

Table of contents

1. Introduction.....	1
2. iceGGO-1 (CH₄).....	4
2.1. Round-robin cylinders (iceGGO-1)	4
2.2. Measurement methods (iceGGO-1)	6
2.3. Results of iceGGO-1	7
3. iceGGO-2 (CO₂).....	10
3.1. Round-robin cylinders (iceGGO-2)	10
3.2. Measurement methods (iceGGO-2)	11
3.3. Results of iceGGO-2	12
4. iceGGO-3 (CO₂).....	16
4.1. Round-robin cylinders (iceGGO-3)	16
4.2. Measurement methods (iceGGO-3)	18
4.3. Results of iceGGO-3	19
5. iceGGO-4 (CO).....	21
5.1. Round-robin cylinders (iceGGO-4)	21
5.2. Measurement methods (iceGGO-4)	22
5.3. Results of iceGGO-4	23
6. iceGGO-5 (N₂O).....	26
6.1. Round-robin cylinders (iceGGO-5)	26
6.2. Measurement methods (iceGGO-5)	27
6.3. Results of iceGGO-5	28
7. iceGGO-6 (CH₄).....	31
7.1. Round-robin cylinders (iceGGO-6)	31
7.2. Measurement methods (iceGGO-6)	32
7.3. Results of iceGGO-6	33
8. NOAA-ICP.....	36
8.1. Round-robin cylinders (NOAA-ICP)	36
8.2. Measurement methods (NOAA-ICP)	37

8.3. Results of NOAA-ICP.....	40
8.3.1. Results for CO (NOAA-ICP)	40
8.3.2. Results for CO ₂ (NOAA-ICP)	42
8.3.3. Results for CH ₄ (NOAA-ICP)	44
8.3.4. Results for N ₂ O (NOAA-ICP).....	45
9. Discussion.....	47
9.1. Measurement precisions	47
9.2. CH ₄ scale adjustment	49
9.3. CO scale adjustment.....	53
9.4. CO ₂ scale adjustment	57
9.5. CO ₂ isotope effect	60
9.6. N ₂ O scale adjustment	66
Acknowledgements.....	67
References	68