REPORT ON RADIOCARBON SAMPLE

From the excavations of Ramat Hovav, two samples were submitted for radiocarbon dating. All samples were wood charcoal.
They were pretreated to remove contamination using the procedure in (*1*) and measured by Accelerator Mass Spectrometry. All samples provided enough charred remains after pre-treatment for the measurement. Based on the carbon percent (%C), provided values above 60-65% which indicate a good preserved charcoal.

The results of the measurement and pre-treatment are given in the table.
Calibrated ranges are given for ±1σ (±1standard deviation= 68.2% probability that the true age is included in the given range) and for ±2σ (±2standard deviation= 95.4% probability that the true age is included in the given range). The results of the calibrated ranges are given in the figure.

RTK #	TYPE	^{14}C age ± 1σ year BP	Calibrated age ± 1σ year	Calibrated age ± 2σ year	Collection Site	Sample ID	δ^{13}C ‰ PDB	prep%	C%
6364	charcoal	2760 ± 55	68.2% probability 975BC (8.8%) 955BC 940BC (59.4%) 835BC	95.4% probability 1040BC (95.4%) 810BC	Ramat Hovav. Area C	A5803. L309 B3023	-22.5	45.7	63.5
6365	charcoal	2770 ± 55	68.2% probability 975BC (68.2%) 840BC	95.4% probability 1050BC (95.4%) 810BC	Ramat Hovav. Area C	A5803. L318 B3042	-24.5	28	65

^{14}C age are reported in conventional radiocarbon years (before present =1950) in accordance with international convention (*2*) .

Thus all calculated ^{14}C ages have been corrected for the fractionation so as to refer the results to be equivalent with the standard δ^{13}C value of -25‰(wood).

Calibrated ages in calendar years have been obtained from the calibration tables in (*3, 4*) by means of OxCal v. 4.1.5 of Bronk Ramsey (2010) (*5, 6*).

References

1.   Yizhaq, M. (2004) in *Faculty of Chemistry* (Weizmann Institute of Science, Rehovot).
2.   Stuiver, M. & Polach, H. A. (1977) *Radiocarbon* **19,** 355-363.
3.   Reimer, P. J., Baillie, M. G. L., Bard, E., Bayliss, A., Beck, J. W., Blackwell, P. G., Bronk Ramsey, C., Buck, C. E., Burr, G., Edwards, R. L., Friedrich, M., Guilderson, T. P., Hajdas, I., Heaton, T. J., Hogg, A. G., Hughen, K. A., Kaiser, K. F., Kromer, B., McCormac, F. G., Manning, S., Reimer, R. W., Richards, D. A., Southon, J. R., Talamo, S., Turney, C. S. M., van der Plicht, J. & Weyhenmeyer, C. E. (2009) *Radiocarbon* **51,** 1111-1150.
4.   Reimer, P. J., Baillie, M. G. L., Bard, E., Bayliss, A., Beck, J. W., Bertrand, C., Blackwell, P. G., Buck, C. E., Burr, G., Cutler, K. B., Damon, P. E., Edwards, R. L., Fairbanks, R. G., Friedrich, M., Guilderson, T. P., Hughen, K. A., Kromer, B., McCormac, F. G., Manning, S., Bronk Ramsey, C., Reimer, R. W., Remmele, S., Southon, J. R., Stuiver, M., Talamo, S., Taylor, F. W., van der Plicht, J. & Weyhenmeyer, C. E. (2004) *Radiocarbon* **46,** 1029-1058.
5.   Bronk-Ramsey, C. (2001) *Radiocarbon* **43,** 355-363.
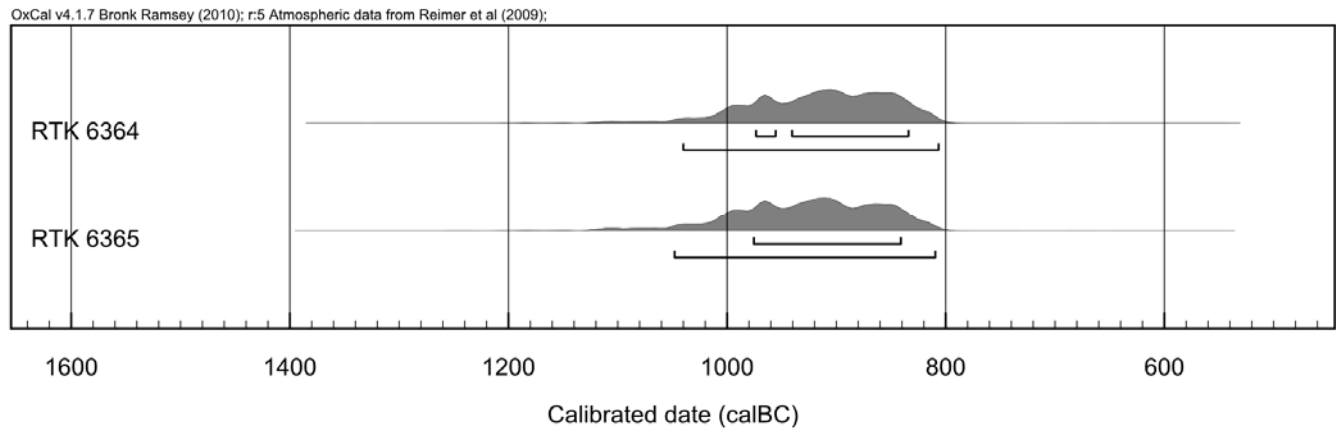6.   Bronk-Ramsey, C. (1995) *Radiocarbon* **37,** 425-430.

Figure : Probability distribution of the calibrated ranges for the samples radiocarbon dated.