

INTERNATIONAL CHRONOSTRATIGRAPHIC CHART

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International Commission on Stratigraphy

v **2024**/12



	em/r	TEL	de de la companya de			
Egnot,	Erath "	System Era	Series / Epoch	Stage / Age	GSSP	numerical age (Ma)
		_	U/L	Meghalayan	3	present 0.0042
		ar	Holocene M	Northgrippian Greenlandian	3	0.0082 0.0117
		Ľ	U/L	Upper		0.129
		Quaternary	Pleistocene	Chibanian	1	0.774
				Calabrian	1	1.80
				Gelasian	_	
			Pliocene L/E	Piacenzian	1	2.58
				Zanclean	<	3.600
				Messinian		5.333
		<u>ڪ</u>	U/L		1	7.246
	0	Neogene		Tortonian	1	11.63
		00	Miocene M	Serravallian	1	13.82
	0	ž	- Wilocerie	Langhian	1	15.98
	00		L/E	Burdigalian		20.45
	Cenozoic		L/L	Aquitanian	<	23.04
				Chattian	<	27.30
			Oligocene	Rupelian	<	33.9
		(D)		Priabonian	<	
		ű		Bartonian		37.71
<u>ပ</u>		ge	Focene			41.03
20		Paleogene	Eocene	Lutetian	1	48.07
Phanerozoic				Ypresian	<	
믋				Thanetian	<	56.00
ێڐ			Paleocene	Selandian	4	59.24
<u>а</u>						61.66
				Danian	1	66.00
	Mesozoic	Cretaceous	Upper	Maastrichtian	<	72.2 ±0.2
				Campanian	1	
				Santonian	1	83.6 ±0.2
				Coniacian	~	85.7 ±0.2
				Turonian	~	89.8 ±0.3
				Cenomanian	1	93.9 ±0.2
					1	100.5 ±0.1
			Lower	Albian	<	113.2 ±0.3
				Aptian		121.4 ±0.6
				Barremian	<	125.77
				Hauterivian	<	132.6 ±0.6
				Valanginian	<	137.05 ±0.2
				Berriasian		143.1 ±0.6
						1 7 0.1 ±0.0

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\$Onos	Erath	System (Era	Se	ries / Epoch	Stage / Age	GSSP	
					Tithonian		143.1 ±0.6
			Upper	Kimmeridgian	<	149.2 ±0.7	
		Jurassic			Oxfordian		154.8 ±0.8
				Middle	Callovian	1	161.5 ±1.0 165.3 ±1.1
					Bathonian Bajocian	3	168.2 ±1.2 170.9 ±0.8
					Aalenian	<	174.7 ±0.8
					Toarcian	<	
					Pliensbachian		184.2 ±0.3
	Mesozoic			Lowei		3	192.9 ±0.3
					Sinemurian	3	199.5 ±0.3
	SO				Hettangian		201.4 ±0.2
	Me				Rhaetian		~ 205.7
				Upper	er Norian		
		sic	Оррог				~ 227.3
		Triassic			Carnian	<	007
0		Ļ			Ladinian	<	~ 237 241.464 ±0.28
<u>10</u>			Middle		Anisian		
Phanerozoic				Lower	Olenekian Induan	<u> </u>	246.7 249.9
ane	C	Permian	Lopingian		Changhsingian	13	251.902 ±0.024 254.14 ±0.07
he					Wuchiapingian		259.51 ±0.21
_			Guadalupian		Capitanian	<	264.28 ±0.16
					Wordian	<	266.9 ±0.4
					Roadian	<	274.4 ±0.4
					Kungurian		202 2 ±0 4
				iourolion	Artinskian	2	283.3 ±0.4
				isuralian	Sakmarian		290.1 ±0.26
	zoi				Asselian	~	293.52 ±0.17
	Paleozoic	Carboniferous	/anian	Linnar	Gzhelian		298.9 ±0.15
				Upper	Kasimovian		303.7 ±0.1 307.0 ±0.1
			Pennsylvanian	Middle	Moscovian		315.2 ±0.2
				Lower	Bashkirian	1	
							323.4 ±0.4
			pian	Upper Middle	Serpukhovian		330.3 ±0.4
			ssissippian		Visean		
						1	346.7 ±0.4
			Σ	Lower	Tournaisian	<	050 00 10 10
							358.86 ±0.19

ý	them/E	Par Ela	Series / Epoch		Ω			
400	E/9/4		Series / Epoch	Stage / Age	numerical age (Ma)			
		Devonian	Upper	Famennian	3			
				Frasnian	372.15 ±0.46 382.31 ±1.36			
			Middle	Givetian	<u>a</u>			
				Eifelian	387.95 ±1.04 393.47 ±0.99			
				Emsian	410.62 ±1.95			
			Lower	Pragian §	413.02 ±1.91			
				Lochkovian	419.62 ±1.36			
			Pridoli	\$	422.7 ±1.6			
		_	Ludlow	Ludfordian 4 Gorstian	425.0 ±1.5			
		Silurian		Homerian	426.7 ±1.5			
		<u>n</u>	Wenlock	Sheinwoodian s	430.6 ±1.3 432.9 ±1.2			
Sic.	O	S	Llandovery	Telychian Aeronian Rhuddanian	438.6 ±1.0 440.5 ±1.0 443.1 ±0.9			
Phanerozoic	Paleozoic	Ordovician	Upper	Hirnantian S Katian	445.2 ±0.9 452.8 ±0.7			
ha	Pa			Sandbian _s	458.2 ±0.7			
Ф.			Middle	Darriwilian	450.2 ±0.7 469.4 ±0.9			
				Dapingian s	471.3 ±1.4			
			O		Lower	Floian	477.1 ±1.2	U
					486.85 ±1.5	th S		
			Furongian	Stage 10	~ 491.0	U		
			Fulbligian	Jiangshanian s	4 94.2	ir h		
		Cambrian		Paibian s	~ 497.0	N		
			Miaolingian	Guzhangian s	~ 500.5	Ρ		
				Drumian _s	~ 504.5	P a		
				Wuliuan s	~ 506.5	N		
			Series 2	Stage 4		e s		
				Stage 3	~ 514.5	Т		
			Terreneuvian	Stage 2	~ 521.0	C		
				Fortunian	~ 529.0	С		
					538.8 ±0.6	T (c		

	£000the	Eathem/E	Selen Period	D		
			Ediacaran	538.8 ±0.6 ~ 635		
	Proterozoic	Neo- proterozoic	Cryogenian			
			Tonian	(F) 1000		
		Meso- proterozoic	Stenian			
			Ectasian	1200		
			Calymmian			
	terc		Statherian	1600		
UE	Pro	Paleo- proterozoic	Orosirian	1800		
Precambrian				2050		
Sam			Rhyacian	2300		
Prec			Siderian	2500		
	Archean	Neo- archean		2000		
		Meso-		2800		
		archean		3200		
		Paleo-		3200		
		archean		3600		
		Eo- archean				
				4031 ± 3		
		dean		1567		
	Units of all ranks are in the process of being defined by Global Boundary Stratotype Section and Points (GSSP) for their lower boundaries, including					

Units of all ranks are in the process of being defined by Global Boundary Stratotype Section and Points (GSSP) for their lower boundaries, including those of the Archean and Proterozoic, long defined by Global Standard Stratigraphic Ages (GSSA). Ratified Subseries/Subepochs are abbreviated as U/L (Upper/Late), M (Middle) and L/E (Lower/Early). Italic fonts indicate informal units and placeholders for unnamed units. Previous versions and detailed information on ratified GSSPs are available at the website http://www.stratigraphy.org. The URL to this chart is provided below.

Numerical ages are subject to ongoing revision and do not define units in the Phanerozoic and the Ediacaran; only GSSPs do. For boundaries in the Phanerozoic without ratified GSSPs or without constrained numerical ages, an approximate numerical age (~) is provided.

Most numerical ages are taken from 'A Geologic Time Scale 2020' by Gradstein et al. (2020), but some ages differ as provided by the relevant ICS subcommissions, with advice from the Timescale Calibration subcommission. These are approved by the ICS executive as the current consensus.

Colouring follows the Commission for the Geological Map of the World (www.ccgm.org)



Chart drafted and maintained online by officers K.M. Cohen and N. Car.

The chart is a product of collective work by all ICS members past and present.

(c) International Commission on Stratigraphy, December 2024

URL: http://www.stratigraphy.org/ICSchart/ChronostratChart2024-12.pdf

To cite: Cohen, K.M., Finney, S.C., Gibbard, P.L. & Fan, J.-X. (2013; updated) The ICS International Chronostratigraphic Chart. Episodes 36: 199-204