

Reference: EDGARv4.2 FT2012

unit: kton (Gg) CH4 /yr

Definition of emission source: CH4 totals including also biofuel and biomass (such as agricultural waste burning, Savannah fires, forest fires, post-burn decay, peat fires and decay of drained peatlands)

Applied data sources: EDGARv4.2, EDGARv4.2FT2010, extrapolation using NIR/CRF of UNFCCC

Date: 26/09/2014

Country name	Country code	1970	1971	1972	1973	1974	1975	1976	1977
China	CHN	3.72E+04	3.88E+04	3.93E+04	3.94E+04	3.96E+04	4.07E+04	4.10E+04	4.15E+04
India	IND	1.90E+04	1.91E+04	1.91E+04	1.94E+04	1.96E+04	2.00E+04	2.01E+04	2.04E+04
United States	USA	2.83E+04	2.76E+04	2.79E+04	2.81E+04	2.80E+04	2.81E+04	2.81E+04	2.78E+04
World total	Totals	2.53E+05	2.45E+05	2.55E+05	2.58E+05	2.56E+05	2.62E+05	2.69E+05	2.76E+05

Country name	Country code	1970	1971	1972	1973	1974	1975	1976	1977
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1978	1979	1980	1981	1982	1983	1984	1985	1986
4.18E+04	4.16E+04	4.14E+04	4.10E+04	4.15E+04	4.24E+04	4.33E+04	4.33E+04	4.41E+04
2.06E+04	2.07E+04	2.12E+04	2.16E+04	2.17E+04	2.23E+04	2.27E+04	2.29E+04	2.35E+04
2.77E+04	2.86E+04	2.89E+04	2.90E+04	2.89E+04	2.82E+04	2.89E+04	2.87E+04	2.85E+04
2.76E+05	2.84E+05	2.86E+05	2.80E+05	2.99E+05	2.92E+05	2.85E+05	2.88E+05	2.95E+05

1978	1979	1980	1981	1982	1983	1984	1985	1986
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1987	1988	1989	1990	1991	1992	1993	1994	1995
4.48E+04	4.58E+04	4.72E+04	4.84E+04	4.83E+04	4.81E+04	4.78E+04	4.86E+04	5.12E+04
2.37E+04	2.48E+04	2.54E+04	2.45E+04	2.48E+04	2.50E+04	2.52E+04	2.55E+04	2.58E+04
2.88E+04	2.94E+04	2.96E+04	3.04E+04	2.99E+04	2.97E+04	2.94E+04	2.93E+04	2.88E+04
3.08E+05	3.00E+05	3.06E+05	3.18E+05	3.19E+05	3.26E+05	3.10E+05	3.15E+05	3.12E+05

1987	1988	1989	1990	1991	1992	1993	1994	1995
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Abstract: This analysis indicates that total cumulative anthropogenic CH4, CO2, and N2O emissions f

Summary For Global Surface Temperature Change Values Associated With Livestock-Related GHG

2015	2016	2017	2018	2019	2020	2021	Year
0.518967	0.523877	0.528611	0.531666	0.531087	0.525344	0.51492	Select Glot
0.44	0.44	0.44	0.44	0.44	0.44	0.44	Livestock-F
0.228346	0.230506	0.232589	0.233933	0.233678	0.231152	0.226565	Global Surf
0.892189	0.915205	0.9384	0.960356	0.978961	0.992684	1.001991	Select Glot
0.05	0.05	0.05	0.05	0.05	0.05	0.05	Livestock-F
0.044609	0.04576	0.04692	0.048018	0.048948	0.049634	0.0501	Global Surf
0.054023	0.055118	0.056211	0.057208	0.058107	0.058805	0.059243	Select Glot
0.53	0.53	0.53	0.53	0.53	0.53	0.53	Livestock-F
0.028632	0.029212	0.029792	0.03032	0.030797	0.031166	0.031399	Global Surf
0.518967	0.523877	0.528611	0.531666	0.531087	0.525344	0.51492	Global Surf
0.892189	0.915205	0.9384	0.960356	0.978961	0.992684	1.001991	Global Surf
0.054023	0.055118	0.056211	0.057208	0.058107	0.058805	0.059243	Global Surf
1.465179	1.4942	1.523222	1.54923	1.568154	1.576833	1.576155	Global Surf
0.228346	0.230506	0.232589	0.233933	0.233678	0.231152	0.226565	Global Surf
0.044609	0.04576	0.04692	0.048018	0.048948	0.049634	0.0501	Global Surf
0.028632	0.029212	0.029792	0.03032	0.030797	0.031166	0.031399	Global Surf
0.301588	0.305479	0.309301	0.312271	0.313423	0.311952	0.308064	Global Surf
0.301588	0.305479	0.309301	0.312271	0.313423	0.311952	0.308064	Global Surf
1.465179	1.4942	1.523222	1.54923	1.568154	1.576833	1.576155	Global Surf
20.58%	20.44%	20.31%	20.16%	19.99%	19.78%	19.55%	Livestock S

Summary For Global Surface Temperature Change Values Associated With Livestock-Related GHG

2015	2016	2017	2018	2019	2020	2021	Year
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0.518967	0.523877	0.528611	0.531666	0.531087	0.525344	0.51492	Select Glot
0.44	0.44	0.44	0.44	0.44	0.44	0.44	Livestock-F
0.228346	0.230506	0.232589	0.233933	0.233678	0.231152	0.226565	Global Surl
0.892189	0.915205	0.9384	0.960356	0.978961	0.992684	1.001991	Select Glot
0.132	0.132	0.132	0.132	0.132	0.132	0.132	Livestock-F
0.117769	0.120807	0.123869	0.126767	0.129223	0.131034	0.132263	Global Surl
0.054023	0.055118	0.056211	0.057208	0.058107	0.058805	0.059243	Select Glot
0.53	0.53	0.53	0.53	0.53	0.53	0.53	Livestock-F
0.028632	0.029212	0.029792	0.03032	0.030797	0.031166	0.031399	Global Surl
0.518967	0.523877	0.528611	0.531666	0.531087	0.525344	0.51492	Global Surl
0.892189	0.915205	0.9384	0.960356	0.978961	0.992684	1.001991	Global Surl
0.054023	0.055118	0.056211	0.057208	0.058107	0.058805	0.059243	Global Surl
1.465179	1.4942	1.523222	1.54923	1.568154	1.576833	1.576155	Global Surl
0.228346	0.230506	0.232589	0.233933	0.233678	0.231152	0.226565	Global Surl
0.117769	0.120807	0.123869	0.126767	0.129223	0.131034	0.132263	Global Surl
0.028632	0.029212	0.029792	0.03032	0.030797	0.031166	0.031399	Global Surl
0.374747	0.380526	0.386249	0.391021	0.393698	0.393352	0.390227	Global Surl
0.374747	0.380526	0.386249	0.391021	0.393698	0.393352	0.390227	Global Surl
1.465179	1.4942	1.523222	1.54923	1.568154	1.576833	1.576155	Global Surl
25.58%	25.47%	25.36%	25.24%	25.10%	24.95%	24.76%	Livestock S

Sheet 1 CH4

Values derived from Figure 2D, Allen et al., May 2016; Based on Anthropogenic 330 Mt CH4 Pulse in

2011	2012	2013	2014	2015	2016	2017	2018	2019
0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.0192	0.02

1950-1959 Annual 180 Mt CH4 Pulse Emission - Anthropogenic [6/11]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.0192	0.02
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0	0.000818	0.002727	0.005455	0.007909	0.008907	0.009818	0.010473	0.010909

1960-1969 Annual 210 Mt CH4 Pulse Emission - Anthropogenic [7/11]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.0192	0.02
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0	0.000955	0.003182	0.006364	0.009227	0.010392	0.011455	0.012218	0.012727

1970-1979 Annual 240 Mt CH4 Pulse Emission - Anthropogenic [8/11]

1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

Sum 0 0.000818 0.003545 0.009 0.016909 0.025816 0.035635 0.046107

Year 1950 1951 1952 1953 1954 1955 1956 1957

Year	1950	1951	1952	1953	1954	1955	1956	1957
Sum	0	0.000818	0.003545	0.009	0.016909	0.025816	0.035635	0.046107
LSSC %	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
LSSC Value	0	0.00036	0.00156	0.00396	0.00744	0.011359	0.015679	0.020287

LSSC = Livestock Supply Chains

Summary For Global Surface Temperature Change Values Associated With Livestock-Related Metha

2015	2016	2017	2018	2019	2020	2021	Year
0.518967	0.523877	0.528611	0.531666	0.531087	0.525344	0.51492	Select Glot
0.44	0.44	0.44	0.44	0.44	0.44	0.44	Livestock-F
0.228346	0.230506	0.232589	0.233933	0.233678	0.231152	0.226565	Global Surl

2015	2016	2017	2018	2019	2020	2021	Year
0.518967	0.523877	0.528611	0.531666	0.531087	0.525344	0.51492	Select Glot
0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	0.3333	Livestock-F
0.172972	0.174608	0.176186	0.177204	0.177011	0.175097	0.171623	Global Surl

2015	2016	2017	2018	2019	2020	2021	Year
0.518967	0.523877	0.528611	0.531666	0.531087	0.525344	0.51492	Select Glot
0.3	0.3	0.3	0.3	0.3	0.3	0.3	Livestock-F
0.15569	0.157163	0.158583	0.1595	0.159326	0.157603	0.154476	Global Surl

From 1950-2016 appear to have increased annual global surface temperatures approximately 1.5 degrees

Emissions - CH₄, CO₂, and N₂O [Produced By Todd Shuman, WUMU-WURU, December 21, 2016, b

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Methane Emission
Related (Enteric, Manure, and Other) Share [4/9 approx] Of Total Methane Emission Pulse: Based on
Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related CH₄

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Carbon Dioxide
Related Share [1/20 approx] Of Total Carbon Dioxide Emission Pulse. Based on Gerber et al. (2013),
Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related CO₂

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Nitrous Oxide Emission
Related Share [53/100 approx] Of Total Nitrous Oxide Emission Pulse. Based on Gerber et al. (2013),
Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related N₂O

Surface Temperature Change Values Associated With Cumulative Anthropogenic CH₄ Emissions (1950-2016)
Surface Temperature Change Values Associated With Cumulative Anthropogenic CO₂ Emissions (1950-2016)
Surface Temperature Change Values Associated With Cumulative Anthropogenic N₂O Emissions (1950-2016)
Surface Temperature Change Values Associated With Cumulative Anthropogenic Emissions (1950-2016)

Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related CH₄
Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related CO₂
Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related N₂O
Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related Emission

Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related Emission
Surface Temperature Change Values Associated With Cumulative Anthropogenic Emissions (1950-2016)
Supply Chain Emission-Related Temperature Change Values [CH₄+CO₂+N₂O] As A Proportion [%] of

Emissions - CH₄, CO₂, and N₂O [Produced By Todd Shuman, WUMU-WURU, December 21, 2016. C

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Methane Emissions (Enteric, Manure, and Other) Share [4/9 approx] Of Total Methane Emission Pulse: Based on Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related CH4

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Carbon Dioxide Emissions (Livestock-Related Share [132/1000 approx] Of Total Carbon Dioxide Emission Pulse. Based on Gerber et al. (2013), Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related CO2

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Nitrous Oxide Emissions (Livestock-Related Share [53/100 approx] Of Total Nitrous Oxide Emission Pulse. Based on Gerber et al. (2013), Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related N2O

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic CH4 Emissions (1950-2016)
 Global Surface Temperature Change Values Associated With Cumulative Anthropogenic CO2 Emissions (1950-2016)
 Global Surface Temperature Change Values Associated With Cumulative Anthropogenic N2O Emissions (1950-2016)
 Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Emissions (1950-2016)

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related CH4 Emissions (1950-2016)
 Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related CO2 Emissions (1950-2016)
 Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related N2O Emissions (1950-2016)
 Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related Emissions (1950-2016)

Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related Emissions (1950-2016)
 Global Surface Temperature Change Values Associated With Cumulative Anthropogenic Emissions (1950-2016)
 Supply Chain Emission-Related Temperature Change Values [CH4+CO2+N2O] As A Proportion [%] of Total Emissions

Year 2011 - Global Surface Temperature Change in Degrees Celsius; assume pulse emission occurs on 1/1/2011

2020	2021	2022	2023	2024	2025	2026	2027	2028
0.0205	0.02075	0.020666	0.0204	0.020166	0.01975	0.019166	0.0185	0.0179

0.0205	0.02075	0.020666	0.0204	0.020166	0.01975	0.019166	0.0185	0.0179
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0.011182	0.011318	0.011272	0.011127	0.011	0.010773	0.010454	0.010091	0.009764

0.0205	0.02075	0.020666	0.0204	0.020166	0.01975	0.019166	0.0185	0.0179
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0.013045	0.013205	0.013151	0.012982	0.012833	0.012568	0.012197	0.011773	0.011391

0.057016	0.068198	0.079516	0.090925	0.102507	0.114416	0.126506	0.138445	0.150172
1958	1959	1960	1961	1962	1963	1964	1965	1966

1958	1959	1960	1961	1962	1963	1964	1965	1966
0.057016	0.068198	0.079516	0.090925	0.102507	0.114416	0.126506	0.138445	0.150172
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.025087	0.030007	0.034987	0.040007	0.045103	0.050343	0.055663	0.060916	0.066076

ane [CH4] Emissions, Three Different Scenarios

nal Surface Temperature Change Values Associated With Cumulative Anthropogenic Methane Emission
 Related (Enteric, Manure, and Other [Combined]) Share [4/9 approx] of total methane emission pulse:
 face Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related Meth

nal Surface Temperature Change Values Associated With Cumulative Anthropogenic Methane Emission
 Related (Enteric and Manure Combined) Share [1/3 approx] of total methane emission pulse: Based on
 face Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related Meth

nal Surface Temperature Change Values Associated With Cumulative Anthropogenic Methane Emission
 Related (Enteric and Manure Combined) Share [3/10 approx] of total methane emission pulse: Based on
 face Temperature Change Values Associated With Cumulative Anthropogenic Livestock-Related Meth

ees C (in 2015 and 2016, and likely for 2017 and 2018 as well) above and beyond what such surface t

ased solely on LSSC GHG proportions presented in Gerber et al. (2013). CO2 Sequestration Foregone

ons (1950-2016); Degrees C

Gerber et al. (2013), Page 15. [Gerber et al. include "upstream" and "downstream" CH4 emission sou
Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 44% of Total Ant

Emissions (1950-2016); Degrees C

page 15.

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 5% of Total Anth

missions (1950-2016); Degrees C

page 15.

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 53% of Total Ant

2016), in Degrees C.

2016), in Degrees C.

2016), in Degrees C.

, in Degrees C [CH4+CO2+N2O]

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 44% of Total Ant

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 5% of Total Anth

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are correlated with 53% of Total Anth

issions (1950-2016), in Degrees C [CH4+CO2+N2O]

issions (1950-2016), in Degrees C [CH4+CO2+N2O]

, in Degrees C [CH4+CO2+N2O]

Total Cumulative Anthropogenic CH4+CO2+N2O Emission-Related Temperature Change Values (19:

CO2 Sequestration Foregone Due To Forest Conversion to Pasture and LFC Production is included, be

ons (1950-2016); Degrees C

Gerber et al. (2013), Page 15. [Gerber et al. include "upstream" and "downstream" CH4 emission sou
Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 44% of Total Ant

Emissions (1950-2016); Degrees C

13), page 15 and Goodland and Anhang, 2009

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 5% of Total Anth

missions (1950-2016); Degrees C

page 15.

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 53% of Total Ant

2016), in Degrees C.

2016), in Degrees C.

!016), in Degrees C.

, in Degrees C [CH4+CO2+N2O]

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 44% of Total Ant

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are associated with 15% of Total Ant

Emissions (1950-2016), in Degrees C. Livestock Supply Chains are correlated with 53% of Total Anth

issions (1950-2016), in Degrees C [CH4+CO2+N2O]

issions (1950-2016), in Degrees C [CH4+CO2+N2O]

, in Degrees C [CH4+CO2+N2O]

Total Cumulative Anthropogenic CH4+CO2+N2O Emission-Related Temperature Change Values (19:

Jan 1 of Emission Year; analysis has applied associated temperature change values on Jan 1 of follow

2029	2030	2031	2032	2033	2034	2035	2036	2037
0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119

0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0.009409	0.009087	0.008727	0.008318	0.007909	0.007527	0.007091	0.006818	0.006491

0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0.010977	0.010602	0.010182	0.009705	0.009227	0.008782	0.008273	0.007955	0.007573

0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119
0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272
0.012545	0.012116	0.011636	0.011091	0.010545	0.010036	0.009455	0.009091	0.008655

0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119
0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182
0.014114	0.013631	0.013091	0.012477	0.011864	0.011291	0.010636	0.010227	0.009736

0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119
0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091
0.015682	0.015145	0.014545	0.013864	0.013182	0.012545	0.011818	0.011364	0.010818

0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119
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4 Pulse; Temperature Change in Degrees Celsius)

1967	1968	1969	1970	1971	1972	1973	1974	1975
0.009764	0.009409	0.009087	0.008727	0.008318	0.007909	0.007527	0.007091	0.006818
0.010091	0.009764	0.009409	0.009087	0.008727	0.008318	0.007909	0.007527	0.007091
0.010454	0.010091	0.009764	0.009409	0.009087	0.008727	0.008318	0.007909	0.007527
0.010773	0.010454	0.010091	0.009764	0.009409	0.009087	0.008727	0.008318	0.007909
0.011	0.010773	0.010454	0.010091	0.009764	0.009409	0.009087	0.008727	0.008318
0.011127	0.011	0.010773	0.010454	0.010091	0.009764	0.009409	0.009087	0.008727
0.011272	0.011127	0.011	0.010773	0.010454	0.010091	0.009764	0.009409	0.009087
0.011318	0.011272	0.011127	0.011	0.010773	0.010454	0.010091	0.009764	0.009409
0.011182	0.011318	0.011272	0.011127	0.011	0.010773	0.010454	0.010091	0.009764
0.010909	0.011182	0.011318	0.011272	0.011127	0.011	0.010773	0.010454	0.010091
0.012218	0.012727	0.013045	0.013205	0.013151	0.012982	0.012833	0.012568	0.012197
0.011455	0.012218	0.012727	0.013045	0.013205	0.013151	0.012982	0.012833	0.012568
0.010392	0.011455	0.012218	0.012727	0.013045	0.013205	0.013151	0.012982	0.012833
0.009227	0.010392	0.011455	0.012218	0.012727	0.013045	0.013205	0.013151	0.012982
0.006364	0.009227	0.010392	0.011455	0.012218	0.012727	0.013045	0.013205	0.013151
0.003182	0.006364	0.009227	0.010392	0.011455	0.012218	0.012727	0.013045	0.013205
0.000955	0.003182	0.006364	0.009227	0.010392	0.011455	0.012218	0.012727	0.013045
0	0.000955	0.003182	0.006364	0.009227	0.010392	0.011455	0.012218	0.012727
	0	0.000955	0.003182	0.006364	0.009227	0.010392	0.011455	0.012218
		0	0.000955	0.003182	0.006364	0.009227	0.010392	0.011455
			0	0.001091	0.003636	0.007273	0.010545	0.011876
				0	0.001091	0.003636	0.007273	0.010545
					0	0.001091	0.003636	0.007273

0 0.001091 0.003636
0 0.001091
0

0.161681	0.172909	0.18386	0.194473	0.204807	0.215025	0.225294	0.235499	0.245544
1967	1968	1969	1970	1971	1972	1973	1974	1975

1967	1968	1969	1970	1971	1972	1973	1974	1975
0.161681	0.172909	0.18386	0.194473	0.204807	0.215025	0.225294	0.235499	0.245544
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.07114	0.07608	0.080898	0.085568	0.090115	0.094611	0.09913	0.103619	0.108039

ons (1950-2016); Degrees C

Based on Gerber et al. (2013), page 15. Gerber et al. include upstream and downstream CH4 emissic
 iane Emissions (1950-2016) Degrees C

ons (1950-2016); Degrees C

1 FAO #s relative to Shuman Assumed Approximate Values
 iane Emissions (1950-2016) Degrees C

ons (1950-2016); Degrees C

on FAO #s relative to EDGAR Global CH4 Emission Values
 iane Emissions (1950-2016) Degrees C

temperatures otherwise would have been without such anthropogenic CH₄/CO₂/N₂O emissions over t

e Due To Forest Conversion to Pasture and LFC Production is excluded]

ces in the livestock supply chain. (Enteric and manure sources are considered neither "upstream" or "
ropogenic CH₄ Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 1

ropogenic CO₂ Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 3

ropogenic N₂O Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 4

ropogenic CH₄ Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 1
ropogenic CO₂ Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 3
ropogenic N₂O Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 4

50-2016 period)

ased on Goodland and Anhang - range is 8.2%/9.34%/10.23%]

rces in the livestock supply chain. (Enteric and manure sources are considered neither "upstream" or "
 hropogenic CH4 Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 1

ropogenic CO2 Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 3 and Goo

hropogenic N2O Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 4

hropogenic CH4 Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 1
 hropogenic CO2 Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 3 and Goo
 ropogenic N2O Emissions in year 2005 -- Source: Gerber, et al. 2013, page 15 and Sheet 4

50-2016 period)

ving (post-pulse) years.

2038	2039	2040	2041	2042	2043	2044	2045	2046
0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007

0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0.006109	0.005727	0.005455	0.005182	0.004909	0.004636	0.004364	0.004091	0.003818

0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0.007127	0.006682	0.006364	0.006045	0.005727	0.005409	0.005091	0.004773	0.004455

0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007
0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272
0.008145	0.007636	0.007273	0.006909	0.006545	0.006182	0.005818	0.005455	0.005091

0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007
0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182
0.009164	0.008591	0.008182	0.007773	0.007364	0.006955	0.006545	0.006136	0.005727

0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007
0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091
0.010182	0.009545	0.009091	0.008636	0.008182	0.007727	0.007273	0.006818	0.006364

0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007
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1976	1977	1978	1979	1980	1981	1982	1983	1984
0.006491	0.006109	0.005727	0.005455	0.005182	0.004909	0.004636	0.004364	0.004091
0.006818	0.006491	0.006109	0.005727	0.005455	0.005182	0.004909	0.004636	0.004364
0.007091	0.006818	0.006491	0.006109	0.005727	0.005455	0.005182	0.004909	0.004636
0.007527	0.007091	0.006818	0.006491	0.006109	0.005727	0.005455	0.005182	0.004909
0.007909	0.007527	0.007091	0.006818	0.006491	0.006109	0.005727	0.005455	0.005182
0.008318	0.007909	0.007527	0.007091	0.006818	0.006491	0.006109	0.005727	0.005455
0.008727	0.008318	0.007909	0.007527	0.007091	0.006818	0.006491	0.006109	0.005727
0.009087	0.008727	0.008318	0.007909	0.007527	0.007091	0.006818	0.006491	0.006109
0.009409	0.009087	0.008727	0.008318	0.007909	0.007527	0.007091	0.006818	0.006491
0.009764	0.009409	0.009087	0.008727	0.008318	0.007909	0.007527	0.007091	0.006818
0.011773	0.011391	0.010977	0.010602	0.010182	0.009705	0.009227	0.008782	0.008273
0.012197	0.011773	0.011391	0.010977	0.010602	0.010182	0.009705	0.009227	0.008782
0.012568	0.012197	0.011773	0.011391	0.010977	0.010602	0.010182	0.009705	0.009227
0.012833	0.012568	0.012197	0.011773	0.011391	0.010977	0.010602	0.010182	0.009705
0.012982	0.012833	0.012568	0.012197	0.011773	0.011391	0.010977	0.010602	0.010182
0.013151	0.012982	0.012833	0.012568	0.012197	0.011773	0.011391	0.010977	0.010602
0.013205	0.013151	0.012982	0.012833	0.012568	0.012197	0.011773	0.011391	0.010977
0.013045	0.013205	0.013151	0.012982	0.012833	0.012568	0.012197	0.011773	0.011391
0.012727	0.013045	0.013205	0.013151	0.012982	0.012833	0.012568	0.012197	0.011773
0.012218	0.012727	0.013045	0.013205	0.013151	0.012982	0.012833	0.012568	0.012197
0.013091	0.013964	0.014545	0.014909	0.015091	0.01503	0.014836	0.014666	0.014364
0.011876	0.013091	0.013964	0.014545	0.014909	0.015091	0.01503	0.014836	0.014666
0.010545	0.011876	0.013091	0.013964	0.014545	0.014909	0.015091	0.01503	0.014836

0.007273	0.010545	0.011876	0.013091	0.013964	0.014545	0.014909	0.015091	0.01503
0.003636	0.007273	0.010545	0.011876	0.013091	0.013964	0.014545	0.014909	0.015091
0.001091	0.003636	0.007273	0.010545	0.011876	0.013091	0.013964	0.014545	0.014909
0	0.001091	0.003636	0.007273	0.010545	0.011876	0.013091	0.013964	0.014545
	0	0.001091	0.003636	0.007273	0.010545	0.011876	0.013091	0.013964
		0	0.001091	0.003636	0.007273	0.010545	0.011876	0.013091
			0	0.001091	0.003636	0.007273	0.010545	0.011876
				0	0.001227	0.004091	0.008182	0.011864
					0	0.001227	0.004091	0.008182
						0	0.001227	0.004091
							0	0.001227
								0

0.255353	0.264835	0.273948	0.282781	0.291304	0.299614	0.307878	0.316239	0.324625
1976	1977	1978	1979	1980	1981	1982	1983	1984

1976	1977	1978	1979	1980	1981	1982	1983	1984
0.255353	0.264835	0.273948	0.282781	0.291304	0.299614	0.307878	0.316239	0.324625
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.112355	0.116527	0.120537	0.124424	0.128174	0.13183	0.135466	0.139145	0.142835

on sources in the livestock supply chain. (Enteric and manure sources are considered neither upstream

he1950-2016 period. This analysis also indicates that global livestock supply chain-associated GHG e

'downstream" -- they are classified within the "animal production unit" category - see page 7.]

'downstream" -- they are classified within the "animal production unit" category - see page 7.]

land and Anhang, 2009

land and Anhang, 2009

2047	2048	2049	2050	2051	2052	2053	2054	2055
0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166
0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0.003633	0.003409	0.003245	0.003091	0.002909	0.002727	0.002591	0.0024	0.002272
0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0.004238	0.003977	0.003786	0.003606	0.003394	0.003182	0.003023	0.0028	0.002651

0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166
0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272
0.004844	0.004545	0.004327	0.004121	0.003879	0.003636	0.003455	0.0032	0.00303

0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166
0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182
0.005449	0.005114	0.004868	0.004636	0.004363	0.004091	0.003886	0.0036	0.003409

0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166
0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091
0.006055	0.005682	0.005409	0.005151	0.004848	0.004545	0.004318	0.004	0.003787

0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166
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1985	1986	1987	1988	1989	1990	1991	1992	1993
0.003818	0.003633	0.003409	0.003245	0.003091	0.002909	0.002727	0.002591	0.0024
0.004091	0.003818	0.003633	0.003409	0.003245	0.003091	0.002909	0.002727	0.002591
0.004364	0.004091	0.003818	0.003633	0.003409	0.003245	0.003091	0.002909	0.002727
0.004636	0.004364	0.004091	0.003818	0.003633	0.003409	0.003245	0.003091	0.002909
0.004909	0.004636	0.004364	0.004091	0.003818	0.003633	0.003409	0.003245	0.003091
0.005182	0.004909	0.004636	0.004364	0.004091	0.003818	0.003633	0.003409	0.003245
0.005455	0.005182	0.004909	0.004636	0.004364	0.004091	0.003818	0.003633	0.003409
0.005727	0.005455	0.005182	0.004909	0.004636	0.004364	0.004091	0.003818	0.003633
0.006109	0.005727	0.005455	0.005182	0.004909	0.004636	0.004364	0.004091	0.003818
0.006491	0.006109	0.005727	0.005455	0.005182	0.004909	0.004636	0.004364	0.004091
0.007955	0.007573	0.007127	0.006682	0.006364	0.006045	0.005727	0.005409	0.005091
0.008273	0.007955	0.007573	0.007127	0.006682	0.006364	0.006045	0.005727	0.005409
0.008782	0.008273	0.007955	0.007573	0.007127	0.006682	0.006364	0.006045	0.005727
0.009227	0.008782	0.008273	0.007955	0.007573	0.007127	0.006682	0.006364	0.006045
0.009705	0.009227	0.008782	0.008273	0.007955	0.007573	0.007127	0.006682	0.006364
0.010182	0.009705	0.009227	0.008782	0.008273	0.007955	0.007573	0.007127	0.006682
0.010602	0.010182	0.009705	0.009227	0.008782	0.008273	0.007955	0.007573	0.007127
0.010977	0.010602	0.010182	0.009705	0.009227	0.008782	0.008273	0.007955	0.007573
0.011391	0.010977	0.010602	0.010182	0.009705	0.009227	0.008782	0.008273	0.007955
0.011773	0.011391	0.010977	0.010602	0.010182	0.009705	0.009227	0.008782	0.008273
0.013939	0.013455	0.013018	0.012545	0.012116	0.011636	0.011091	0.010545	0.010036
0.014364	0.013939	0.013455	0.013018	0.012545	0.012116	0.011636	0.011091	0.010545
0.014666	0.014364	0.013939	0.013455	0.013018	0.012545	0.012116	0.011636	0.011091

0.014836	0.014666	0.014364	0.013939	0.013455	0.013018	0.012545	0.012116	0.011636
0.01503	0.014836	0.014666	0.014364	0.013939	0.013455	0.013018	0.012545	0.012116
0.015091	0.01503	0.014836	0.014666	0.014364	0.013939	0.013455	0.013018	0.012545
0.014909	0.015091	0.01503	0.014836	0.014666	0.014364	0.013939	0.013455	0.013018
0.014545	0.014909	0.015091	0.01503	0.014836	0.014666	0.014364	0.013939	0.013455
0.013964	0.014545	0.014909	0.015091	0.01503	0.014836	0.014666	0.014364	0.013939
0.013091	0.013964	0.014545	0.014909	0.015091	0.01503	0.014836	0.014666	0.014364
0.013361	0.014727	0.015709	0.016364	0.016773	0.016977	0.016909	0.016691	0.016499
0.011864	0.013361	0.014727	0.015709	0.016364	0.016773	0.016977	0.016909	0.016691
0.008182	0.011864	0.013361	0.014727	0.015709	0.016364	0.016773	0.016977	0.016909
0.004091	0.008182	0.011864	0.013361	0.014727	0.015709	0.016364	0.016773	0.016977
0.001227	0.004091	0.008182	0.011864	0.013361	0.014727	0.015709	0.016364	0.016773
0	0.001227	0.004091	0.008182	0.011864	0.013361	0.014727	0.015709	0.016364
	0	0.001227	0.004091	0.008182	0.011864	0.013361	0.014727	0.015709
		0	0.001227	0.004091	0.008182	0.011864	0.013361	0.014727
			0	0.001227	0.004091	0.008182	0.011864	0.013361
				0	0.001227	0.004091	0.008182	0.011864
					0	0.001364	0.004545	0.009091
						0	0.001364	0.004545
							0	0.001364
								0

0.332806	0.340839	0.348639	0.356226	0.363603	0.370717	0.377664	0.384655	0.391779
1985	1986	1987	1988	1989	1990	1991	1992	1993

1985	1986	1987	1988	1989	1990	1991	1992	1993
0.332806	0.340839	0.348639	0.356226	0.363603	0.370717	0.377664	0.384655	0.391779
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.146435	0.149969	0.153401	0.156739	0.159985	0.163115	0.166172	0.169248	0.172383

n or downstream -- they are classified within the "animal production unit" category - see page 7.)

missions are likely responsible for roughly one-fifth (20.5%) of the cumulative global surface temperat

2056	2057	2058	2059	2060	2061	2062	2063	2064
0.004	0.0038	0.0035	0.00325	0.003166	0.003	0.0028	0.0026	0.0025

0.004	0.0038	0.0035	0.00325	0.003166	0.003	0.0028	0.0026	0.0025
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0.002182	0.002073	0.001909	0.001773	0.001727	0.001636	0.001527	0.001418	0.001364

0.004	0.0038	0.0035	0.00325	0.003166	0.003	0.0028	0.0026	0.0025
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0.002545	0.002418	0.002227	0.002068	0.002015	0.001909	0.001782	0.001655	0.001591

0.004	0.0038	0.0035	0.00325	0.003166	0.003	0.0028	0.0026	0.0025
0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272
0.002909	0.002764	0.002545	0.002364	0.002303	0.002182	0.002036	0.001891	0.001818

0.004	0.0038	0.0035	0.00325	0.003166	0.003	0.0028	0.0026	0.0025
0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182
0.003273	0.003109	0.002864	0.002659	0.00259	0.002455	0.002291	0.002127	0.002045

0.004	0.0038	0.0035	0.00325	0.003166	0.003	0.0028	0.0026	0.0025
0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091
0.003636	0.003455	0.003182	0.002955	0.002878	0.002727	0.002545	0.002364	0.002273

0.004	0.0038	0.0035	0.00325	0.003166	0.003	0.0028	0.0026	0.0025
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1994	1995	1996	1997	1998	1999	2000	2001	2002
0.002272	0.002182	0.002073	0.001909	0.001773	0.001727	0.001636	0.001527	0.001418
0.0024	0.002272	0.002182	0.002073	0.001909	0.001773	0.001727	0.001636	0.001527
0.002591	0.0024	0.002272	0.002182	0.002073	0.001909	0.001773	0.001727	0.001636
0.002727	0.002591	0.0024	0.002272	0.002182	0.002073	0.001909	0.001773	0.001727
0.002909	0.002727	0.002591	0.0024	0.002272	0.002182	0.002073	0.001909	0.001773
0.003091	0.002909	0.002727	0.002591	0.0024	0.002272	0.002182	0.002073	0.001909
0.003245	0.003091	0.002909	0.002727	0.002591	0.0024	0.002272	0.002182	0.002073
0.003409	0.003245	0.003091	0.002909	0.002727	0.002591	0.0024	0.002272	0.002182
0.003633	0.003409	0.003245	0.003091	0.002909	0.002727	0.002591	0.0024	0.002272
0.003818	0.003633	0.003409	0.003245	0.003091	0.002909	0.002727	0.002591	0.0024
0.004773	0.004455	0.004238	0.003977	0.003786	0.003606	0.003394	0.003182	0.003023
0.005091	0.004773	0.004455	0.004238	0.003977	0.003786	0.003606	0.003394	0.003182
0.005409	0.005091	0.004773	0.004455	0.004238	0.003977	0.003786	0.003606	0.003394
0.005727	0.005409	0.005091	0.004773	0.004455	0.004238	0.003977	0.003786	0.003606
0.006045	0.005727	0.005409	0.005091	0.004773	0.004455	0.004238	0.003977	0.003786
0.006364	0.006045	0.005727	0.005409	0.005091	0.004773	0.004455	0.004238	0.003977
0.006682	0.006364	0.006045	0.005727	0.005409	0.005091	0.004773	0.004455	0.004238
0.007127	0.006682	0.006364	0.006045	0.005727	0.005409	0.005091	0.004773	0.004455
0.007573	0.007127	0.006682	0.006364	0.006045	0.005727	0.005409	0.005091	0.004773
0.007955	0.007573	0.007127	0.006682	0.006364	0.006045	0.005727	0.005409	0.005091
0.009455	0.009091	0.008655	0.008145	0.007636	0.007273	0.006909	0.006545	0.006182
0.010036	0.009455	0.009091	0.008655	0.008145	0.007636	0.007273	0.006909	0.006545
0.010545	0.010036	0.009455	0.009091	0.008655	0.008145	0.007636	0.007273	0.006909

0.011091	0.010545	0.010036	0.009455	0.009091	0.008655	0.008145	0.007636	0.007273
0.011636	0.011091	0.010545	0.010036	0.009455	0.009091	0.008655	0.008145	0.007636
0.012116	0.011636	0.011091	0.010545	0.010036	0.009455	0.009091	0.008655	0.008145
0.012545	0.012116	0.011636	0.011091	0.010545	0.010036	0.009455	0.009091	0.008655
0.013018	0.012545	0.012116	0.011636	0.011091	0.010545	0.010036	0.009455	0.009091
0.013455	0.013018	0.012545	0.012116	0.011636	0.011091	0.010545	0.010036	0.009455
0.013939	0.013455	0.013018	0.012545	0.012116	0.011636	0.011091	0.010545	0.010036
0.016159	0.015681	0.015136	0.014645	0.014114	0.013631	0.013091	0.012477	0.011864
0.016499	0.016159	0.015681	0.015136	0.014645	0.014114	0.013631	0.013091	0.012477
0.016691	0.016499	0.016159	0.015681	0.015136	0.014645	0.014114	0.013631	0.013091
0.016909	0.016691	0.016499	0.016159	0.015681	0.015136	0.014645	0.014114	0.013631
0.016977	0.016909	0.016691	0.016499	0.016159	0.015681	0.015136	0.014645	0.014114
0.016773	0.016977	0.016909	0.016691	0.016499	0.016159	0.015681	0.015136	0.014645
0.016364	0.016773	0.016977	0.016909	0.016691	0.016499	0.016159	0.015681	0.015136
0.015709	0.016364	0.016773	0.016977	0.016909	0.016691	0.016499	0.016159	0.015681
0.014727	0.015709	0.016364	0.016773	0.016977	0.016909	0.016691	0.016499	0.016159
0.013361	0.014727	0.015709	0.016364	0.016773	0.016977	0.016909	0.016691	0.016499
0.013182	0.014845	0.016364	0.017455	0.018182	0.018636	0.018864	0.018787	0.018545
0.009091	0.013182	0.014845	0.016364	0.017455	0.018182	0.018636	0.018864	0.018787
0.004545	0.009091	0.013182	0.014845	0.016364	0.017455	0.018182	0.018636	0.018864
0.001364	0.004545	0.009091	0.013182	0.014845	0.016364	0.017455	0.018182	0.018636
0	0.001364	0.004545	0.009091	0.013182	0.014845	0.016364	0.017455	0.018182
	0	0.001364	0.004545	0.009091	0.013182	0.014845	0.016364	0.017455
		0	0.001364	0.004545	0.009091	0.013182	0.014845	0.016364
			0	0.001364	0.004545	0.009091	0.013182	0.014845
				0	0.001364	0.004545	0.009091	0.013182
					0	0.001364	0.004545	0.009091
						0	0.001364	0.004545
							0	0.001364
								0

0.399029	0.40621	0.413288	0.420156	0.426811	0.43334	0.439666	0.445731	0.451527
1994	1995	1996	1997	1998	1999	2000	2001	2002

1994	1995	1996	1997	1998	1999	2000	2001	2002
0.399029	0.40621	0.413288	0.420156	0.426811	0.43334	0.439666	0.445731	0.451527
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.175573	0.178732	0.181847	0.184869	0.187797	0.19067	0.193453	0.196122	0.198672

ure change over this period. This value excludes foregone carbon sequestration due to the conversion

2065	2066	2067	2068	2069	2070	2071	2072	2073
0.0024	0.0023	0.0022	0.00211	0.00203	0.00195	0.00187	0.00179	0.00171

0.0024	0.0023	0.0022	0.00211	0.00203	0.00195	0.00187	0.00179	0.00171
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0.001309	0.001255	0.0012	0.001151	0.001107	0.001064	0.00102	0.000976	0.000933

0.0024	0.0023	0.0022	0.00211	0.00203	0.00195	0.00187	0.00179	0.00171
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0.001527	0.001464	0.0014	0.001343	0.001292	0.001241	0.00119	0.001139	0.001088

0.0024	0.0023	0.0022	0.00211	0.00203	0.00195	0.00187	0.00179	0.00171
0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272
0.001745	0.001673	0.0016	0.001535	0.001476	0.001418	0.00136	0.001302	0.001244

0.0024	0.0023	0.0022	0.00211	0.00203	0.00195	0.00187	0.00179	0.00171
0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182
0.001964	0.001882	0.0018	0.001726	0.001661	0.001595	0.00153	0.001465	0.001399

0.0024	0.0023	0.0022	0.00211	0.00203	0.00195	0.00187	0.00179	0.00171
0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091
0.002182	0.002091	0.002	0.001918	0.001845	0.001773	0.0017	0.001627	0.001555

0.0024	0.0023	0.0022	0.00211	0.00203	0.00195	0.00187	0.00179	0.00171
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2003	2004	2005	2006	2007	2008	2009	2010	2011
0.001364	0.001309	0.001255	0.0012	0.001151	0.001107	0.001064	0.00102	0.000976
0.001418	0.001364	0.001309	0.001255	0.0012	0.001151	0.001107	0.001064	0.00102
0.001527	0.001418	0.001364	0.001309	0.001255	0.0012	0.001151	0.001107	0.001064
0.001636	0.001527	0.001418	0.001364	0.001309	0.001255	0.0012	0.001151	0.001107
0.001727	0.001636	0.001527	0.001418	0.001364	0.001309	0.001255	0.0012	0.001151
0.001773	0.001727	0.001636	0.001527	0.001418	0.001364	0.001309	0.001255	0.0012
0.001909	0.001773	0.001727	0.001636	0.001527	0.001418	0.001364	0.001309	0.001255
0.002073	0.001909	0.001773	0.001727	0.001636	0.001527	0.001418	0.001364	0.001309
0.002182	0.002073	0.001909	0.001773	0.001727	0.001636	0.001527	0.001418	0.001364
0.002272	0.002182	0.002073	0.001909	0.001773	0.001727	0.001636	0.001527	0.001418
0.0028	0.002651	0.002545	0.002418	0.002227	0.002068	0.002015	0.001909	0.001782
0.003023	0.0028	0.002651	0.002545	0.002418	0.002227	0.002068	0.002015	0.001909
0.003182	0.003023	0.0028	0.002651	0.002545	0.002418	0.002227	0.002068	0.002015
0.003394	0.003182	0.003023	0.0028	0.002651	0.002545	0.002418	0.002227	0.002068
0.003606	0.003394	0.003182	0.003023	0.0028	0.002651	0.002545	0.002418	0.002227
0.003786	0.003606	0.003394	0.003182	0.003023	0.0028	0.002651	0.002545	0.002418
0.003977	0.003786	0.003606	0.003394	0.003182	0.003023	0.0028	0.002651	0.002545
0.004238	0.003977	0.003786	0.003606	0.003394	0.003182	0.003023	0.0028	0.002651
0.004455	0.004238	0.003977	0.003786	0.003606	0.003394	0.003182	0.003023	0.0028
0.004773	0.004455	0.004238	0.003977	0.003786	0.003606	0.003394	0.003182	0.003023
0.005818	0.005455	0.005091	0.004844	0.004545	0.004327	0.004121	0.003879	0.003636
0.006182	0.005818	0.005455	0.005091	0.004844	0.004545	0.004327	0.004121	0.003879
0.006545	0.006182	0.005818	0.005455	0.005091	0.004844	0.004545	0.004327	0.004121

0.006909	0.006545	0.006182	0.005818	0.005455	0.005091	0.004844	0.004545	0.004327
0.007273	0.006909	0.006545	0.006182	0.005818	0.005455	0.005091	0.004844	0.004545
0.007636	0.007273	0.006909	0.006545	0.006182	0.005818	0.005455	0.005091	0.004844
0.008145	0.007636	0.007273	0.006909	0.006545	0.006182	0.005818	0.005455	0.005091
0.008655	0.008145	0.007636	0.007273	0.006909	0.006545	0.006182	0.005818	0.005455
0.009091	0.008655	0.008145	0.007636	0.007273	0.006909	0.006545	0.006182	0.005818
0.009455	0.009091	0.008655	0.008145	0.007636	0.007273	0.006909	0.006545	0.006182
0.011291	0.010636	0.010227	0.009736	0.009164	0.008591	0.008182	0.007773	0.007364
0.011864	0.011291	0.010636	0.010227	0.009736	0.009164	0.008591	0.008182	0.007773
0.012477	0.011864	0.011291	0.010636	0.010227	0.009736	0.009164	0.008591	0.008182
0.013091	0.012477	0.011864	0.011291	0.010636	0.010227	0.009736	0.009164	0.008591
0.013631	0.013091	0.012477	0.011864	0.011291	0.010636	0.010227	0.009736	0.009164
0.014114	0.013631	0.013091	0.012477	0.011864	0.011291	0.010636	0.010227	0.009736
0.014645	0.014114	0.013631	0.013091	0.012477	0.011864	0.011291	0.010636	0.010227
0.015136	0.014645	0.014114	0.013631	0.013091	0.012477	0.011864	0.011291	0.010636
0.015681	0.015136	0.014645	0.014114	0.013631	0.013091	0.012477	0.011864	0.011291
0.016159	0.015681	0.015136	0.014645	0.014114	0.013631	0.013091	0.012477	0.011864
0.018333	0.017955	0.017424	0.016818	0.016273	0.015682	0.015145	0.014545	0.013864
0.018545	0.018333	0.017955	0.017424	0.016818	0.016273	0.015682	0.015145	0.014545
0.018787	0.018545	0.018333	0.017955	0.017424	0.016818	0.016273	0.015682	0.015145
0.018864	0.018787	0.018545	0.018333	0.017955	0.017424	0.016818	0.016273	0.015682
0.018636	0.018864	0.018787	0.018545	0.018333	0.017955	0.017424	0.016818	0.016273
0.018182	0.018636	0.018864	0.018787	0.018545	0.018333	0.017955	0.017424	0.016818
0.017455	0.018182	0.018636	0.018864	0.018787	0.018545	0.018333	0.017955	0.017424
0.016364	0.017455	0.018182	0.018636	0.018864	0.018787	0.018545	0.018333	0.017955
0.014845	0.016364	0.017455	0.018182	0.018636	0.018864	0.018787	0.018545	0.018333
0.013182	0.014845	0.016364	0.017455	0.018182	0.018636	0.018864	0.018787	0.018545
0.009091	0.013182	0.014845	0.016364	0.017455	0.018182	0.018636	0.018864	0.018787
0.004545	0.009091	0.013182	0.014845	0.016364	0.017455	0.018182	0.018636	0.018864
0.001364	0.004545	0.009091	0.013182	0.014845	0.016364	0.017455	0.018182	0.018636
0	0.001364	0.004545	0.009091	0.013182	0.014845	0.016364	0.017455	0.018182
	0	0.001364	0.004545	0.009091	0.013182	0.014845	0.016364	0.017455
		0	0.001364	0.004545	0.009091	0.013182	0.014845	0.016364
			0	0.0015	0.005	0.01	0.0145	0.01633
				0	0.0015	0.005	0.01	0.0145
					0	0.0015	0.005	0.01
						0	0.0015	0.005
							0	0.0015
								0

0.457105	0.462452	0.467585	0.4725	0.477319	0.48224	0.487439	0.492853	0.498228
2003	2004	2005	2006	2007	2008	2009	2010	2011

2003	2004	2005	2006	2007	2008	2009	2010	2011
0.457105	0.462452	0.467585	0.4725	0.477319	0.48224	0.487439	0.492853	0.498228
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.201126	0.203479	0.205738	0.2079	0.21002	0.212186	0.214473	0.216855	0.21922

of forests into pastures and livestock feed row crop production. If foregone carbon sequestration is in

2074	2075	2076	2077	2078	2079	2080	2081	2082
0.00163	0.00157	0.00151	0.00145	0.00139	0.00133	0.00128	0.00123	0.00118

0.00163	0.00157	0.00151	0.00145	0.00139	0.00133	0.00128	0.00123	0.00118
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0.000889	0.000856	0.000824	0.000791	0.000758	0.000725	0.000698	0.000671	0.000644

0.00163	0.00157	0.00151	0.00145	0.00139	0.00133	0.00128	0.00123	0.00118
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0.001037	0.000999	0.000961	0.000923	0.000885	0.000846	0.000815	0.000783	0.000751

0.00163	0.00157	0.00151	0.00145	0.00139	0.00133	0.00128	0.00123	0.00118
0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272
0.001185	0.001142	0.001098	0.001055	0.001011	0.000967	0.000931	0.000895	0.000858

0.00163	0.00157	0.00151	0.00145	0.00139	0.00133	0.00128	0.00123	0.00118
0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182
0.001334	0.001285	0.001235	0.001186	0.001137	0.001088	0.001047	0.001006	0.000965

0.00163	0.00157	0.00151	0.00145	0.00139	0.00133	0.00128	0.00123	0.00118
0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091
0.001482	0.001427	0.001373	0.001318	0.001264	0.001209	0.001164	0.001118	0.001073

0.00163	0.00157	0.00151	0.00145	0.00139	0.00133	0.00128	0.00123	0.00118
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2012	2013	2014	2015	2016	2017	2018	2019	2020
0.000933	0.000889	0.000856	0.000824	0.000791	0.000758	0.000725	0.000698	0.000671
0.000976	0.000933	0.000889	0.000856	0.000824	0.000791	0.000758	0.000725	0.000698
0.00102	0.000976	0.000933	0.000889	0.000856	0.000824	0.000791	0.000758	0.000725
0.001064	0.00102	0.000976	0.000933	0.000889	0.000856	0.000824	0.000791	0.000758
0.001107	0.001064	0.00102	0.000976	0.000933	0.000889	0.000856	0.000824	0.000791
0.001151	0.001107	0.001064	0.00102	0.000976	0.000933	0.000889	0.000856	0.000824
0.0012	0.001151	0.001107	0.001064	0.00102	0.000976	0.000933	0.000889	0.000856
0.001255	0.0012	0.001151	0.001107	0.001064	0.00102	0.000976	0.000933	0.000889
0.001309	0.001255	0.0012	0.001151	0.001107	0.001064	0.00102	0.000976	0.000933
0.001364	0.001309	0.001255	0.0012	0.001151	0.001107	0.001064	0.00102	0.000976
0.001655	0.001591	0.001527	0.001464	0.0014	0.001343	0.001292	0.001241	0.00119
0.001782	0.001655	0.001591	0.001527	0.001464	0.0014	0.001343	0.001292	0.001241
0.001909	0.001782	0.001655	0.001591	0.001527	0.001464	0.0014	0.001343	0.001292
0.002015	0.001909	0.001782	0.001655	0.001591	0.001527	0.001464	0.0014	0.001343
0.002068	0.002015	0.001909	0.001782	0.001655	0.001591	0.001527	0.001464	0.0014
0.002227	0.002068	0.002015	0.001909	0.001782	0.001655	0.001591	0.001527	0.001464
0.002418	0.002227	0.002068	0.002015	0.001909	0.001782	0.001655	0.001591	0.001527
0.002545	0.002418	0.002227	0.002068	0.002015	0.001909	0.001782	0.001655	0.001591
0.002651	0.002545	0.002418	0.002227	0.002068	0.002015	0.001909	0.001782	0.001655
0.0028	0.002651	0.002545	0.002418	0.002227	0.002068	0.002015	0.001909	0.001782
0.003455	0.0032	0.00303	0.002909	0.002764	0.002545	0.002364	0.002303	0.002182
0.003636	0.003455	0.0032	0.00303	0.002909	0.002764	0.002545	0.002364	0.002303
0.003879	0.003636	0.003455	0.0032	0.00303	0.002909	0.002764	0.002545	0.002364

0.004121	0.003879	0.003636	0.003455	0.0032	0.00303	0.002909	0.002764	0.002545
0.004327	0.004121	0.003879	0.003636	0.003455	0.0032	0.00303	0.002909	0.002764
0.004545	0.004327	0.004121	0.003879	0.003636	0.003455	0.0032	0.00303	0.002909
0.004844	0.004545	0.004327	0.004121	0.003879	0.003636	0.003455	0.0032	0.00303
0.005091	0.004844	0.004545	0.004327	0.004121	0.003879	0.003636	0.003455	0.0032
0.005455	0.005091	0.004844	0.004545	0.004327	0.004121	0.003879	0.003636	0.003455
0.005818	0.005455	0.005091	0.004844	0.004545	0.004327	0.004121	0.003879	0.003636
0.006955	0.006545	0.006136	0.005727	0.005449	0.005114	0.004868	0.004636	0.004363
0.007364	0.006955	0.006545	0.006136	0.005727	0.005449	0.005114	0.004868	0.004636
0.007773	0.007364	0.006955	0.006545	0.006136	0.005727	0.005449	0.005114	0.004868
0.008182	0.007773	0.007364	0.006955	0.006545	0.006136	0.005727	0.005449	0.005114
0.008591	0.008182	0.007773	0.007364	0.006955	0.006545	0.006136	0.005727	0.005449
0.009164	0.008591	0.008182	0.007773	0.007364	0.006955	0.006545	0.006136	0.005727
0.009736	0.009164	0.008591	0.008182	0.007773	0.007364	0.006955	0.006545	0.006136
0.010227	0.009736	0.009164	0.008591	0.008182	0.007773	0.007364	0.006955	0.006545
0.010636	0.010227	0.009736	0.009164	0.008591	0.008182	0.007773	0.007364	0.006955
0.011291	0.010636	0.010227	0.009736	0.009164	0.008591	0.008182	0.007773	0.007364
0.013182	0.012545	0.011818	0.011364	0.010818	0.010182	0.009545	0.009091	0.008636
0.013864	0.013182	0.012545	0.011818	0.011364	0.010818	0.010182	0.009545	0.009091
0.014545	0.013864	0.013182	0.012545	0.011818	0.011364	0.010818	0.010182	0.009545
0.015145	0.014545	0.013864	0.013182	0.012545	0.011818	0.011364	0.010818	0.010182
0.015682	0.015145	0.014545	0.013864	0.013182	0.012545	0.011818	0.011364	0.010818
0.016273	0.015682	0.015145	0.014545	0.013864	0.013182	0.012545	0.011818	0.011364
0.016818	0.016273	0.015682	0.015145	0.014545	0.013864	0.013182	0.012545	0.011818
0.017424	0.016818	0.016273	0.015682	0.015145	0.014545	0.013864	0.013182	0.012545
0.017955	0.017424	0.016818	0.016273	0.015682	0.015145	0.014545	0.013864	0.013182
0.018333	0.017955	0.017424	0.016818	0.016273	0.015682	0.015145	0.014545	0.013864
0.018545	0.018333	0.017955	0.017424	0.016818	0.016273	0.015682	0.015145	0.014545
0.018787	0.018545	0.018333	0.017955	0.017424	0.016818	0.016273	0.015682	0.015145
0.018864	0.018787	0.018545	0.018333	0.017955	0.017424	0.016818	0.016273	0.015682
0.018636	0.018864	0.018787	0.018545	0.018333	0.017955	0.017424	0.016818	0.016273
0.018182	0.018636	0.018864	0.018787	0.018545	0.018333	0.017955	0.017424	0.016818
0.017455	0.018182	0.018636	0.018864	0.018787	0.018545	0.018333	0.017955	0.017424
0.018	0.0192	0.02	0.0205	0.02075	0.020666	0.0204	0.020166	0.01975
0.01633	0.018	0.0192	0.02	0.0205	0.02075	0.020666	0.0204	0.020166
0.0145	0.01633	0.018	0.0192	0.02	0.0205	0.02075	0.020666	0.0204
0.01	0.0145	0.01633	0.018	0.0192	0.02	0.0205	0.02075	0.020666
0.005	0.01	0.0145	0.01633	0.018	0.0192	0.02	0.0205	0.02075
0.0015	0.005	0.01	0.0145	0.01633	0.018	0.0192	0.02	0.0205
0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.0192	0.02
	0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.0192
		0	0.0015	0.005	0.01	0.0145	0.01633	0.018
			0	0.0015	0.005	0.01	0.0145	0.01633
				0	0.0015	0.005	0.01	0.0145

0.503556	0.5088	0.513935	0.518967	0.523877	0.528611	0.531666	0.531087	0.525344
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2012	2013	2014	2015	2016	2017	2018	2019	2020
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2012	2013	2014	2015	2016	2017	2018	2019	2020
0.503556	0.5088	0.513935	0.518967	0.523877	0.528611	0.531666	0.531087	0.525344
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.221565	0.223872	0.226131	0.228346	0.230506	0.232589	0.233933	0.233678	0.231152

cluded into the “equation”, the livestock supply chain share of total increases to roughly a quarter (25.4%)

2083	2084	2085	2086	2087	2088	2089	2090	2091
0.00113	0.00108	0.00104	0.00103	0.00102	0.00101	0.001	0.001	0.001

0.00113	0.00108	0.00104	0.00103	0.00102	0.00101	0.001	0.001	0.001
0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454	0.545454
0.000616	0.000589	0.000567	0.000562	0.000556	0.000551	0.000545	0.000545	0.000545

0.00113	0.00108	0.00104	0.00103	0.00102	0.00101	0.001	0.001	0.001
0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363	0.636363
0.000719	0.000687	0.000662	0.000655	0.000649	0.000643	0.000636	0.000636	0.000636

0.00113	0.00108	0.00104	0.00103	0.00102	0.00101	0.001	0.001	0.001
0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272	0.727272
0.000822	0.000785	0.000756	0.000749	0.000742	0.000735	0.000727	0.000727	0.000727

0.00113	0.00108	0.00104	0.00103	0.00102	0.00101	0.001	0.001	0.001
0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182	0.818182
0.000925	0.000884	0.000851	0.000843	0.000835	0.000826	0.000818	0.000818	0.000818

0.00113	0.00108	0.00104	0.00103	0.00102	0.00101	0.001	0.001	0.001
0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091	0.909091
0.001027	0.000982	0.000945	0.000936	0.000927	0.000918	0.000909	0.000909	0.000909

0.00113	0.00108	0.00104	0.00103	0.00102	0.00101	0.001	0.001	0.001
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2021	2022	2023	2024	2025	2026	2027	2028	2029
0.000644	0.000616	0.000589	0.000567	0.000562	0.000556	0.000551	0.000545	0.000545
0.000671	0.000644	0.000616	0.000589	0.000567	0.000562	0.000556	0.000551	0.000545
0.000698	0.000671	0.000644	0.000616	0.000589	0.000567	0.000562	0.000556	0.000551
0.000725	0.000698	0.000671	0.000644	0.000616	0.000589	0.000567	0.000562	0.000556
0.000758	0.000725	0.000698	0.000671	0.000644	0.000616	0.000589	0.000567	0.000562
0.000791	0.000758	0.000725	0.000698	0.000671	0.000644	0.000616	0.000589	0.000567
0.000824	0.000791	0.000758	0.000725	0.000698	0.000671	0.000644	0.000616	0.000589
0.000856	0.000824	0.000791	0.000758	0.000725	0.000698	0.000671	0.000644	0.000616
0.000889	0.000856	0.000824	0.000791	0.000758	0.000725	0.000698	0.000671	0.000644
0.000933	0.000889	0.000856	0.000824	0.000791	0.000758	0.000725	0.000698	0.000671
0.001139	0.001088	0.001037	0.000999	0.000961	0.000923	0.000885	0.000846	0.000815
0.00119	0.001139	0.001088	0.001037	0.000999	0.000961	0.000923	0.000885	0.000846
0.001241	0.00119	0.001139	0.001088	0.001037	0.000999	0.000961	0.000923	0.000885
0.001292	0.001241	0.00119	0.001139	0.001088	0.001037	0.000999	0.000961	0.000923
0.001343	0.001292	0.001241	0.00119	0.001139	0.001088	0.001037	0.000999	0.000961
0.0014	0.001343	0.001292	0.001241	0.00119	0.001139	0.001088	0.001037	0.000999
0.001464	0.0014	0.001343	0.001292	0.001241	0.00119	0.001139	0.001088	0.001037
0.001527	0.001464	0.0014	0.001343	0.001292	0.001241	0.00119	0.001139	0.001088
0.001591	0.001527	0.001464	0.0014	0.001343	0.001292	0.001241	0.00119	0.001139
0.001655	0.001591	0.001527	0.001464	0.0014	0.001343	0.001292	0.001241	0.00119
0.002036	0.001891	0.001818	0.001745	0.001673	0.0016	0.001535	0.001476	0.001418
0.002182	0.002036	0.001891	0.001818	0.001745	0.001673	0.0016	0.001535	0.001476
0.002303	0.002182	0.002036	0.001891	0.001818	0.001745	0.001673	0.0016	0.001535

0.002364	0.002303	0.002182	0.002036	0.001891	0.001818	0.001745	0.001673	0.0016
0.002545	0.002364	0.002303	0.002182	0.002036	0.001891	0.001818	0.001745	0.001673
0.002764	0.002545	0.002364	0.002303	0.002182	0.002036	0.001891	0.001818	0.001745
0.002909	0.002764	0.002545	0.002364	0.002303	0.002182	0.002036	0.001891	0.001818
0.00303	0.002909	0.002764	0.002545	0.002364	0.002303	0.002182	0.002036	0.001891
0.0032	0.00303	0.002909	0.002764	0.002545	0.002364	0.002303	0.002182	0.002036
0.003455	0.0032	0.00303	0.002909	0.002764	0.002545	0.002364	0.002303	0.002182
0.004091	0.003886	0.0036	0.003409	0.003273	0.003109	0.002864	0.002659	0.00259
0.004363	0.004091	0.003886	0.0036	0.003409	0.003273	0.003109	0.002864	0.002659
0.004636	0.004363	0.004091	0.003886	0.0036	0.003409	0.003273	0.003109	0.002864
0.004868	0.004636	0.004363	0.004091	0.003886	0.0036	0.003409	0.003273	0.003109
0.005114	0.004868	0.004636	0.004363	0.004091	0.003886	0.0036	0.003409	0.003273
0.005449	0.005114	0.004868	0.004636	0.004363	0.004091	0.003886	0.0036	0.003409
0.005727	0.005449	0.005114	0.004868	0.004636	0.004363	0.004091	0.003886	0.0036
0.006136	0.005727	0.005449	0.005114	0.004868	0.004636	0.004363	0.004091	0.003886
0.006545	0.006136	0.005727	0.005449	0.005114	0.004868	0.004636	0.004363	0.004091
0.006955	0.006545	0.006136	0.005727	0.005449	0.005114	0.004868	0.004636	0.004363
0.008182	0.007727	0.007273	0.006818	0.006364	0.006055	0.005682	0.005409	0.005151
0.008636	0.008182	0.007727	0.007273	0.006818	0.006364	0.006055	0.005682	0.005409
0.009091	0.008636	0.008182	0.007727	0.007273	0.006818	0.006364	0.006055	0.005682
0.009545	0.009091	0.008636	0.008182	0.007727	0.007273	0.006818	0.006364	0.006055
0.010182	0.009545	0.009091	0.008636	0.008182	0.007727	0.007273	0.006818	0.006364
0.010818	0.010182	0.009545	0.009091	0.008636	0.008182	0.007727	0.007273	0.006818
0.011364	0.010818	0.010182	0.009545	0.009091	0.008636	0.008182	0.007727	0.007273
0.011818	0.011364	0.010818	0.010182	0.009545	0.009091	0.008636	0.008182	0.007727
0.012545	0.011818	0.011364	0.010818	0.010182	0.009545	0.009091	0.008636	0.008182
0.013182	0.012545	0.011818	0.011364	0.010818	0.010182	0.009545	0.009091	0.008636
0.013864	0.013182	0.012545	0.011818	0.011364	0.010818	0.010182	0.009545	0.009091
0.014545	0.013864	0.013182	0.012545	0.011818	0.011364	0.010818	0.010182	0.009545
0.015145	0.014545	0.013864	0.013182	0.012545	0.011818	0.011364	0.010818	0.010182
0.015682	0.015145	0.014545	0.013864	0.013182	0.012545	0.011818	0.011364	0.010818
0.016273	0.015682	0.015145	0.014545	0.013864	0.013182	0.012545	0.011818	0.011364
0.016818	0.016273	0.015682	0.015145	0.014545	0.013864	0.013182	0.012545	0.011818
0.019166	0.0185	0.0179	0.01725	0.01666	0.016	0.01525	0.0145	0.0138
0.01975	0.019166	0.0185	0.0179	0.01725	0.01666	0.016	0.01525	0.0145
0.020166	0.01975	0.019166	0.0185	0.0179	0.01725	0.01666	0.016	0.01525
0.0204	0.020166	0.01975	0.019166	0.0185	0.0179	0.01725	0.01666	0.016
0.020666	0.0204	0.020166	0.01975	0.019166	0.0185	0.0179	0.01725	0.01666
0.02075	0.020666	0.0204	0.020166	0.01975	0.019166	0.0185	0.0179	0.01725
0.0205	0.02075	0.020666	0.0204	0.020166	0.01975	0.019166	0.0185	0.0179
0.02	0.0205	0.02075	0.020666	0.0204	0.020166	0.01975	0.019166	0.0185
0.0192	0.02	0.0205	0.02075	0.020666	0.0204	0.020166	0.01975	0.019166
0.018	0.0192	0.02	0.0205	0.02075	0.020666	0.0204	0.020166	0.01975
0.01633	0.018	0.0192	0.02	0.0205	0.02075	0.020666	0.0204	0.020166

0.51492	0.502485	0.488204	0.472561	0.455984	0.438777	0.421169	0.403509	0.386005
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2021	2022	2023	2024	2025	2026	2027	2028	2029
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2021	2022	2023	2024	2025	2026	2027	2028	2029
0.51492	0.502485	0.488204	0.472561	0.455984	0.438777	0.421169	0.403509	0.386005
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.226565	0.221093	0.21481	0.207927	0.200633	0.193062	0.185314	0.177544	0.169842

5%) of the global surface temperature rise that has occurred since 1950.

0.001535	0.001476	0.001418	0.00136	0.001302	0.001244	0.001185	0.001142	0.001098
0.0016	0.001535	0.001476	0.001418	0.00136	0.001302	0.001244	0.001185	0.001142
0.001673	0.0016	0.001535	0.001476	0.001418	0.00136	0.001302	0.001244	0.001185
0.001745	0.001673	0.0016	0.001535	0.001476	0.001418	0.00136	0.001302	0.001244
0.001818	0.001745	0.001673	0.0016	0.001535	0.001476	0.001418	0.00136	0.001302
0.001891	0.001818	0.001745	0.001673	0.0016	0.001535	0.001476	0.001418	0.00136
0.002036	0.001891	0.001818	0.001745	0.001673	0.0016	0.001535	0.001476	0.001418
0.002455	0.002291	0.002127	0.002045	0.001964	0.001882	0.0018	0.001726	0.001661
0.00259	0.002455	0.002291	0.002127	0.002045	0.001964	0.001882	0.0018	0.001726
0.002659	0.00259	0.002455	0.002291	0.002127	0.002045	0.001964	0.001882	0.0018
0.002864	0.002659	0.00259	0.002455	0.002291	0.002127	0.002045	0.001964	0.001882
0.003109	0.002864	0.002659	0.00259	0.002455	0.002291	0.002127	0.002045	0.001964
0.003273	0.003109	0.002864	0.002659	0.00259	0.002455	0.002291	0.002127	0.002045
0.003409	0.003273	0.003109	0.002864	0.002659	0.00259	0.002455	0.002291	0.002127
0.0036	0.003409	0.003273	0.003109	0.002864	0.002659	0.00259	0.002455	0.002291
0.003886	0.0036	0.003409	0.003273	0.003109	0.002864	0.002659	0.00259	0.002455
0.004091	0.003886	0.0036	0.003409	0.003273	0.003109	0.002864	0.002659	0.00259
0.004848	0.004545	0.004318	0.004	0.003787	0.003636	0.003455	0.003182	0.002955
0.005151	0.004848	0.004545	0.004318	0.004	0.003787	0.003636	0.003455	0.003182
0.005409	0.005151	0.004848	0.004545	0.004318	0.004	0.003787	0.003636	0.003455
0.005682	0.005409	0.005151	0.004848	0.004545	0.004318	0.004	0.003787	0.003636
0.006055	0.005682	0.005409	0.005151	0.004848	0.004545	0.004318	0.004	0.003787
0.006364	0.006055	0.005682	0.005409	0.005151	0.004848	0.004545	0.004318	0.004
0.006818	0.006364	0.006055	0.005682	0.005409	0.005151	0.004848	0.004545	0.004318
0.007273	0.006818	0.006364	0.006055	0.005682	0.005409	0.005151	0.004848	0.004545
0.007727	0.007273	0.006818	0.006364	0.006055	0.005682	0.005409	0.005151	0.004848
0.008182	0.007727	0.007273	0.006818	0.006364	0.006055	0.005682	0.005409	0.005151
0.008636	0.008182	0.007727	0.007273	0.006818	0.006364	0.006055	0.005682	0.005409
0.009091	0.008636	0.008182	0.007727	0.007273	0.006818	0.006364	0.006055	0.005682
0.009545	0.009091	0.008636	0.008182	0.007727	0.007273	0.006818	0.006364	0.006055
0.010182	0.009545	0.009091	0.008636	0.008182	0.007727	0.007273	0.006818	0.006364
0.010818	0.010182	0.009545	0.009091	0.008636	0.008182	0.007727	0.007273	0.006818
0.011364	0.010818	0.010182	0.009545	0.009091	0.008636	0.008182	0.007727	0.007273
0.013	0.0125	0.0119	0.0112	0.0105	0.01	0.0095	0.009	0.0085
0.0138	0.013	0.0125	0.0119	0.0112	0.0105	0.01	0.0095	0.009
0.0145	0.0138	0.013	0.0125	0.0119	0.0112	0.0105	0.01	0.0095
0.01525	0.0145	0.0138	0.013	0.0125	0.0119	0.0112	0.0105	0.01
0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119	0.0112	0.0105
0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119	0.0112
0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125	0.0119
0.0179	0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013	0.0125
0.0185	0.0179	0.01725	0.01666	0.016	0.01525	0.0145	0.0138	0.013
0.019166	0.0185	0.0179	0.01725	0.01666	0.016	0.01525	0.0145	0.0138
0.01975	0.019166	0.0185	0.0179	0.01725	0.01666	0.016	0.01525	0.0145
0.368606	0.351517	0.334904	0.318842	0.303276	0.288284	0.273803	0.259895	0.246655
2030	2031	2032	2033	2034	2035	2036	2037	2038

2030	2031	2032	2033	2034	2035	2036	2037	2038
0.368606	0.351517	0.334904	0.318842	0.303276	0.288284	0.273803	0.259895	0.246655
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.162187	0.154667	0.147358	0.14029	0.133441	0.126845	0.120473	0.114354	0.108528

0.001055	0.001011	0.000967	0.000931	0.000895	0.000858	0.000822	0.000785	0.000756
0.001098	0.001055	0.001011	0.000967	0.000931	0.000895	0.000858	0.000822	0.000785
0.001142	0.001098	0.001055	0.001011	0.000967	0.000931	0.000895	0.000858	0.000822
0.001185	0.001142	0.001098	0.001055	0.001011	0.000967	0.000931	0.000895	0.000858
0.001244	0.001185	0.001142	0.001098	0.001055	0.001011	0.000967	0.000931	0.000895
0.001302	0.001244	0.001185	0.001142	0.001098	0.001055	0.001011	0.000967	0.000931
0.00136	0.001302	0.001244	0.001185	0.001142	0.001098	0.001055	0.001011	0.000967
0.001595	0.00153	0.001465	0.001399	0.001334	0.001285	0.001235	0.001186	0.001137
0.001661	0.001595	0.00153	0.001465	0.001399	0.001334	0.001285	0.001235	0.001186
0.001726	0.001661	0.001595	0.00153	0.001465	0.001399	0.001334	0.001285	0.001235
0.0018	0.001726	0.001661	0.001595	0.00153	0.001465	0.001399	0.001334	0.001285
0.001882	0.0018	0.001726	0.001661	0.001595	0.00153	0.001465	0.001399	0.001334
0.001964	0.001882	0.0018	0.001726	0.001661	0.001595	0.00153	0.001465	0.001399
0.002045	0.001964	0.001882	0.0018	0.001726	0.001661	0.001595	0.00153	0.001465
0.002127	0.002045	0.001964	0.001882	0.0018	0.001726	0.001661	0.001595	0.00153
0.002291	0.002127	0.002045	0.001964	0.001882	0.0018	0.001726	0.001661	0.001595
0.002455	0.002291	0.002127	0.002045	0.001964	0.001882	0.0018	0.001726	0.001661
0.002878	0.002727	0.002545	0.002364	0.002273	0.002182	0.002091	0.002	0.001918
0.002955	0.002878	0.002727	0.002545	0.002364	0.002273	0.002182	0.002091	0.002
0.003182	0.002955	0.002878	0.002727	0.002545	0.002364	0.002273	0.002182	0.002091
0.003455	0.003182	0.002955	0.002878	0.002727	0.002545	0.002364	0.002273	0.002182
0.003636	0.003455	0.003182	0.002955	0.002878	0.002727	0.002545	0.002364	0.002273
0.003787	0.003636	0.003455	0.003182	0.002955	0.002878	0.002727	0.002545	0.002364
0.004	0.003787	0.003636	0.003455	0.003182	0.002955	0.002878	0.002727	0.002545
0.004318	0.004	0.003787	0.003636	0.003455	0.003182	0.002955	0.002878	0.002727
0.004545	0.004318	0.004	0.003787	0.003636	0.003455	0.003182	0.002955	0.002878
0.004848	0.004545	0.004318	0.004	0.003787	0.003636	0.003455	0.003182	0.002955
0.005151	0.004848	0.004545	0.004318	0.004	0.003787	0.003636	0.003455	0.003182
0.005409	0.005151	0.004848	0.004545	0.004318	0.004	0.003787	0.003636	0.003455
0.005682	0.005409	0.005151	0.004848	0.004545	0.004318	0.004	0.003787	0.003636
0.006055	0.005682	0.005409	0.005151	0.004848	0.004545	0.004318	0.004	0.003787
0.006364	0.006055	0.005682	0.005409	0.005151	0.004848	0.004545	0.004318	0.004
0.006818	0.006364	0.006055	0.005682	0.005409	0.005151	0.004848	0.004545	0.004318
0.008	0.0075	0.007	0.00666	0.00625	0.00595	0.005666	0.005333	0.005
0.0085	0.008	0.0075	0.007	0.00666	0.00625	0.00595	0.005666	0.005333
0.009	0.0085	0.008	0.0075	0.007	0.00666	0.00625	0.00595	0.005666
0.0095	0.009	0.0085	0.008	0.0075	0.007	0.00666	0.00625	0.00595
0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007	0.00666	0.00625
0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007	0.00666
0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075	0.007
0.0119	0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008	0.0075
0.0125	0.0119	0.0112	0.0105	0.01	0.0095	0.009	0.0085	0.008
0.013	0.0125	0.0119	0.0112	0.0105	0.01	0.0095	0.009	0.0085
0.0138	0.013	0.0125	0.0119	0.0112	0.0105	0.01	0.0095	0.009

0.2341	0.222173	0.21097	0.200206	0.189985	0.180417	0.171509	0.163054	0.155055
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2039	2040	2041	2042	2043	2044	2045	2046	2047
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2039	2040	2041	2042	2043	2044	2045	2046	2047
0.2341	0.222173	0.21097	0.200206	0.189985	0.180417	0.171509	0.163054	0.155055
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.103004	0.097756	0.092827	0.088091	0.083593	0.079384	0.075464	0.071744	0.068224

2110	2111
0.001	0.001

0.001	0.001
0.545454	0.545454
0.000545	0.000545

0.001	0.001
0.636363	0.636363
0.000636	0.000636

0.000749	0.000742	0.000735	0.000727	0.000727	0.000727	0.000727	0.000727	0.000727
0.000756	0.000749	0.000742	0.000735	0.000727	0.000727	0.000727	0.000727	0.000727
0.000785	0.000756	0.000749	0.000742	0.000735	0.000727	0.000727	0.000727	0.000727
0.000822	0.000785	0.000756	0.000749	0.000742	0.000735	0.000727	0.000727	0.000727
0.000858	0.000822	0.000785	0.000756	0.000749	0.000742	0.000735	0.000727	0.000727
0.000895	0.000858	0.000822	0.000785	0.000756	0.000749	0.000742	0.000735	0.000727
0.000931	0.000895	0.000858	0.000822	0.000785	0.000756	0.000749	0.000742	0.000735
0.001088	0.001047	0.001006	0.000965	0.000925	0.000884	0.000851	0.000843	0.000835
0.001137	0.001088	0.001047	0.001006	0.000965	0.000925	0.000884	0.000851	0.000843
0.001186	0.001137	0.001088	0.001047	0.001006	0.000965	0.000925	0.000884	0.000851
0.001235	0.001186	0.001137	0.001088	0.001047	0.001006	0.000965	0.000925	0.000884
0.001285	0.001235	0.001186	0.001137	0.001088	0.001047	0.001006	0.000965	0.000925
0.001334	0.001285	0.001235	0.001186	0.001137	0.001088	0.001047	0.001006	0.000965
0.001399	0.001334	0.001285	0.001235	0.001186	0.001137	0.001088	0.001047	0.001006
0.001465	0.001399	0.001334	0.001285	0.001235	0.001186	0.001137	0.001088	0.001047
0.00153	0.001465	0.001399	0.001334	0.001285	0.001235	0.001186	0.001137	0.001088
0.001595	0.00153	0.001465	0.001399	0.001334	0.001285	0.001235	0.001186	0.001137
0.001845	0.001773	0.0017	0.001627	0.001555	0.001482	0.001427	0.001373	0.001318
0.001918	0.001845	0.001773	0.0017	0.001627	0.001555	0.001482	0.001427	0.001373
0.002	0.001918	0.001845	0.001773	0.0017	0.001627	0.001555	0.001482	0.001427
0.002091	0.002	0.001918	0.001845	0.001773	0.0017	0.001627	0.001555	0.001482
0.002182	0.002091	0.002	0.001918	0.001845	0.001773	0.0017	0.001627	0.001555
0.002273	0.002182	0.002091	0.002	0.001918	0.001845	0.001773	0.0017	0.001627
0.002364	0.002273	0.002182	0.002091	0.002	0.001918	0.001845	0.001773	0.0017
0.002545	0.002364	0.002273	0.002182	0.002091	0.002	0.001918	0.001845	0.001773
0.002727	0.002545	0.002364	0.002273	0.002182	0.002091	0.002	0.001918	0.001845
0.002878	0.002727	0.002545	0.002364	0.002273	0.002182	0.002091	0.002	0.001918
0.002955	0.002878	0.002727	0.002545	0.002364	0.002273	0.002182	0.002091	0.002
0.003182	0.002955	0.002878	0.002727	0.002545	0.002364	0.002273	0.002182	0.002091
0.003455	0.003182	0.002955	0.002878	0.002727	0.002545	0.002364	0.002273	0.002182
0.003636	0.003455	0.003182	0.002955	0.002878	0.002727	0.002545	0.002364	0.002273
0.003787	0.003636	0.003455	0.003182	0.002955	0.002878	0.002727	0.002545	0.002364
0.004	0.003787	0.003636	0.003455	0.003182	0.002955	0.002878	0.002727	0.002545
0.00475	0.0044	0.004166	0.004	0.0038	0.0035	0.00325	0.003166	0.003
0.005	0.00475	0.0044	0.004166	0.004	0.0038	0.0035	0.00325	0.003166
0.005333	0.005	0.00475	0.0044	0.004166	0.004	0.0038	0.0035	0.00325
0.005666	0.005333	0.005	0.00475	0.0044	0.004166	0.004	0.0038	0.00325
0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166	0.004	0.0038
0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166	0.004
0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044	0.004166
0.007	0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475	0.0044
0.0075	0.007	0.00666	0.00625	0.00595	0.005666	0.005333	0.005	0.00475
0.008	0.0075	0.007	0.00666	0.00625	0.00595	0.005666	0.005333	0.005
0.0085	0.008	0.0075	0.007	0.00666	0.00625	0.00595	0.005666	0.005333
0.14752	0.140441	0.133829	0.127144	0.12093	0.115016	0.10948	0.104231	0.099244
2048	2049	2050	2051	2052	2053	2054	2055	2056

2048	2049	2050	2051	2052	2053	2054	2055	2056
0.14752	0.140441	0.133829	0.127144	0.12093	0.115016	0.10948	0.104231	0.099244
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.064909	0.061794	0.058885	0.055943	0.053209	0.050607	0.048171	0.045862	0.043667

2057	2058	2059	2060	2061	2062	2063	2064	2065
0.094566	0.090196	0.086062	0.082265	0.078597	0.075081	0.071753	0.068714	0.065917
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.041609	0.039686	0.037867	0.036196	0.034583	0.033036	0.031571	0.030234	0.029003

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0.000727 0.000727 0.000727 0.000727 0.000727 0.000727 0.000727

2066	2067	2068	2069	2070	2071	2072	2073	2074
0.063195	0.060632	0.05826	0.056081	0.053996	0.051915	0.049929	0.048037	0.04623
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.027806	0.026678	0.025634	0.024676	0.023758	0.022843	0.021969	0.021136	0.020341

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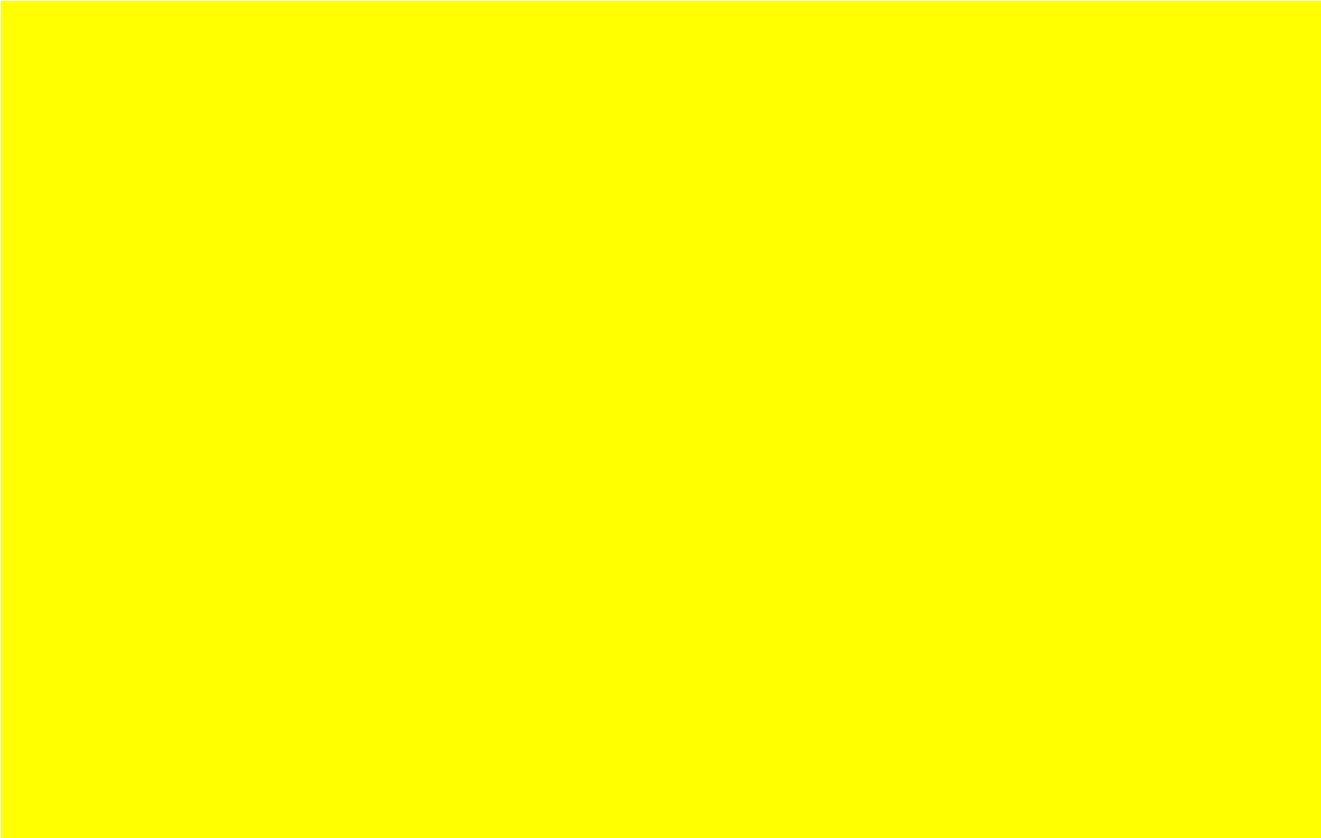
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2083



2075	2076	2077	2078	2079	2080	2081	2082	2083
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0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.019579	0.01885	0.018155	0.017492	0.016863	0.016268	0.015658	0.015074	0.014517

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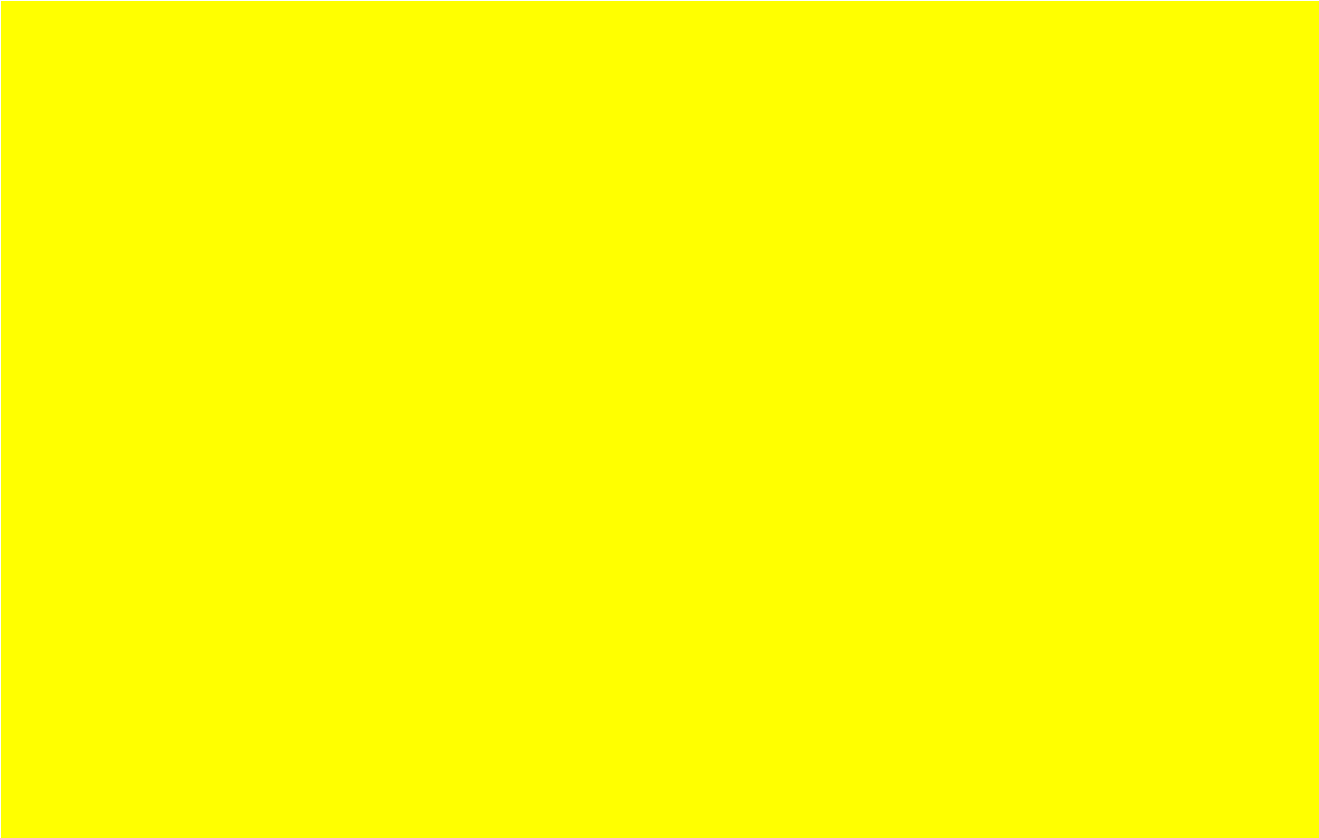
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2092



2084	2085	2086	2087	2088	2089	2090	2091	2092
0.031785	0.030636	0.029538	0.02849	0.027492	0.026544	0.025645	0.024696	0.023757
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.013985	0.01348	0.012997	0.012536	0.012096	0.011679	0.011284	0.010866	0.010453

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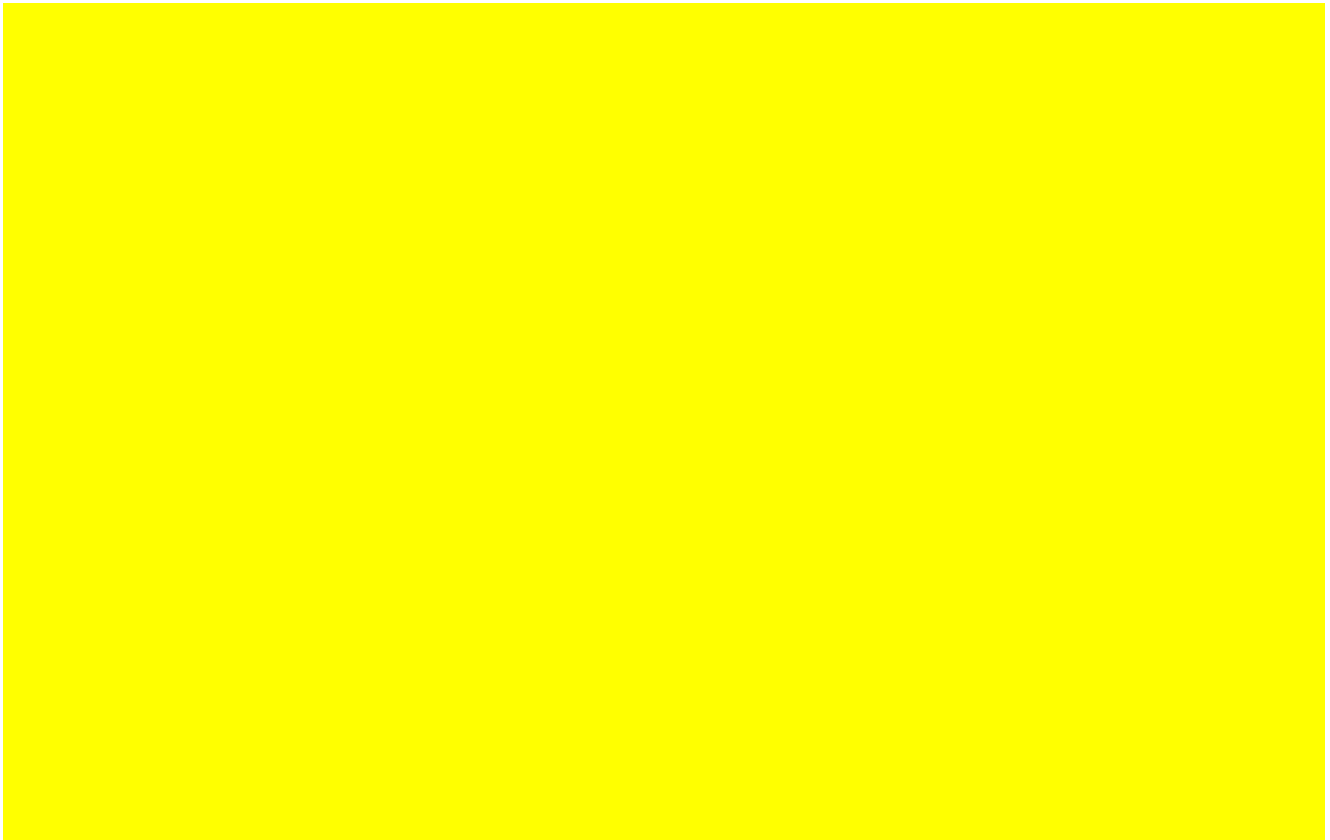
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0.022828	0.021909	0.021	0.020091	0.019182	0.018273	0.017364	0.016455	0.015545
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.010044	0.00964	0.00924	0.00884	0.00844	0.00804	0.00764	0.00724	0.00684

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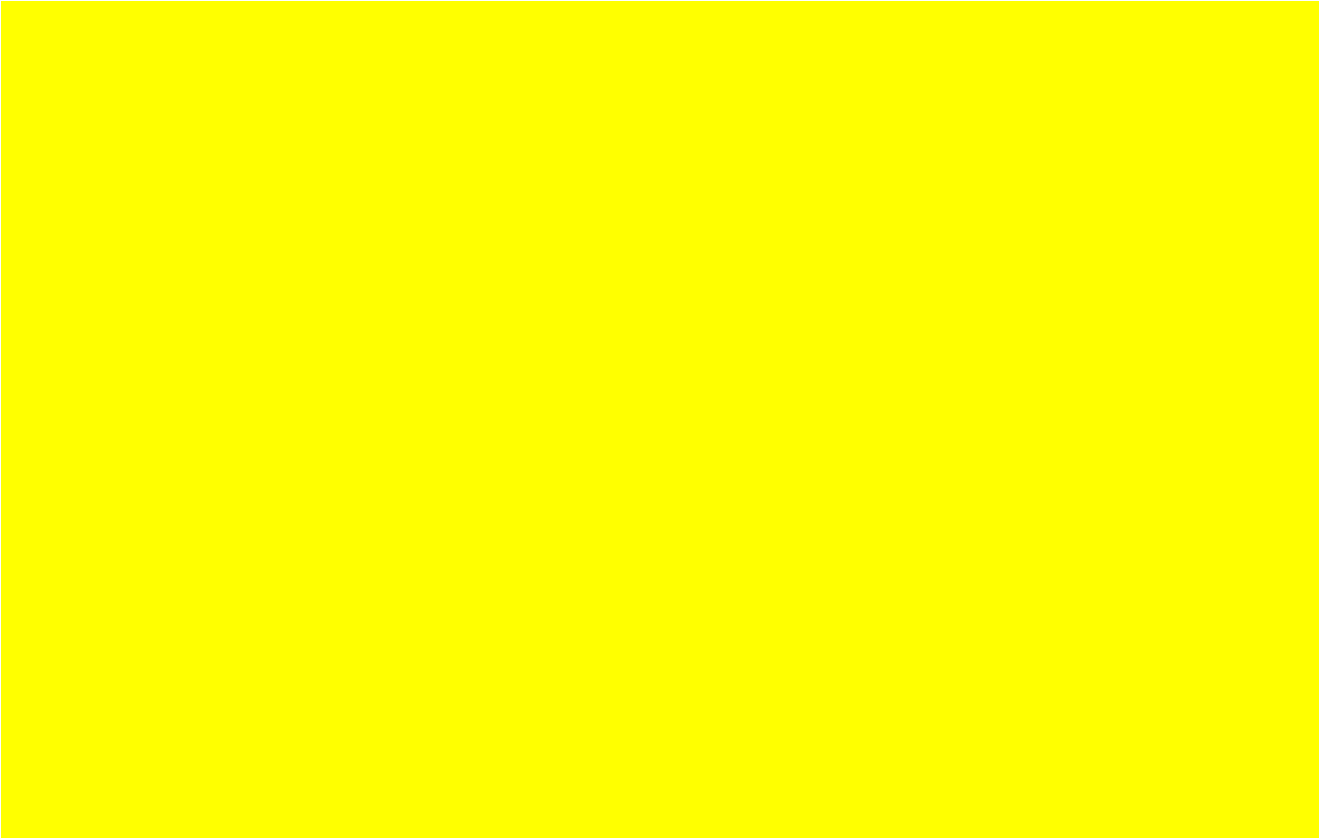
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0.001	0.001	0.001	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001				
0.001	0.001	0.001	0.001	0.001	0.001	0.001			
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001		
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.014636	0.013727	0.012818	0.011909	0.011	0.01	0.009	0.008	0.007	
2102	2103	2104	2105	2106	2107	2108	2109	2110	

2102	2103	2104	2105	2106	2107	2108	2109	2110
0.014636	0.013727	0.012818	0.011909	0.011	0.01	0.009	0.008	0.007
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
0.00644	0.00604	0.00564	0.00524	0.00484	0.0044	0.00396	0.00352	0.00308

2111

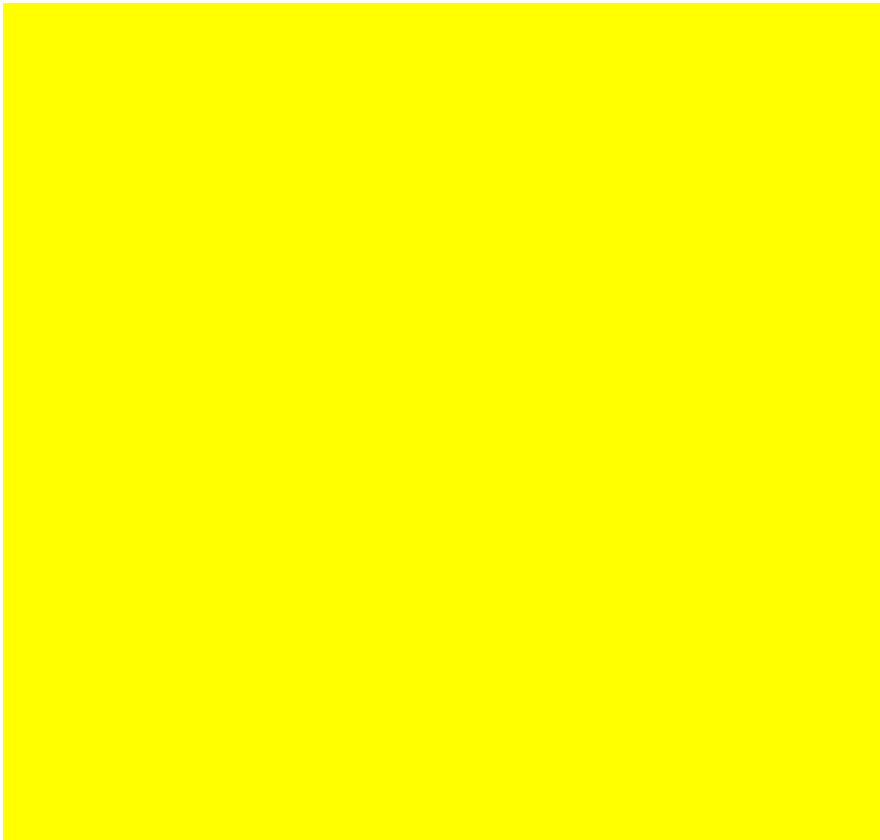
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0.001	0.001	0.001	0.001	0.001	
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0.006	0.005	0.004	0.003	0.002	0.001
2111	2112	2113	2114	2115	2116

2111	2112	2113	2114	2115	2116
0.006	0.005	0.004	0.003	0.002	0.001
0.44	0.44	0.44	0.44	0.44	0.44
0.00264	0.0022	0.00176	0.00132	0.00088	0.00044

Values derived from Figure 2D, Allen et al., May 2016; Based on Anthropogenic 38 Gt CO2 Puls

2011	2012	2013	2014	2015	2016	2017	2018
0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025

1950-1959 Annual 10 Gt CO2 Pulse Emission - Anthropogenic [approx 1/4]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0	0.000395	0.001315	0.00263	0.003814	0.004295	0.004734	0.005326

1960-1969 Annual 13.8 Gt CO2 Pulse Emission - Anthropogenic [approx 1/3]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0	0.000545	0.0018155	0.003631	0.005265	0.005929	0.006536	0.007353

1970-1979 Annual 19.8 Gt CO2 Pulse Emission - Anthropogenic [approx 1/2]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0	0.000782	0.0026055	0.005211	0.007556	0.00851	0.00938	0.010552

1980-1989 Annual 25.3 Gt CO2 Pulse Emission - Anthropogenic [approx 2/3]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0	0.000999	0.003329	0.006658	0.009654	0.010873	0.011984	0.013482

1990-1999 Annual 28.97 Gt CO2 Pulse Emission - Anthropogenic [approx 3/4]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0	0.001144	0.003812	0.007624	0.011055	0.01245	0.013723	0.015439

2000- 2010 Annual 32.6 Gt CO2 Pulse Emission - Anthropogenic [approx 7/8]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0	0.001287	0.0042895	0.008579	0.01244	0.01401	0.015442	0.017372

2011-2016 Annual 38 Gt CO2 Pulse Emission - Anthropogenic [1/1]

0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025
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1950-2016 (1950-1959 -- 10 Gt CO2 Pulse; 1960-1969 -- 13.8 Gt CO2 Pulse; 1970-1979 -- 19.8 Gt CO2 Pulse; 1980-1989 -- 25.3 Gt CO2 Pulse; 1990-1999 -- 28.97 Gt CO2 Pulse; 2000-2010 -- 32.6 Gt CO2 Pulse; 2011-2016 -- 38 Gt CO2 Pulse)

	1950	1951	1952	1953	1954	1955	1956
1950	0	0.0003945	0.001315	0.00263	0.003814	0.004295	0.004734
1951		0	0.0003945	0.001315	0.00263	0.003814	0.004295
1952			0	0.000395	0.001315	0.00263	0.003814
1953				0	0.000395	0.001315	0.00263
1954					0	0.000395	0.001315
1955						0	0.000395
1956							0
1957							
1958							
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1960							
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1962							
1963							
1964							
1965							
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 2016

Sum 0 0.0003945 0.0017095 0.00434 0.008153 0.012448 0.017182

Year 1950 1951 1952 1953 1954 1955 1956

Year 1950 1951 1952 1953 1954 1955 1956

Sum 0 0.0003945 0.0017095 0.00434 0.008153 0.012448 0.017182

LSSC % 0.05 0.05 0.05 0.05 0.05 0.05 0.05

LSSC Value 0 0.000019725 0.000085475 0.000217 0.000408 0.000622 0.000859

LSSC = Livestock Supply Chains

ie in 2011 - Global Surface Temperature Change in Degrees Celsius; assume pulse emission occurs c

2019	2020	2021	2022	2023	2024	2025	2026	2027
0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261

0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.005697	0.005983	0.006207	0.006365	0.006549	0.006619	0.006733	0.006799	0.006864

0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.007865	0.008261	0.008569	0.008787	0.009041	0.009138	0.009295	0.009386	0.009477

0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.011287	0.011855	0.012298	0.012611	0.012975	0.013114	0.01334	0.01347	0.013601

0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.014421	0.015147	0.015713	0.016112	0.016578	0.016756	0.017044	0.017211	0.017377

0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.016514	0.017345	0.017993	0.01845	0.018984	0.019187	0.019517	0.019708	0.019899

0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.018582	0.019517	0.020246	0.020761	0.021362	0.02159	0.021962	0.022177	0.022391

0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261
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3t CO2 Pulse; 1980-1989 -- 25.3 Gt CO2 Pulse; 1990-1999 -- 28.97 Gt CO2 Pulse; 2000-2010 -- 32.6

0.022508	0.028204	0.034187	0.040394	0.046909	0.053958	0.061578	0.069762	0.078195
1957	1958	1959	1960	1961	1962	1963	1964	1965
1957	1958	1959	1960	1961	1962	1963	1964	1965
0.022508	0.028204	0.034187	0.040394	0.046909	0.053958	0.061578	0.069762	0.078195
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.001125	0.00141	0.001709	0.00202	0.002345	0.002698	0.003079	0.003488	0.00391

on Jan 1 of Emission Year; analysis has applied associated temperature change values on Jan 1 of fol

2028	2029	2030	2031	2032	2033	2034	2035	2036
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.006904	0.006925	0.006943	0.00697	0.00697	0.00697	0.006956	0.006943	0.006925
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.009531	0.00956	0.009586	0.009622	0.009622	0.009622	0.009604	0.009586	0.00956
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.013679	0.013721	0.013757	0.013809	0.013809	0.013809	0.013783	0.013757	0.013721
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.017477	0.017531	0.017577	0.017644	0.017644	0.017644	0.01761	0.017577	0.017531
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.020013	0.020074	0.020127	0.020204	0.020204	0.020204	0.020165	0.020127	0.020074
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.02252	0.022589	0.022649	0.022734	0.022734	0.022734	0.022691	0.022649	0.022589
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633

3 Gt CO2 Pulse; 2011-2016 -- 38 Gt CO2 Pulse; Temperature Change in Degrees Celsius)

0.086861 0.095792 0.104885 0.114106 0.123437 0.133066 0.143318 0.154374 0.166171

1966 1967 1968 1969 1970 1971 1972 1973 1974

1966 1967 1968 1969 1970 1971 1972 1973 1974

0.086861 0.095792 0.104885 0.114106 0.123437 0.133066 0.143318 0.154374 0.166171

0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05

0.004343 0.00479 0.005244 0.005705 0.006172 0.006653 0.007166 0.007719 0.008309

llowing (post-pulse) years.

2037	2038	2039	2040	2041	2042	2043	2044	2045
0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255

0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.006904	0.006877	0.006864	0.006838	0.006812	0.006785	0.006759	0.006733	0.006707

0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.009531	0.009495	0.009477	0.009441	0.009404	0.009368	0.009332	0.009295	0.009259

0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.013679	0.013627	0.013601	0.013549	0.013496	0.013444	0.013392	0.01334	0.013288

0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.017477	0.017411	0.017377	0.017311	0.017244	0.017178	0.017111	0.017044	0.016978

0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.020013	0.019937	0.019899	0.019822	0.019746	0.01967	0.019594	0.019517	0.019441

0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.02252	0.022434	0.022391	0.022305	0.02222	0.022134	0.022048	0.021962	0.021876

0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255
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0.178263	0.190623	0.203328	0.21625	0.229325	0.242518	0.255997	0.270067	0.28487
1975	1976	1977	1978	1979	1980	1981	1982	1983
1975	1976	1977	1978	1979	1980	1981	1982	1983
0.178263	0.190623	0.203328	0.21625	0.229325	0.242518	0.255997	0.270067	0.28487
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.008913	0.009531	0.010166	0.010813	0.011466	0.012126	0.0128	0.013503	0.014244

2046	2047	2048	2049	2050	2051	2052	2053	2054
0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244

0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.006662	0.006628	0.006601	0.006575	0.006549	0.006536	0.006522	0.006486	0.006417

0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.009197	0.00915	0.009114	0.009078	0.009041	0.009023	0.009005	0.008954	0.00886

0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.013199	0.013132	0.01308	0.013028	0.012975	0.012949	0.012923	0.01285	0.012715

0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.016865	0.016778	0.016712	0.016645	0.016578	0.016545	0.016512	0.016419	0.016246

0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.019312	0.019212	0.019136	0.01906	0.018984	0.018946	0.018908	0.018801	0.018603

0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.021731	0.021619	0.021533	0.021448	0.021362	0.021319	0.021276	0.021156	0.020933

0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244
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0.300362 0.316107 0.332091 0.348387 0.364869 0.381484 0.398214 0.415152 0.432484

1984 1985 1986 1987 1988 1989 1990 1991 1992

1984 1985 1986 1987 1988 1989 1990 1991 1992

0.300362 0.316107 0.332091 0.348387 0.364869 0.381484 0.398214 0.415152 0.432484

0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05

0.015018 0.015805 0.016605 0.017419 0.018243 0.019074 0.019911 0.020758 0.021624

2055	2056	2057	2058	2059	2060	2061	2062	2063
0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366

0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.006378	0.006351	0.006325	0.006312	0.006299	0.006273	0.006246	0.006233	0.006223

0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.008805	0.008769	0.008733	0.008714	0.008696	0.00866	0.008624	0.008605	0.008591

0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.012637	0.012585	0.012532	0.012506	0.01248	0.012428	0.012376	0.01235	0.012329

0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.016146	0.016079	0.016012	0.015979	0.015946	0.015879	0.015813	0.015779	0.015753

0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.018488	0.018412	0.018336	0.018298	0.018259	0.018183	0.018107	0.018069	0.018038

0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.020804	0.020718	0.020632	0.02059	0.020547	0.020461	0.020375	0.020332	0.020298

0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366
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0	0.001144	0.003812	0.007624	0.011055
	0	0.001144	0.003812	0.007624
		0	0.001144	0.003812
			0	0.001287
				0

0.45025	0.468456	0.486822	0.505332	0.524043	0.54287	0.561761	0.580701	0.599809
1993	1994	1995	1996	1997	1998	1999	2000	2001
1993	1994	1995	1996	1997	1998	1999	2000	2001
0.45025	0.468456	0.486822	0.505332	0.524043	0.54287	0.561761	0.580701	0.599809
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.022512	0.023423	0.024341	0.025267	0.026202	0.027144	0.028088	0.029035	0.02999

2064	2065	2066	2067	2068	2069	2070	2071	2072
0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285

0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.006181	0.006136	0.006115	0.006088	0.006062	0.006049	0.006036	0.006023	0.00601

0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.008533	0.008471	0.008442	0.008406	0.008369	0.008351	0.008333	0.008315	0.008297

0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.012246	0.012157	0.012116	0.012063	0.012011	0.011985	0.011959	0.011933	0.011907

0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.015646	0.015533	0.01548	0.015413	0.015347	0.015313	0.01528	0.015247	0.015214

0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.017916	0.017787	0.017726	0.01765	0.017573	0.017535	0.017497	0.017459	0.017421

0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.020161	0.020015	0.019946	0.01986	0.019775	0.019732	0.019689	0.019646	0.019603

0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285
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0.01245	0.013723	0.015439	0.016514	0.017345	0.017993	0.01845	0.018984	0.019187
0.011055	0.01245	0.013723	0.015439	0.016514	0.017345	0.017993	0.01845	0.018984
0.007624	0.011055	0.01245	0.013723	0.015439	0.016514	0.017345	0.017993	0.01845
0.00429	0.008579	0.01244	0.01401	0.015442	0.017372	0.018582	0.019517	0.020246
0.001287	0.00429	0.008579	0.01244	0.01401	0.015442	0.017372	0.018582	0.019517
0	0.001287	0.00429	0.008579	0.01244	0.01401	0.015442	0.017372	0.018582
	0	0.001287	0.00429	0.008579	0.01244	0.01401	0.015442	0.017372
		0	0.001287	0.00429	0.008579	0.01244	0.01401	0.015442
			0	0.001287	0.00429	0.008579	0.01244	0.01401
				0	0.001287	0.00429	0.008579	0.01244
					0	0.001287	0.00429	0.008579
						0	0.001287	0.00429
							0	0.001287
								0

0.619278	0.639159	0.659429	0.67983	0.700346	0.72103	0.741815	0.762657	0.783545
2002	2003	2004	2005	2006	2007	2008	2009	2010
2002	2003	2004	2005	2006	2007	2008	2009	2010
0.619278	0.639159	0.659429	0.67983	0.700346	0.72103	0.741815	0.762657	0.783545
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.030964	0.031958	0.032971	0.033991	0.035017	0.036051	0.037091	0.038133	0.039177

2073	2074	2075	2076	2077	2078	2079	2080	2081
0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212

0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.005996	0.005983	0.00596	0.005931	0.005904	0.005873	0.005839	0.005825	0.005818

0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.008279	0.008261	0.008228	0.008188	0.008152	0.008108	0.008061	0.008043	0.008032

0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.011881	0.011855	0.011808	0.011751	0.011699	0.011636	0.011568	0.011542	0.011527

0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.01518	0.015147	0.015087	0.015014	0.014947	0.014867	0.014781	0.014747	0.014727

0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.017383	0.017345	0.017276	0.017192	0.017116	0.017024	0.016925	0.016887	0.016864

0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.01956	0.019517	0.01944	0.019346	0.01926	0.019157	0.019045	0.019002	0.018977

0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212
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0.019517	0.019708	0.019899	0.020013	0.020074	0.020127	0.020204	0.020204	0.020204
0.019187	0.019517	0.019708	0.019899	0.020013	0.020074	0.020127	0.020204	0.020204
0.018984	0.019187	0.019517	0.019708	0.019899	0.020013	0.020074	0.020127	0.020204
0.020761	0.021362	0.02159	0.021962	0.022177	0.022391	0.02252	0.022589	0.022649
0.020246	0.020761	0.021362	0.02159	0.021962	0.022177	0.022391	0.02252	0.022589
0.019517	0.020246	0.020761	0.021362	0.02159	0.021962	0.022177	0.022391	0.02252
0.018582	0.019517	0.020246	0.020761	0.021362	0.02159	0.021962	0.022177	0.022391
0.017372	0.018582	0.019517	0.020246	0.020761	0.021362	0.02159	0.021962	0.022177
0.015442	0.017372	0.018582	0.019517	0.020246	0.020761	0.021362	0.02159	0.021962
0.01401	0.015442	0.017372	0.018582	0.019517	0.020246	0.020761	0.021362	0.02159
0.01244	0.01401	0.015442	0.017372	0.018582	0.019517	0.020246	0.020761	0.021362
0.008579	0.01244	0.01401	0.015442	0.017372	0.018582	0.019517	0.020246	0.020761
0.00429	0.008579	0.01244	0.01401	0.015442	0.017372	0.018582	0.019517	0.020246
0.001287	0.00429	0.008579	0.01244	0.01401	0.015442	0.017372	0.018582	0.019517
0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025	0.02166
	0	0.0015	0.005	0.01	0.0145	0.01633	0.018	0.02025
		0	0.0015	0.005	0.01	0.0145	0.01633	0.018
			0	0.0015	0.005	0.01	0.0145	0.01633
				0	0.0015	0.005	0.01	0.0145
					0	0.0015	0.005	0.01

0.80445	0.825581	0.847145	0.869377	0.892189	0.915205	0.9384	0.960356	0.978961
2011	2012	2013	2014	2015	2016	2017	2018	2019

2011	2012	2013	2014	2015	2016	2017	2018	2019
0.80445	0.825581	0.847145	0.869377	0.892189	0.915205	0.9384	0.960356	0.978961
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.040222	0.041279	0.042357	0.043469	0.044609	0.04576	0.04692	0.048018	0.048948

2082	2083	2084	2085	2086	2087	2088	2089	2090
0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185

0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.00581	0.005802	0.005794	0.005786	0.005778	0.00577	0.005762	0.005754	0.005747

0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.008021	0.00801	0.007999	0.007988	0.007977	0.007966	0.007956	0.007945	0.007934

0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.011511	0.011495	0.01148	0.011464	0.011449	0.011433	0.011417	0.011402	0.011386

0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.014708	0.014688	0.014668	0.014648	0.014628	0.014608	0.014588	0.014568	0.014548

0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.016841	0.016819	0.016796	0.016773	0.01675	0.016727	0.016704	0.016681	0.016658

0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.018951	0.018925	0.0189	0.018874	0.018848	0.018822	0.018797	0.018771	0.018745

0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185
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0.020165	0.020127	0.020074	0.020013	0.019937	0.019899	0.019822	0.019746	0.01967
0.020204	0.020165	0.020127	0.020074	0.020013	0.019937	0.019899	0.019822	0.019746
0.020204	0.020204	0.020165	0.020127	0.020074	0.020013	0.019937	0.019899	0.019822
0.022734	0.022734	0.022734	0.022691	0.022649	0.022589	0.02252	0.022434	0.022391
0.022649	0.022734	0.022734	0.022734	0.022691	0.022649	0.022589	0.02252	0.022434
0.022589	0.022649	0.022734	0.022734	0.022734	0.022691	0.022649	0.022589	0.02252
0.02252	0.022589	0.022649	0.022734	0.022734	0.022734	0.022691	0.022649	0.022589
0.022391	0.02252	0.022589	0.022649	0.022734	0.022734	0.022734	0.022691	0.022649
0.022177	0.022391	0.02252	0.022589	0.022649	0.022734	0.022734	0.022734	0.022691
0.021962	0.022177	0.022391	0.02252	0.022589	0.022649	0.022734	0.022734	0.022734
0.02159	0.021962	0.022177	0.022391	0.02252	0.022589	0.022649	0.022734	0.022734
0.021362	0.02159	0.021962	0.022177	0.022391	0.02252	0.022589	0.022649	0.022734
0.020761	0.021362	0.02159	0.021962	0.022177	0.022391	0.02252	0.022589	0.022649
0.020246	0.020761	0.021362	0.02159	0.021962	0.022177	0.022391	0.02252	0.022589
0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261	0.02625
0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585	0.0261
0.02025	0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256	0.02585
0.018	0.02025	0.02166	0.02275	0.0236	0.0242	0.0249	0.025166	0.0256
0.01633	0.018	0.02025	0.02166	0.02275	0.0236	0.0242	0.0249	0.025166
0.0145	0.01633	0.018	0.02025	0.02166	0.02275	0.0236	0.0242	0.0249

0.992684	1.001991	1.009504	1.015356	1.018916	1.021058	1.022078	1.022221	1.021735
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2020	2021	2022	2023	2024	2025	2026	2027	2028
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2020	2021	2022	2023	2024	2025	2026	2027	2028
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0.992684	1.001991	1.009504	1.015356	1.018916	1.021058	1.022078	1.022221	1.021735
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0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
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0.049634	0.0501	0.050475	0.050768	0.050946	0.051053	0.051104	0.051111	0.051087
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2091	2092	2093	2094	2095	2096	2097	2098	2099
0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214

0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.005736	0.005726	0.057176	0.005707	0.005697	0.005681	0.005665	0.005649	0.005628

0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.007919	0.007905	0.078938	0.007879	0.007865	0.007843	0.007821	0.007799	0.00777

0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.011365	0.011344	0.113287	0.011308	0.011287	0.011256	0.011224	0.011193	0.011152

0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.014521	0.014494	0.144745	0.014448	0.014421	0.014381	0.014341	0.014301	0.014248

0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.016628	0.016597	0.165746	0.016544	0.016514	0.016468	0.016422	0.016376	0.016315

0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.018711	0.018676	0.186507	0.018616	0.018582	0.018531	0.018479	0.018428	0.018359

0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214
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0.019594	0.019517	0.019441	0.019312	0.019212	0.019136	0.01906	0.018984	0.018946
0.01967	0.019594	0.019517	0.019441	0.019312	0.019212	0.019136	0.01906	0.018984
0.019746	0.01967	0.019594	0.019517	0.019441	0.019312	0.019212	0.019136	0.01906
0.022305	0.02222	0.022134	0.022048	0.021962	0.021876	0.021731	0.021619	0.021533
0.022391	0.022305	0.02222	0.022134	0.022048	0.021962	0.021876	0.021731	0.021619
0.022434	0.022391	0.022305	0.02222	0.022134	0.022048	0.021962	0.021876	0.021731
0.02252	0.022434	0.022391	0.022305	0.02222	0.022134	0.022048	0.021962	0.021876
0.022589	0.02252	0.022434	0.022391	0.022305	0.02222	0.022134	0.022048	0.021962
0.022649	0.022589	0.02252	0.022434	0.022391	0.022305	0.02222	0.022134	0.022048
0.022691	0.022649	0.022589	0.02252	0.022434	0.022391	0.022305	0.02222	0.022134
0.022734	0.022691	0.022649	0.022589	0.02252	0.022434	0.022391	0.022305	0.02222
0.022734	0.022734	0.022691	0.022649	0.022589	0.02252	0.022434	0.022391	0.022305
0.022734	0.022734	0.022734	0.022691	0.022649	0.022589	0.02252	0.022434	0.022391
0.022649	0.022734	0.022734	0.022734	0.022691	0.022649	0.022589	0.02252	0.022434
0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633	0.02625
0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264	0.02633
0.0261	0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645	0.0264
0.02585	0.0261	0.02625	0.02633	0.0264	0.0265	0.0265	0.0265	0.02645
0.0256	0.02585	0.0261	0.02625	0.02633	0.0264	0.0265	0.0265	0.0265
0.025166	0.0256	0.02585	0.0261	0.02625	0.02633	0.0264	0.0265	0.0265

1.020506	1.01897	1.016972	1.066135	1.063509	1.06065	1.057631	1.05446	1.051112
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2029	2030	2031	2032	2033	2034	2035	2036	2037
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2029	2030	2031	2032	2033	2034	2035	2036	2037
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1.020506	1.01897	1.016972	1.066135	1.063509	1.06065	1.057631	1.05446	1.051112
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0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
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0.051025	0.050949	0.050849	0.053307	0.053175	0.053033	0.052882	0.052723	0.052556
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2100	2101	2102	2103	2104	2105	2106	2107	2108
0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106

0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106
0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263	0.263
0.00561	0.005597	0.005583	0.005576	0.005568	0.005562	0.005555	0.005547	0.005539

0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106
0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631	0.3631
0.007745	0.007727	0.007709	0.007698	0.007687	0.00768	0.007669	0.007658	0.007647

0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106
0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211	0.5211
0.011115	0.011089	0.011063	0.011047	0.011032	0.011021	0.011006	0.01099	0.010974

0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106
0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658	0.6658
0.014202	0.014168	0.014135	0.014115	0.014095	0.014082	0.014062	0.014042	0.014022

0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106
0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624	0.7624
0.016262	0.016224	0.016186	0.016163	0.01614	0.016125	0.016102	0.016079	0.016056

0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106
0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579	0.8579
0.018299	0.018256	0.018213	0.018187	0.018162	0.018145	0.018119	0.018093	0.018067

0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106
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0.018908	0.018801	0.018603	0.018488	0.018412	0.018336	0.018298	0.018259	0.018183
0.018946	0.018908	0.018801	0.018603	0.018488	0.018412	0.018336	0.018298	0.018259
0.018984	0.018946	0.018908	0.018801	0.018603	0.018488	0.018412	0.018336	0.018298
0.021448	0.021362	0.021319	0.021276	0.021156	0.020933	0.020804	0.020718	0.020632
0.021533	0.021448	0.021362	0.021319	0.021276	0.021156	0.020933	0.020804	0.020718
0.021619	0.021533	0.021448	0.021362	0.021319	0.021276	0.021156	0.020933	0.020804
0.021731	0.021619	0.021533	0.021448	0.021362	0.021319	0.021276	0.021156	0.020933
0.021876	0.021731	0.021619	0.021533	0.021448	0.021362	0.021319	0.021276	0.021156
0.021962	0.021876	0.021731	0.021619	0.021533	0.021448	0.021362	0.021319	0.021276
0.022048	0.021962	0.021876	0.021731	0.021619	0.021533	0.021448	0.021362	0.021319
0.022134	0.022048	0.021962	0.021876	0.021731	0.021619	0.021533	0.021448	0.021362
0.02222	0.022134	0.022048	0.021962	0.021876	0.021731	0.021619	0.021533	0.021448
0.022305	0.02222	0.022134	0.022048	0.021962	0.021876	0.021731	0.021619	0.021533
0.022391	0.022305	0.02222	0.022134	0.022048	0.021962	0.021876	0.021731	0.021619
0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255	0.02533
0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256	0.0255
0.02633	0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257	0.0256
0.0264	0.02633	0.02625	0.02615	0.0261	0.026	0.0259	0.0258	0.0257
0.02645	0.0264	0.02633	0.02625	0.02615	0.0261	0.026	0.0259	0.0258
0.0265	0.02645	0.0264	0.02633	0.02625	0.02615	0.0261	0.026	0.0259
1.047683	1.044191	1.040692	1.037189	1.053288	1.049803	1.046346	1.042872	1.039423
2038	2039	2040	2041	2042	2043	2044	2045	2046
2038	2039	2040	2041	2042	2043	2044	2045	2046
1.047683	1.044191	1.040692	1.037189	1.053288	1.049803	1.046346	1.042872	1.039423
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.052384	0.05221	0.052035	0.051859	0.052664	0.05249	0.052317	0.052144	0.051971

2109	2110	2111
0.02103	0.021	0.021

0.02103	0.021	0.021
0.263	0.263	0.263
0.005531	0.005523	0.005523

0.02103	0.021	0.021
0.3631	0.3631	0.3631
0.007636	0.007625	0.007625

0.02103	0.021	0.021
0.5211	0.5211	0.5211
0.010959	0.010943	0.010943

0.02103	0.021	0.021
0.6658	0.6658	0.6658
0.014002	0.013982	0.013982

0.02103	0.021	0.021
0.7624	0.7624	0.7624
0.016033	0.01601	0.01601

0.02103	0.021	0.021
0.8579	0.8579	0.8579
0.018042	0.018016	0.018016

0.02103	0.021	0.021
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0.018107	0.018069	0.018038	0.017916	0.017787	0.017726	0.01765	0.017573	0.017535
0.018183	0.018107	0.018069	0.018038	0.017916	0.017787	0.017726	0.01765	0.017573
0.018259	0.018183	0.018107	0.018069	0.018038	0.017916	0.017787	0.017726	0.01765
0.02059	0.020547	0.020461	0.020375	0.020332	0.020298	0.020161	0.020015	0.019946
0.020632	0.02059	0.020547	0.020461	0.020375	0.020332	0.020298	0.020161	0.020015
0.020718	0.020632	0.02059	0.020547	0.020461	0.020375	0.020332	0.020298	0.020161
0.020804	0.020718	0.020632	0.02059	0.020547	0.020461	0.020375	0.020332	0.020298
0.020933	0.020804	0.020718	0.020632	0.02059	0.020547	0.020461	0.020375	0.020332
0.021156	0.020933	0.020804	0.020718	0.020632	0.02059	0.020547	0.020461	0.020375
0.021276	0.021156	0.020933	0.020804	0.020718	0.020632	0.02059	0.020547	0.020461
0.021319	0.021276	0.021156	0.020933	0.020804	0.020718	0.020632	0.02059	0.020547
0.021362	0.021319	0.021276	0.021156	0.020933	0.020804	0.020718	0.020632	0.02059
0.021448	0.021362	0.021319	0.021276	0.021156	0.020933	0.020804	0.020718	0.020632
0.021533	0.021448	0.021362	0.021319	0.021276	0.021156	0.020933	0.020804	0.020718
0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244	0.02425
0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466	0.0244
0.0255	0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248	0.02466
0.0256	0.0255	0.02533	0.0252	0.0251	0.025	0.0249	0.02485	0.0248
0.0257	0.0256	0.0255	0.02533	0.0252	0.0251	0.025	0.0249	0.02485
0.0258	0.0257	0.0256	0.0255	0.02533	0.0252	0.0251	0.025	0.0249
1.036004	1.032622	1.029285	1.026003	1.017266	1.039586	1.031067	1.022574	1.014125
2047	2048	2049	2050	2051	2052	2053	2054	2055
2047	2048	2049	2050	2051	2052	2053	2054	2055
1.036004	1.032622	1.029285	1.026003	1.017266	1.039586	1.031067	1.022574	1.014125
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.0518	0.051631	0.051464	0.0513	0.050863	0.051979	0.051553	0.051129	0.050706

2056	2057	2058	2059	2060	2061	2062	2063	2064
0.005523								
0.005523	0.005523							
0.005531	0.005523	0.005523						
0.005539	0.005531	0.005523	0.005523					
0.007658	0.007647	0.007636	0.007625	0.007625				
0.007669	0.007658	0.007647	0.007636	0.007625	0.007625			
0.00768	0.007669	0.007658	0.007647	0.007636	0.007625	0.007625		
0.007687	0.00768	0.007669	0.007658	0.007647	0.007636	0.007625	0.007625	
0.007698	0.007687	0.00768	0.007669	0.007658	0.007647	0.007636	0.007625	0.007625
0.007709	0.007698	0.007687	0.00768	0.007669	0.007658	0.007647	0.007636	0.007625
0.007727	0.007709	0.007698	0.007687	0.00768	0.007669	0.007658	0.007647	0.007636
0.007745	0.007727	0.007709	0.007698	0.007687	0.00768	0.007669	0.007658	0.007647
0.00777	0.007745	0.007727	0.007709	0.007698	0.007687	0.00768	0.007669	0.007658
0.007799	0.00777	0.007745	0.007727	0.007709	0.007698	0.007687	0.00768	0.007669
0.011224	0.011193	0.011152	0.011115	0.011089	0.011063	0.011047	0.011032	0.011021
0.011256	0.011224	0.011193	0.011152	0.011115	0.011089	0.011063	0.011047	0.011032
0.011287	0.011256	0.011224	0.011193	0.011152	0.011115	0.011089	0.011063	0.011047
0.011308	0.011287	0.011256	0.011224	0.011193	0.011152	0.011115	0.011089	0.011063
0.113287	0.011308	0.011287	0.011256	0.011224	0.011193	0.011152	0.011115	0.011089
0.011344	0.113287	0.011308	0.011287	0.011256	0.011224	0.011193	0.011152	0.011115
0.011365	0.011344	0.113287	0.011308	0.011287	0.011256	0.011224	0.011193	0.011152
0.011386	0.011365	0.011344	0.113287	0.011308	0.011287	0.011256	0.011224	0.011193
0.011402	0.011386	0.011365	0.011344	0.113287	0.011308	0.011287	0.011256	0.011224
0.011417	0.011402	0.011386	0.011365	0.011344	0.113287	0.011308	0.011287	0.011256
0.014608	0.014588	0.014568	0.014548	0.014521	0.014494	0.144745	0.014448	0.014421
0.014628	0.014608	0.014588	0.014568	0.014548	0.014521	0.014494	0.144745	0.014448
0.014648	0.014628	0.014608	0.014588	0.014568	0.014548	0.014521	0.014494	0.144745
0.014668	0.014648	0.014628	0.014608	0.014588	0.014568	0.014548	0.014521	0.014494
0.014688	0.014668	0.014648	0.014628	0.014608	0.014588	0.014568	0.014548	0.014521
0.014708	0.014688	0.014668	0.014648	0.014628	0.014608	0.014588	0.014568	0.014548
0.014727	0.014708	0.014688	0.014668	0.014648	0.014628	0.014608	0.014588	0.014568
0.014747	0.014727	0.014708	0.014688	0.014668	0.014648	0.014628	0.014608	0.014588
0.014781	0.014747	0.014727	0.014708	0.014688	0.014668	0.014648	0.014628	0.014608
0.014867	0.014781	0.014747	0.014727	0.014708	0.014688	0.014668	0.014648	0.014628
0.017116	0.017024	0.016925	0.016887	0.016864	0.016841	0.016819	0.016796	0.016773
0.017192	0.017116	0.017024	0.016925	0.016887	0.016864	0.016841	0.016819	0.016796
0.017276	0.017192	0.017116	0.017024	0.016925	0.016887	0.016864	0.016841	0.016819
0.017345	0.017276	0.017192	0.017116	0.017024	0.016925	0.016887	0.016864	0.016841
0.017383	0.017345	0.017276	0.017192	0.017116	0.017024	0.016925	0.016887	0.016864
0.017421	0.017383	0.017345	0.017276	0.017192	0.017116	0.017024	0.016925	0.016887
0.017459	0.017421	0.017383	0.017345	0.017276	0.017192	0.017116	0.017024	0.016925

0.017497	0.017459	0.017421	0.017383	0.017345	0.017276	0.017192	0.017116	0.017024
0.017535	0.017497	0.017459	0.017421	0.017383	0.017345	0.017276	0.017192	0.017116
0.017573	0.017535	0.017497	0.017459	0.017421	0.017383	0.017345	0.017276	0.017192
0.01986	0.019775	0.019732	0.019689	0.019646	0.019603	0.01956	0.019517	0.01944
0.019946	0.01986	0.019775	0.019732	0.019689	0.019646	0.019603	0.01956	0.019517
0.020015	0.019946	0.01986	0.019775	0.019732	0.019689	0.019646	0.019603	0.01956
0.020161	0.020015	0.019946	0.01986	0.019775	0.019732	0.019689	0.019646	0.019603
0.020298	0.020161	0.020015	0.019946	0.01986	0.019775	0.019732	0.019689	0.019646
0.020332	0.020298	0.020161	0.020015	0.019946	0.01986	0.019775	0.019732	0.019689
0.020375	0.020332	0.020298	0.020161	0.020015	0.019946	0.01986	0.019775	0.019732
0.020461	0.020375	0.020332	0.020298	0.020161	0.020015	0.019946	0.01986	0.019775
0.020547	0.020461	0.020375	0.020332	0.020298	0.020161	0.020015	0.019946	0.01986
0.02059	0.020547	0.020461	0.020375	0.020332	0.020298	0.020161	0.020015	0.019946
0.020632	0.02059	0.020547	0.020461	0.020375	0.020332	0.020298	0.020161	0.020015
0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366	0.0235
0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237	0.02366
0.0244	0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375	0.0237
0.02466	0.0244	0.02425	0.02415	0.02405	0.024	0.02395	0.02385	0.02375
0.0248	0.02466	0.0244	0.02425	0.02415	0.02405	0.024	0.02395	0.02385
0.02485	0.0248	0.02466	0.0244	0.02425	0.02415	0.02405	0.024	0.02395
1.005725	0.997324	0.988927	0.980636	0.972569	0.962514	0.980848	0.970946	0.96105
2056	2057	2058	2059	2060	2061	2062	2063	2064
2056	2057	2058	2059	2060	2061	2062	2063	2064
1.005725	0.997324	0.988927	0.980636	0.972569	0.962514	0.980848	0.970946	0.96105
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.050286	0.049866	0.049446	0.049032	0.048628	0.048126	0.049042	0.048547	0.048053

2065 2066 2067 2068 2069 2070 2071 2072 2073

0.007625
0.007625 0.007625
0.007636 0.007625 0.007625
0.007647 0.007636 0.007625 0.007625
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0.014381 0.014341 0.014301 0.014248 0.014202 0.014168 0.014135 0.014115 0.014095
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0.144745 0.014448 0.014421 0.014381 0.014341 0.014301 0.014248 0.014202 0.014168
0.014494 0.144745 0.014448 0.014421 0.014381 0.014341 0.014301 0.014248 0.014202
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0.014568 0.014548 0.014521 0.014494 0.144745 0.014448 0.014421 0.014381 0.014341
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0.016819 0.016796 0.016773 0.01675 0.016727 0.016704 0.016681 0.016658 0.016628
0.016841 0.016819 0.016796 0.016773 0.01675 0.016727 0.016704 0.016681 0.016658
0.016864 0.016841 0.016819 0.016796 0.016773 0.01675 0.016727 0.016704 0.016681
0.016887 0.016864 0.016841 0.016819 0.016796 0.016773 0.01675 0.016727 0.016704

0.016925	0.016887	0.016864	0.016841	0.016819	0.016796	0.016773	0.01675	0.016727
0.017024	0.016925	0.016887	0.016864	0.016841	0.016819	0.016796	0.016773	0.01675
0.017116	0.017024	0.016925	0.016887	0.016864	0.016841	0.016819	0.016796	0.016773
0.019346	0.01926	0.019157	0.019045	0.019002	0.018977	0.018951	0.018925	0.0189
0.01944	0.019346	0.01926	0.019157	0.019045	0.019002	0.018977	0.018951	0.018925
0.019517	0.01944	0.019346	0.01926	0.019157	0.019045	0.019002	0.018977	0.018951
0.01956	0.019517	0.01944	0.019346	0.01926	0.019157	0.019045	0.019002	0.018977
0.019603	0.01956	0.019517	0.01944	0.019346	0.01926	0.019157	0.019045	0.019002
0.019646	0.019603	0.01956	0.019517	0.01944	0.019346	0.01926	0.019157	0.019045
0.019689	0.019646	0.019603	0.01956	0.019517	0.01944	0.019346	0.01926	0.019157
0.019732	0.019689	0.019646	0.019603	0.01956	0.019517	0.01944	0.019346	0.01926
0.019775	0.019732	0.019689	0.019646	0.019603	0.01956	0.019517	0.01944	0.019346
0.01986	0.019775	0.019732	0.019689	0.019646	0.019603	0.01956	0.019517	0.01944
0.019946	0.01986	0.019775	0.019732	0.019689	0.019646	0.019603	0.01956	0.019517
0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285	0.0228
0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229	0.02285
0.02366	0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295	0.0229
0.0237	0.02366	0.0235	0.02333	0.02325	0.02315	0.02305	0.023	0.02295
0.02375	0.0237	0.02366	0.0235	0.02333	0.02325	0.02315	0.02305	0.023
0.02385	0.02375	0.0237	0.02366	0.0235	0.02333	0.02325	0.02315	0.02305
0.951154	0.94132	0.931544	0.921773	0.912011	0.902389	0.889598	0.89577	0.883123
2065	2066	2067	2068	2069	2070	2071	2072	2073
2065	2066	2067	2068	2069	2070	2071	2072	2073
0.951154	0.94132	0.931544	0.921773	0.912011	0.902389	0.889598	0.89577	0.883123
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.047558	0.047066	0.046577	0.046089	0.045601	0.045119	0.04448	0.044788	0.044156

2074 2075 2076 2077 2078 2079 2080 2081 2082

0.010943
0.010943 0.010943
0.010959 0.010943 0.010943
0.010974 0.010959 0.010943 0.010943
0.01099 0.010974 0.010959 0.010943 0.010943
0.011006 0.01099 0.010974 0.010959 0.010943 0.010943
0.014082 0.014062 0.014042 0.014022 0.014002 0.013982 0.013982
0.014095 0.014082 0.014062 0.014042 0.014022 0.014002 0.013982 0.013982
0.014115 0.014095 0.014082 0.014062 0.014042 0.014022 0.014002 0.013982 0.013982
0.014135 0.014115 0.014095 0.014082 0.014062 0.014042 0.014022 0.014002 0.013982
0.014168 0.014135 0.014115 0.014095 0.014082 0.014062 0.014042 0.014022 0.014002
0.014202 0.014168 0.014135 0.014115 0.014095 0.014082 0.014062 0.014042 0.014022
0.014248 0.014202 0.014168 0.014135 0.014115 0.014095 0.014082 0.014062 0.014042
0.014301 0.014248 0.014202 0.014168 0.014135 0.014115 0.014095 0.014082 0.014062
0.014341 0.014301 0.014248 0.014202 0.014168 0.014135 0.014115 0.014095 0.014082
0.014381 0.014341 0.014301 0.014248 0.014202 0.014168 0.014135 0.014115 0.014095
0.016514 0.016468 0.016422 0.016376 0.016315 0.016262 0.016224 0.016186 0.016163
0.016544 0.016514 0.016468 0.016422 0.016376 0.016315 0.016262 0.016224 0.016186
0.165746 0.016544 0.016514 0.016468 0.016422 0.016376 0.016315 0.016262 0.016224
0.016597 0.165746 0.016544 0.016514 0.016468 0.016422 0.016376 0.016315 0.016262
0.016628 0.016597 0.165746 0.016544 0.016514 0.016468 0.016422 0.016376 0.016315
0.016658 0.016628 0.016597 0.165746 0.016544 0.016514 0.016468 0.016422 0.016376
0.016681 0.016658 0.016628 0.016597 0.165746 0.016544 0.016514 0.016468 0.016422

0.016704	0.016681	0.016658	0.016628	0.016597	0.165746	0.016544	0.016514	0.016468
0.016727	0.016704	0.016681	0.016658	0.016628	0.016597	0.165746	0.016544	0.016514
0.01675	0.016727	0.016704	0.016681	0.016658	0.016628	0.016597	0.165746	0.016544
0.018874	0.018848	0.018822	0.018797	0.018771	0.018745	0.018711	0.018676	0.186507
0.0189	0.018874	0.018848	0.018822	0.018797	0.018771	0.018745	0.018711	0.018676
0.018925	0.0189	0.018874	0.018848	0.018822	0.018797	0.018771	0.018745	0.018711
0.018951	0.018925	0.0189	0.018874	0.018848	0.018822	0.018797	0.018771	0.018745
0.018977	0.018951	0.018925	0.0189	0.018874	0.018848	0.018822	0.018797	0.018771
0.019002	0.018977	0.018951	0.018925	0.0189	0.018874	0.018848	0.018822	0.018797
0.019045	0.019002	0.018977	0.018951	0.018925	0.0189	0.018874	0.018848	0.018822
0.019157	0.019045	0.019002	0.018977	0.018951	0.018925	0.0189	0.018874	0.018848
0.01926	0.019157	0.019045	0.019002	0.018977	0.018951	0.018925	0.0189	0.018874
0.019346	0.01926	0.019157	0.019045	0.019002	0.018977	0.018951	0.018925	0.0189
0.01944	0.019346	0.01926	0.019157	0.019045	0.019002	0.018977	0.018951	0.018925
0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212	0.02209
0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215	0.02212
0.02285	0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222	0.02215
0.0229	0.02285	0.0228	0.02275	0.02266	0.02255	0.02245	0.02233	0.0222
0.02295	0.0229	0.02285	0.0228	0.02275	0.02266	0.02255	0.02245	0.02233
0.023	0.02295	0.0229	0.02285	0.0228	0.02275	0.02266	0.02255	0.02245
0.87056	0.85802	0.845503	0.833007	0.82053	0.808071	0.795646	0.780259	0.783657
2074	2075	2076	2077	2078	2079	2080	2081	2082
2074	2075	2076	2077	2078	2079	2080	2081	2082
0.87056	0.85802	0.845503	0.833007	0.82053	0.808071	0.795646	0.780259	0.783657
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.043528	0.042901	0.042275	0.04165	0.041027	0.040404	0.039782	0.039013	0.039183

2083 2084 2085 2086 2087 2088 2089 2090 2091

0.013982
0.013982 0.013982
0.014002 0.013982 0.013982
0.014022 0.014002 0.013982 0.013982
0.014042 0.014022 0.014002 0.013982 0.013982
0.014062 0.014042 0.014022 0.014002 0.013982 0.013982
0.014082 0.014062 0.014042 0.014022 0.014002 0.013982 0.013982
0.01614 0.016125 0.016102 0.016079 0.016056 0.016033 0.01601 0.01601
0.016163 0.01614 0.016125 0.016102 0.016079 0.016056 0.016033 0.01601 0.01601
0.016186 0.016163 0.01614 0.016125 0.016102 0.016079 0.016056 0.016033 0.01601
0.016224 0.016186 0.016163 0.01614 0.016125 0.016102 0.016079 0.016056 0.016033
0.016262 0.016224 0.016186 0.016163 0.01614 0.016125 0.016102 0.016079 0.016056
0.016315 0.016262 0.016224 0.016186 0.016163 0.01614 0.016125 0.016102 0.016079
0.016376 0.016315 0.016262 0.016224 0.016186 0.016163 0.01614 0.016125 0.016102

0.016422	0.016376	0.016315	0.016262	0.016224	0.016186	0.016163	0.01614	0.016125
0.016468	0.016422	0.016376	0.016315	0.016262	0.016224	0.016186	0.016163	0.01614
0.016514	0.016468	0.016422	0.016376	0.016315	0.016262	0.016224	0.016186	0.016163
0.018616	0.018582	0.018531	0.018479	0.018428	0.018359	0.018299	0.018256	0.018213
0.186507	0.018616	0.018582	0.018531	0.018479	0.018428	0.018359	0.018299	0.018256
0.018676	0.186507	0.018616	0.018582	0.018531	0.018479	0.018428	0.018359	0.018299
0.018711	0.018676	0.186507	0.018616	0.018582	0.018531	0.018479	0.018428	0.018359
0.018745	0.018711	0.018676	0.186507	0.018616	0.018582	0.018531	0.018479	0.018428
0.018771	0.018745	0.018711	0.018676	0.186507	0.018616	0.018582	0.018531	0.018479
0.018797	0.018771	0.018745	0.018711	0.018676	0.186507	0.018616	0.018582	0.018531
0.018822	0.018797	0.018771	0.018745	0.018711	0.018676	0.186507	0.018616	0.018582
0.018848	0.018822	0.018797	0.018771	0.018745	0.018711	0.018676	0.186507	0.018616
0.018874	0.018848	0.018822	0.018797	0.018771	0.018745	0.018711	0.018676	0.186507
0.0189	0.018874	0.018848	0.018822	0.018797	0.018771	0.018745	0.018711	0.018676
0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185	0.02181
0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188	0.02185
0.02212	0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191	0.02188
0.02215	0.02212	0.02209	0.02206	0.02203	0.022	0.02197	0.02194	0.02191
0.0222	0.02215	0.02212	0.02209	0.02206	0.02203	0.022	0.02197	0.02194
0.02233	0.0222	0.02215	0.02212	0.02209	0.02206	0.02203	0.022	0.02197
0.768459	0.753371	0.738401	0.723467	0.70855	0.693649	0.678764	0.663899	0.647026
2083	2084	2085	2086	2087	2088	2089	2090	2091
2083	2084	2085	2086	2087	2088	2089	2090	2091
0.768459	0.753371	0.738401	0.723467	0.70855	0.693649	0.678764	0.663899	0.647026
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.038423	0.037669	0.03692	0.036173	0.035428	0.034682	0.033938	0.033195	0.032351

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2100

0.01601
0.01601 0.01601
0.016033 0.01601 0.01601
0.016056 0.016033 0.01601 0.01601
0.016079 0.016056 0.016033 0.01601 0.01601

0.016102	0.016079	0.016056	0.016033	0.01601	0.01601			
0.016125	0.016102	0.016079	0.016056	0.016033	0.01601	0.01601		
0.01614	0.016125	0.016102	0.016079	0.016056	0.016033	0.01601	0.01601	
0.018187	0.018162	0.018145	0.018119	0.018093	0.018067	0.018042	0.018016	0.018016
0.018213	0.018187	0.018162	0.018145	0.018119	0.018093	0.018067	0.018042	0.018016
0.018256	0.018213	0.018187	0.018162	0.018145	0.018119	0.018093	0.018067	0.018042
0.018299	0.018256	0.018213	0.018187	0.018162	0.018145	0.018119	0.018093	0.018067
0.018359	0.018299	0.018256	0.018213	0.018187	0.018162	0.018145	0.018119	0.018093
0.018428	0.018359	0.018299	0.018256	0.018213	0.018187	0.018162	0.018145	0.018119
0.018479	0.018428	0.018359	0.018299	0.018256	0.018213	0.018187	0.018162	0.018145
0.018531	0.018479	0.018428	0.018359	0.018299	0.018256	0.018213	0.018187	0.018162
0.018582	0.018531	0.018479	0.018428	0.018359	0.018299	0.018256	0.018213	0.018187
0.018616	0.018582	0.018531	0.018479	0.018428	0.018359	0.018299	0.018256	0.018213
0.186507	0.018616	0.018582	0.018531	0.018479	0.018428	0.018359	0.018299	0.018256
0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214	0.02133
0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148	0.0214
0.02185	0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154	0.02148
0.02188	0.02185	0.02181	0.02177	0.2174	0.0217	0.02166	0.0216	0.02154
0.02191	0.02188	0.02185	0.02181	0.02177	0.2174	0.0217	0.02166	0.0216
0.02194	0.02191	0.02188	0.02185	0.02181	0.02177	0.2174	0.0217	0.02166
0.630174	0.641149	0.624342	0.607557	0.59079	0.574052	0.557343	0.344989	0.328326
2092	2093	2094	2095	2096	2097	2098	2099	2100
2092	2093	2094	2095	2096	2097	2098	2099	2100
0.630174	0.641149	0.624342	0.607557	0.59079	0.574052	0.557343	0.344989	0.328326
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.031509	0.032057	0.031217	0.030378	0.02954	0.028703	0.027867	0.017249	0.016416

2101

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0.018016								
0.018016	0.018016							
0.018042	0.018016	0.018016						
0.018067	0.018042	0.018016	0.018016					
0.018093	0.018067	0.018042	0.018016	0.018016				
0.018119	0.018093	0.018067	0.018042	0.018016	0.018016			
0.018145	0.018119	0.018093	0.018067	0.018042	0.018016	0.018016		
0.018162	0.018145	0.018119	0.018093	0.018067	0.018042	0.018016	0.018016	
0.018187	0.018162	0.018145	0.018119	0.018093	0.018067	0.018042	0.018016	0.018016
0.018213	0.018187	0.018162	0.018145	0.018119	0.018093	0.018067	0.018042	0.018016
0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106	0.02103
0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109	0.02106
0.0214	0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112	0.02109
0.02148	0.0214	0.02133	0.02128	0.02123	0.0212	0.02117	0.02115	0.02112
0.02154	0.02148	0.0214	0.02133	0.02128	0.02123	0.0212	0.02117	0.02115
0.0216	0.02154	0.02148	0.0214	0.02133	0.02128	0.02123	0.0212	0.02117
0.30969	0.291107	0.272579	0.254107	0.235713	0.217384	0.199101	0.180863	0.162652
2101	2102	2103	2104	2105	2106	2107	2108	2109
2101	2102	2103	2104	2105	2106	2107	2108	2109
0.30969	0.291107	0.272579	0.254107	0.235713	0.217384	0.199101	0.180863	0.162652
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.015484	0.014555	0.013629	0.012705	0.011786	0.010869	0.009955	0.009043	0.008133

2110

2111

2112

2113

2114

2115

2116

0.018016						
0.021	0.021					
0.02103	0.021	0.021				
0.02106	0.02103	0.021	0.021			
0.02109	0.02106	0.02103	0.021	0.021		
0.02112	0.02109	0.02106	0.02103	0.021	0.021	
0.02115	0.02112	0.02109	0.02106	0.02103	0.021	0.021
0.144466	0.1263	0.10518	0.08409	0.06303	0.042	0.021
2110	2111	2112	2113	2114	2115	2116
2110	2111	2112	2113	2114	2115	2116
0.144466	0.1263	0.10518	0.08409	0.06303	0.042	0.021
0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.007223	0.006315	0.005259	0.004205	0.003152	0.0021	0.00105

Values derived from Figure 2D, Allen et al., May 2016; Based on Anthropogenic 6.7/6.9/10.008 Mt

2011	2012	2013	2014	2015	2016	2017	2018
0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009

1950-1959 Annual N2O Pulse Emission - Anthropogenic [approx 51% of 6.7/6.9/10.008 Mt]

0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0	5.1E-05	0.00010204	0.00020408	0.000337	0.000408	0.000434	0.000459

1960-1969 Annual N2O Pulse Emission - Anthropogenic [approx 59% of 6.7/6.9/10.008 Mt]

0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0	5.92E-05	0.0001184	0.0002368	0.000391	0.000474	0.000503	0.000533

1970-1979 Annual N2O Pulse Emission - Anthropogenic [approx 67% of 6.7/6.9/10.008 Mt]

0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0	6.74E-05	0.00013472	0.00026944	0.000445	0.000539	0.000573	0.000606

1980-1989 Annual N2O Pulse Emission - Anthropogenic [approx 76% of 6.7/6.9/10.008 Mt]

0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0	7.55E-05	0.00015104	0.00030208	0.000498	0.000604	0.000642	0.00068

1990-1999 Annual N2O Pulse Emission - Anthropogenic [approx 84% of 6.7/6.9/10.008 Mt]

0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0	8.37E-05	0.00016736	0.00033472	0.000552	0.000669	0.000711	0.000753

2000- 2010 Annual N2O Pulse Emission - Anthropogenic [approx 92% of 6.7/6.9/10.008 Mt]

0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0	9.18E-05	0.00018368	0.00036736	0.000606	0.000735	0.000781	0.000827

2011-2016 Annual N2O Pulse Emission - Anthropogenic [100% of 6.7/6.9/10.008 Mt]

0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009
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	1950	1951	1952	1953	1954	1955	1956
1950	0	0.00005102	0.00010204	0.000204	0.000337	0.000408	0.000434

1951	0	0.00005102	0.000102	0.000204	0.000337	0.000408
1952		0	5.1E-05	0.000102	0.000204	0.000337
1953			0	5.1E-05	0.000102	0.000204
1954				0	5.1E-05	0.000102
1955					0	5.1E-05
1956						0
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Sum 0 0.00005102 0.00015306 0.000357 0.000694 0.001102 0.001536

Year 1950 1951 1952 1953 1954 1955 1956

Year 1950 1951 1952 1953 1954 1955 1956

Sum 0 0.00005102 0.00015306 0.000357 0.000694 0.001102 0.001536

LSSC % 0.53 0.53 0.53 0.53 0.53 0.53 0.53

LSSC Value 0 2.70406E-05 8.11218E-05 0.000189 0.000368 0.000584 0.000814

LSSC = Livestock Supply Chains

It N2O Pulse in 2011 - Global Surface Temperature Change in Degrees Celsius; assume pulse emissi

2019	2020	2021	2022	2023	2024	2025	2026	2027
0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126

0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0.000497	0.00051	0.000536	0.000561	0.000582	0.000597	0.000612	0.000628	0.000643

0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0.000577	0.000592	0.000622	0.000651	0.000675	0.000693	0.00071	0.000728	0.000746

0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0.000657	0.000674	0.000707	0.000741	0.000768	0.000788	0.000808	0.000829	0.000849

0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0.000736	0.000755	0.000793	0.000831	0.000861	0.000884	0.000906	0.000929	0.000952

0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0.000816	0.000837	0.000879	0.00092	0.000954	0.000979	0.001004	0.001029	0.001054

0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0.000895	0.000918	0.000964	0.00101	0.001047	0.001075	0.001102	0.00113	0.001157

0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126
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1957	1958	1959	1960	1961	1962	1963	1964	1965
0.000459	0.000497	0.00051	0.000536	0.000561	0.000582	0.000597	0.000612	0.000628

0.001995	0.002492	0.003003	0.003538	0.004108	0.004706	0.005335	0.006002	0.006694
1957	1958	1959	1960	1961	1962	1963	1964	1965
1957	1958	1959	1960	1961	1962	1963	1964	1965
0.001995	0.002492	0.003003	0.003538	0.004108	0.004706	0.005335	0.006002	0.006694
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.001057	0.001321	0.001591	0.001875	0.002177	0.002494	0.002828	0.003181	0.003548

on occurs on Jan 1 of Emission Year; analysis has applied associated temperature change values on

2028	2029	2030	2031	2032	2033	2034	2035	2036
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0.000658	0.000668	0.000679	0.000689	0.000699	0.000704	0.000709	0.000714	0.000719
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0.000764	0.000776	0.000787	0.000799	0.000811	0.000817	0.000823	0.000829	0.000835
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0.000869	0.000882	0.000896	0.000909	0.000923	0.00093	0.000936	0.000943	0.00095
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0.000974	0.000989	0.001004	0.00102	0.001035	0.001042	0.00105	0.001057	0.001065
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0.001079	0.001096	0.001113	0.00113	0.001146	0.001155	0.001163	0.001172	0.00118
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0.001185	0.001203	0.001221	0.00124	0.001258	0.001267	0.001277	0.001286	0.001295
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
1966	1967	1968	1969	1970	1971	1972	1973	1974
0.000643	0.000658	0.000668	0.000679	0.000689	0.000699	0.000704	0.000709	0.000714

0.007407	0.008139	0.008887	0.009647	0.010422	0.011219	0.012033	0.01287	0.013736
1966	1967	1968	1969	1970	1971	1972	1973	1974
1966	1967	1968	1969	1970	1971	1972	1973	1974
0.007407	0.008139	0.008887	0.009647	0.010422	0.011219	0.012033	0.01287	0.013736
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.003926	0.004313	0.00471	0.005113	0.005524	0.005946	0.006377	0.006821	0.00728

Jan 1 of following (post-pulse) years.

2037	2038	2039	2040	2041	2042	2043	2044	2045
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0.000724	0.00073	0.000735	0.00074	0.000724	0.000709	0.000699	0.000689	0.000679
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0.000841	0.000847	0.000852	0.000858	0.000841	0.000823	0.000811	0.000799	0.000787
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0.000957	0.000963	0.00097	0.000977	0.000957	0.000936	0.000923	0.000909	0.000896
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0.001072	0.00108	0.001087	0.001095	0.001072	0.00105	0.001035	0.00102	0.001004
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0.001188	0.001197	0.001205	0.001213	0.001188	0.001163	0.001146	0.00113	0.001113
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0.001304	0.001313	0.001322	0.001332	0.001304	0.001277	0.001258	0.00124	0.001221
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
1975	1976	1977	1978	1979	1980	1981	1982	1983
0.000719	0.000724	0.00073	0.000735	0.00074	0.000724	0.000709	0.000699	0.000689

0.014622	0.015519	0.016427	0.017349	0.018279	0.019199	0.020118	0.02104	0.02197
1975	1976	1977	1978	1979	1980	1981	1982	1983
1975	1976	1977	1978	1979	1980	1981	1982	1983
0.014622	0.015519	0.016427	0.017349	0.018279	0.019199	0.020118	0.02104	0.02197
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.007749	0.008225	0.008706	0.009195	0.009688	0.010176	0.010663	0.011151	0.011644

2046	2047	2048	2049	2050	2051	2052	2053	2054
0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121

0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0.000668	0.000658	0.000648	0.000643	0.000638	0.000633	0.000628	0.000622	0.000617

0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0.000776	0.000764	0.000752	0.000746	0.00074	0.000734	0.000728	0.000722	0.000716

0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0.000882	0.000869	0.000855	0.000849	0.000842	0.000835	0.000829	0.000822	0.000815

0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0.000989	0.000974	0.000959	0.000952	0.000944	0.000936	0.000929	0.000921	0.000914

0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0.001096	0.001079	0.001063	0.001054	0.001046	0.001038	0.001029	0.001021	0.001013

0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0.001203	0.001185	0.001166	0.001157	0.001148	0.001139	0.00113	0.00112	0.001111

0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121
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1984	1985	1986	1987	1988	1989	1990	1991	1992
0.000679	0.000668	0.000658	0.000648	0.000643	0.000638	0.000633	0.000628	0.000622

0.022915	0.023864	0.024811	0.025755	0.026702	0.027648	0.028593	0.029544	0.0305
1984	1985	1986	1987	1988	1989	1990	1991	1992
1984	1985	1986	1987	1988	1989	1990	1991	1992
0.022915	0.023864	0.024811	0.025755	0.026702	0.027648	0.028593	0.029544	0.0305
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.012145	0.012648	0.01315	0.01365	0.014152	0.014654	0.015154	0.015658	0.016165

2055	2056	2057	2058	2059	2060	2061	2062	2063
0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112

0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0.000612	0.000607	0.000602	0.000597	0.000592	0.000587	0.000582	0.000577	0.000571

0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0.00071	0.000704	0.000699	0.000693	0.000687	0.000681	0.000675	0.000669	0.000663

0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0.000808	0.000802	0.000795	0.000788	0.000781	0.000775	0.000768	0.000761	0.000754

0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0.000906	0.000899	0.000891	0.000884	0.000876	0.000868	0.000861	0.000853	0.000846

0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0.001004	0.000996	0.000987	0.000979	0.000971	0.000962	0.000954	0.000946	0.000937

0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0.001102	0.001093	0.001084	0.001075	0.001065	0.001056	0.001047	0.001038	0.001029

0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112
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1993	1994	1995	1996	1997	1998	1999	2000	2001
0.000617	0.000612	0.000607	0.000602	0.000597	0.000592	0.000587	0.000582	0.000577

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0.03147	0.032457	0.033452	0.034447	0.035443	0.036442	0.03744	0.038434	0.039435
1993	1994	1995	1996	1997	1998	1999	2000	2001
1993	1994	1995	1996	1997	1998	1999	2000	2001
0.03147	0.032457	0.033452	0.034447	0.035443	0.036442	0.03744	0.038434	0.039435
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.016679	0.017202	0.017729	0.018257	0.018785	0.019314	0.019843	0.02037	0.0209

2064	2065	2066	2067	2068	2069	2070	2071	2072
0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104

0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0.000566	0.000561	0.000556	0.000551	0.000546	0.000541	0.000536	0.000536	0.000531

0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0.000657	0.000651	0.000645	0.000639	0.000633	0.000628	0.000622	0.000622	0.000616

0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0.000748	0.000741	0.000734	0.000727	0.000721	0.000714	0.000707	0.000707	0.000701

0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0.000838	0.000831	0.000823	0.000816	0.000808	0.000801	0.000793	0.000793	0.000785

0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0.000929	0.00092	0.000912	0.000904	0.000895	0.000887	0.000879	0.000879	0.00087

0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0.001019	0.00101	0.001001	0.000992	0.000983	0.000974	0.000964	0.000964	0.000955

0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104
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2002	2003	2004	2005	2006	2007	2008	2009	2010
0.000571	0.000566	0.000561	0.000556	0.000551	0.000546	0.000541	0.000536	0.000536

0.000184	0.000367	0.000606	0.000735	0.000781	0.000827	0.000895	0.000918	0.000964
9.18E-05	0.000184	0.000367	0.000606	0.000735	0.000781	0.000827	0.000895	0.000918
0	9.18E-05	0.000184	0.000367	0.000606	0.000735	0.000781	0.000827	0.000895
	0	9.18E-05	0.000184	0.000367	0.000606	0.000735	0.000781	0.000827
		0	9.18E-05	0.000184	0.000367	0.000606	0.000735	0.000781
			0	9.18E-05	0.000184	0.000367	0.000606	0.000735
				0	9.18E-05	0.000184	0.000367	0.000606
					0	9.18E-05	0.000184	0.000367
						0	9.18E-05	0.000184
							0	9.18E-05
								0

0.04044	0.041457	0.042491	0.043532	0.044573	0.045613	0.046656	0.047696	0.048738
2002	2003	2004	2005	2006	2007	2008	2009	2010
2002	2003	2004	2005	2006	2007	2008	2009	2010
0.04044	0.041457	0.042491	0.043532	0.044573	0.045613	0.046656	0.047696	0.048738
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.021433	0.021972	0.02252	0.023072	0.023623	0.024175	0.024728	0.025279	0.025831

2073	2074	2075	2076	2077	2078	2079	2080	2081
0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001

0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0.000531	0.000526	0.000526	0.00052	0.00052	0.000515	0.000515	0.00051	0.00051

0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0.000616	0.00061	0.00061	0.000604	0.000604	0.000598	0.000598	0.000592	0.000592

0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0.000701	0.000694	0.000694	0.000687	0.000687	0.00068	0.00068	0.000674	0.000674

0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0.000785	0.000778	0.000778	0.00077	0.00077	0.000763	0.000763	0.000755	0.000755

0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0.00087	0.000862	0.000862	0.000854	0.000854	0.000845	0.000845	0.000837	0.000837

0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0.000955	0.000946	0.000946	0.000937	0.000937	0.000928	0.000928	0.000918	0.000918

0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001
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2011	2012	2013	2014	2015	2016	2017	2018	2019
0.000531	0.000531	0.000526	0.000526	0.00052	0.00052	0.000515	0.000515	0.00051

0.00101	0.001047	0.001075	0.001102	0.00113	0.001157	0.001185	0.001203	0.001221
0.000964	0.00101	0.001047	0.001075	0.001102	0.00113	0.001157	0.001185	0.001203
0.000918	0.000964	0.00101	0.001047	0.001075	0.001102	0.00113	0.001157	0.001185
0.000895	0.000918	0.000964	0.00101	0.001047	0.001075	0.001102	0.00113	0.001157
0.000827	0.000895	0.000918	0.000964	0.00101	0.001047	0.001075	0.001102	0.00113
0.000781	0.000827	0.000895	0.000918	0.000964	0.00101	0.001047	0.001075	0.001102
0.000735	0.000781	0.000827	0.000895	0.000918	0.000964	0.00101	0.001047	0.001075
0.000606	0.000735	0.000781	0.000827	0.000895	0.000918	0.000964	0.00101	0.001047
0.000367	0.000606	0.000735	0.000781	0.000827	0.000895	0.000918	0.000964	0.00101
0.000184	0.000367	0.000606	0.000735	0.000781	0.000827	0.000895	0.000918	0.000964
9.18E-05	0.000184	0.000367	0.000606	0.000735	0.000781	0.000827	0.000895	0.000918
0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009	0.000975
	0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085	0.0009
		0	0.0001	0.0002	0.0004	0.00066	0.0008	0.00085
			0	0.0001	0.0002	0.0004	0.00066	0.0008
				0	0.0001	0.0002	0.0004	0.00066
					0	0.0001	0.0002	0.0004
0.049776	0.050823	0.051874	0.052941	0.054023	0.055118	0.056211	0.057208	0.058107
2011	2012	2013	2014	2015	2016	2017	2018	2019
2011	2012	2013	2014	2015	2016	2017	2018	2019
0.049776	0.050823	0.051874	0.052941	0.054023	0.055118	0.056211	0.057208	0.058107
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.026381	0.026936	0.027493	0.028059	0.028632	0.029212	0.029792	0.03032	0.030797

0.00124	0.001258	0.001267	0.001277	0.001286	0.001295	0.001304	0.001313	0.001322
0.001221	0.00124	0.001258	0.001267	0.001277	0.001286	0.001295	0.001304	0.001313
0.001203	0.001221	0.00124	0.001258	0.001267	0.001277	0.001286	0.001295	0.001304
0.001185	0.001203	0.001221	0.00124	0.001258	0.001267	0.001277	0.001286	0.001295
0.001157	0.001185	0.001203	0.001221	0.00124	0.001258	0.001267	0.001277	0.001286
0.00113	0.001157	0.001185	0.001203	0.001221	0.00124	0.001258	0.001267	0.001277
0.001102	0.00113	0.001157	0.001185	0.001203	0.001221	0.00124	0.001258	0.001267
0.001075	0.001102	0.00113	0.001157	0.001185	0.001203	0.001221	0.00124	0.001258
0.001047	0.001075	0.001102	0.00113	0.001157	0.001185	0.001203	0.001221	0.00124
0.00101	0.001047	0.001075	0.001102	0.00113	0.001157	0.001185	0.001203	0.001221
0.000964	0.00101	0.001047	0.001075	0.001102	0.00113	0.001157	0.001185	0.001203
0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126	0.00129
0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123	0.00126
0.0009	0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012	0.00123
0.00085	0.0009	0.000975	0.001	0.00105	0.0011	0.00114	0.00117	0.0012
0.0008	0.00085	0.0009	0.000975	0.001	0.00105	0.0011	0.00114	0.00117
0.00066	0.0008	0.00085	0.0009	0.000975	0.001	0.00105	0.0011	0.00114

0.058805	0.059243	0.059544	0.059794	0.059994	0.060119	0.060219	0.060267	0.060267
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2020	2021	2022	2023	2024	2025	2026	2027	2028
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2020	2021	2022	2023	2024	2025	2026	2027	2028
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0.058805	0.059243	0.059544	0.059794	0.059994	0.060119	0.060219	0.060267	0.060267
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53

0.031166	0.031399	0.031558	0.031691	0.031797	0.031863	0.031916	0.031942	0.031941
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2091	2092	2093	2094	2095	2096	2097	2098	2099
0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009

0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009
0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102	0.5102
0.00051	0.00051	0.00051	0.00051	0.000459	0.000459	0.000459	0.000459	0.000459

0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009
0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592	0.592
0.000592	0.000592	0.000592	0.000592	0.000533	0.000533	0.000533	0.000533	0.000533

0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009
0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736	0.6736
0.000674	0.000674	0.000674	0.000674	0.000606	0.000606	0.000606	0.000606	0.000606

0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009
0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552	0.7552
0.000755	0.000755	0.000755	0.000755	0.00068	0.00068	0.00068	0.00068	0.00068

0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009
0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368	0.8368
0.000837	0.000837	0.000837	0.000837	0.000753	0.000753	0.000753	0.000753	0.000753

0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009
0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184	0.9184
0.000918	0.000918	0.000918	0.000918	0.000827	0.000827	0.000827	0.000827	0.000827

0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009
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2029	2030	2031	2032	2033	2034	2035	2036	2037
0.00051	0.00051	0.00051	0.00051	0.00051	0.000459	0.000459	0.000459	0.000459

0.001332	0.001304	0.001277	0.001258	0.00124	0.001221	0.001203	0.001185	0.001166
0.001322	0.001332	0.001304	0.001277	0.001258	0.00124	0.001221	0.001203	0.001185
0.001313	0.001322	0.001332	0.001304	0.001277	0.001258	0.00124	0.001221	0.001203
0.001304	0.001313	0.001322	0.001332	0.001304	0.001277	0.001258	0.00124	0.001221
0.001295	0.001304	0.001313	0.001322	0.001332	0.001304	0.001277	0.001258	0.00124
0.001286	0.001295	0.001304	0.001313	0.001322	0.001332	0.001304	0.001277	0.001258
0.001277	0.001286	0.001295	0.001304	0.001313	0.001322	0.001332	0.001304	0.001277
0.001267	0.001277	0.001286	0.001295	0.001304	0.001313	0.001322	0.001332	0.001304
0.001258	0.001267	0.001277	0.001286	0.001295	0.001304	0.001313	0.001322	0.001332
0.00124	0.001258	0.001267	0.001277	0.001286	0.001295	0.001304	0.001313	0.001322
0.001221	0.00124	0.001258	0.001267	0.001277	0.001286	0.001295	0.001304	0.001313
0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141	0.00142
0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014	0.00141
0.00126	0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139	0.0014
0.00123	0.00126	0.00129	0.00131	0.00133	0.00135	0.00137	0.00138	0.00139
0.0012	0.00123	0.00126	0.00129	0.00131	0.00133	0.00135	0.00137	0.00138
0.00117	0.0012	0.00123	0.00126	0.00129	0.00131	0.00133	0.00135	0.00137
0.060226	0.060152	0.060045	0.059906	0.059734	0.059479	0.0592	0.058899	0.058575
2029	2030	2031	2032	2033	2034	2035	2036	2037
2029	2030	2031	2032	2033	2034	2035	2036	2037
0.060226	0.060152	0.060045	0.059906	0.059734	0.059479	0.0592	0.058899	0.058575
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.03192	0.031881	0.031824	0.03175	0.031659	0.031524	0.031376	0.031217	0.031045

0.001157	0.001148	0.001139	0.00113	0.00112	0.001111	0.001102	0.001093	0.001084
0.001166	0.001157	0.001148	0.001139	0.00113	0.00112	0.001111	0.001102	0.001093
0.001185	0.001166	0.001157	0.001148	0.001139	0.00113	0.00112	0.001111	0.001102
0.001203	0.001185	0.001166	0.001157	0.001148	0.001139	0.00113	0.00112	0.001111
0.001221	0.001203	0.001185	0.001166	0.001157	0.001148	0.001139	0.00113	0.00112
0.00124	0.001221	0.001203	0.001185	0.001166	0.001157	0.001148	0.001139	0.00113
0.001258	0.00124	0.001221	0.001203	0.001185	0.001166	0.001157	0.001148	0.001139
0.001277	0.001258	0.00124	0.001221	0.001203	0.001185	0.001166	0.001157	0.001148
0.001304	0.001277	0.001258	0.00124	0.001221	0.001203	0.001185	0.001166	0.001157
0.001332	0.001304	0.001277	0.001258	0.00124	0.001221	0.001203	0.001185	0.001166
0.001322	0.001332	0.001304	0.001277	0.001258	0.00124	0.001221	0.001203	0.001185
0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133	0.00131
0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135	0.00133
0.00141	0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137	0.00135
0.0014	0.00141	0.00142	0.00143	0.00144	0.00145	0.00142	0.00139	0.00137
0.00139	0.0014	0.00141	0.00142	0.00143	0.00144	0.00145	0.00142	0.00139
0.00138	0.00139	0.0014	0.00141	0.00142	0.00143	0.00144	0.00145	0.00142
0.058229	0.057871	0.057476	0.057066	0.056643	0.056205	0.055746	0.055272	0.054786
2038	2039	2040	2041	2042	2043	2044	2045	2046
2038	2039	2040	2041	2042	2043	2044	2045	2046
0.058229	0.057871	0.057476	0.057066	0.056643	0.056205	0.055746	0.055272	0.054786
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.030861	0.030672	0.030462	0.030245	0.030021	0.029789	0.029545	0.029294	0.029037

2109	2110	2111
0.00085	0.00085	0.00085

0.00085	0.00085	0.00085
0.5102	0.5102	0.5102
0.000434	0.000434	0.000434

0.00085	0.00085	0.00085
0.592	0.592	0.592
0.000503	0.000503	0.000503

0.00085	0.00085	0.00085
0.6736	0.6736	0.6736
0.000573	0.000573	0.000573

0.00085	0.00085	0.00085
0.7552	0.7552	0.7552
0.000642	0.000642	0.000642

0.00085	0.00085	0.00085
0.8368	0.8368	0.8368
0.000711	0.000711	0.000711

0.00085	0.00085	0.00085
0.9184	0.9184	0.9184
0.000781	0.000781	0.000781

0.00085	0.00085	0.00085
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2047	2048	2049	2050	2051	2052	2053	2054	2055
0.000434	0.000434	0.000434	0.000434					

0.001075	0.001065	0.001056	0.001047	0.001038	0.001029	0.001019	0.00101	0.001001
0.001084	0.001075	0.001065	0.001056	0.001047	0.001038	0.001029	0.001019	0.00101
0.001093	0.001084	0.001075	0.001065	0.001056	0.001047	0.001038	0.001029	0.001019
0.001102	0.001093	0.001084	0.001075	0.001065	0.001056	0.001047	0.001038	0.001029
0.001111	0.001102	0.001093	0.001084	0.001075	0.001065	0.001056	0.001047	0.001038
0.00112	0.001111	0.001102	0.001093	0.001084	0.001075	0.001065	0.001056	0.001047
0.00113	0.00112	0.001111	0.001102	0.001093	0.001084	0.001075	0.001065	0.001056
0.001139	0.00113	0.00112	0.001111	0.001102	0.001093	0.001084	0.001075	0.001065
0.001148	0.001139	0.00113	0.00112	0.001111	0.001102	0.001093	0.001084	0.001075
0.001157	0.001148	0.001139	0.00113	0.00112	0.001111	0.001102	0.001093	0.001084
0.001166	0.001157	0.001148	0.001139	0.00113	0.00112	0.001111	0.001102	0.001093
0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121	0.0012
0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122	0.00121
0.00133	0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123	0.00122
0.00135	0.00133	0.00131	0.00129	0.00127	0.00126	0.00125	0.00124	0.00123
0.00137	0.00135	0.00133	0.00131	0.00129	0.00127	0.00126	0.00125	0.00124
0.00139	0.00137	0.00135	0.00133	0.00131	0.00129	0.00127	0.00126	0.00125
0.054325	0.053891	0.053474	0.053071	0.052252	0.051452	0.050668	0.049896	0.04913
2047	2048	2049	2050	2051	2052	2053	2054	2055
2047	2048	2049	2050	2051	2052	2053	2054	2055
0.054325	0.053891	0.053474	0.053071	0.052252	0.051452	0.050668	0.049896	0.04913
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.028792	0.028562	0.028341	0.028128	0.027694	0.027269	0.026854	0.026445	0.026039

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0.000992	0.000983	0.000974	0.000964	0.000964	0.000955	0.000955	0.000946	0.000946
0.001001	0.000992	0.000983	0.000974	0.000964	0.000964	0.000955	0.000955	0.000946
0.00101	0.001001	0.000992	0.000983	0.000974	0.000964	0.000964	0.000955	0.000955
0.001019	0.00101	0.001001	0.000992	0.000983	0.000974	0.000964	0.000964	0.000955
0.001029	0.001019	0.00101	0.001001	0.000992	0.000983	0.000974	0.000964	0.000964
0.001038	0.001029	0.001019	0.00101	0.001001	0.000992	0.000983	0.000974	0.000964
0.001047	0.001038	0.001029	0.001019	0.00101	0.001001	0.000992	0.000983	0.000974
0.001056	0.001047	0.001038	0.001029	0.001019	0.00101	0.001001	0.000992	0.000983
0.001065	0.001056	0.001047	0.001038	0.001029	0.001019	0.00101	0.001001	0.000992
0.001075	0.001065	0.001056	0.001047	0.001038	0.001029	0.001019	0.00101	0.001001
0.001084	0.001075	0.001065	0.001056	0.001047	0.001038	0.001029	0.001019	0.00101
0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112	0.00111
0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112
0.00121	0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113
0.00122	0.00121	0.0012	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114
0.00123	0.00122	0.00121	0.0012	0.00119	0.00118	0.00117	0.00116	0.00115
0.00124	0.00123	0.00122	0.00121	0.0012	0.00119	0.00118	0.00117	0.00116
0.048373	0.047624	0.046883	0.046149	0.045421	0.044631	0.043851	0.043079	0.042308
2056	2057	2058	2059	2060	2061	2062	2063	2064
2056	2057	2058	2059	2060	2061	2062	2063	2064
0.048373	0.047624	0.046883	0.046149	0.045421	0.044631	0.043851	0.043079	0.042308
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.025638	0.025241	0.024848	0.024459	0.024073	0.023655	0.023241	0.022832	0.022423

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0.000937	0.000937	0.000928	0.000928	0.000918	0.000918	0.000918	0.000918	0.000918
0.000946	0.000937	0.000937	0.000928	0.000928	0.000918	0.000918	0.000918	0.000918
0.000946	0.000946	0.000937	0.000937	0.000928	0.000928	0.000918	0.000918	0.000918
0.000955	0.000946	0.000946	0.000937	0.000937	0.000928	0.000928	0.000918	0.000918
0.000955	0.000955	0.000946	0.000946	0.000937	0.000937	0.000928	0.000928	0.000918
0.000964	0.000955	0.000955	0.000946	0.000946	0.000937	0.000937	0.000928	0.000928
0.000964	0.000964	0.000955	0.000955	0.000946	0.000946	0.000937	0.000937	0.000928
0.000974	0.000964	0.000964	0.000955	0.000955	0.000946	0.000946	0.000937	0.000937
0.000983	0.000974	0.000964	0.000964	0.000955	0.000955	0.000946	0.000946	0.000937
0.000992	0.000983	0.000974	0.000964	0.000964	0.000955	0.000955	0.000946	0.000946
0.001001	0.000992	0.000983	0.000974	0.000964	0.000964	0.000955	0.000955	0.000946
0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104	0.00104
0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105	0.00104
0.00112	0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105	0.00105
0.00113	0.00112	0.00111	0.0011	0.00109	0.00108	0.00107	0.00106	0.00105
0.00114	0.00113	0.00112	0.00111	0.0011	0.00109	0.00108	0.00107	0.00106
0.00115	0.00114	0.00113	0.00112	0.00111	0.0011	0.00109	0.00108	0.00107
0.041545	0.040792	0.040047	0.039311	0.038584	0.037861	0.037079	0.036307	0.035544
2065	2066	2067	2068	2069	2070	2071	2072	2073
2065	2066	2067	2068	2069	2070	2071	2072	2073
0.041545	0.040792	0.040047	0.039311	0.038584	0.037861	0.037079	0.036307	0.035544
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.022019	0.02162	0.021225	0.020835	0.020449	0.020066	0.019652	0.019243	0.018838

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0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918
0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918
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0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918
0.000928	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918
0.000928	0.000928	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918
0.000937	0.000928	0.000928	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918
0.000937	0.000937	0.000928	0.000928	0.000918	0.000918	0.000918	0.000918	0.000918
0.000946	0.000937	0.000937	0.000928	0.000928	0.000918	0.000918	0.000918	0.000918
0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001	0.001
0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001	0.001
0.00104	0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101	0.001
0.00105	0.00104	0.00104	0.00103	0.00103	0.00102	0.00102	0.00101	0.00101
0.00105	0.00105	0.00104	0.00104	0.00103	0.00103	0.00102	0.00102	0.00101
0.00106	0.00105	0.00105	0.00104	0.00104	0.00103	0.00103	0.00102	0.00102
0.034783	0.034031	0.033289	0.032546	0.031813	0.03108	0.030352	0.029555	0.028767
2074	2075	2076	2077	2078	2079	2080	2081	2082
2074	2075	2076	2077	2078	2079	2080	2081	2082
0.034783	0.034031	0.033289	0.032546	0.031813	0.03108	0.030352	0.029555	0.028767
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.018435	0.018037	0.017643	0.01725	0.016861	0.016472	0.016087	0.015664	0.015247

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0.000918	0.000827	0.000827	0.000827	0.000827	0.000827	0.000827	0.000781	0.000781
0.000918	0.000918	0.000827	0.000827	0.000827	0.000827	0.000827	0.000827	0.000781
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0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000827
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0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918	0.000918
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.00101	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.00101	0.00101	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.02798	0.027194	0.026408	0.025633	0.024857	0.024082	0.023306	0.022526	0.021677
2083	2084	2085	2086	2087	2088	2089	2090	2091
2083	2084	2085	2086	2087	2088	2089	2090	2091
0.02798	0.027194	0.026408	0.025633	0.024857	0.024082	0.023306	0.022526	0.021677
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.014829	0.014413	0.013996	0.013585	0.013174	0.012763	0.012352	0.011939	0.011489

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0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781
0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781
0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781
0.000827	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781
0.000827	0.000827	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781
0.000827	0.000827	0.000827	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781
0.000827	0.000827	0.000827	0.000827	0.000781	0.000781	0.000781	0.000781	0.000781
0.000827	0.000827	0.000827	0.000827	0.000827	0.000781	0.000781	0.000781	0.000781
0.000827	0.000827	0.000827	0.000827	0.000827	0.000827	0.000781	0.000781	0.000781
0.000918	0.000827	0.000827	0.000827	0.000827	0.000827	0.000827	0.000781	0.000781
0.000918	0.000918	0.000827	0.000827	0.000827	0.000827	0.000827	0.000827	0.000781
0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009
0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009	0.0009
0.001	0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009	0.0009
0.001	0.001	0.001	0.001	0.001	0.001	0.0009	0.0009	0.0009
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0009	0.0009
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0009
0.020828	0.019979	0.01913	0.018273	0.017416	0.016559	0.015701	0.014844	0.013987
2092	2093	2094	2095	2096	2097	2098	2099	2100
2092	2093	2094	2095	2096	2097	2098	2099	2100
0.020828	0.019979	0.01913	0.018273	0.017416	0.016559	0.015701	0.014844	0.013987
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.011039	0.010589	0.010139	0.009685	0.00923	0.008776	0.008322	0.007867	0.007413

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0.000781								
0.000781	0.000781							
0.000781	0.000781	0.000781						
0.000781	0.000781	0.000781	0.000781					
0.000781	0.000781	0.000781	0.000781	0.000781				
0.000781	0.000781	0.000781	0.000781	0.000781	0.000781			
0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781		
0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	
0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781
0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781	0.000781
0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085
0.0009	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085
0.0009	0.0009	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085
0.0009	0.0009	0.0009	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085
0.0009	0.0009	0.0009	0.0009	0.00085	0.00085	0.00085	0.00085	0.00085
0.0009	0.0009	0.0009	0.0009	0.0009	0.00085	0.00085	0.00085	0.00085
0.013156	0.012326	0.011495	0.010664	0.009834	0.009003	0.008223	0.007442	0.006661
2101	2102	2103	2104	2105	2106	2107	2108	2109
2101	2102	2103	2104	2105	2106	2107	2108	2109
0.013156	0.012326	0.011495	0.010664	0.009834	0.009003	0.008223	0.007442	0.006661
0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.006973	0.006533	0.006092	0.005652	0.005212	0.004772	0.004358	0.003944	0.00353

2110

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0.000781						
0.00085	0.00085					
0.00085	0.00085	0.00085				
0.00085	0.00085	0.00085	0.00085			
0.00085	0.00085	0.00085	0.00085	0.00085		
0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	
0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085
0.005881	0.0051	0.00425	0.0034	0.00255	0.0017	0.00085
2110	2111	2112	2113	2114	2115	2116
2110	2111	2112	2113	2114	2115	2116
0.005881	0.0051	0.00425	0.0034	0.00255	0.0017	0.00085
0.53	0.53	0.53	0.53	0.53	0.53	0.53
0.003117	0.002703	0.002253	0.001802	0.001352	0.000901	0.000451