

Expert Reviewer: GRAY

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						** If you are cutting and pasting comments from another application into the review form, please DOUBLE-CLICK in the appropriate spreadsheet comment cell before pasting your comment. Only ONE comment per row, please. **
1	6	2	6	2	6	Replace "is likely" by "seems possible"
2	6	2	6	2	6	Delete "all"
3	6	2	7	2	7	Delete "also significantly"
4	6	2	13	2	13	Delete "far"
5	6	2	13	2	13	Delete "natural"
6	6	2	18	2	18	Replace "It is virtually certain" with "Observations so far indicate"
7	6	2	18	2	18	Delete "in radiative forcing"
8	6	2	18	2	18	Replace "well-mixed" by "minor". They are cetrtyainly NOT "well-mixed"
9	6	2	22	2	22	Replace "the current warming will be mitigated by a natural" by " of a current"
10	6	2	23	2	23	Replace "very likely" by "generally expected"
11	6	2	23	2	23	Delete "naturally"
12	6	2	26	2	29	Delete this paragraph. The authors of this Chapter are not qualified to speculate on possible "projected" temperatures
13	6	2	31	2	31	Insert after "models" "based on the unlikely supposition that greenhouse gases are the exclusive influence on the climate"
14	6	2	31	2	31	Insert after "proved" "surprisingly"
15	6	2	31	2	31	Insert after "simulating" "some of"
16	6	2	33	2	33	Replace "adequately repring" by "giving some clues to"
17	6	2	37	2	37	Replace "likely" by "may have"
18	6	2	39	2	39	Delete "It is unlikely that"
19	6	2	39	2	39	Replace "were" with "could hardly have been"
20	6	2	40	2	40	Replace "instead very likely" by "possibly involved"
21	6	2	43	2	43	eplace "are very likely" with "could be"
22	6	2	44	2	44	Replace "still under discusion" with "unknown"
23	6	2	49	2	49	Replace "is likely unprecedented" by "has not been identified"
24	6	2	50	2	50	Replace is likely" with "could possibly be"
25	6	2	50	2	50	Delete "enhanced"
26	6	2	53	2	53	Replace "likely" with "may have"
27	6	2	54	2	54	Replace "was likely" with could have been"
28	6	3	1	3	1	Replace "likely also" with "may also have"
29	6	3	14	3	14	Insert after "synchronously" "but our poor samples makes it unwise to derive averages"

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30	6	3	14	3	16	Delete from "Consistent" on line 14 to "century" on line 16. There are simply not enough samples to make such a confident statement.
31	6	3	20	3	20	Replace "cannot be attributed " with "is difficult to attribute"
32	6	3	24	3	24	Insert after "models" "based on the unlikely supposition that greenhouse gases are the exclusive influence on the climate"
33	6	3	24	3	24	Insert after "are" "surprisingly"
34	6	3	24	3	24	Replace "most robust" with "some"
35	6	3	25	3	25	Replace "observed" by "inferred"
36	6	3	30	3	32	Delete this paragraph..We do not need to know "no evidence". The "global warming" of the past 100 years was contaminated by sample bias, from proximity of measuring equipment to human activity
37	6	3	36	3	36	Replace "under global warming" by "if similat conditions recur"
38	6	3	49	3	49	Replace "is virtually certain" by "seems probable that"
39	6	3	49	3	49	Insert after "in" "the minor greenhouse gases"
40	6	3	51	3	53	Delete from "It is very likely" in line 51 to "era" in line 53. This sentence is misleading. What is important is the total radiative forcing, including contributions from the major greenhouse gas, water vapour and clouds, not that due to the minor components only, let alone such natural contributors such as the sun and volcanos".
41	6	3	55	3	55	Replace "very likely" with "possible"
42	6	4	2	4	2	Replace "peaked around 1980" with"has fallen since 1983, and is currently hovering around zero" I suggest you read Chapter 2
43	6	4	2	4	2	Replace "when it was very likely" with "The current average concentration is possibly"
44	6	4	3	4	3	Replace "higher than " by "as high as"
45	6	4	5	4	5	Replace "likely" with "possible"
46	6	4	9	4	10	Delete "very likely"
47	6	4	14	4	14	Add at end "The distribution of samples is, however, still very poor, so there is doubt whether the "averages" can be trusted"
48	6	4	21	4	21	Add at end "Again, the poor sample distribution lends considerable doubt to this conclusion"
49	6	4	24	4	24	Replace from "has provided To "very likely" by "shows"
50	6	4	26	4	28	Replace from."It is also" on line 28 to "last 1300 years" on line 28 with " This is, of course, the results of a concentration of measuring equipment to the vicinity of human activity"
51	6	4	29	4	29	Replace "most robust" by "more believeable"
52	6	4	33	4	34	Delete from ".that" on line 33 to "context" on line 34
53	6	4	37	4	37	Replace "are" with "can be adjusted to be"

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54	6	4	38	4	39	Delete both lines. It is untrue. The rise can be explained by the biased sample, because most measuring equipment is situated near human activities, See Gray, 2000 "The Cause of Global Warming", Energy and Environment Vol 11 pages 629; McKJitrick and Michaels 2004 "A test of corrections for extraneous signals in gridded surface temperature data". Climate Research Vol26 pages 159-173"
55	6	4	44	4	44	Replace "are broadly consistent with" by "show little relation to"
56	6	4	52	4	52	Replace "It is likely" with "There is evidence"
57	6	5	9	5	11	Delete from "It is likely" on line 9 to "feedbacks" on line 11. There is no evidence for this
58	6	5	13	5	13	Delete "very likely"
59	6	5	14	5	14	Replace "climate change" with "changes in the climate"
60	6	5	14	5	14	Delete "to climate change"
61	6	5	16	5	16	Delete "It is virtual;ly certain that"
62	6	5	17	5	17	Insert after "were" "probably"
63	6	5	19	5	19	Delete "consistent with model results" They are not "consistent."
64	6	5	22	5	22	Delete "It is very likely that"
65	6	5	22	5	22	Replace "were primarily" with "could have been"
66	6	5	25	5	29	Delete this whole paragraph. I just do not believe that this is true. You cannot possibly simulate the major natural influences such as continental drift, solar changes, volcanic eruptions and ocean circulation changes, whose effects are largely unknown
67	6	2		5		This whole section consists of a succession of extravagant extreme claims of almost complete knowledge of paleoclimate processes which is not supported by credible literature.
68	6	6	28	6	28	Delete "state of the art"
69	6	6	51	6	51	Insert after "mechanics" "but possible feedbacks have been little explored"
70	6	6	57	6	57	Insert after "ice" "Unfortunately, the very poor sample distribution means we have little knowledge of truly global concentrations"
71	6	7	2	7	2	Insert after "sampling" "but these also suffer from bias, as they are mainly measured over the sea whereas the paleo samples are on land"
72	6	7	5	7	7	Delete from "This potentially" on line 5 to "understood" on line 7 This is unnecessary guff
73	6	7	15	7	15	Insert after "years)" "but only, of course, for summer, and for constant presumed precipitation and nutrients"
74	6	7	17	7	17	Replace "not always" by "rarely"
75	6	7	17	7	18	Delete from "Again" on line 17 to "uncertainty" on line 18
76	6	8	34	8	34	Replace "important" with "vital"
77	6	9	43	9	43	Add at end "the more extreme"
78	6	9	44	9	44	Replace "will" with "could possibly"
79	6	11	20	11	20	Insert after "Antarctic temperature". "but often anticipating it"

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80	6	11	45	11	45	Insert after "years" "at least for the very few poorly distributed samples available"
81	6	11	46	11	46	Insert after : "gases" "for these samples at least":
82	6	11	49	11	49	Delete "large and increaseing"
83	6	11	53	11	53	Insert after "gases" "but of course, changes in the main greenhouse gas, water vapour, are unknown"
84	6	11	57	11	57	Insert after "years" "but we are ignorant of the possible changes in the main greenhouse gas, water vapour"
85	6	12	6	12	6	Insert after "CO2" "as determined on these unrepresentative samples"
86	6	12	8	12	9	Replace " peaked around 1980 .when it" with "in 1984, when it was first measured with modern instruments"
87	6	12	9	12	9	Insert after "Era" "baut it has fallen ever since and the concentratuion seems to be about to decline""
88	6	12	9	12	9	Insert after "rate" "for the year 2000"
89	6	12	17	12	17	Insert after "confidence" "but several feedback mechanisms are less well known"
90	6	14	13	14	13	Delete "consistently"
91	6	15	36	15	36	Add at end "It should be remembered that intercomparison exercises can often do little more than confirm common erors"
92	6	17	56	17	56	Replace from "could mitigate" to "natural" with "provide a current"
93	6	22	33	22	33	Insert after "gases" "but not, of course, the major greenhouse gas, water vapour, or clouds"
94	6	22	43	22	43	Insert after "atmospheric" . "minor"
95	6	23	36	23	36	Add at end "But. Of course. None pf these data are really "globally synchronous" because of the poor sample distribution"
96	6	23	44	23	45	Delete from "However" on line 43 to "warming" on line 45> You are in no position to make a statement on any paleo measures "globally" since yous samples are so few and distributed in an unrepresentative manner. The current ones are equally unrepresentative becaius they are predoiminantly close to huiman activity, so the two sets cannot be reliably compared
97	6	23	45	23	45	Add at end "poor distribution of samples,"
98	6	23	52	23	52	Replace "climate change" with "change of climate"
99	6	27	24	27	24	Insert after "marine)" "but they do not include a contribution from the bias due to poor spatial sampling"
100	6	27	28	27	28	Insert after "variability" "and is subject to a similar additional uncertainty from biased spatial coverage"
101	6	27	44	27	44	Insert after "century "However, this can be mostly explained by the bias caused by the proximity of measuring equipment to human activity (see McKitrick, R and P J Michaels 2004: A test of corrections for extraneous signals in gridded surface temperature data " Climate Research Vol 26, pages 159-173"
102	6	27	44	27	46	Delete from "Recent" on line 44 to "that" on line 46. It is redundant
103	6	27	46	27	46	Replace "was very likely" with "may have been"
104	6	27	53	27	53	Insert after "2004" "McIntyre & McKitrick 2003"
105	6	28	11	28	11	Add at end "They can also be regarded with suspician because of the poor distribution of samples"

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106	6	28	14	28	14	Insert after "(2003)". " showed that the number and distribution of samples was insufficient to derive a meaningful global or hemiepheric average,and they"
107	6	28	18	28	18	Delete "qualitative"
108	6	28	18	28	18	Replace "precluded" by "showed that"
109	6	28	18	28	18	Insert after "times". "is futile"
110	6	26	18	28	19	Replace "limiting the vallue" on line 18 to "review as a" on line 19 by "which means there is no legitimate"
111	6	28	20	28	20	Add at end " McIntyre and McKitrick (2003) have identified several serious errors in the calculatiions made for this paper which , when corrected, show higher tempratires for the years 1400 and 1500 than even the upwardly biased 20th century global surface temperature record"
112	6	28	41	28	41	Replace "was" by "may have been"
113	6	28	51	28	51	Add at end "There remains the bias due to poor sample size and distribution which casts doubt on the entire exercise"
114	6	35	18	35	18	Replace "good" by "strictly limited"
115	6	35	30	35	30	Add at end "The effects of various feedbacks, such as the influence of cosmic rays, or influences on cloud cover, are less well known"
116	6	36	50	36	50	Delete "generally good"
117	6	41	6	41	6	Delete "Robust" and "Key", also in the Table
118	6	50	49	50	49	Insert "Gray. V.R., 2000. "The Zcause of Global Warming" . Energy and Environment Vol 11 pages 613-629"
119	6	58	4	58	4	Insert "McKitrick, R & P.J. Michaels 2004 "A test for extraneous signals in gridded surface temperature data" Climate Research Vol 26, pages 159-173"
120	6	68	31	68	31	Insert after "cause" "since the changes in past ages of the most important greenhouse gas, water vapour are unknown"
121	6	93	12	93	12	Add "Soon and Baliunas (2003) have pointed out that the poor number and distribution of samples, particularly for the early period, is such that these reconstructions have to regarded with suspicion"
122	6	94	9	94	9	Add at end "The inadequate number and distribution of these samples, particularly for the earlier period means that the hemispheric and global averages should be regarded with suspicion (Soon & Baliunas 2003)"
123	6	95	11	95	11	Add at end "The absence of any overall temperature rise from 1350 to 2000 in the last sample suggests the possibility that sites remote from human habitation are exempt from the surface warming claimed for the 20th Century"
124	6	100	5	100	5	There needs to be an indicator of length on the vertical scale
125	6	100	5	100	5	Add at end "Records of length changes in glaciers". It should be noted that there are many glaciers that have increased in the 20th Century"

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126	6	102	20	102	20	Add "The inadequate number and distribution of these samples, particularly for the earlier period means that the hemispheric and global averages should be regarded with suspicion (Soon & Baliunas 2003)"
127	6	1	55	1	55	Delete "robust".