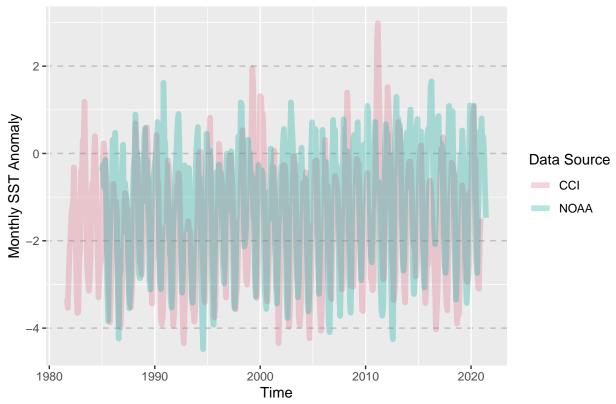




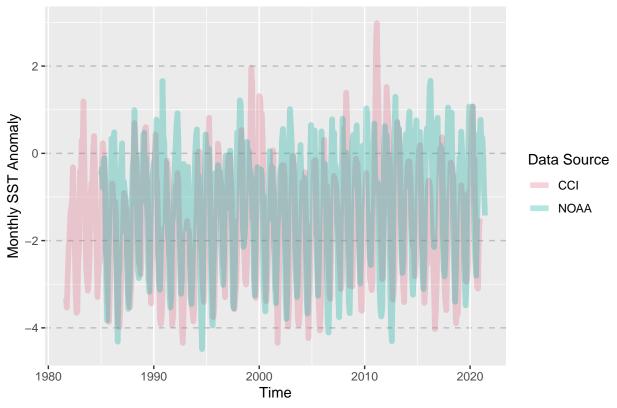


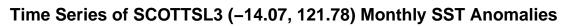


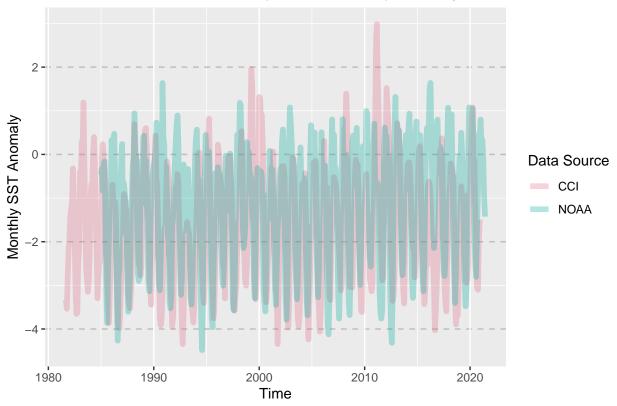


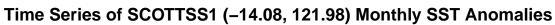


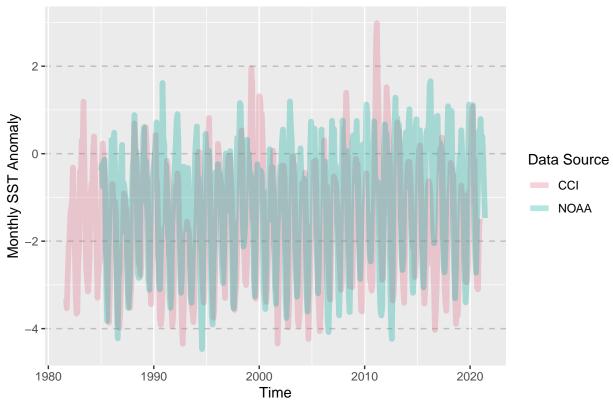


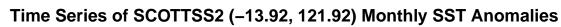


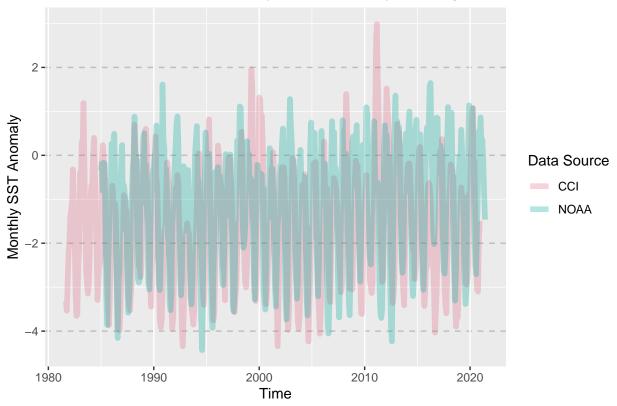


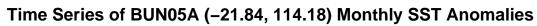


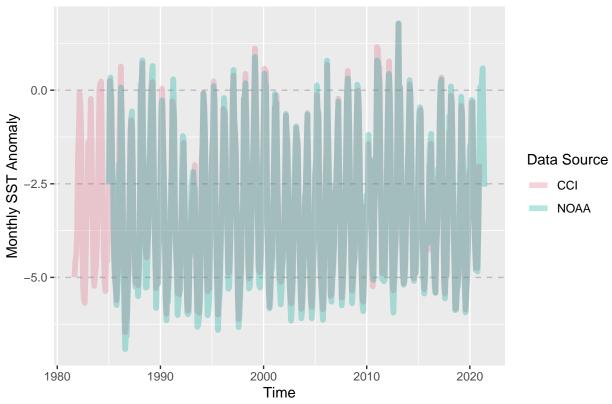


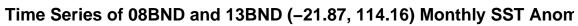


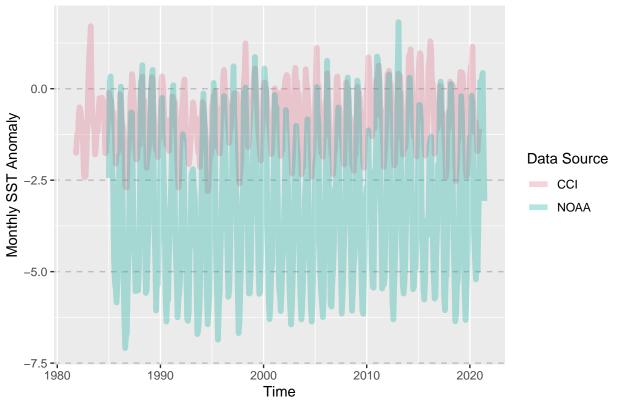




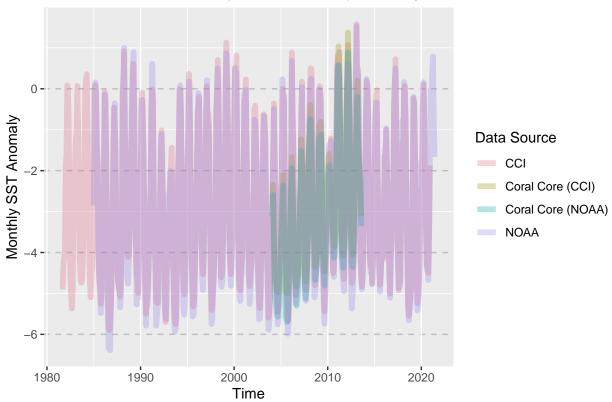




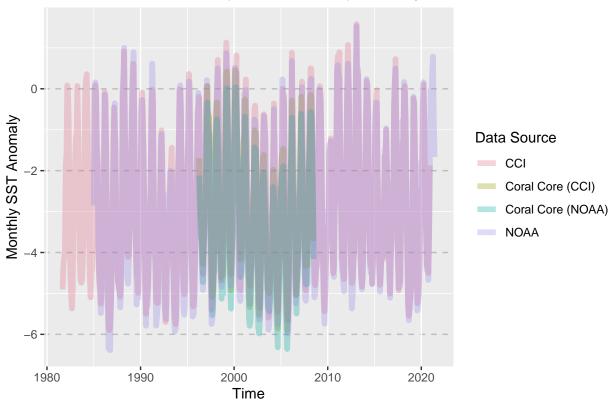




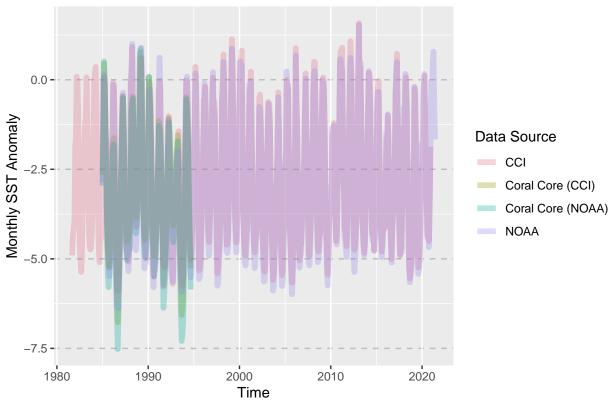


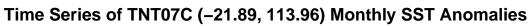


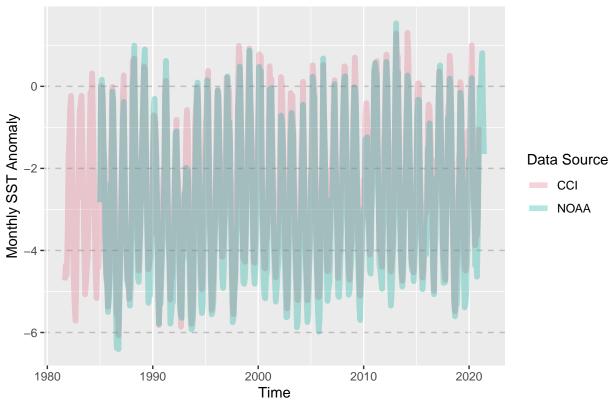




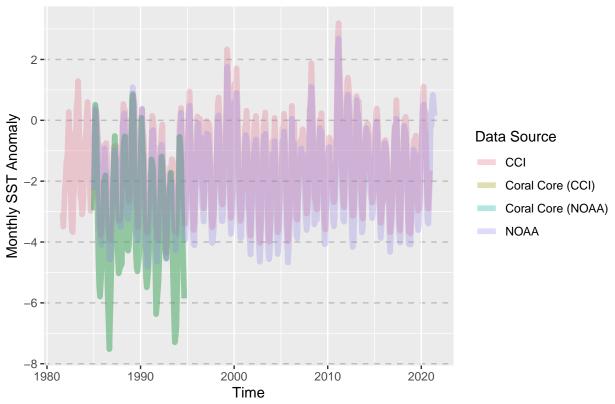




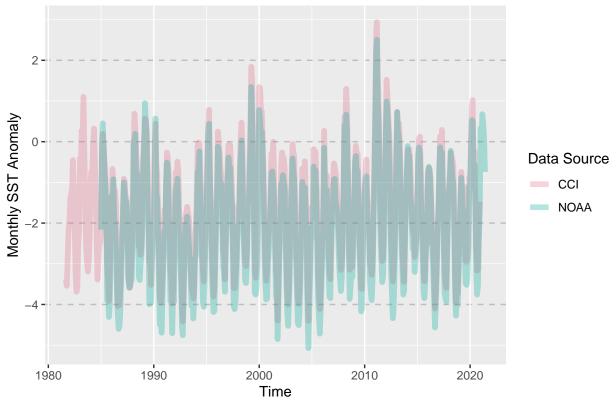




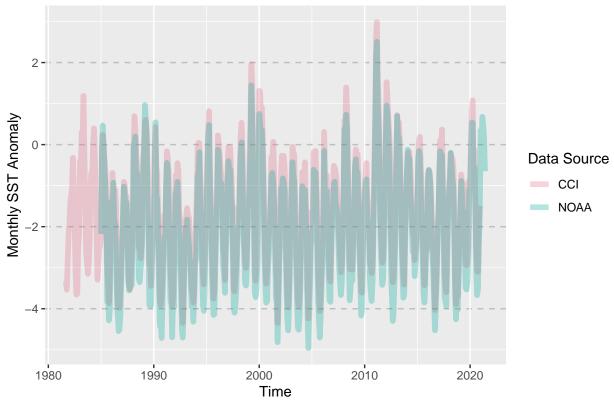










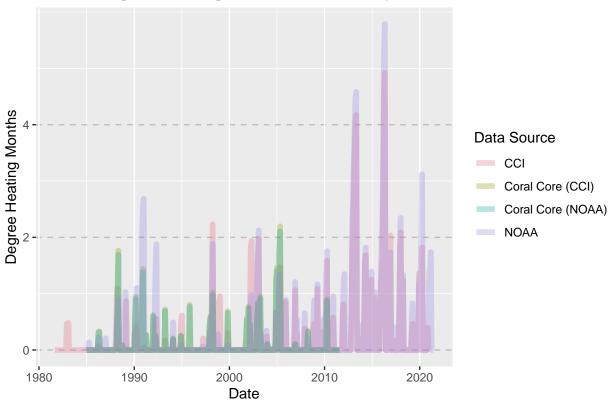


Degree Heating Month Values in BRS05					
Date	Site	CCI	NOAA	Coral Core (CCI)	Coral Core (NOAA)
1990 Dec	BRS05	NA	2.548165	NA	NA
1991 Jan	BRS05	NA	2.686059	NA	NA
1998 Apr	BRS05	2.232604	NA	NA	NA
2003 Feb	BRS05	NA	2.124424	NA	NA
2005 May	BRS05	NA	NA	2.196411	2.105658
2012 Dec	BRS05	NA	2.304541	NA	NA
2013 Jan	BRS05	2.235311	2.768242	NA	NA
2013 Feb	BRS05	3.038393	3.470583	NA	NA
2013 Mar	BRS05	3.513935	3.954607	NA	NA
2013 Apr	BRS05	4.053494	4.483995	NA	NA
2013 May	BRS05	4.171941	4.582212	NA	NA
2016 Feb	BRS05	NA	2.345986	NA	NA
2016 Mar	BRS05	2.855907	3.659365	NA	NA
2016 Apr	BRS05	4.493128	5.268087	NA	NA
2016 May	BRS05	4.913836	5.787594	NA	NA
2016 Dec	BRS05	2.035217	NA	NA	NA
2018 Jan	BRS05	2.090688	2.344876	NA	NA
2020 Mar	BRS05	NA	2.031833	NA	NA
2020 Apr	BRS05	NA	3.121222	NA	NA

^a Coral Core Date Range is from 1985 to 2011

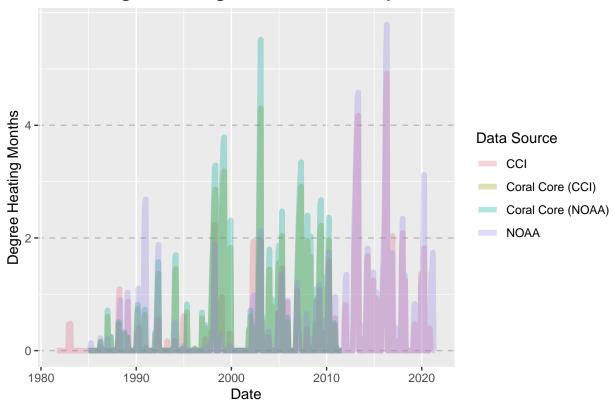
BRS05 Degree Heating Months Time Series

BRS05 Degree Heating Month values time plot



BRS07 Degree Heating Months Time Series

BRS07 Degree Heating Month values time plot



De	gree Hea	ating Mon	th Values	in BRS07	
Date	Site	CCI	NOAA	Coral Core (CCI)	Coral Core (NOAA)
1990 Dec	BRS07	NA	2.548165	NA	NA
1991 Jan	BRS07	NA	2.686059	NA	NA
1998 Feb	BRS07	NA	NA	NA	2.121460
1998 Mar	BRS07	NA	NA	2.311557	2.670219
1998 Apr	BRS07	2.232604	NA	2.815834	3.255766
1998 May	BRS07	NA	NA	2.858888	3.289489
1998 Dec	BRS07	NA	NA	NA	2.455620
1999 Jan	BRS07	NA	NA	2.456534	2.985985
1999 Feb	BRS07	NA	NA	2.767820	3.332408
1999 Mar	BRS07	NA	NA	3.094324	3.697226
1999 Apr	BRS07	NA	NA	3.186020	3.786131
1999 Dec	BRS07	NA	NA	NA	2.311533
2002 Dec	BRS07	NA	NA	2.277922	2.933868
2003 Jan	BRS07	NA	NA	3.369085	4.347153
2003 Feb	BRS07	NA	2.124424	4.303638	5.521313
2005 May	BRS07	NA	NA	2.037697	2.474014
2007 Feb	BRS07	NA	NA	2.101080	2.452555
2007 Mar	BRS07	NA	NA	2.457835	2.854160
2007 Apr	BRS07	NA	NA	2.676503	3.090219
2007 May	BRS07	NA	NA	2.910763	3.344671
2008 Jan	BRS07	NA	NA	NA	2.400438
2008 May	BRS07	NA	NA	NA	2.032554
2009 May	BRS07	NA	NA	2.141242	2.602773
2009 Jun	BRS07	NA	NA	2.216786	2.673284
2010 Apr	BRS07	NA	NA	NA	2.363649
2012 Dec	BRS07	NA	2.304541	NA	NA
2013 Jan	BRS07	2.235311	2.768242	NA	NA
2013 Feb	BRS07	3.038393	3.470583	NA	NA
2013 Mar	BRS07	3.513935	3.954607	NA	NA
2013 Apr	BRS07	4.053494	4.483995	NA	NA
2013 May	BRS07	4.171941	4.582212	NA	NA
2016 Feb	BRS07	NA	2.345986	NA	NA
2016 Mar	BRS07	2.855907	3.659365	NA	NA
2016 Apr	BRS07	4.493128	5.268087	NA	NA
2016 May	BRS07	4.913836	5.787594	NA	NA
2016 Dec	BRS07	2.035217	NA	NA	NA
2018 Jan	BRS07	2.090688	2.344876	NA	NA
2020 Mar	BRS07	NA	2.031833	NA	NA
2020 Apr	BRS07	NA	3.121222	NA	NA

^a Coral Core Date Range is from 1985 to 2011

DAR3 Degree Heating Months Time Series



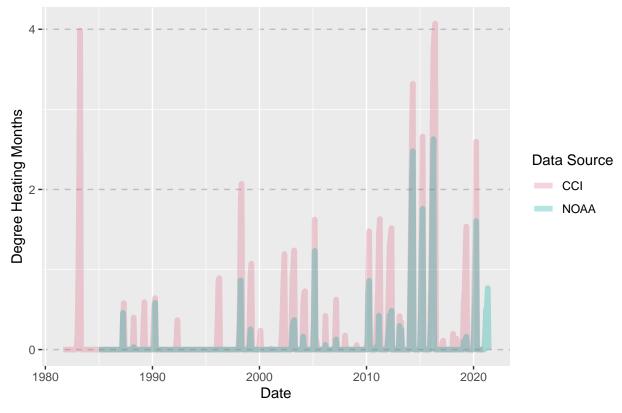


Table 1: Degree Heating Month values in DAR3 from CCI (left) and NOAA (right)

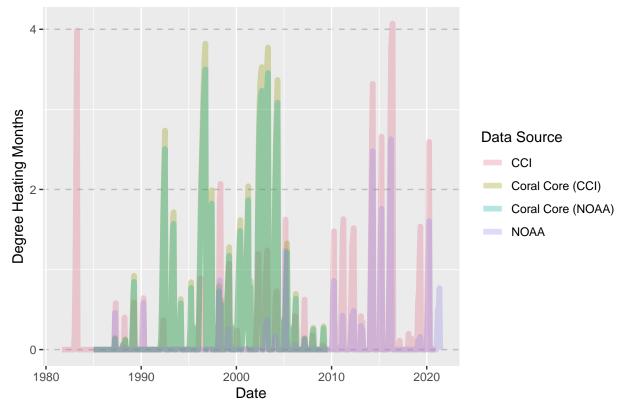
Date	DHM value	Date	DHM value
2016-Jun	4.0709144	2016-Apr	2.6280683
1983-Apr	3.9839208	2014-May	2.4771831
2016-May	3.9347101	2014-Apr	2.0976759
2016-Apr	3.7442817	2016-Mar	1.8606795
2014-May	3.3209593	2015-Apr	1.7597519
2014-Apr	2.7898849	2020-Apr	1.6053113
2016-Mar	2.6890772	2015-Mar	1.3356964
2015-Apr	2.6610193	2005-Mar	1.2332655
2020-Apr	2.5963338	2014-Mar	1.2326203
1983-Mar	2.2733838	2016-Feb	0.8747207
1998-May	2.0698542	1998-Apr	0.8647240
1998-Apr	1.8658770	2010-Apr	0.8585960
2015-Mar	1.7704816	2021-May	0.7679235
2014-Mar	1.7120120	2010-Mar	0.6928738
2011-Apr	1.6294489	2020-Mar	0.6862557
2005-Mar	1.6245417	2014-Feb	0.5969841
2019-May	1.5374549	1990-Apr	0.5853692
$\frac{2013 \text{ May}}{2012\text{-May}}$	1.5176929	2021-Apr	0.5351905
$\frac{2012 \text{ May}}{2010\text{-Apr}}$	1.4792122	2021-Mar	0.5014683
2020-Mar	1.4457954	2012-May	0.4853136
2011-Mar	1.4379123	2015-Feb	0.4787698
2012-Apr	1.4111337	1987-Apr	0.4593889
2016-Feb	1.3928385	2012-Mar	0.4302456
2012-Mar	1.2999305	2011-Mar	0.4254890
2003-Apr	1.2385086	2020-Feb	0.3802969
2002-May	1.1936400	2003-Apr	0.3694040
2019-Apr	1.1754154	2003-Mar	0.3493484
1999-Apr	1.0720771	2005-Feb	0.3269841
2003-Mar	1.0369713	1998-Mar	0.3246685
1983-Feb	1.0229540	2016-Jan	0.2982168
2010-Mar	0.9813421	2013-Feb	0.2969841
1999-Mar	0.9238743	2003-Feb	0.2698413
2003-Feb	0.9178300	2012-Feb	0.2642869
2014-Feb	0.9057763	1999-Mar	0.2547401
1996-Apr	0.8926295	2013-Apr	0.2457222
2002-Apr	0.8854689	2021-Feb	0.2184127
2020-Feb	0.8631049	2004-Feb	0.1644349
1996-Mar	0.8490889	2019-May	0.1607348
2011-Feb	0.8084511	2007-Mar	0.1280581
2012-Feb	0.8069213	2019-Apr	0.1263889
2015-Feb	0.7968265	2012-Jan	0.1095072
2004-Apr	0.7297618	2019-Feb	0.1048413
2019-Mar	0.7285432	1999-Feb	0.0855556
2004-Mar	0.6988920	2011-Feb	0.0666270
1990-Apr	0.6440420	2006-Mar	0.0591846
2007-Mar	0.6249715	2010-Feb	0.0562698
1998-Mar	0.6230098	2010-Dec	0.0359588
2016-Jan	0.6149446	1988-Apr	0.0320556
2019-Feb	0.5984363	1990-Mar	0.0253136
1989-Apr	0.5914373	2007-Feb	0.0098413
1987-May	0.5809463	1985-Jan	0.0000000
2004-Feb	0.5316875 2	⁷ 1985-Feb	0.0000000
1990-Mar	0.5201679	1985-Mar	0.0000000
2002-Mar	0.5105979	1985-Apr	0.0000000
2005-Feb	0.5086303	1985-May	0.0000000

Degree Heating Month Values in DAR Long					
Date	Site	CCI	NOAA	Coral Core (CCI)	Coral Core (NOAA)
1983 Mar	DAR Long	2.273384	NA	NA	NA
1983 Apr	DAR Long	3.983921	NA	NA	NA
1992 Jun	DAR Long	NA	NA	2.347899	2.149814
1992 Jul	DAR Long	NA	NA	2.736517	2.505646
1996 May	DAR Long	NA	NA	2.283129	2.090509
1996 Jun	DAR Long	NA	NA	2.671747	2.446340
1996 Jul	DAR Long	NA	NA	3.060365	2.802172
1996 Aug	DAR Long	NA	NA	3.448983	3.158003
1996 Sep	DAR Long	NA	NA	3.675676	3.365572
1996 Oct	DAR Long	NA	NA	3.821408	3.499008
1998 May	DAR Long	2.069854	NA	NA	NA
2001 Apr	DAR Long	NA	NA	2.040243	NA
2002 May	DAR Long	NA	NA	2.461246	2.253598
2002 Jun	DAR Long	NA	NA	3.011788	2.757693
2002 Jul	DAR Long	NA	NA	3.319444	3.039393
2002 Aug	DAR Long	NA	NA	3.465175	3.172830
2002 Sep	DAR Long	NA	NA	3.529945	3.232135
2003 Feb	DAR Long	NA	NA	2.606978	2.387035
2003 Mar	DAR Long	NA	NA	3.238481	2.965261
2003 Apr	DAR Long	NA	NA	3.627099	3.321093
2003 May	DAR Long	NA	NA	3.772831	3.454529
2004 Feb	DAR Long	NA	NA	2.202167	2.016378
2004 Mar	DAR Long	NA	NA	2.752709	2.520472
2004 Apr	DAR Long	NA	NA	3.141327	2.876303
2004 May	DAR Long	NA	NA	3.368021	3.083872
2014 Apr	DAR Long	2.789885	2.097676	NA	NA
2014 May	DAR Long	3.320959	2.477183	NA	NA
2015 Apr	DAR Long	2.661019	NA	NA	NA
2016 Mar	DAR Long	2.689077	NA	NA	NA
2016 Apr	DAR Long	3.744282	2.628068	NA	NA
2016 May	DAR Long	3.934710	NA	NA	NA
2016 Jun	DAR Long	4.070914	NA	NA	NA
2020 Apr	DAR Long	2.596334	NA	NA	NA

^a Coral Core Date Range is from 1985 to 2009

DAR Long Degree Heating Months Time Series



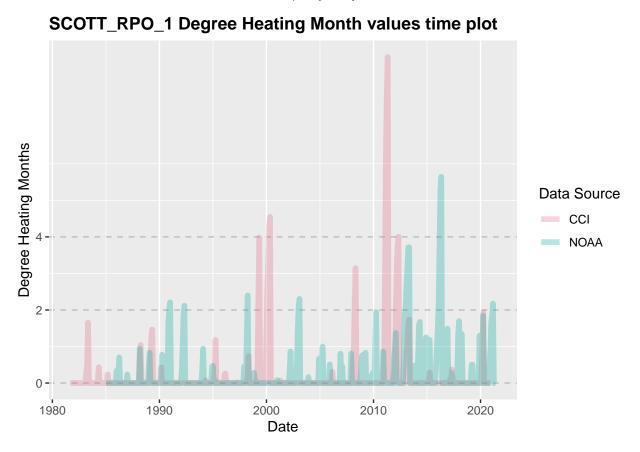


${\bf SCOTT_RPO_1\ Degree\ Heating\ Months\ Time\ Series}$

 $\label{lem:continuous} $$\left(\operatorname{Degree\ Heating\ Month\ values\ in\ SCOTT_RPO_1\ from\ CCI\ (left)\ and\ NOAA\ (right) \right)$}$

-	D.T.T. (D. T. T. T. T.
Date	DHM value	Date	DHM value
2011-May	8.9216712	2016-May	5.6440170
2011-Apr	7.9922101	2016-Apr	5.2728466
2011-Mar	6.3379939	2013-May	3.7172995
2000-May	4.5487244	2013-Apr	3.7090323
2000-Apr	4.2786143	2016-Mar	3.6348375
2012-May	4.0057916	2013-Mar	3.1490232
1999-May	3.9830644	2013-Feb	2.7172077
2012-Apr	3.7172991	1998-Apr	2.3973729
2000-Mar	3.3710665	2003-Feb	2.3024189
2011-Feb	3.3536937	1991-Jan	2.2112854
2008-May	3.1441705	2021-Mar	2.1741346
2012-Mar	3.0750824	2016-Feb	2.1268929
2000-Feb	2.5996668	1992-May	2.1183134
1999-Apr	2.3861819	2003-Jan	2.0571241
2008-Apr	2.3421272	1990-Dec	2.0210827
2012-Feb	1.9565885	2013-Jan	2.0179843
2020-Apr	1.9366954	2010-Apr	1.9427477
2013-May	1.7396613	2012-Dec	1.8835881
1983-May	1.6568706	1992-Apr	1.8513365
2013-Apr	1.6147134	2020-Apr	1.8467600
1989-May	1.4663243	2021-Feb	1.8358674
2000-Jan	1.3162369	2018-Jan	1.6949950
1989-Apr	1.2778330	2021-Jan	1.6877155
1995-Apr	1.1815256	2014-May	1.6748553
2013-Mar	1.0701682	1990-Nov	1.6370091
1988-Apr	$\frac{1.0421725}{1.0421725}$	2014-Apr	1.5852978
2008-Mar	0.9485789	2016-Dec	1.4866096
2020-Mar	0.8588158	2016-Jan	1.4426079
1998-May	$\frac{0.7425296}{0.7425296}$	2017-Dec	1.3935021
2011-Jan	$\frac{0.7125230}{0.7275272}$	2002-Dec	1.3756311
2013-Feb	0.7197388	2012-Feb	1.3711752
1988-Mar	0.6946244	2018-Apr	1.3443730
1989-Mar	0.6749514	2019-Dec	1.2969429
2008-Feb	0.5965350	1998-Mar	1.2873638
1983-Apr	0.4686982	2014-Dec	1.2524483
2012-Jan	0.4359160	2015-Apr	1.1816271
1984-May	0.4327731	2010-Mar	1.0104053
1990-Mar	0.4291392	2005-Apr	0.9998038
1999-Mar	0.4243016	1992-Mar	0.9603274
2017-May	0.3694625	2012-Jan	0.9513730
1995-Mar	$\frac{0.3639772}{0.3639772}$	2015-Dec	0.9495021
2006-Mar	0.3094610	1994-Feb	0.9424445
1983-Mar	0.2988183	1988-Mar	0.9421381
2015-Apr	0.2890034	2020-Dec	0.8888031
1996-Mar	$\frac{0.2630034}{0.2642276}$	$\frac{2020\text{-Dec}}{2002\text{-Apr}}$	0.8622117
1985-Mar	0.2336544	2010-Dec	0.8594268
1996-Feb	$\frac{0.2330344}{0.2241216}$	1989-Feb	0.8294606
1998-Apr	$\frac{0.2241210}{0.2085487}$	2009-Apr	0.8288892
2017-Mar	$\frac{0.2069487}{0.1059137}$	2003-Apr 2007-Dec	0.8079446
1989-Feb	$\frac{0.1053137}{0.1058123}$	2007-Dec 2006-Dec	0.8021381
2015-Mar	$\frac{0.1036123}{0.0997866}$	2020-Dec 2020-Mar	0.8014175
1994-May	$\frac{0.0337500}{0.0784518}$	1990-Apr	0.7737494
2001-May	0.0668837 3	1990-Apr 1 2009-Jan	0.7698875
1994-Apr	$\frac{0.0000037}{0.0422137}$	$\frac{12009-3411}{2015-Mar}$	0.7379514
1994-Apr	$\frac{0.0422137}{0.0362129}$	2015-Mai 2008-Dec	0.7379314
1984-Apr 1981-Sep	$\frac{0.0302129}{0.0000000}$	1986-Apr	0.7236133
1981-Sep 1081 Oct	0.0000000	2016 Nov	0.7000034

 $\verb|\end{table}|$



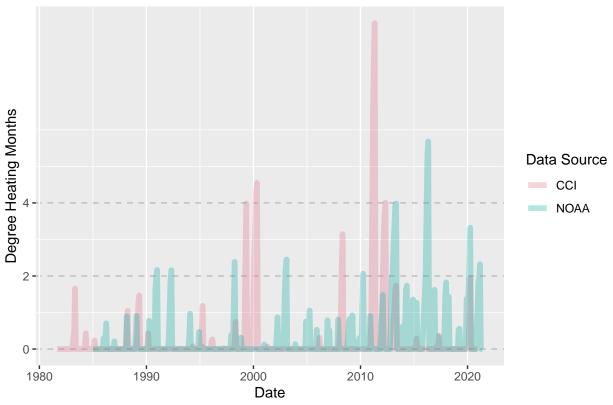
SCOTT_SL4 Degree Heating Months Time Series

 $\label{table} $$ \operatorname{CCI (left) and NOAA (right)} $$ \operatorname{CCI (left) and NOAA (right)} $$$

- D +	DILL	- D	DILL
Date	DHM value	Date	DHM value
2011-May	8.9216712	2016-May	5.6795685
2011-Apr	7.9922101	2016-Apr	5.3197732
2011-Mar	6.3379939	2013-May	3.9826668
2000-May	4.5487244	2013-Apr	3.9548070
2000-Apr	4.2786143	2016-Mar	3.6815370
2012-May	4.0057916	2013-Mar	3.3265709
1999-May	3.9830644	2020-Apr	3.3217565
2012-Apr	3.7172991	2013-Feb	2.8335498
2000-Mar	3.3710665	2003-Feb	2.4512818
2011-Feb	3.3536937	1998-Apr	2.3854911
2008-May	3.1441705	2021-Mar	2.3251462
2012-Mar	3.0750824	2020-Mar	2.2458537
2000-Feb	2.5996668	2003-Jan	2.1657837
1999-Apr	2.3861819	1991-Jan	2.1655902
2008-Apr	2.3421272	1992-May	2.1594526
2012-Feb	1.9565885	2016-Feb	2.1407740
2020-Apr	1.9366954	2010-Apr	2.0613482
2013-May	1.7396613	2013-Jan	2.0598375
1983-May	1.6568706	1990-Dec	1.9851497
2013-Apr	1.6147134	2021-Feb	1.9627702
1989-May	1.4663243	2012-Dec	1.9352035
2000-Jan	1.3162369	1992-Apr	1.8886895
1989-Apr	1.2778330	2018-Jan	1.8260095
1995-Apr	1.1815256	2021-Jan	1.8065579
2013-Mar	1.0701682	2014-May	1.7391816
1988-Apr	1.0421725	2014-Apr	1.6322895
2008-Mar	0.9485789	2016-Dec	1.6227519
2020-Mar	0.8588158	1990-Nov	1.6189028
1998-May	0.7425296	2020-Feb	1.5060584
2011-Jan	0.7275272	2012-Feb	1.4821667
2013-Feb	0.7197388	2017-Dec	1.4797626
1988-Mar	0.6946244	2002-Dec	1.4650207
1989-Mar	0.6749514	2018-Apr	1.4315906
2008-Feb	0.5965350	2016-Jan	1.4235149
1983-Apr	0.4686982	2020-Jan	1.3715579
2012-Jan	0.4359160	2019-Dec	1.3698271
1984-May	0.4327731	2014-Dec	1.3556658
1990-Mar	0.4291392	1998-Mar	1.2885883
1999-Mar	0.4243016	2015-Apr	1.2644980
2017-May	0.3694625	2010-Mar	1.1064454
1995-Mar	0.3639772	2005-Apr	1.0553067
2006-Mar	0.3094610	2012-Jan	1.0224938
1983-Mar	0.2988183	1992-Mar	0.9961200
2015-Apr	0.2890034	2020-Dec	0.9706336
1996-Mar	0.2642276	1994-Feb	0.9677127
1985-Mar	0.2336544	2015-Dec	0.9559777
1996-Feb	0.2241216	2009-Apr	0.9265798
1998-Apr	0.2085487	1989-Feb	0.9115721
2017-Mar	0.1059137	2010-Dec	0.9029669
1989-Feb	0.1058123	1988-Mar	0.8949566
2015-Mar	0.0997866	2002-Apr	0.8697519
1994-May	0.0784518	2009-Jan	0.8273644
2001-May	0.0668837 3	4 2007-Dec	0.8097953
1994-Apr	0.0422137	4 2001 Bee 2015-Mar	0.8015952
1984-Apr	0.0362129	2006-Dec	0.7894727
1981-Sep	0.0000000	2016-Nov	0.7845695
1081 Oct	0.0000000	1000 Apr	0.7766766

 $\verb|\end{table}|$



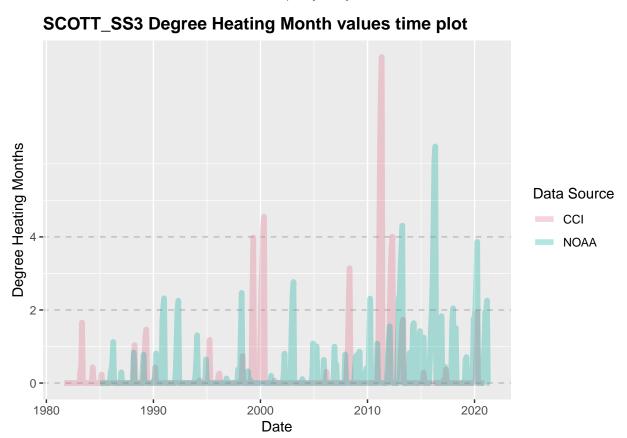


SCOTT_SS3 Degree Heating Months Time Series

 $\label{table} $$ \operatorname{CCI (left) and NOAA (right)} $$ \operatorname{CCI (left) and NOAA (right)} $$$

- D. /	DIII 1	- D /	DIIM 1
Date	DHM value	Date	DHM value
2011-May	8.9216712	2016-May	6.4767806
2011-Apr	7.9922101	2016-Apr	6.0942372
2011-Mar	6.3379939	2016-Mar	4.4121776
2000-May	4.5487244	2013-Apr	4.3079664
2000-Apr	4.2786143	2020-Apr	3.8639502
2012-May	4.0057916	2013-Mar	3.6632402
1999-May	3.9830644	2013-Feb	3.1955354
2012-Apr	3.7172991	2020-Mar	2.8405573
2000-Mar	3.3710665	2016-Feb	2.8257632
2011-Feb	3.3536937	2003-Feb	2.7643427
2008-May	3.1441705	1998-Apr	2.4671671
2012-Mar	3.0750824	2003-Jan	2.4544260
2000-Feb	2.5996668	2013-Jan	2.4174045
1999-Apr	2.3861819	1991-Jan	2.3191249
2008-Apr	2.3421272	2010-Apr	2.3139029
2012-Feb	1.9565885	2012-Dec	2.3113127
2020-Apr	1.9366954	2021-Mar	2.2571081
2013-May	1.7396613	1992-May	2.2554281
1983-May	1.6568706	1990-Dec	2.0781944
2013-Apr	1.6147134	2018-Jan	2.0486625
1989-May	1.4663243	2020-Feb	2.0447881
2000-Jan	1.3162369	1992-Apr	2.0212717
1989-Apr	1.2778330	2016-Jan	2.0045658
1995-Apr	1.1815256	2021-Feb	1.9748872
2013-Mar	1.0701682	2021-Jan	1.9438991
1988-Apr	1.0421725	2016-Dec	1.8314094
2008-Mar	0.9485789	2020-Jan	1.7970389
2020-Mar	0.8588158	2019-Dec	1.7483664
1998-May	0.7425296	1990-Nov	1.6933929
2011-Jan	0.7275272	2017-Dec	1.6596675
2013-Feb	0.7197388	2014-May	1.6426410
1988-Mar	0.6946244	2002-Dec	1.5909148
1989-Mar	0.6749514	2014-Apr	1.5765492
2008-Feb	0.5965350	2012-Feb	1.5515975
1983-Apr	0.4686982	2018-Apr	1.5067213
2012-Jan	0.4359160	2014-Dec	1.4243772
1984-May	0.4327731	1998-Mar	1.4191076
1990-Mar	0.4291392	2015-Dec	1.3975062
1999-Mar	0.4243016	2010-Mar	1.3391767
2017-May	0.3694625	1994-Feb	1.3096694
1995-Mar	0.3639772	2015-Apr	1.2488031
2006-Mar	0.3094610	2013-Apr	1.1724690
1983-Mar	0.2988183	1992-Mar	1.1378788
2015-Apr	0.2890034	1986-Apr	1.1228911
1996-Mar	0.2642276	2004-Dec	1.0841514
1985-Mar	0.2336544	2010-Dec	1.0799578
1996-Feb	0.2330344	2010-Dec 2020-Dec	1.0549041
1990-Feb 1998-Apr	0.2241210	2020-Dec 2005-Apr	1.0049041
2017-Mar	0.2089487	2005-Apr 2006-Dec	0.9981406
1989-Feb	0.1059137	2000-Dec 2012-Nov	0.9901400
2015-Mar	0.1038123	2012-Nov 2016-Nov	0.9400596
	0.0997800		0.9550596
1994-May	0.0104010	2009-Apr	
2001-May	0.0668837 3	7 1988-Mar	0.8360918
1994-Apr	0.0422137	2013-Dec	0.8222266
1984-Apr	0.0362129	1990-Apr	0.8118161
1981-Sep	0.0000000	2002-Apr	0.8056030
TUX L Liet		ZULZ LIGO	LL /X35119

 $\verb|\end{table}|$



SCOTTNR1 Degree Heating Months Time Series

SCOTTNR1 Degree Heating Month values time plot

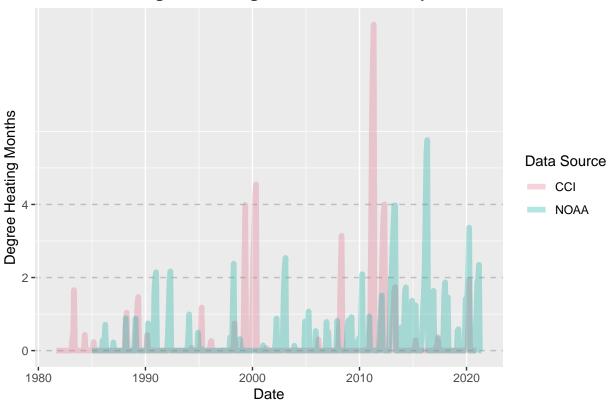


Table 2: Degree Heating Month values in SCOTTNR1 from CCI (left) and NOAA (right)

- D +	DIII 1	- D /	DIII 1
Date	DHM value	Date	DHM value
2011-May	8.9216712	2016-May	5.7619588
2011-Apr	7.9922101	2016-Apr	5.3952942
2011-Mar	6.3379939	2013-May	3.9777275
2000-May	4.5487244	2013-Apr	3.9671919
2000-Apr	4.2786143	2016-Mar	3.7555866
2012-May	4.0057916	2020-Apr	3.3660940
1999-May	3.9830644	2013-Mar	3.3371510
_2012-Apr	3.7172991	2013-Feb	2.8424218
_2000-Mar	3.3710665	2003-Feb	2.5365232
2011-Feb	3.3536937	1998-Apr	2.3789869
2008-May	3.1441705	2021-Mar	2.3466963
2012-Mar	3.0750824	2020-Mar	2.2943864
2000-Feb	2.5996668	2003-Jan	2.2454347
1999-Apr	2.3861819	2016-Feb	2.2037607
2008-Apr	2.3421272	1992-May	2.1683918
2012-Feb	1.9565885	1991-Jan	2.1458110
2020-Apr	1.9366954	2010-Apr	2.0918863
2013-May	1.7396613	2013-Jan	2.0770476
1983-May	1.6568706	2021-Feb	1.9922897
2013-Apr	1.6147134	1990-Dec	1.9855980
1989-May	1.4663243	2012-Dec	1.9661894
2000-Jan	1.3162369	1992-Apr	1.8997917
1989-Apr	1.2778330	2018-Jan	1.8671873
1995-Apr	1.1815256	2021-Jan	1.8490583
2013-Mar	1.0701682	2014-May	1.7332734
1988-Apr	1.0421725	2016-Dec	1.6361787
2008-Mar	0.9485789	2014-Apr	1.6301572
2020-Mar	0.8588158	1990-Nov	1.6157076
1998-May	0.7425296	2020-Feb	1.5425605
2011-Jan	0.7275272	2002-Dec	1.5339313
2013-Feb	0.7197388	2012-Feb	1.5116347
1988-Mar	0.6946244	2017-Dec	1.5069744
1989-Mar	0.6749514	2016-Jan	1.4808002
2008-Feb	0.5965350	2018-Apr	1.4612754
1983-Apr	0.4686982	2020-Jan	1.4127035
2012-Jan	0.4359160	2019-Dec	1.4105550
1984-May	0.4327731	2014-Dec	1.3696733
1990-Mar	0.4291392	1998-Mar	1.2916126
1999-Mar	0.4243016	2015-Apr	1.2367135
2017-May	0.3694625	2010-Mar	1.1378453
1995-Mar	0.3639772	2005-Apr	1.0678801
2006-Mar	0.3094610	2012-Jan	1.0472949
1983-Mar	0.2988183	1992-Mar	1.0127508
2015-Apr	0.2890034	2015-Dec	0.9983292
1996-Mar	0.2642276	2020-Dec	0.9959421
1985-Mar	0.2336544	1994-Feb	0.9919467
1996-Feb	0.2241216	2010-Dec	0.9384690
1998-Apr	0.2085487	2009-Apr	0.9176195
2017-Mar	0.1059137	1988-Mar	0.8876323
1989-Feb	0.1058123	2002-Apr	0.8798238
2015-Mar	0.0997866	1989-Feb	0.8781679
1994-May	0.0784518 4		0.8344239
2001-May	0.0668837	2007-Dec	0.8134388
1994-Apr	0.0422137	2016-Nov	0.8037076
1984-Apr	0.0362129	2004-Dec	0.7991249

SCOTTSL1 Degree Heating Months Time Series



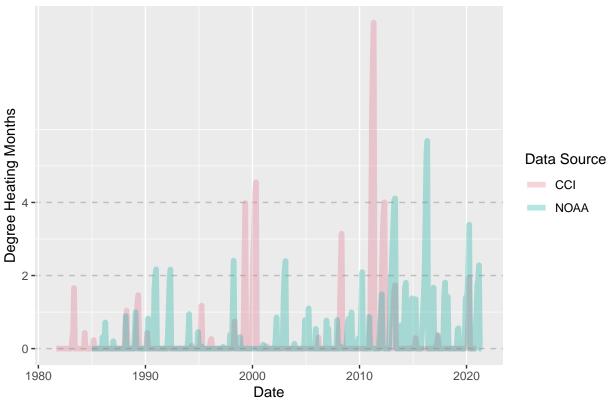


Table 3: Degree Heating Month values in SCOTTSL1 from CCI (left) and NOAA (right)

Date	DHM value	Data	DHM value
	8.9216712	$\frac{\text{Date}}{2016\text{-May}}$	5.6842482
$\frac{2011\text{-May}}{2011\text{-Apr}}$	7.9922101		5.3105778
		2016-Apr	4.1132273
2011-Mar	6.3379939 4.5487244	2013-May	
2000-May		2013-Apr	4.0592343
2000-Apr	4.2786143	2016-Mar	3.6621654
2012-May	4.0057916	2013-Mar	3.4071553
1999-May	3.9830644	2020-Apr	3.3922926
2012-Apr	3.7172991	2013-Feb	2.8950978
2000-Mar	3.3710665	1998-Apr	2.4071341
2011-Feb	3.3536937	2003-Feb	2.3953490
2008-May	3.1441705		2.2932136
2012-Mar	3.0750824		2.2819487
2000-Feb	2.5996668	1991-Jan	2.1702800
_1999-Apr	2.3861819	1992-May	2.1640664
2008-Apr	2.3421272	2003-Jan	2.1171510
2012-Feb	1.9565885	2016-Feb	2.1146241
2020-Apr	1.9366954	2010-Apr	2.0920741
2013-May	1.7396613	2013-Jan	2.0908284
1983-May	1.6568706	1990-Dec	1.9672548
2013-Apr	1.6147134	2012-Dec	1.9397386
1989-May	1.4663243	2021-Feb	1.9037622
2000-Jan	1.3162369	1992-Apr	1.8836218
1989-Apr	1.2778330	2018-Jan	1.8083122
1995-Apr	1.1815256	2014-May	1.8031617
2013-Mar	1.0701682	2021-Jan	1.7348499
1988-Apr	1.0421725	2016-Dec	1.6692548
2008-Mar	0.9485789	2014-Apr	1.6659429
2020-Mar	0.8588158	1990-Nov	1.6187457
1998-May	0.7425296	2020-Feb	1.5414787
2011-Jan	0.7275272	2012-Feb	1.4885195
2013-Feb	0.7197388	2017-Dec	1.4665773
1988-Mar	0.6946244	2002-Dec	1.4331580
1989-Mar	0.6749514	2018-Apr	1.4207924
2008-Feb	0.5965350	2016-Jan	1.3949359
1983-Apr	0.4686982	2020-Jan	1.3893768
2012-Jan	0.4359160	2019-Dec	1.3818354
1984-May	0.4327731	2014-Dec	1.3759429
1990-Mar	0.4291392	2015-Apr	1.3538576
1999-Mar	0.4243016	1998-Mar	1.2980551
2017-May	0.3694625	2010-Mar	1.1269952
1995-Mar	0.3639772	$\frac{2010\text{-Mar}}{2005\text{-Apr}}$	1.1005411
$\frac{1995\text{-Mar}}{2006\text{-Mar}}$	0.3094610	2003-Apr 2012-Jan	1.0357279
1983-Mar	0.3094010	1989-Feb	0.9957970
$\frac{1905\text{-Mai}}{2015\text{-Apr}}$	0.2890034	2009-Apr	0.9955666
$\frac{2015-\text{Apr}}{1996-\text{Mar}}$	0.2642276	1992-Mar	0.9955000
$\frac{1990\text{-Mar}}{1985\text{-Mar}}$	0.2042270	1992-Mar 1994-Feb	0.9792093
1985-Mar 1996-Feb	0.2330344	2015-Dec	0.9450712
1998-Apr	0.2085487	2020-Dec	0.9308569
2017-Mar	0.1059137	1988-Mar	0.8920575
1989-Feb	0.1058123	2010-Dec	0.8678139
2015-Mar	0.0997866	2002-Apr	0.8527386
1994-May	0.0784518 4		0.8477786
2001-May	0.0668837	1990-Apr	0.8234483
1994-Apr	0.0422137	2009-Jan	0.8179574
1984-Apr	0.0362129	2016-Nov	0.8107457

SCOTTSL2 Degree Heating Months Time Series

SCOTTSL2 Degree Heating Month values time plot

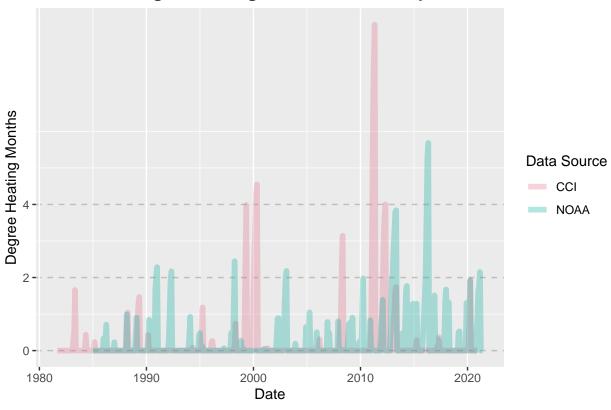


Table 4: Degree Heating Month values in SCOTTSL2 from CCI (left) and NOAA (right)

Date	DHM value	Data	DHM value
	8.9216712	$\frac{\text{Date}}{2016\text{-May}}$	5.6846977
2011-May 2011-Apr	7.9922101	$\frac{2016-May}{2016-Apr}$	5.0840977
$\frac{2011\text{-Apr}}{2011\text{-Mar}}$	6.3379939	2010-Apr 2013-May	3.8401065
$\frac{2011\text{-Mai}}{2000\text{-May}}$	4.5487244	2013-May 2013-Apr	3.7964734
$\frac{2000\text{-May}}{2000\text{-Apr}}$	4.3487244	$\frac{2015\text{-Apr}}{2016\text{-Mar}}$	3.6049044
•			
2012-May	4.0057916	2013-Mar	3.2246144
1999-May	3.9830644	2013-Feb	2.8006586
2012-Apr	3.7172991	1998-Apr	2.4463557
2000-Mar	3.3710665	1991-Jan	2.2838457
2011-Feb	3.3536937	2003-Feb	2.1806341
2008-May	3.1441705	1992-May	2.1694663
2012-Mar	3.0750824	2021-Mar	2.1513010
2000-Feb	2.5996668	2016-Feb	2.1022390
1999-Apr	2.3861819	2013-Jan	2.0809425
2008-Apr	2.3421272	1990-Dec	2.0392448
2012-Feb	1.9565885	2010-Apr	1.9745674
2020-Apr	1.9366954	2003-Jan	1.9530608
2013-May	1.7396613	2020-Apr	1.9178124
1983-May	1.6568706	2012-Dec	1.8985997
2013-Apr	1.6147134	1992-Apr	1.8771235
1989-May	1.4663243	2021-Feb	1.7957324
2000-Jan	1.3162369	2014-May	1.7687275
1989-Apr	1.2778330	2018-Jan	1.6732328
1995-Apr	1.1815256	1990-Nov	1.6581923
2013-Mar	1.0701682	2014-Apr	1.6312233
1988-Apr	1.0421725	2021-Jan	1.6195877
2008-Mar	0.9485789	2016-Dec	1.5084491
2020-Mar	0.8588158	2016-Jan	1.4319318
1998-May	0.7425296	2012-Feb	1.3896269
$\frac{2011\text{-Jan}}{2013\text{-Feb}}$	0.7275272	2017-Dec	1.3808900
	0.7197388	2018-Apr	1.3194706 1.3080835
$\frac{1988\text{-Mar}}{1989\text{-Mar}}$	0.6946244	2019-Dec 1998-Mar	
$\frac{1989\text{-Mar}}{2008\text{-Feb}}$	$\begin{array}{r} 0.6749514 \\ \hline 0.5965350 \end{array}$	$\frac{1998\text{-Mar}}{2002\text{-Dec}}$	1.3074968
			1.2997502
1983-Apr	0.4686982	2014-Dec	1.2852986
2012-Jan	0.4359160	2015-Apr	1.2823250
1984-May	0.4327731	2005-Apr	1.0459725
1990-Mar	0.4291392	2010-Mar	1.0313751
1999-Mar	0.4243016	1988-Mar	0.9894396
2017-May	0.3694625	2012-Jan	0.9789748
1995-Mar	0.3639772	1992-Mar	0.9555978
2006-Mar	0.3094610	1994-Feb 2015-Dec	0.9266788
1983-Mar	0.2988183		0.9215244
2015-Apr	0.2890034	2009-Apr 1989-Feb	0.9026534
$\frac{1996\text{-Mar}}{1985\text{-Mar}}$	0.2642276		0.8996511
$\frac{1985\text{-Mar}}{1996\text{-Feb}}$	0.2336544	2002-May	0.8880931
1996-Feb 1998-Apr	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\frac{2002\text{-Apr}}{2020\text{-Dec}}$	$\begin{array}{c c} 0.8770405 \\ \hline 0.8495029\end{array}$
$\frac{1998-Apr}{2017-Mar}$	0.2085487	$\frac{2020\text{-Dec}}{2020\text{-Mar}}$	0.8495029
1989-Feb	0.1059137	1990-Apr	0.8449868
$\frac{1989\text{-Feb}}{2015\text{-Mar}}$	0.1038123	2010-Dec	0.8309007
$\frac{2015\text{-Mar}}{1994\text{-May}}$	0.0997800		0.8309007
$\frac{1994\text{-May}}{2001\text{-May}}$	0.0784318 1	$\frac{12007-Dec}{2015-Mar}$	0.7981493
$\frac{2001-\text{May}}{1994-\text{Apr}}$	0.0008837	2015-Mar 2006-Dec	0.7829880
1994-Apr 1984-Apr	0.0422137	2006-Dec 2009-Jan	0.7829880
1904-APF	0.0302129	∠uuy-jan	0.7022798

SCOTTSL3 Degree Heating Months Time Series

SCOTTSL3 Degree Heating Month values time plot

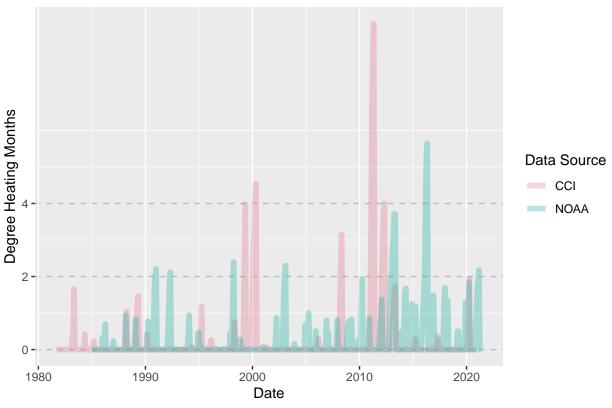


Table 5: Degree Heating Month values in SCOTTSL3 from CCI (left) and NOAA (right)

Date	DHM value	Date	DHM value
2011-May	8.9216712	2016-May	5.6440170
2011-Apr	7.9922101	2016-Apr	5.2728466
2011-Mar	6.3379939	2013-May	3.7172995
2000-May	4.5487244	2013-Apr	3.7090323
2000-Apr	4.2786143	2016-Mar	3.6348375
2012-May	4.0057916	2013-Mar	3.1490232
1999-May	3.9830644	2013-Feb	2.7172077
2012-Apr	3.7172991	1998-Apr	2.3973729
2000-Mar	3.3710665	2003-Feb	2.3024189
2011-Feb	3.3536937	1991-Jan	2.2112854
2008-May	3.1441705	2021-Mar	2.1741346
2012-Mar	3.0750824	2016-Feb	2.1268929
2000-Feb	2.5996668	1992-May	2.1183134
1999-Apr	2.3861819	2003-Jan	2.0571241
2008-Apr	2.3421272	1990-Dec	2.0210827
2012-Feb	1.9565885	2013-Jan	2.0179843
2020-Apr	1.9366954	2010-Apr	1.9427477
2013-May	1.7396613	2012-Dec	1.8835881
1983-May	1.6568706	1992-Apr	1.8513365
2013-Apr	1.6147134	2020-Apr	1.8467600
1989-May	1.4663243	2021-Feb	1.8358674
2000-Jan	1.3162369	2018-Jan	1.6949950
1989-Apr	1.2778330	2021-Jan	1.6877155
1995-Apr	1.1815256	2014-May	1.6748553
$\frac{2013\text{-Mar}}{2013\text{-Mar}}$	1.0701682	1990-Nov	1.6370091
1988-Apr	1.0421725	2014-Apr	1.5852978
$\frac{1000 \mathrm{Mpr}}{2008 \cdot \mathrm{Mar}}$	0.9485789	2016-Dec	1.4866096
$\frac{2000 \text{ Mar}}{2020 \text{-Mar}}$	0.8588158	2016-Jan	1.4426079
1998-May	0.7425296	2017-Dec	1.3935021
$\frac{2011\text{-Jan}}{2011\text{-Jan}}$	0.7275272	2002-Dec	1.3756311
2013-Feb	0.7197388	2012-Feb	1.3711752
$\frac{2019-100}{1988-Mar}$	0.6946244	$\frac{2012\text{-}\text{res}}{2018\text{-}\text{Apr}}$	1.3443730
1989-Mar	0.6749514	2019-Dec	1.2969429
$\frac{1909-\text{Mar}}{2008-\text{Feb}}$	0.5965350	1998-Mar	1.2873638
1983-Apr	0.4686982	2014-Dec	1.2524483
2012-Jan	0.4050962	$\frac{2014\text{-Dec}}{2015\text{-Apr}}$	1.1816271
$\frac{2012\text{-Jan}}{1984\text{-May}}$	0.4339100 0.4327731	$\frac{2010\text{-Apr}}{2010\text{-Mar}}$	1.0104053
$\frac{1984-May}{1990-Mar}$	0.4327731	$\frac{2010\text{-Mar}}{2005\text{-Apr}}$	0.9998038
1990-Mar 1999-Mar	0.4291392	1992-Mar	0.9998038
2017-May	0.4243010	2012-Jan	0.9003274
$\frac{2017 - \text{May}}{1995 - \text{Mar}}$	0.3694025 0.3639772	2012-Jan 2015-Dec	0.9313730
2006-Mar	0.3039772	1994-Feb	0.9495021
	0.3094610	$\frac{1994\text{-Feb}}{1988\text{-Mar}}$	
$\frac{1983\text{-Mar}}{2015\text{-Apr}}$	0.2988183		0.9421381
$\frac{2015-Apr}{1996-Mar}$	0.2890034	2020-Dec	0.8888031
		2002-Apr	0.8622117
1985-Mar	0.2336544	2010-Dec	0.8594268
1996-Feb	0.2241216	1989-Feb	0.8294606
1998-Apr	0.2085487	2009-Apr	0.8288892
2017-Mar	0.1059137	2007-Dec	0.8079446
1989-Feb	0.1058123	2006-Dec	0.8021381
2015-Mar	0.0997866	2020-Mar	0.8014175
1994-May	0.0784518 4		0.7737494
2001-May	0.0668837	2009-Jan	0.7698875
1994-Apr	0.0422137	2015-Mar	0.7379514
1984-Apr	0.0362129	$2008 ext{-} ext{Dec}$	0.7258139

SCOTTSS1 Degree Heating Months Time Series

SCOTTSS1 Degree Heating Month values time plot

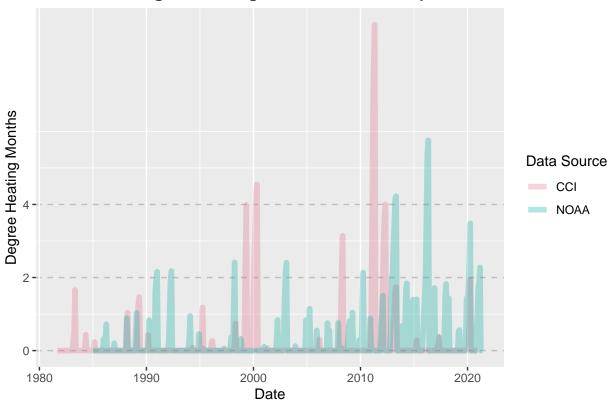


Table 6: Degree Heating Month values in SCOTTSS1 from CCI (left) and NOAA (right)

			` ,
Date	DHM value	Date	DHM value
2011-May	8.9216712	2016-May	5.7525065
2011-Apr	7.9922101	2016-Apr	5.3674486
2011-Mar	6.3379939	2013-May	4.2217140
2000-May	4.5487244	2013-Apr	4.1566562
2000-Apr	4.2786143	2016-Mar	3.7113585
2012-May	4.0057916	2013-Mar	3.4838993
1999-May	3.9830644	2020-Apr	3.4818847
2012-Apr	3.7172991	2013-Feb	2.9478737
2000-Mar	3.3710665	1998-Apr	2.4137782
2011-Feb	3.3536937	2003-Feb	2.4089735
2008-May	3.1441705	2020-Mar	2.3664612
2012-Mar	3.0750824	2021-Mar	2.2752780
2000-Feb	2.5996668	1992-May	2.1757144
1999-Apr	2.3861819	1991-Jan	2.1575608
2008-Apr	2.3421272	2016-Feb	2.1498489
2012-Feb	1.9565885	2010-Apr	2.1346261
2020-Apr	1.9366954	2013-Jan	2.1259264
2013-May	1.7396613	2003-Jan	2.1248834
1983-May	1.6568706	2012-Dec	1.9599007
2013-Apr	1.6147134	1990-Dec	1.9534706
1989-May	1.4663243	1992-Apr	1.8900113
2000-Jan	1.3162369	2021-Feb	1.8847362
1989-Apr	1.2778330	2014-May	1.8430232
1995-Apr	1.1815256	2018-Jan	1.8213457
$\frac{2013\text{-Mar}}{2}$	1.0701682	2021-Jan	1.7174318
1988-Apr	1.0421725	2016-Dec	1.7140620
$\frac{2008-Mar}{2008-Mar}$	0.9485789	2014-Apr	1.6892556
$\frac{2020\text{-Mar}}{2020\text{-Mar}}$	0.8588158	1990-Nov	1.6180902
1998-May	0.7425296	2020-Feb	1.5955968
$\frac{2011\text{-Jan}}{2011\text{-Jan}}$	0.7275272	2012-Feb	1.5007926
2013-Feb	0.7197388	2017-Dec	1.4714491
1988-Mar	0.6946244	2002-Dec	1.4485352
1989-Mar	0.6749514	2020-Jan	1.4366791
2008-Feb	0.5965350	2018-Apr	1.4314814
1983-Apr	0.4686982	2019-Dec	1.4245244
$\frac{1909-\text{Apr}}{2012-\text{Jan}}$	0.4359160	2015-Dec 2016-Jan	1.4236898
$\frac{2012-3an}{1984-May}$	0.4327731	$\frac{2010-3an}{2015-Apr}$	1.4230036
1990-Mar	0.4291392	$\frac{2010-\text{Npr}}{2014-\text{Dec}}$	1.3959760
1990-Mar	0.4243016	1998-Mar	1.3040213
2017-May	0.3694625	2010-Mar	1.1678693
$\frac{2017 \text{-May}}{1995 \text{-Mar}}$	0.3639772	$\frac{2010\text{-Mai}}{2005\text{-Apr}}$	1.1479994
$\frac{1995\text{-Mar}}{2006\text{-Mar}}$	0.3094610	2003-Apr 2012-Jan	1.0508404
1983-Mar	0.3094010	2012-Jan 2009-Apr	1.0303404
$\frac{1905\text{-Mai}}{2015\text{-Apr}}$	0.2890034	1989-Feb	1.0325928
$\frac{2015-\text{Apr}}{1996-\text{Mar}}$	0.2642276	1992-Mar	0.9849211
$\frac{1990-Mar}{1985-Mar}$	0.2042270	2015-Dec	0.9634706
1905-Mai 1996-Feb	0.2330344	1994-Feb	0.9469706
1990-Feb 1998-Apr	0.2241210	2020-Dec	0.9409700
$\frac{1998-Apr}{2017-Mar}$	0.2089487	1988-Mar	0.9230042
1989-Feb	0.1059137	2010-Dec	0.8827998
$\frac{1989\text{-Feb}}{2015\text{-Mar}}$	0.1038123	2010-Dec 2015-Mar	0.8688024
$\frac{2015\text{-Mar}}{1994\text{-May}}$	0.0997800		0.8464235
	0.0784518 4		0.8464235
2001-May		2002-Apr	
1994-Apr	0.0422137	2004-Dec	0.8362126
1984-Apr	0.0362129	1990-Apr	0.8338040

SCOTTSS2 Degree Heating Months Time Series

SCOTTSS2 Degree Heating Month values time plot

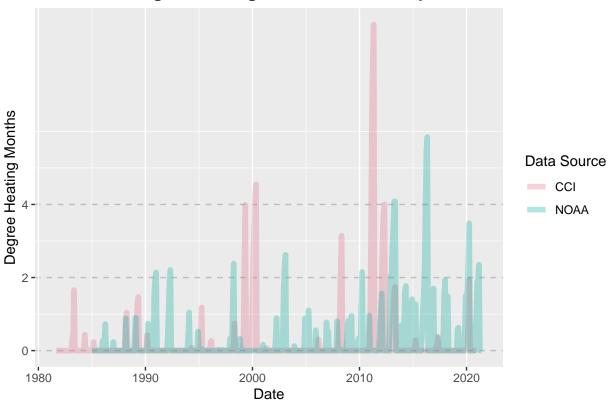


Table 7: Degree Heating Month values in SCOTTSS2 from CCI (left) and NOAA (right)

D-4-	DHM value	D-4-	DIIM 1
Date Date	8.9216712	Date Date	DHM value 5.8426428
2011-May		2016-May	
2011-Apr	7.9922101	2016-Apr	5.4613214
2011-Mar	6.3379939	2013-May	4.0837202
2000-May	4.5487244	2013-Apr	4.0782053
2000-Apr	4.2786143	2016-Mar	3.8163334
2012-May	4.0057916	2020-Apr	3.4823941
1999-May	3.9830644	2013-Mar	3.4285506
2012-Apr	3.7172991	2013-Feb	2.9169067
2000-Mar	3.3710665	2003-Feb	2.6198929
2011-Feb	3.3536937	2020-Mar	2.4127394
2008-May	3.1441705	1998-Apr	2.3785769
2012-Mar	3.0750824	2021-Mar	2.3500806
2000-Feb	2.5996668	2003-Jan	2.3210715
1999-Apr	2.3861819	2016-Feb	2.2540444
2008-Apr	2.3421272	1992-May	2.2066261
2012-Feb	1.9565885	2010-Apr	2.1522244
2020-Apr	1.9366954	2013-Jan	2.1409425
2013-May	1.7396613	1991-Jan	2.1391361
1983-May	1.6568706	2012-Dec	2.0267179
2013-Apr	1.6147134	2021-Feb	1.9981141
1989-May	1.4663243	1990-Dec	1.9739438
2000-Jan	1.3162369	2018-Jan	1.9327597
1989-Apr	1.2778330	1992-Apr	1.9288532
1995-Apr	1.1815256	2021-Jan	1.8650070
2013-Mar	1.0701682	2014-May	1.7660178
1988-Apr	1.0421725	2016-Dec	1.6989653
2008-Mar	0.9485789	2014-Apr	1.6408255
2020-Mar	0.8588158	2020-Feb	1.6356116
1998-May	0.7425296	2002-Dec	1.6116857
2011-Jan	0.7275272	1990-Nov	1.6116547
2013-Feb	0.7197388	2012-Feb	1.5641389
1988-Mar	0.6946244	2017-Dec	1.5414384
1989-Mar	0.6749514	2016-Jan	1.5247920
2008-Feb	0.5965350	2020-Jan	1.4925662
1983-Apr	0.4686982	2019-Dec	1.4867287
2012-Jan	0.4359160	2018-Apr	1.4821803
1984-May	0.4327731	2014-Dec	1.4074169
1990-Mar	0.4291392	1998-Mar	1.2992556
1999-Mar	0.4243016	2015-Apr	1.2684709
2017-May	0.3694625	2010-Mar	1.1959030
1995-Mar	0.3639772	2005-Apr	1.0987213
2006-Mar	0.3094610	2012-Jan	1.0959210
1983-Mar	0.2988183	1994-Feb	1.0430539
$\frac{1900 \text{ War}}{2015\text{-Apr}}$	0.2890034	1992-Mar	1.0428651
1996-Mar	0.2642276	2015-Dec	1.0276642
1985-Mar	0.2336544	2010-Dec 2020-Dec	1.0033631
1996-Feb	0.2241216	2010-Dec	0.9625459
1990-Feb 1998-Apr	0.2241210	2010-Dec 2009-Apr	0.9625459
$\frac{1998-\text{Apr}}{2017-\text{Mar}}$	0.2083487	1989-Feb	0.9913307
1989-Feb	0.1059137	$\frac{1989\text{-Feb}}{2002\text{-Apr}}$	0.8992780
2015-Mar	0.1038123	2002-Apr 2004-Dec	0.8824384
$\frac{2015 - Mar}{1994 - May}$	0.0997800		0.8803536
		$\frac{1988\text{-Mar}}{2016\text{-Nov}}$	
2001-May	0.0668837		0.8573213
1994-Apr	0.0422137	2009-Jan	0.8277490
1984-Apr	0.0362129	2007-Dec	0.7987407

BUN05A Degree Heating Months Time Series

BUN05A Degree Heating Month values time plot

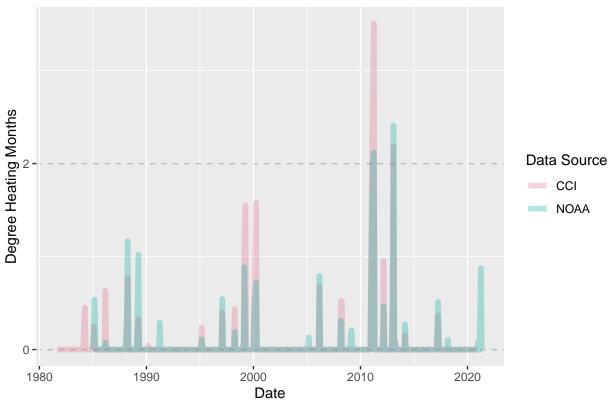


Table 8: Degree Heating Month values in BUN05A from CCI (left) and NOAA (right)

Date	DHM value	Date	DHM value
2011-Apr	3.5047295	2013-Feb	2.4075384
$\frac{2011\text{-Apr}}{2011\text{-Mar}}$	2.8765642	2013-Feb 2011-Apr	2.4075384
2011-Mar 2011-Feb	2.2791442	$\frac{2011\text{-Apr}}{2011\text{-Mar}}$	1.9959677
2011-Feb 2013-Feb	2.1829070	2011-Mai 2011-Feb	1.5563978
$\frac{2013\text{-Feb}}{2000\text{-Apr}}$	1.5783603	1988-Apr	1.1652329
1999-Apr	1.5497903	_	
1999-Apr 1999-Mar	1.3497903	1989-Apr 1999-Mar	$\frac{1.0202903}{0.8892473}$
$\frac{1999-\text{Mar}}{2011-\text{Jan}}$	1.1561260	2021-Apr	0.8769785
$\frac{2011-3an}{2000-Mar}$	1.0768654	2021-Apr 2011-Jan	0.8709783
$\frac{2000\text{-Mar}}{2012\text{-Mar}}$	0.9503007	$\frac{2011-\mathrm{Jan}}{2006-\mathrm{Mar}}$	0.7973118
1988-Apr	0.9505007	2000-Mar 2000-Apr	0.7902131
$\frac{1988-\text{Apr}}{2006-\text{Mar}}$	0.7673450	2000-Apr 2013-Jan	
$\frac{2000\text{-Mar}}{1986\text{-Mar}}$		$\frac{2015\text{-Jan}}{2000\text{-Mar}}$	0.6166667
$\frac{1980\text{-Mar}}{2000\text{-Feb}}$	0.6332230		0.5814090
	0.5765425	1997-Feb	0.5433717
2008-Apr	0.5239251	1985-Mar	0.5376536
2008-Mar	0.5170977	2017-Apr	0.5120430
1984-Apr	0.4531066	2012-Mar	0.4659918
1998-Apr 2013-Jan	0.4364945	$\frac{2000\text{-Feb}}{1989\text{-Mar}}$	0.4492584
	0.4077434		0.3705376
1997-Feb	0.3955206	$\frac{1988\text{-Mar}}{2008\text{-Mar}}$	0.3654802
2017-Apr	0.3664080		0.3140860
1989-Apr	0.3253651	2021-Mar	0.2898925
1985-Feb	0.2487332	1991-Apr	0.2877527
1995-Mar	0.2393563	2014-Mar	0.2708602
1984-Mar	0.2209466	2017-Mar	0.2279570
2012-Feb	0.1748185	2009-Mar	0.2062596
2014-Mar	0.1551602	1985-Feb	0.1987289
1999-Feb	0.1105191	1998-Apr	0.1880860
1989-Mar	0.1038710	1988-Feb	0.1523619
2013-Apr 1984-Feb	0.0818284 0.0448168	$\frac{2009\text{-Feb}}{2005\text{-Mar}}$	$\begin{array}{r} 0.1476575 \\ \hline 0.1308602 \end{array}$
$\frac{1984\text{-Feb}}{1988\text{-Mar}}$			
$\frac{1988-Mar}{1990-Mar}$	0.0445183	$\frac{1995\text{-Mar}}{2018\text{-Mar}}$	0.1098925 0.1040860
	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		
2017-Mar		2021-Jan	0.0931183
1981-Sep	0.0000000	2013-Apr	0.0750860
1981-Oct	0.0000000	1986-Mar	0.0740860
1981-Nov	0.0000000	2012-Feb	0.0302929
1981-Dec	0.0000000	1985-Jan	0.0000000
1982-Jan	0.0000000	1985-Apr 1985-May	$0.0000000\\0.0000000$
$\frac{1982\text{-Feb}}{1982\text{-Mar}}$	0.0000000		
		1985-Jun	0.0000000
1982-Apr	0.0000000	1985-Jul	0.0000000
$\frac{1982\text{-May}}{1982\text{-Jun}}$	0.0000000	1985-Aug 1985-Sep	0.0000000
		-	0.0000000
1982-Jul	0.0000000	1985-Oct 1985-Nov	
1982-Aug	0.0000000	$\frac{1985\text{-Nov}}{1985\text{-Dec}}$	0.0000000
1982-Sep	0.0000000		0.0000000
1982-Oct	0.0000000	1986-Jan	0.0000000
1982-Nov	0.0000000	1986-Feb	0.0000000
1982-Dec		1986-Apr	0.0000000
1983-Jan	$\begin{array}{c c} 0.0000000 \\ \hline 0.0000000 & 5 \end{array}$	1986-May	0.0000000
1983-Feb			0.0000000
1983-Mar	0.0000000	1986-Jul	0.0000000
1983-Apr	0.0000000	1986-Aug	0.0000000
1983-May	0.0000000	1986-Sep	0.0000000

Bundegi Degree Heating Months Time Series

08BND and **13BND** Degree Heating Month values time plot

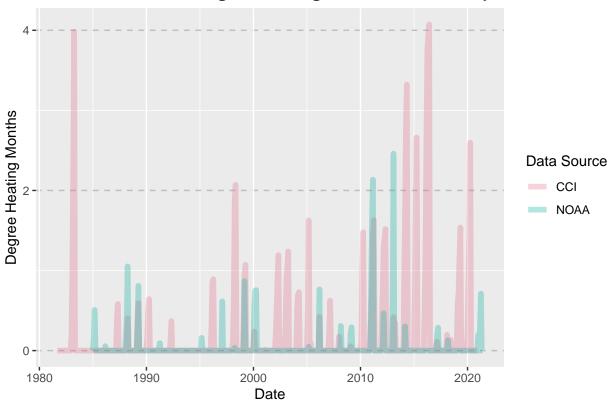


Table 9: Degree Heating Month values in 08BND and 13BND from CCI (left) and NOAA (right)

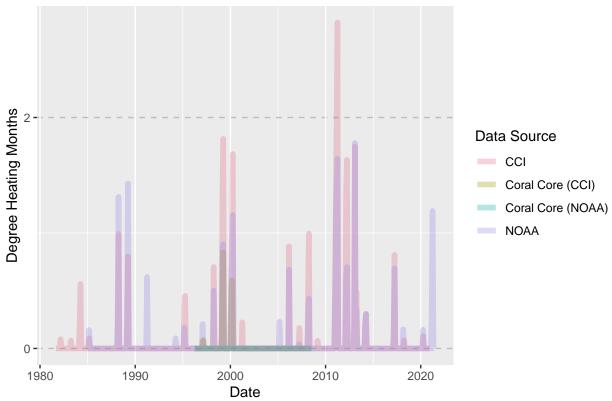
Data	DUM 1	Data	рим 1
$\frac{\text{Date}}{2016\text{-Jun}}$	DHM value 4.0709144	$\frac{\text{Date}}{2013\text{-Feb}}$	DHM value 2.4595161
1983-Apr	3.9839208	$\frac{2013\text{-Feb}}{2011\text{-Mar}}$	$\frac{2.4595161}{2.1338479}$
2016-May	3.9347101	2011-Mar 2011-Feb	1.6912673
$\frac{2010\text{-May}}{2016\text{-Apr}}$	3.7442817	1988-Apr	1.0514260
$\frac{2010\text{-Apr}}{2014\text{-May}}$	3.3209593	2011-Jan	0.8809677
	2.7898849	1999-Mar	0.8680645
$\frac{2014\text{-Apr}}{2016\text{-Mar}}$	2.6890772	1989-Mai 1989-Apr	0.8083763
$\frac{2010\text{-Mai}}{2015\text{-Apr}}$	2.6610193	$\frac{1989-\text{Apr}}{2006-\text{Mar}}$	0.7638710
$\frac{2010-\text{Apr}}{2020-\text{Apr}}$	2.5963338	2000-Mai 2000-Apr	0.7555261
$\frac{2020\text{-Apr}}{1983\text{-Mar}}$	2.3903338	2000-Apr 2000-Mar	0.7353201 0.7496552
1985-Mar 1998-May	2.2733636	2000-Mar 2021-Apr	0.7490332
	1.8658770	$\frac{2021\text{-Apr}}{2013\text{-Jan}}$	
1998-Apr 2015-Mar	1.7704816	1997-Feb	$\begin{array}{r} 0.6406452 \\ \hline 0.6149424 \end{array}$
$\frac{2015\text{-Mar}}{2014\text{-Mar}}$		2000-Feb	
	1.7120120		0.5535261
$\frac{2011\text{-Apr}}{2005\text{-Mar}}$	1.6245417	1985-Mar	0.5067166
		2012-Mar	$\begin{array}{c} 0.4686318 \\ \hline 0.4095551 \end{array}$
2019-May	1.5374549	1988-Mar	
2012-May	1.5176929	2008-Mar	0.3080645
2010-Apr	1.4792122	2014-Mar 1989-Mar	0.3019355
$\frac{2020\text{-Mar}}{2011\text{-Mar}}$	1.4457954		0.2948387
	1.4379123	2009-Mar	0.2914286
2012-Apr	1.4111337	2017-Apr	0.2856452
2016-Feb	1.3928385	2021-Mar	0.2796774
2012-Mar	1.2999305	2009-Feb	0.2252995
2003-Apr	1.2385086	1988-Feb	0.1969744
2002-May	1.1936400	2017-Mar	0.1967742
2019-Apr	1.1754154	2021-Jan	0.1961290
1999-Apr	1.0720771	1985-Feb	0.1699424
2003-Mar	1.0369713	1995-Mar	0.1600000
1983-Feb	1.0229540	2018-Mar	0.1296774
2010-Mar 1999-Mar	0.9813421	1991-Apr 2012-Feb	0.0938710
$\frac{1999\text{-Mar}}{2003\text{-Feb}}$	0.9238743	$\frac{2012\text{-Feb}}{1986\text{-Mar}}$	0.0776641
$\frac{2003\text{-Feb}}{2014\text{-Feb}}$	0.9178300		0.0551613
	0.9057763	2005-Mar	0.0487097
1996-Apr	0.8926295	1998-Apr	0.0345376
2002-Apr	0.8854689	1985-Jan	0.0000000
$\frac{2020\text{-Feb}}{1996\text{-Mar}}$	0.8631049	1985-Apr	0.0000000
	0.8490889	1985-May	0.0000000
2011-Feb	0.8084511	1985-Jun 1985-Jul	0.0000000
$\frac{2012\text{-Feb}}{2015\text{-Feb}}$	$\begin{array}{r} 0.8069213 \\ \hline 0.7968265 \end{array}$		0.0000000
$\frac{2015\text{-reb}}{2004\text{-Apr}}$		1985-Aug	
	0.7297618	1985-Sep	0.0000000
$\frac{2019\text{-Mar}}{2004\text{-Mar}}$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1985-Oct	0.0000000
		1985-Nov	0.0000000
$\frac{1990\text{-Apr}}{2007\text{-Mar}}$	0.6440420	1985-Dec	0.0000000
1998-Mar	0.6249715	$\frac{1986\text{-Jan}}{1986\text{-Feb}}$	
	0.6230098		0.0000000
2016-Jan	0.6149446	1986-Apr	0.0000000
2019-Feb	0.5984363	1986-May	0.0000000
1989-Apr	0.5914373	1986-Jun	0.0000000
1987-May	0.5809463	1986-Jul	0.0000000
2004-Feb	0.5316875 5		0.0000000
1990-Mar	0.5201679	1986-Sep	0.0000000
2002-Mar	0.5105979	1986-Oct	0.0000000
2005-Feb	0.5086303	1986-Nov	0.0000000

Degree Heating Month Values in 08TNT		
Date	Site	CCI
2011 Apr	08TNT	2.822778

^a Coral Core Date Range is from 1996 to 2008

Tantabiddi 08TNT Degree Heating Months Time Series

08TNT Degree Heating Month values time plot

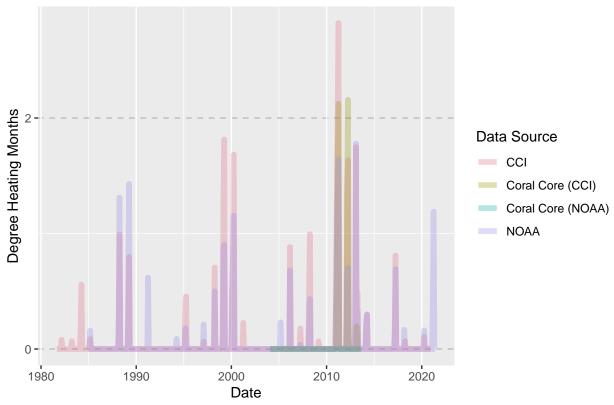


Degree Heating Month Values in 13TNT			
Date	Site	CCI	Coral Core (CCI)
2011 Apr	13TNT	2.822778	2.123089
2012 Apr	13TNT	NA	2.158121

^a Coral Core Date Range is from 2004 to 2013

Tantabiddi 13TNT Degree Heating Months Time Series

13TNT Degree Heating Month values time plot

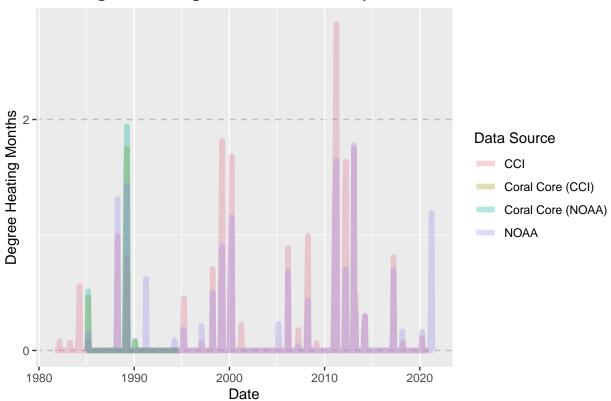


Degree H	eating	Month	Values in TNT
Date	Site		CCI
2011 Apr	TNT		2.822778

^a Coral Core Date Range is from 1985 to 1994

TNT Degree Heating Months Time Series

TNT Degree Heating Month values time plot



TNT07C Degree Heating Months Time Series

TNT07C Degree Heating Month values time plot

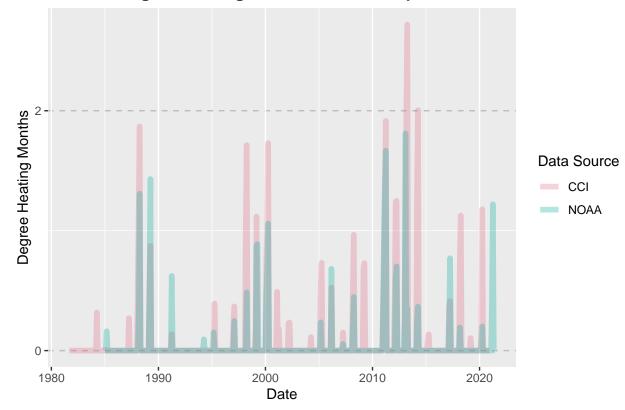


Table 10: Degree Heating Month values in TNT07C from CCI (left) and NOAA (right)

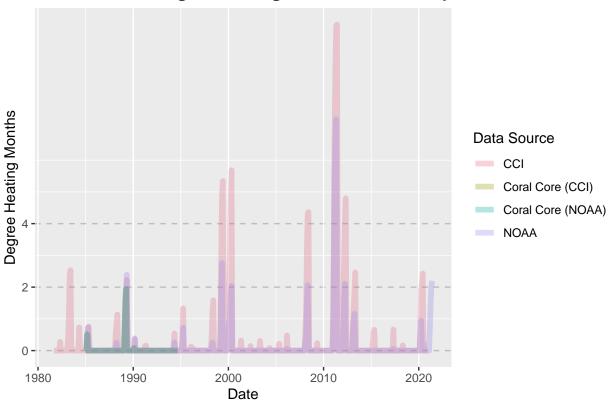
D-4-	DIIM1	D-4-	DIIM 1
Date	DHM value 2.7178574	$\frac{\text{Date}}{2013\text{-Feb}}$	DHM value 1.8107716
2013-Apr			1.8107716
$\frac{2014\text{-Apr}}{2013\text{-Mar}}$	2.0041040	2011-Apr	
	1.9830514	1989-Apr	1.4300358
2011-Apr	1.9151712	2011-Mar	1.3845100
1988-Apr	1.8685407	1988-Apr	1.3076188
2000-Apr	1.7304011	2021-Apr	1.2194875
1998-Apr	1.7126357	2000-Apr	1.0589811
2014-Mar	1.3059658	2011-Feb	1.0191587
2011-Mar	1.3010337	1999-Apr	0.8878423
2013-Feb	1.2890191	1999-Mar	0.8672867
2012-Apr	1.2484796	2017-Apr	0.7701649
2012-Mar	1.2386756	2012-Apr	0.7022079
1988-Mar	1.1920680	2006-Mar	0.6821254
2020-Apr	1.1787466	2000-Mar	0.6814255
2018-Apr	1.1257715	1991-Apr	0.6222222
1999-Mar	1.1166702	2012-Mar	0.5963190
1998-Mar	1.0011644	1989-Mar	0.5314803
2000-Mar	0.9955971	1998-Apr	0.4868889
2008-Apr	0.9649547	2000-Feb	0.4754291
1989-Apr	0.8746312	2011-Jan	0.4492222
2000-Feb	0.7825317	2008-Apr	0.4471219
2018-Mar	0.7459663	2021-Mar	0.4079319
2005-Apr	0.7314433	2014-Apr	0.3651864
2009-Apr	0.7285332	2013-Apr	0.3502222
2011-Feb	0.7144214	1988-Mar	0.3153966
2009-Mar	0.7030625	2013-Jan	0.2708351
1988-Feb	0.6228753	2014-Mar	0.2669642
2006-Mar	0.5253222	2017-Mar	0.2576093
2005-Mar	0.5159681	1997-Feb	0.2463651
2008-Mar	0.4904829	2005-Mar	0.2356738
2001-Feb	0.4904472	2020-Apr	0.2012222
1989-Mar	0.4801582	2008-Mar	0.1988996
2012-Feb	0.4652878	2018-Mar	0.1918029
2017-Apr	0.4134197	1985-Mar	0.1614803
1995-Apr	0.3923861	1995-Mar	0.1518029
2011-Jan	0.3779016	1994-Apr	0.0942222
1997-Feb	0.3684454	2007-Apr	0.0552222
2017-Mar	0.3666131	1988-Feb	0.0219808
1984-Apr	0.3181394	1985-Jan	0.0000000
1987-Apr	0.2701403	1985-Feb	0.0000000
2002-Apr	0.2343518	1985-Apr	0.0000000
2002-Mar	0.2285476	1985-May	0.0000000
1997-Jan	0.2137102	1985-Jun	0.0000000
1999-Feb	0.1897357	1985-Jul	0.0000000
2001-Apr	0.1818072	1985-Aug	0.0000000
2020-Mar	0.1766097	1985-Sep	0.0000000
2007-Apr	0.1501391	1985-Oct	0.0000000
1991-Apr	0.1378090	1985-Nov	0.0000000
2015-Apr	0.1358157	1985-Dec	0.0000000
2004-Apr	0.1121396	1986-Jan	0.0000000
2019-Mar	0.1043519	1986-Feb	0.0000000
2015-Mar	0.0746770 5		0.0000000
1995-Mar	0.0175786	1986-Apr	0.0000000
1998-Feb	0.0161648	1986-May	0.0000000
1985-Feb	0.0047348	1986-Jun	0.0000000

Degree Heating Month Values in Wallabi Island			
Date	Site	CCI	NOAA
1983 May	Wallabi Island	2.386421	NA
1983 Jun	Wallabi Island	2.532907	NA
1989 May	Wallabi Island	2.221051	2.390893
1999 Apr	Wallabi Island	2.870589	NA
1999 May	Wallabi Island	4.813814	2.760075
1999 Jun	Wallabi Island	5.341297	NA
2000 Feb	Wallabi Island	2.345816	NA
2000 Mar	Wallabi Island	3.073562	NA
2000 Apr	Wallabi Island	4.779713	NA
2000 May	Wallabi Island	5.683910	2.039766
2008 Apr	Wallabi Island	3.163940	NA
2008 May	Wallabi Island	4.296523	2.058171
2008 Jun	Wallabi Island	4.362674	NA
2011 Feb	Wallabi Island	3.804644	2.800319
2011 Mar	Wallabi Island	6.997546	5.481555
2011 Apr	Wallabi Island	8.923032	6.670136
2011 May	Wallabi Island	10.230774	7.285243
2011 Jun	Wallabi Island	10.270260	NA
2012 Mar	Wallabi Island	3.020914	NA
2012 Apr	Wallabi Island	4.082398	2.101513
2012 May	Wallabi Island	4.799819	NA
2013 May	Wallabi Island	2.465572	NA
2020 May	Wallabi Island	2.092374	NA
2020 Jun	Wallabi Island	2.428527	NA
2021 May	Wallabi Island	NA	2.052043
2021 Jun	Wallabi Island	NA	2.192957

^a Coral Core Date Range is from 1985 to 1994

Wallabi Island Degree Heating Months Time Series

Wallabi Island Degree Heating Month values time plot



HAB05B Degree Heating Months Time Series



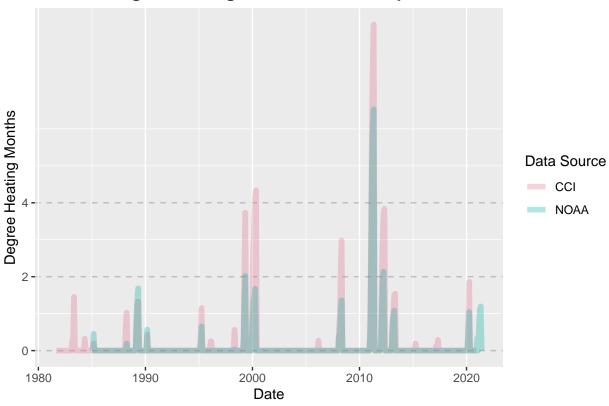


Table 11: Degree Heating Month values in HAB05B from CCI (left) and NOAA (right)

Date DHM value Date DHM value 2011-May 6.5254593 2011-Apr 7.9186266 2011-Apr 6.0679862 2011-Mar 6.0842826 2011-Mar 5.0625346 2000-May 4.3345639 2011-Feb 2.5566743 2000-Apr 4.1856412 2012-Apr 2.1361772 2012-May 3.8318281 1999-May 2.0233441 1999-May 3.7314855 2012-Mar 1.8880590 2012-Apr 3.6780660 1989-May 1.6871398 2000-Mar 3.4452974 2000-Apr 1.6761272 2011-Feb 3.3476166 1989-Apr 1.4622473 2012-Mar 3.0727238 2000-Mar 1.4230089 2008-May 2.9775431 2008-May 2.9775431 2008-May 2.9215951 2021-May 1.3632770 2008-Apr 2.2511993 2000-Feb 1.3223100 1999-Apr 2.2215951 2021-May 1.1946559 2012-Feb 1.9521884 2021-Apr 1.1233118 2020-Apr 1.6828822 2012-Feb 1.1076826 2013-May 1.5392558 2008-Apr 1.0909651 2013-Apr 1.5045230 2013-Apr 1.0838886 1983-May 1.3415043 2013-Apr 1.0435138 2020-Apr 1.12152757 2000-Jan 1.3415043 2013-Mar 0.9584370 1989-Apr 1.2152759 2000-Jan 0.7800538 1995-Apr 1.1512787 2013-Feb 0.7241897 2013-Feb 0.7241897 2013-Feb 0.7241897 2013-Feb 0.7349133 2008-Mar 0.4556344 2008-Mar 0.9531865 1995-Apr 0.6556344 2008-Mar 0.8405356 2020-Mar 0.5310215 2011-Jan 0.7369905 1985-Mar 0.4569278 2013-Feb 0.7349133 2008-Mar 0.4255135 1988-Mar 0.6742669 2008-Feb 0.4019114 2008-Feb 0.6191008 2021-Jan 0.3374731 1998-Mar 0.6676347 2011-Jan 0.4106989 1985-Mar 0.6676347 2011-Jan 0.4106989 1985-Mar 0.6676347 2011-Jan 0.4106989 1985-Mar 0.6756060 1985-Mar 0.3686020 1985-Feb 0.0000000 1986-Mar 0.250342 1985-Mar 0.0000000 1985-Mar 0.3686020 1985-Peb 0.0000000 1985-Mar 0.0000000 1985-				
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HAB10A Degree Heating Months Time Series

HAB10A Degree Heating Month values time plot

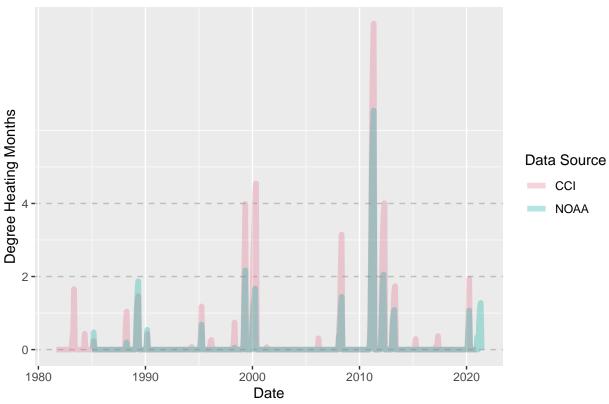


Table 12: Degree Heating Month values in HAB10A from CCI (left) and NOAA (right)

- D /	DID 1	- D /	DIIM 1
Date	DHM value	Date	DHM value
2011-May	8.9216712	2011-May	6.5397704
2011-Apr	7.9922101	2011-Apr	6.0591790
2011-Mar	6.3379939	2011-Mar	5.0533295
2000-May	4.5487244	2011-Feb	2.5449962
2000-Apr	4.2786143	1999-May	2.1693011
2012-May	4.0057916	2012-Apr	2.0573185
1999-May	3.9830644	1989-May	1.8702473
2012-Apr	3.7172991	2012-Mar	1.7971357
2000-Mar	3.3710665	2000-Apr	1.6711884
2011-Feb	3.3536937	1989-Apr	1.5722366
2008-May	3.1441705	2008-May	1.4446515
2012-Mar	3.0750824	1999-Apr	1.4445161
2000-Feb	2.5996668	2000-Mar	1.3100056
1999-Apr	2.3861819	2021-May	1.2791183
2008-Apr	2.3421272	2000-Feb	1.2474787
2012-Feb	1.9565885	2021-Apr	1.1585269
2020-Apr	1.9366954	2008-Apr	1.1250278
2013-May	1.7396613	2013-Apr	1.0860169
1983-May	1.6568706	2020-Apr	1.0677742
2013-Apr	1.6147134	2012-Feb	1.0558991
1989-May	1.4663243	1989-Mar	0.9667204
2000-Jan	1.3162369	2013-Mar	0.9245008
1989-Apr	1.2778330	2000-Jan	0.7470430
1995-Apr	1.1815256	2013-Feb	0.6971352
2013-Mar	1.0701682	1995-Apr	0.6803656
1988-Apr	1.0421725	2021-Mar	0.6780108
2008-Mar	0.9485789	1990-Mar	0.5431720
2020-Mar	0.8588158	2020-Mar	0.5405914
1998-May	0.7425296	1985-Mar	0.4736713
2011-Jan	0.7275272	2008-Mar	0.3971783
2013-Feb	0.7197388	2011-Jan	0.3960753
1988-Mar	0.6946244	2008-Feb	0.3807805
1989-Mar	0.6749514	2021-Jan	0.3457527
2008-Feb	0.5965350	1995-Mar	0.2028495
1983-Apr	0.4686982	1988-Apr	0.1978495
2012-Jan	0.4359160	2012-Jan	0.0999462
1984-May	0.4327731	1998-May	0.0557527
1990-Mar	0.4291392	1985-Feb	0.0085637
1999-Mar	0.4243016	1985-Jan	0.0000000
2017-May	0.3694625	1985-Apr	0.0000000
1995-Mar	0.3639772	1985-May	0.0000000
2006-Mar	0.3094610	1985-Jun	0.0000000
1983-Mar	0.2988183	1985-Jul	0.0000000
2015-Apr	0.2890034	1985-Aug	0.0000000
1996-Mar	0.2642276	1985-Sep	0.0000000
1985-Mar	0.2336544	1985-Oct	0.0000000
1996-Feb	0.2241216	1985-Nov	0.0000000
1998-Apr	0.2085487	1985-Dec	0.0000000
2017-Mar	0.1059137	1986-Jan	0.0000000
1989-Feb	0.1058123	1986-Feb	0.0000000
2015-Mar	0.0997866	1986-Mar	0.0000000
1994-May	0.0784518 6		0.0000000
2001-May	0.0668837	1986-May	0.0000000
1994-Apr	0.0422137	1986-Jun	0.0000000
1984-Apr	0.0362129	1986-Jul	0.0000000