**SUPPLEMENTARY MATERIAL**

Table S1   Monthly mean CO2 and 14CO2 data measured at the 115 and 10 m elevations of the Hegyhátsál tower station. At the calculation of mean CO2 concentrations, the start and end date of 14C sampling periods were considered therefore these differ from the ones that are published online in the database of the World Data Centre for Greenhouse Gases.

|  |  |  |  |
| --- | --- | --- | --- |
| Sampling  | Sampling | Hegyhátsál 115 m  | Hegyhátsál 10 m  |
| month | start-end | CO2 (ppm) | 14C (‰) | CO2 (ppm) | 14C (‰) |
| 9/2008 | 03.09-04.10 | 386.3 | 44.1 | 393.2 | 45.0 |
| 10/2008 | 04.10-31.10 | 395.8 | 31.4 | 408.6 | 38.4 |
| 11/2008 | 31.10-29.11 | 403.7 | 36.4 | 409.8 | 37.7 |
| 12/2008 | 29.11-31.12 | 401.2 | 46.5 | 404.9 | 37.3 |
| 1/2009 | 31.12-30.01 | 405.2 | 35.4 | 408.5 | 42.6 |
| 2/2009 | 30.01-25.02 | 402.5 | 38.8 | 405.1 | 48.1 |
| 3/2009 | 25.02-01.04 | 398.6 | 47.3 | 401.3 | 34.8 |
| 4/2009 | 01.04-29.04 | 396.1 | 39.4 | 406.8 | 23.1 |
| 5/2009 | 29.04-31.05 | 389.4 | 40.4 | 397.9 | 42.0 |
| 6/2009 | 31.05-01.07 | 388.6 | 44.2 | 397.5 | 54.3 |
| 7/2009 | 01.07-31.07 | 384.0 | 46.9 | 399.8 | 49.2 |
| 8/2009 | 31.07-01.09 | 382.7 | 46.6 | 399.5 | 32.0 |
| 9/2009 | 01.09-30.09 | 386.4 | 45.1 | 405.0 | 48.5 |
| 10/2009 | 30.09-01.11 | 395.8 | 45.1 | 405.0 | 50.5 |
| 11/2009 | 01.11-30.11 | 407.7 | 18.3 | 416.5 | NA |
| 12/2009 | 30.11-31.12 | 405.7 | 37.0 | 410.0 | NA |
| 1/2010 | 31.12-01.02 | 411.0 | 23.4 | 415.0 | 14.7 |
| 2/2010 | 01.02-02.03 | 406.5 | 19.0 | 409.5 | 26.8 |
| 3/2010 | 02.03-31.03 | 400.5 | 38.5 | 403.8 | 37.8 |
| 4/2010 | 31.03-30.04 | 396.7 | 47.0 | 403.7 | 35.2 |
| 5/2010 | 30.04-08.06 | 392.4 | 34.2 | 399.2 | 27.0 |
| 6/2010 | 08.06-30.06 | 386.9 | 40.8 | 394.7 | 44.4 |
| 7/2010 | 30.06-31.07 | 386.1 | 43.0 | 401.9 | 30.2 |
| 8/2010 | 31.07-31.08 | 384.4 | 47.0 | 402.9 | 27.3 |
| 9/2010 | 31.08-30.09 | 388.2 | 39.6 | 399.7 | 31.8 |
| 10/2010 | 30.09-03.11 | 401.5 | 41.4 | 411.0 | 25.4 |
| 11/2010 | 03.11-01.12 | 409.5 | 37.9 | 415.9 | 42.0 |
| 12/2010 | 01.12-05.01 | 408.7 | 28.9 | 412.8 | 32.8 |
| 1/2011 | 05.01-02.02 | 408.1 | 22.2 | 412.9 | 23.9 |
| 2/2011 | 02.02-02.03 | 410.4 | 19.8 | 414.3 | 16.8 |
| 3/2011 | 02.03-30.03 | 403.3 | 25.9 | 407.5 | 32.2 |
| 4/2011 | 30.03-04.05 | 398.7 | 25.6 | 407.5 | 21.4 |
| 5/2011 | 04.05-01.06 | 392.1 | 24.8 | 404.2 | 30.0 |
| 6/2011 | 01.06-29.06 | 390.7 | 37.1 | 398.5 | 28.2 |
| 7/2011 | 29.06-03.08 | 387.3 | 33.8 | 399.9 | 30.5 |
| 8/2011 | 03.08-31.08 | 387.3 | NA | 405.2 | 40.5 |
| 9/2011 | 31.08-28.09 | 390.6 | 42.5 | 405.8 | 34.0 |
| 10/2011 | 28.09-02.11 | 399.7 | 36.6 | 411.1 | 37.2 |
| 11/2011 | 02.11-30.11 | 418.1 | 19.3 | 423.3 | 13.8 |
| 12/2011 | 30.11-29.12 | 408.4 | 36.3 | 414.0 | 38.7 |
| 1/2012 | 29.12-01.02 | 404.6 | 26.9 | 409.1 | 28.2 |
| 2/2012 | 01.02-29.02 | 409.7 | 14.2 | 412.4 | 9.4 |
| 3/2012 | 29.02-28.03 | 403.4 | 38.1 | 407.8 | 21.3 |
| 4/2012 | 28.03-02.05 | 402.2 | 32.3 | 406.9 | 23.1 |
| 5/2012 | 02.05-30.05 | 395.0 | 32.9 | 401.9 | 25.0 |
| 6/2012 | 30.05-27.06 | 395.9 | 23.2 | 404.8 | 28.2 |
| 7/2012 | 27.06-01.08 | 391.5 | 28.0 | 403.2 | 29.8 |
| 8/2012 | 01.08-29.08 | 391.1 | 32.8 | 410.2 | 25.2 |
| 9/2012 | 29.08-26.09 | 393.7 | 39.7 | 401.5 | 29.6 |
| 10/2012 | 26.09-31.10 | 404.4 | 21.1 | 413.3 | 16.9 |
| 11/2012 | 31.10-28.11 | 412.9 | 16.3 | 419.6 | 9.1 |
| 12/2012 | 28.11-02.01 | 412.3 | 7.4 | 416.5 | 14.1 |
| 1/2013 | 02.01-06.02 | 414.2 | 11.6 | 417.6 | 21.9 |
| 2/2013 | 06.02-06.03 | 414.3 | 29.8 | 416.5 | 19.5 |
| 3/2013 | 06.03-04.04 | 410.8 | 24.6 | 412.5 | 12.2 |
| 4/2013 | 04.04-02.05 | 406.7 | 28.6 | 412.1 | 9.8 |
| 5/2013 | 02.05-05.06 | 399.0 | 26.7 | 405.2 | 34.6 |
| 6/2013 | 05.06-03.07 | 392.5 | 22.0 | 404.2 | 16.4 |
| 7/2013 | 03.07-07.08 | 391.9 | 24.4 | 403.3 | 16.4 |
| 8/2013 | 07.08-04.09 | 392.6 | 25.0 | 404.3 | 33.4 |
| 9/2013 | 04.09-03.10 | 395.8 | 22.0 | 407.5 | 9.1 |
| 10/2013 | 03.10-06.11 | 406.8 | 16.5 | 417.1 | 16.0 |
| 11/2013 | 06.11-04.12 | 412.2 | 17.5 | 417.9 | 20.2 |
| 12/2013 | 04.12-02.01 | 416.7 | 8.8 | 419.1 | 7.1 |
| 1/2014 | 02.01-05.02 | 417.5 | 8.6 | 421.8 | 10.6 |
| 2/2014 | 05.02-05.03 | 410.4 | 7.4 | 413.6 | 13.9 |
| 3/2014 | 05.03-02.04 | 408.2 | 21.1 | 414.6 | 11.0 |
| 4/2014 | 02.04-07.05 | 404.6 | 12.8 | 412.5 | 8.0 |
| 5/2014 | 07.05-04.06 | 399.8 | NA | 407.3 | 16.4 |
| 6/2014 | 04.06-03.07 | 395.8 | 26.0 | 409.7 | 20.4 |
| 7/2014 | 03.07-06.08 | 396.9 | 16.4 | 412.8 | 19.6 |
| 8/2014 | 06.08-03.09 | 393.1 | 11.8 | 404.6 | 15.8 |
| 9/2014 | 03.09-01.10 | 401.3 | 17.5 | 414.8 | 29.3 |