

TABLE 5.5^a

Radiometric Ages of Some Mare Basalts Dated by Two or More Methods

Mission	Sample no.	Basalt type^b	Material dated^c	Method	Age (Ga)^d	Source
Apollo 11	10044	low-K	wr	Ar-Ar	3.69 ± 0.05	Turner, 1970
			wr	Ar-Ar	3.66 ± 0.04	Guggisberg et al., 1979
			wr	Ar-Ar	3.66 ± 0.03	Geiss et al., 1977
	10062	low-K	7	Rb-Sr	3.62 ± 0.07	Lunatic Asylum, 1970
			wr	Ar-Ar	3.78 ± 0.06	Turner, 1970
			wr	Ar-Ar	3.79 ± 0.04	Guggisberg et al., 1979
			5	Sm-Nd	3.88 ± 0.06	Papanastassiou, DePaolo and Wasserburg, 1977
			7	Rb-Sr	3.92 ± 0.11	Papanastassiou, DePaolo and Wasserburg, 1977
			7	Rb-Sr	3.92 ± 0.11	Papanastassiou, DePaolo and Wasserburg, 1977
	10072	high-K	wr	Ar-Ar	3.49 ± 0.05	Turner, 1970
			wr	Ar-Ar	3.52 ± 0.04	Guggisberg et al., 1979
			pl	Ar-Ar	3.57 ± 0.05	Guggisberg et al., 1979
			p1	Ar-Ar	3.56 ± 0.06	Guggisberg et al., 1979
			il	Ar-Ar	3.58 ± 0.05	Guggisberg et al., 1979
			px	Ar-Ar	3.55 ± 0.05	Guggisberg et al., 1979
7			Rb-Sr	3.57 ± 0.05	Papanastassiou, DePaolo and Wasserburg, 1977	
6			Sm-Nd	3.57 ± 0.03	Papanastassiou, DePaolo and Wasserburg, 1977	
Apollo 12	12002	olivine	wr	Ar-Ar	3.21 ± 0.05	Turner, 1971
			wr	Ar-Ar	3.18 ± 0.04	Alexander, Davis, and Reynolds, 1972
			7	Rb-Sr	3.29 ± 0.10	Papanastassiou and Wasserburg, 1971a
	12039	quartz	6	Rb-Sr	3.12 ± 0.06	Nyquist et al., 1977
			3	Sm-Nd	3.20 ± 0.05	Nyquist et al., 1979a
	12051	quartz	wr	Ar-Ar	3.13 ± 0.05	Stettler et al., 1973

Mission	Sample no.	Basalt type^b	Material dated^c	Method	Age (Ga)^d	Source
			wr	Ar-Ar	3.12 ± 0.07	Stettler et al., 1973
			wr	Ar-Ar	3.23 ± 0.05	Turner, 1971
			wr	Ar-Ar	3.25 ± 0.06	Alexander, Davis, and Reynolds, 1972
			7	Rb-Sr	3.19 ± 0.10	Papanastassiou and Wasserburg, 1971a
			4	Rb-Sr	3.09 ± 0.04	Nyquist et al., 1977
	12064	quartz	wr	Ar-Ar	3.15 ± 0.01	Horn et al., 1975
			wr	Ar-Ar	3.11 ± 0.09	Horn et al., 1975
			5	Rb-Sr	3.11 ± 0.09	Papanastassiou and Wasserburg, 1971a
Apollo 15	15076	quartz	wr	Ar-Ar	3.31 ± 0.04	Stettler et al., 1973
			4	Rb-Sr	3.26 ± 0.08	Papanastassiou and Wasserburg, 1973
	15555	olivine	wr	Ar-Ar	3.29 ± 0.05	Alexander, Davis, and Lewis, 1972
			wr	Ar-Ar	3.25 ± 0.06	York, Kenyon, and Doyle 1972
			wr	Ar-Ar	3.28 ± 0.06	York, Kenyon, and Doyle 1972
			wr	Ar-Ar	3.24 ± 0.06	Husain et al., 1972
			wr	Ar-Ar	3.19 ± 0.02	Podosek, Huneke, and Wasserburg, 1972
			p1	Ar-Ar	3.27 ± 0.02	Podosek, Huneke, and Wasserburg, 1972
			px	Ar-Ar	3.24 ± 0.09	Podosek, Huneke, and Wasserburg, 1972
			6	Rb-Sr	3.23 ± 0.08	Murthy et al., 1972
			6	Rb-Sr	3.27 ± 0.09	Birck, Fourcade, and Allegre, 1975
			7	Rb-Sr	3.25 ± 0.04	Papanastassiou and Wasserburg, 1973
Apollo 17	70035	high-Ti	wr	Ar-Ar	3.67 ± 0.07	Stettler et al., 1973
			wr	Ar-Ar	3.70 ± 0.07	Stettler et al., 1973
			?	Rb-Sr	3.75 ± 0.10	Chappel et al., 1973, cited in Stettler et al., 1973
			7	Rb-Sr	3.74 ± 0.06	Evensen, Murthy, and Coscio, 1973
	70135	high-Ti	7	Rb-Sr	3.67 ± 0.09	Alexander, Davis, and Reynolds, 1972
			3	Sm-Nd	3.77 ± 0.06	Alexander, Davis, and Reynolds, 1972

Mission	Sample no.	Basalt type^b	Material dated^c	Method	Age (Ga)^d	Source
	75055	high-Ti	wr	Ar-Ar	3.71 ± 0.05	Turner, Cadogan, and Yonge, 1973
			wr	Ar-Ar	3.73 ± 0.04	Huneke et al., 1973
			wr	Ar-Ar	3.77 ± 0.05	Kirsten and Horn, 1974
			5	Rb-Sr	3.75 ± 0.10	Tatsumoto et al., 1973
			6	Rb-Sr	3.69 ± 0.06	Tera, Papanastassiou, and Wasserburg, 1974
	75075	high-Ti	wr	Ar-Ar	3.71 ± 0.04	Jessberger, Horn, and Kirsten, 1975
			wr	Ar-Ar	3.66 ± 0.05	Jessberger, Horn, and Kirsten, 1975
			wr	Ar-Ar	3.61 ± 0.04	Jessberger, Horn, and Kirsten, 1975
			pl	Ar-Ar	3.69 ± 0.02	Jessberger, Horn, and Kirsten, 1975
			pl	Ar-Ar	3.67 ± 0.02	Jessberger, Horn, and Kirsten, 1975
			8	Rb-Sr	3.76 ± 0.12	Nyquist, Bansal, and Wiesmann, 1975
			4	Sm-Nd	3.70 ± 0.07	Lugmair, Scheinin, and Marti, 1975
Luna 16	B-1	aluminous	wr	Ar-Ar	3.45 ± 0.04	Huneke, Podosek, and Wasserburg, 1972
			5	Rb-Sr	3.42 ± 0.18	Papanastassiou and Wasserburg, 1972b

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^a From Dalrymple, G. Brent. 1991. "[The Age of the Earth](#)". Stanford University Press. Copyright © 1991 by the Board of Trustees of the Leland Stanford Junior University.

^b Table 5.2

^c Numbers represent number of points in isochron; wr, whole rock; pl, plagioclase; px, pyroxene; il, ilmenite.

^d All ages calculated with the decay constants in Table 3.1. Errors are at the 95% confidence level (two standard deviations). Ages underlined are shown as figures. Ages are based on either isochron (Rb-Sr, Sm-Nd) or ⁴⁰Ar/³⁹Ar age-spectrum (Ar-Ar) methods. Included are data with analytical uncertainties of 0.1 Ga (two standard deviations) or less, except for three results that are included to maximize the number of methods for the sample.