



INTERNATIONAL STRATIGRAPHIC CHART

International Commission on Stratigraphy



Eonothem Eon	Erathem Era	System Period	Series Epoch	Stage Age	Age Ma	GSSP		
Phanerozoic	Cenozoic	Quaternary*	Holocene		0.0118			
			Pleistocene	Upper		0.126		
				Middle		0.781		
		Neogene	Pliocene	Lower		1.806	🔪	
				Gelasian		2.588	🔪	
		Cenozoic	Neogene	Pliocene	Piacenzian		3.600	🔪
					Zanclean		5.332	🔪
			Miocene	Messinian		7.246	🔪	
				Tortonian		11.608	🔪	
				Serravallian		13.65	🔪	
	Langhian				15.97	🔪		
	Burdigalian				20.43	🔪		
	Aquitanian				23.03	🔪		
	Cenozoic		Paleogene	Oligocene	Chattian		28.4 ± 0.1	🔪
					Rupelian		33.9 ± 0.1	🔪
		Eocene		Priabonian		37.2 ± 0.1	🔪	
				Bartonian		40.4 ± 0.2	🔪	
			Lutetian		48.6 ± 0.2	🔪		
		Paleocene	Ypresian		55.8 ± 0.2	🔪		
			Thanetian		58.7 ± 0.2	🔪		
			Selandian		61.7 ± 0.2	🔪		
			Danian		65.5 ± 0.3	🔪		
			Maastrichtian		70.6 ± 0.6	🔪		
		Mesozoic	Cretaceous	Upper	Campanian		83.5 ± 0.7	🔪
					Santonian		85.8 ± 0.7	🔪
	Coniacian					89.3 ± 1.0	🔪	
	Turonian					93.5 ± 0.8	🔪	
	Cenomanian					99.6 ± 0.9	🔪	
	Albian					112.0 ± 1.0	🔪	
	Lower			Aptian		125.0 ± 1.0	🔪	
				Barremian		130.0 ± 1.5	🔪	
				Hauterivian		136.4 ± 2.0	🔪	
Berriasian					145.5 ± 4.0	🔪		

Eonothem Eon	Erathem Era	System Period	Series Epoch	Stage Age	Age Ma	GSSP		
Phanerozoic	Mesozoic	Jurassic	Upper	Tithonian		145.5 ± 4.0	🔪	
				Kimmeridgian		150.8 ± 4.0	🔪	
				Oxfordian		155.7 ± 4.0	🔪	
			Middle	Callovian		161.2 ± 4.0	🔪	
				Bathonian		164.7 ± 4.0	🔪	
				Bajocian		167.7 ± 3.5	🔪	
		Lower	Aalenian		171.6 ± 3.0	🔪		
			Toarcian		175.6 ± 2.0	🔪		
			Pliensbachian		183.0 ± 1.5	🔪		
		Mesozoic	Triassic	Upper	Sinemurian		189.6 ± 1.5	🔪
					Hettangian		196.5 ± 1.0	🔪
					Rhaetian		199.6 ± 0.6	🔪
	Middle			Norian		203.6 ± 1.5	🔪	
				Carnian		216.5 ± 2.0	🔪	
	Lower			Ladinian		228.0 ± 2.0	🔪	
				Anisian		237.0 ± 2.0	🔪	
				Olenekian		245.0 ± 1.5	🔪	
				Induan		249.7 ± 0.7	🔪	
				Changhsingian		251.0 ± 0.4	🔪	
	Paleozoic	Permian	Lopingian	Wuchiapingian		253.8 ± 0.7	🔪	
				Changhsingian		253.8 ± 0.7	🔪	
			Guadalupian	Wordian		260.4 ± 0.7	🔪	
				Roadian		268.0 ± 0.7	🔪	
				Capitanian		265.8 ± 0.7	🔪	
			Cisuralian	Kungurian		268.0 ± 0.7	🔪	
				Artinskian		270.6 ± 0.7	🔪	
				Sakmarian		275.6 ± 0.7	🔪	
				Asselian		284.4 ± 0.7	🔪	
				Gzhelian		294.6 ± 0.8	🔪	
	Paleozoic	Carboniferous	Pennsylvanian	Upper		299.0 ± 0.8	🔪	
				Kasimovian		303.9 ± 0.9	🔪	
			Middle	Moscovian		306.5 ± 1.0	🔪	
Bashkirian					311.7 ± 1.1	🔪		
Lower			Serpukhovian		318.1 ± 1.3	🔪		
			Viséan		318.1 ± 1.3	🔪		
Mississippian			Upper		326.4 ± 1.6	🔪		
			Tournaisian		345.3 ± 2.1	🔪		
						359.2 ± 2.5	🔪	

Eonothem Eon	Erathem Era	System Period	Series Epoch	Stage Age	Age Ma	GSSP			
Phanerozoic	Paleozoic	Devonian	Upper	Famennian		359.2 ± 2.5	🔪		
				Frasnian		374.5 ± 2.6	🔪		
				Givetian		385.3 ± 2.6	🔪		
			Middle	Eifelian		391.8 ± 2.7	🔪		
				Emsian		397.5 ± 2.7	🔪		
				Pragian		407.0 ± 2.8	🔪		
		Lower	Lochkovian		411.2 ± 2.8	🔪			
			Pridoli		416.0 ± 2.8	🔪			
			Ludlow		418.7 ± 2.7	🔪			
		Paleozoic	Silurian	Ludlow	Gorstian		421.3 ± 2.6	🔪	
					Ludfordian		422.9 ± 2.5	🔪	
				Wenlock	Homerian		426.2 ± 2.4	🔪	
	Sheinwoodian					428.2 ± 2.3	🔪		
	Llandovery			Telychian		436.0 ± 1.9	🔪		
				Aeronian		439.0 ± 1.8	🔪		
	Hirnantian			Rhuddanian		443.7 ± 1.5	🔪		
				Stage 6		445.6 ± 1.5	🔪		
	Paleozoic			Ordovician	Upper	Stage 5		455.8 ± 1.6	🔪
						Stage 4		460.9 ± 1.6	🔪
		Middle	Darriwilian			468.1 ± 1.6	🔪		
			Stage 3			471.8 ± 1.6	🔪		
		Lower	Stage 2			478.6 ± 1.7	🔪		
			Tremadocian			488.3 ± 1.7	🔪		
		Furongian	Stage 10			~ 492.0 *	🔪		
			Stage 9			~ 496.0 *	🔪		
		Cambrian	Series 3		Paibian		501.0 ± 2.0	🔪	
					Stage 7		~ 503.0 *	🔪	
	Stage 6				~ 506.5 *	🔪			
	Stage 5				~ 510.0 *	🔪			
	Stage 4				~ 517.0 *	🔪			
	Stage 3				~ 521.0 *	🔪			
	Series 2	Stage 2		~ 534.6 *	🔪				
Stage 1			542.0 ± 1.0	🔪					

This chart was drafted by Gabi Ogg. Intra Cambrian unit ages with * are informal, and awaiting ratified definitions.

Copyright © 2006 International Commission on Stratigraphy

Eonothem Eon	Erathem Era	System Period	Age Ma	GSSP GSSA	
Precambrian	Proterozoic	Ediacaran	542	🔪	
			~630	🔪	
			850	🔪	
		Meso-proterozoic	Stenian	1000	🔪
			Ectasian	1200	🔪
			Calymmian	1400	🔪
	Paleo-proterozoic	Statherian	1600	🔪	
		Orosirian	1800	🔪	
		Rhyacian	2050	🔪	
	Archean	Neoarchean	Siderian	2300	🔪
			2500	🔪	
			2800	🔪	
		Mesoarchean	3200	🔪	
			Paleoarchean	3600	🔪
			Eoarchean	Lower limit is not defined	🔪

Subdivisions of the global geologic record are formally defined by their lower boundary. Each unit of the Phanerozoic (~542 Ma to Present) and the base of Ediacaran are defined by a basal Global Standard Section and Point (GSSP), whereas Precambrian units are formally subdivided by absolute age (Global Standard Stratigraphic Age, GSSA). Details of each GSSP are posted on the ICS website (www.stratigraphy.org).

International chronostratigraphic units, rank, names and formal status are approved by the International Commission on Stratigraphy (ICS) and ratified by the International Union of Geological Sciences (IUGS).

Numerical ages of the unit boundaries in the Phanerozoic are subject to revision. Some stages within the Ordovician and Cambrian will be formally named upon international agreement on their GSSP limits. Most sub-Series boundaries (e.g., Middle and Upper Aptian) are not formally defined.

Colors are according to the Commission for the Geological Map of the World (www.cgmw.org).

The listed numerical ages are from 'A Geologic Time Scale 2004', by F.M. Gradstein, J.G. Ogg, A.G. Smith, et al. (2004; Cambridge University Press).

* proposed by ICS