

**Polynomial Coefficients for Interpolation of Declination, Equation of Time and Star Time,
2024**

		R hour		R hour		R hour		R hour
a ₀	Jan.	6.611132	Apr.	12.590726	Jul.	18.570320	Oct.	0.615624
a ₁		2.102714		2.102714		2.102714		2.102714
a ₀	Feb.	8.648137	May.	14.562021	Aug.	20.607325	Nov.	2.652629
a ₁		2.102714		2.102714		2.102714		2.102714
a ₀	Mar.	10.553722	Jun.	16.599026	Sep.	22.644329	Dec.	4.623923
a ₁		2.102714		2.102714		2.102714		2.102714

		Dec °	E h		Dec °	E h		Dec °	E h
a ₀	Jan.	-23.131302	11.956672	May.	14.858220	12.046573	Sep.	8.537075	11.994816
a ₁		2.203865	-0.254448		9.775502	0.068319		-11.553626	0.166223
a ₂		3.987327	0.027042		-2.056534	-0.081745		-1.173215	0.044690
a ₃		-0.256935	0.066291		-0.570229	-0.000725		0.531316	-0.022821
a ₄		-0.108488	-0.018884		0.085084	0.003585		-0.024347	-0.005065
a ₀	Feb.	-17.583154	11.779174	Jun.	21.954658	12.038537	Oct.	-2.906298	12.167249
a ₁		8.813013	-0.083770		4.493560	-0.078507		-12.429456	0.173390
a ₂		2.719876	0.109717		-3.261800	-0.065329		0.268985	-0.036846
a ₃		-0.699123	0.010761		-0.295774	0.041361		0.544385	-0.031159
a ₄		0.030093	-0.014054		0.123942	-0.004011		0.007599	0.001240
a ₀	Mar.	-7.862407	11.791889	Jul.	23.152362	11.938501	Nov.	-14.192983	12.273452
a ₁		12.108168	0.100462		-1.992890	-0.105052		-10.344402	0.019013
a ₂		1.030265	0.067822		-3.497557	0.029776		1.952556	-0.108763
a ₃		-0.688140	-0.018685		0.227304	0.045826		0.628712	-0.017650
a ₄		0.058630	-0.005532		0.052317	-0.014878		-0.035490	0.010854
a ₀	Apr.	4.260385	11.930999	Aug.	18.191956	11.893255	Dec.	-21.684013	12.189565
a ₁		12.378054	0.159631		-7.939297	0.027744		-5.143583	-0.195332
a ₂		-0.613727	-0.019093		-2.568833	0.086073		3.545112	-0.092388
a ₃		-0.619723	-0.020228		0.517567	0.003787		0.435035	0.036132
a ₄		0.056203	-0.000816		-0.026771	-0.010862		-0.150656	0.004690

		SD (°)		SD (°)		SD (°)		SD (°)
a ₀	Jan.	0.271222	Apr.	0.266895	Jul.	0.262142	Oct.	0.266175
a ₁		-0.000478		-0.002372		0.000396		0.002420
a ₀	Feb.	0.270726	May.	0.264636	Aug.	0.262539	Nov.	0.268558
a ₁		-0.001652		-0.001791		0.001505		0.001925
a ₀	Mar.	0.269199	Jun.	0.262887	Sep.	0.264030	Dec.	0.270397
a ₁		-0.002334		-0.000786		0.002246		0.000852

σ _{Dec} =	0".2052 (degree second)
σ _E =	0°.0263 (hour second)
σ _R =	0°.0014 (hour second)
σ _{SD} =	0".1247 (degree second)

Note: For Declination (Dec) and Equation of Time (E): $y = a_0 + a_1 \cdot x + a_2 \cdot x^2 + a_3 \cdot x^3 + a_4 \cdot x^4$
 For Star Time, GMST, (R): $y = a_0 + a_1 \cdot x$
 Here, (x=day/32, e.g. for 05 April 2024; x=5/32=0.1563)