EDITORS NOTE: Table of contents tables will be removed from individual clauses. The TOC below is for draft review purposes only.

Annex E
(normative)

ORMs

E.1 Introduction

This annex presents the specification of ORMs

E.2 ORMs

E.2.1 Reference ORMs

If two or more object-fixed ORMs for the same object are specified then one of the ORMs is designated as the reference ORM for that object. Table E.1 lists the reference ORMs specified in this International Standard, ordered alphabetically by their label. Parameter values in the tables are specified by value or by reference. Parameters specified by reference shall use the terminology if the cited references. Those terms shall be enclosed in brackets ({ }). Referenced values in length units other than meters shall be converted to metres to specify the corresponding RT parameter.

Table E.1 — Reference ORM directory

Object name	Type	Reference ORM label
2D modelling space	Abstract	ABSTRACT_2D
3D modelling space	Abstract	ABSTRACT_3D
Adrastea	Satellite	ADRASTEA_2000
Amalthea	Satellite	AMALTHEA_2000
Ariel	Satellite	ARIEL_1988
Atlas	Satellite	ATLAS_1988

Object name	Type	Reference ORM label
Belinda	Satellite	BELINDA_1988
Bianca	Satellite	BIANCA_1988
Callisto	Satellite	CALLISTO_2000
Calypso	Satellite	CALYPSO_1988
Charon	Satellite	CHARON_1991
Cordelia	Satellite	CORDELIA_1988
Cressida	Satellite	CRESSIDA_1988
Deimos	Satellite	DEIMOS_1988
Desdemona	Satellite	DESDEMONA_1988
Despina	Satellite	DESPINA_1991
Dione	Satellite	DIONE_1982
Earth	Earth	WGS_1984
Enceladus	Satellite	ENCELADUS_1994
Epimetheus	Satellite	EPIMETHEUS_1988
Eros (asteroid 433)	Planet	EROS_2000
Europa	Satellite	EUROPA_2000
Galatea	Satellite	GALATEA_1991
Ganymede	Satellite	GANYMEDE_2000
Gaspra (asteroid 951)	Planet	GASPRA_1991
Helene	Satellite	HELENE_1992
Iapetus	Satellite	IAPETUS_1988
Ida (asteroid 243)	Planet	IDA_1991
Io	Satellite	IO_2000
Janus	Satellite	JANUS_1988
Juliet	Satellite	JULIET_1988

Object name	Type	Reference ORM label
Jupiter	Planet	JUPITER_1988
Larissa	Satellite	LARISSA_1991
Mars	Planet	MARS_2000
Mercury	Planet	MERCURY_1988
Metis	Satellite	METIS_2000
Mimas	Satellite	MIMAS_1994
Miranda	Satellite	MIRANDA_1988
Moon	Satellite	MOON_1991
Naiad	Satellite	NAIAD_1991
Neptune	Planet	NEPTUNE_1991
Oberon	Satellite	OBERON_1988
Ophelia	Satellite	OPHELIA_1988
Pan	Satellite	PAN_1991
Pandora	Satellite	PANDORA_1988
Phobos	Satellite	PHOBOS_1988
Phoebe	Satellite	PHOEBE_1988
Pluto	Planet	PLUTO_1994
Portia	Satellite	PORTIA_1988
Prometheus	Satellite	PROMETHEUS_1988
Proteus	Satellite	PROTEUS_1991
Puck	Satellite	PUCK_1988
Rhea	Satellite	RHEA_1988
Rosalind	Satellite	ROSALIND_1988
Saturn	Planet	SATURN_1988
Sun	Sun	SUN_1992

Object name	Type	Reference ORM label
Telesto	Satellite	TELESTO_1988
Tethys	Satellite	TETHYS_1991
Thalassa	Satellite	THALASSA_1991
Thebe	Satellite	THEBE_2000
Titan	Satellite	TITAN_1982
Titania	Satellite	TITANIA_1988
Triton	Satellite	TRITON_1991
Umbriel	Satellite	UMBRIEL_1988
Uranus	Planet	URANUS_1988
Venus	Planet	VENUS_1991

E.2.2 Standardized ORMs

The fields of an ORM specification are defined in Table 7.10. Table E.2 is a directory of standardized ORMs organized by category of ORM and type of object. The ORM entries in each table are ordered alphabetically by their label. The directory includes deprecated ORMs in Annex J. ORM specifications may include one or more RT specifications. The RT specifications associated with an ORM immediately follow the ORM Table entry. RT entries are have a blank table cell shaded grey to distinguish RT entires from ORM entries in the tables.

Table E.2 — ORM specification directory

ORM specification table	Table
Abstract ORM specifications	Table E.3 and Table J.7
Object fixed ERM specifications	Table E.4 and Table J.8
Dynamic ERM specifications	Table E.5 and Table J.9
Time fixed instance of a dynamic ERM specifications	Table E.6 and Table J.10
Object fixed planet (non-Earth) ORM specifications	Table E.7 and Table J.11
Dynamic planet (non-Earth) ORM specifications	Table E.8 and Table J.12

ORM specification table	Table
Time fixed instance of a dynamic planet (non-Earth) ORM specifications	Table E.9 and Table J.13
Object fixed satellite ORM specifications	Table E.10 and Table J.14
Dynamic satellite ORM specifications	Table E.11 and Table J.15
Time fixed instance of a dynamic satellite ORM specifications	Table E.12 and Table J.16
Stellar ORM specifications	Table E.13 and Table J.17
Dynamic stellar ORM specifications	Table E.14 and Table J.17
Time fixed instance of a dynamic stellar ORM specifications	Table E.15 and Table J.18

Table E.3 — Abstract ORM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ABSTRACT_2D	1	2D modelling space	This is the reference ORM for abstract 2D object-space.	none	Universal	BI_AXIS_ORIGIN_2D	N/A	none

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Universal	N/A	N/A	none

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ABSTRACT_3D	2	3D modelling space	This is the reference ORM for abstract 3D object-space.	none	Universal	TRI_PLANE	N/A	none

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Universal	N/A	N/A	none

Table E.4 — Object-fixed ERM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ADINDAN_1991	3	Adindan	WGS_1984	1991	Burkina Faso, Cameroon, Ethiopia, Mali, Senegal, and Sudan	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "ADI"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
BURKINA_FASO	1	Burkina Faso; $+4° \le \phi \le +22°$; $-5° \le \lambda \le +8°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.2, "ADI-E"]
CAMEROON	2	Cameroon; $-4° \le \phi \le +19°$; $+3° \le \lambda \le +23°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.2, "ADI-F"]
ETHIOPIA	3	Ethiopia; $-3° \le \phi \le +25°$; $+26° \le \lambda \le +50°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.2, "ADI-A"]
MALI	4	Mali; $+3° \le \phi \le +31°$; $-20° \le \lambda \le +11°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.2, "ADI-C"]
MEAN_SOLUTION	5	Mean Solution (Ethiopia and Sudan); $-5° \le \phi \le +31°$; $+15° \le \lambda \le +55°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.2, "ADI-M"]
SENEGAL	6	Senegal; $+5° \le \phi \le +23°$; $-24° \le \lambda \le -5°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.2, "ADI-D"]
SUDAN	7	Sudan; $-3° \le \phi \le +31°$; $+15° \le \lambda \le +45°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.2, "ADI-B"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
AFGOOYE_1987	5	Afgooye (Somalia)	WGS_1984	1987	Somalia	OBLATE_ELLIPSOID	KRASSOVSKY-_1940	[83502T, App. B.2, "AFG"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SOMALIA	1	Somalia; $-8^o \le \phi \le +19^o$; $+35^o \le \lambda \le +60^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1987	[83502T, App. B.2, "AFG"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
AIN_EL_ABD_1970	6	Ain el Abd	WGS_1984	1970	Bahrain and Saudi Arabia	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.3, "AIN"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
BAHRAIN_ISLAND	1	Bahrain Island; $+24^o \le \phi \le +28^o$; $+49^o \le \lambda \le +53^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1970	[83502T, App. B.3, "AIN-A"]
SAUDI_ARABIA	2	Saudi Arabia; $+8^o \le \phi \le +38^o$; $+28^o \le \lambda \le +62^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1970	[83502T, App. B.3, "AIN-B"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
AMERICAN_SAMOA_1962	8	American Samoa	WGS_1984	1962	American Samoa Islands	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.10, "AMA"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	AMERICAN_SAMOA_ISLANDS	1	American Samoa Islands; -19° ≤ ϕ ≤ -9°; -174° ≤ λ ≤ -165°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1962	[83502T, App. B.10, "AMA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
AMERSFOORT_1885_1903	9	Amersfoort 1885 - Revised	WGS_1984	1903	Netherlands	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[HELM, "AME"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	NETHERLANDS	1	Netherlands; +50° ≤ ϕ ≤ +55°; +2° ≤ λ ≤ +9°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1903	[HELM, "AME-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ANNA_1_1965	10	Anna 1 (astronomic)	WGS_1984	1965	Cocos Islands	OBLATE_ELLIPSOID	AUSTRALIAN_NATIONAL_1966	[83502T, App. B.9, "ANO"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	COCOS_ISLANDS	1	Cocos Islands; -14° ≤ ϕ ≤ -10°; +94° ≤ λ ≤ +99°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1965	[83502T, App. B.9, "ANO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ANTIGUA_1943	11	Antigua (astronomic)	WGS_1984	1943	Antigua and Leeward Islands	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.8, "AIA"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	ANTIGUA_LEEWARD_ISLANDS	1	Antigua and Leeward Islands; +16° ≤ ϕ ≤ +20°; -65° ≤ λ ≤ -61°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1943	[83502T, App. B.8, "AIA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ARC_1950	12	Arc	WGS_1984	1950	Botswana, Lesotho, Malawi, Swaziland, Zaire, Zambia, and Zimbabwe	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "ARF"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	BOTSWANA	1	Botswana; -33° ≤ ϕ ≤ -13°; +13° ≤ λ ≤ +36°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-A"]
	BURUNDI	2	Burundi; -11° ≤ ϕ ≤ +4°; +21° ≤ λ ≤ +37°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-H"]
	LESOTHO	3	Lesotho; -36° ≤ ϕ ≤ -23°; +21° ≤ λ ≤ +35°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-B"]
	MALAWI	4	Malawi; -21° ≤ ϕ ≤ -3°; +26° ≤ λ ≤ +42°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-C"]
	MEAN_SOLUTION	5	Mean Solution (Botswana, Lesotho, Malawi, Swaziland, Zaire, Zambia and Zimbabwe); -36° ≤ ϕ ≤ +10°; +4° ≤ λ ≤ +42°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-M"]
	SWAZILAND	6	Swaziland; -33° ≤ ϕ ≤ -20°; +25° ≤ λ ≤ +40°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-D"]

	ZAIRE	7	Zaire; -21° ≤ ϕ ≤ +10°; +4° ≤ λ ≤ +38°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-E"]
	ZAMBIA	8	Zambia; -24° ≤ ϕ ≤ -1°; +15° ≤ λ ≤ +40°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-F"]
	ZIMBABWE_3	9	Zimbabwe; -29° ≤ ϕ ≤ -9°; +19° ≤ λ ≤ +39°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1950	[83502T, App. B.2, "ARF-G"]
	ZIMBABWE_7	10	Zimbabwe; -29° ≤ ϕ ≤ -9°; +19° ≤ λ ≤ +39°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "ARF-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ARC_1960	13	Arc	WGS_1984	1960	Kenya and Tanzania	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "ARS"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	KENYA_3	1	Kenya; -11° ≤ ϕ ≤ +8°; +28° ≤ λ ≤ +47°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1960	[83502T, App. B.2, "ARS-A"]
	KENYA_7	2	Kenya; -11° ≤ ϕ ≤ +8°; +28° ≤ λ ≤ +47°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1960	[HELM, "ARS-7"]
	MEAN_SOLUTION	3	Mean Solution (Kenya and Tanzania); -18° ≤ ϕ ≤ +8°; +23° ≤ λ ≤ +47°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1960	[83502T, App. B.2, "ARS-M"]
	TANZANIA	4	Tanzania; -18° ≤ ϕ ≤ +5°; +23° ≤ λ ≤ +47°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1960	[83502T, App. B.2, "ARS-B"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ASCENSION_1958	15	Ascension	WGS_1984	1958	Ascension Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "ASC"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ASCENSION_ISLAND	1	Ascension Island; $-9^o \le \phi \le -6^o$; $-16^o \le \lambda \le -13^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1958	[83502T, App. B.8, "ASC"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
AUSTRALIAN_GEOD_1966	17	Australian Geodetic	WGS_1984	1966	Australia and Tasmania	OBLATE_ELLIPSOID	AUSTRALIAN_NATIONAL_1966	[83502T, App. B.4, "AUA"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
AUSTRALIA_TASMANIA	1	Australia and Tasmania; $-46^o \le \phi \le -4^o$; $+109^o \le \lambda \le +161^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1966	[83502T, App. B.4, "AUA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
AUSTRALIAN_GEOD_1984	18	Australian Geodetic	WGS_1984	1984	Australia and Tasmania	OBLATE_ELLIPSOID	AUSTRALIAN_NATIONAL_1966	[83502T, App. B.4, "AUG"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
AUSTRALIA_TASMANIA_3	1	Australia and Tasmania; $-46^o \le \phi \le -4^o$; $+109^o \le \lambda \le +161^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1984	[83502T, App. B.4, "AUG"]

	AUSTRALIA_TASMANIA_7	2	Australia and Tasmania; -46° ≤ ϕ ≤ -4°; +109° ≤ λ ≤ +161°	Δx = -116, Δy = -50,47, Δz = 141,69, ω_1 = 0,23″, ω_2 = 0,39″, ω_3 = 0,344″, Δs = 0,098 3 x 10^{-6}	1984	[CECT, Table 1]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
AYABELLE_LIGHTHOUSE_1991	19	Ayabelle Lighthouse (Djibouti)	WGS_1984	1991	Djibouti	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "PHA"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	DJIBOUTI	1	Djibouti; +5° ≤ ϕ ≤ +20°; +36° ≤ λ ≤ +49°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.2, "PHA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BEACON_E_1945	20	Beacon E (Iwo-jima; astronomic)	WGS_1984	1945	Iwo Jima Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "ATF"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IWO_JIMA_ISLAND	1	Iwo Jima Island; +22° ≤ ϕ ≤ +26°; +140° ≤ λ ≤ +144°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1945	[83502T, App. B.10, "ATF"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BELGIUM_1972	21	Belgium (Observatoire d'Uccle)	WGS_1984	1972	Belgium	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[HELM, "ODU"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	BELGIUM	1	Belgium; +49° ≤ ϕ ≤ +52°; +1° ≤ λ ≤ +8°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1972	[HELM, "ODU-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BELLEVUE_IGN_1987	23	Bellevue (IGN)	WGS_1984	1987	Efate and Erromango Islands (Vanuatu)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "IBE"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	EFATE_ERROMANGO_ISLANDS	1	Efate and Erromango Islands (Vanuatu); -20° ≤ ϕ ≤ -16°; +167° ≤ λ ≤ +171°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.10, "IBE"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BERMUDA_1957	24	Bermuda	WGS_1984	1957	Bermuda	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.8, "BER"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	BERMUDA	1	Bermuda; +31° ≤ ϕ ≤ +34°; -66° ≤ λ ≤ -63°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1957	[83502T, App. B.8, "BER"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BERN_1898	25	Bern	WGS_1984	1898	Switzerland	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[HELM, "BRE"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	SWITZERLAND	1	Switzerland; +44° ≤ ϕ ≤ +49°; +5° ≤ λ ≤ +12°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1898	[HELM, "BRE"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BERN_1898_PM_BERN	26	Bern (with the Prime Meridian at Bern)	WGS_1984	1898 The x-positive *xz*-half-plane contains Bern, Switzerland (1895 determination).	Switzerland	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[HELM, "BRE"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	SWITZERLAND	1	Switzerland; +44° ≤ ϕ ≤ +49°; -3° ≤ λ ≤ +5°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ + 7° 26′ 22,335″ : unknown, Δs = {ds} x 10^{-6} : assumed precise Note: The referenced *z*-axis rotation has been offset so that Bern is contained in the *x*-positive *xz*-plane.	1898	[HELM, "BRE"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BISSAU_1991	28	Bissau	WGS_1984	1991	Guinea-Bissau	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.2, "BID"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	GUINEA_BISSAU	1	Guinea-Bissau; +5° ≤ ϕ ≤ +19°; -23° ≤ λ ≤ -7°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.2, "BID"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BOGOTA_OBS_1987	29	Bogota Observatory	WGS_1984	1987	Colombia	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.7, "BOO"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
COLUMBIA	1	Colombia; -10° ≤ ϕ ≤ +16°; -85° ≤ λ ≤ -61°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.7, "BOO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BOGOTA_OBS_1987_PM-_BOGOTA	30	Bogota Observatory (with the Prime Meridian at Bogota)	WGS_1984	1987 The x-positive *xz*-half-plane contains Bogota, Columbia (IGAC determination).	Colombia	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.7, "BOO"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
COLUMBIA	1	Colombia; -10° ≤ ϕ ≤ +16°; -11° ≤ λ ≤ +13°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = 0''$: precise, ω_3 = -74° 4′ 51,3″ : assumed precise, Δs = 0 : precise Note: The referenced *z*-axis rotation has been offset so that Bogota is contained in the *x*-positive *xz*-plane.	1987	[83502T, App. B.7, "BOO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BUKIT_RIMPAH_1987	31	Bukit Rimpah	WGS_1984	1987	Bangka and Belitung Islands (Indonesia)	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. C.2, "BUR"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
BANGKA_BELITUNG_ISLANDS	1	Bangka and Belitung Islands (Indonesia); -6° ≤ ϕ ≤ +0°; +103° ≤ λ ≤ +110°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. C.2, "BUR"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CAMP_AREA_1987	34	Camp Area (astronomic)	WGS_1984	1987	McMurdo Camp Area (Antarctica)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. C.2, "CAZ"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MCMURDO_CAMP	1	McMurdo Camp Area (Antarctica); -85º ≤ ϕ ≤ -70º; +135º ≤ λ ≤ +180º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. C.2, "CAZ"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CAMPO_INCHAUSPE_1969	35	Campo Inchauspe	WGS_1984	1969	Argentina	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.7, "CAI"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ARGENTINA	1	Argentina; -58º ≤ ϕ ≤ -27º; -72º ≤ λ ≤ -51º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1969	[83502T, App. B.7, "CAI"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CANTON_1966	36	Canton (astronomic)	WGS_1984	1966	Phoenix Islands	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "CAO"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
PHOENIX_ISLANDS	1	Phoenix Islands; -13º ≤ ϕ ≤ +3º; -180º ≤ λ ≤ -165º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1966	[83502T, App. B.10, "CAO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

CAPE_1987	37	Cape	WGS_1984	1987	South Africa	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "CAP"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SOUTH_AFRICA	1	South Africa; $-43° \le \phi \le -15°$; $+10° \le \lambda \le +40°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.2, "CAP"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CAPE_CANAVERAL_1991	38	Cape Canaveral	WGS_1984	1991	Bahamas and Florida	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.6, "CAC"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MEAN_SOLUTION	1	Mean Solution (Bahamas and Florida); $+15° \le \phi \le +38°$; $-94° \le \lambda \le -12°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1991	[83502T, App. B.6, "CAC"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CARTHAGE_1987	39	Carthage	WGS_1984	1987	Tunisia	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "CGE"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
TUNISIA	1	Tunisia; $+24° \le \phi \le +43°$; $+2° \le \lambda \le +18°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.2, "CGE"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CHATHAM_1971	41	Chatam (astronomic)	WGS_1984	1971	Chatham Islands (New Zealand)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "CHI"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	CHATHAM_ISLANDS	1	Chatham Islands (New Zealand); -46° ≤ ϕ ≤ -42°; -180° ≤ λ ≤ -174°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1971	[83502T, App. B.7, "CHI"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CHUA_1987	42	Chua (astronomic)	WGS_1984	1987	Paraguay	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.7, "CHU"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
PARAGUAY	1	Paraguay; -33° ≤ ϕ ≤ -14°; -69° ≤ λ ≤ -49°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.7, "CHU"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
COAMPS_1998	43	COAMPS™	WGS_1984	1998	Earth, Global	SPHERE	COAMPS_1998	[FENWM, Table 1, "COAMPS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_DEFAULT	1	Global (Earth)	{Relationship to WGS84 ellipsoid}	1998	[FENWM, Table 1, "COAMPS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CORREGO_ALEGRE_1987	45	Corrego Alegre	WGS_1984	1987	Brazil	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.7, "COA"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
BRAZIL	1	Brazil; -39° ≤ ϕ ≤ -2°; -80° ≤ λ ≤ -29°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.7, "COA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CYPRUS_1935	47	Cyprus	WGS_1984	1935	Cyprus	OBLATE_ELLIPSOID	CLARKE_1858	[HELM, "CYP"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
CYPRUS	1	Cyprus; +33° ≤ ϕ ≤ +37°; +31° ≤ λ ≤ +36°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1935	[HELM, "CYP-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DABOLA_1991	48	Dabola	WGS_1984	1991	Guinea	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "DAL"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
GUINEA	1	Guinea; +1° ≤ ϕ ≤ +19°; -17° ≤ λ ≤ -7°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.2, "DAL"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DECEPTION_1993	49	Deception	WGS_1984	1993	Deception Island (Antarctica)	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.8, "DID"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
DECEPTION_ISLAND	1	Deception Island (Antarctica); -65° ≤ ϕ ≤ -62°; +58° ≤ λ ≤ +62°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1993	[83502T, App. B.8, "DID"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DJAKARTA_1987	54	Djakarta (also known as Batavia)	WGS_1984	1987	Sumatra (Indonesia)	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. B.3, "BAT"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	SUMATRA	1	Sumatra (Indonesia); -16° ≤ ϕ ≤ +11°; +89° ≤ λ ≤ +146°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.3, "BAT"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DJAKARTA_1987_PM-_DJAKARTA	55	Djakarta (also known as Batavia; with the Prime Meridian at Djakarta)	WGS_1984	1987 The x-positive *xz*-half-plane contains Djarkata, Indonesia.	Sumatra (Indonesia)	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. B.3, "BAT"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	SUMATRA	1	Sumatra (Indonesia); -16° ≤ ϕ ≤ +11°; -18° ≤ λ ≤ +39°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = 0''$: precise, ω_3 = 106° 48′ 27,79″ : assumed precise, Δs = 0 : precise Note: The referenced *z*-axis rotation has been offset so that Djakarta is contained in the *x*-positive *xz*-plane.	1987	[83502T, App. B.3, "BAT"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DOS_1968	56	DOS	WGS_1984	1968	Gizo Island (New Georgia Islands)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "GIZ"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	GIZO_ISLAND	1	Gizo Island (New Georgia Islands); -10° ≤ ϕ ≤ -7°; +155° ≤ λ ≤ +158°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.10, "GIZ"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DOS_71_4_1987	57	DOS 71/4 (St. Helena Island; astronomic)	WGS_1984	1987	St. Helena Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "SHB"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	ST_HELENA_ISLAND	1	St. Helena Island; -18° ≤ ϕ ≤ -14°; -7° ≤ λ ≤ -4°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.8, "SHB"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
EASTER_1967	65	Easter	WGS_1984	1967	Easter Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "EAS"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	EASTER_ISLAND	1	Easter Island; -29° ≤ ϕ ≤ -26°; -111° ≤ λ ≤ -108°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1967	[83502T, App. B.10, "EAS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ESTONIA_1937	69	Estonia	WGS_1984	1937	Estonia	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. B.5, "EST"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	ESTONIA	1	Estonia; +52° ≤ ϕ ≤ +65°; +16° ≤ λ ≤ +34°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1937	[83502T, App. B.5, "EST"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ETRS_1989	70	ETRS	WGS_1984	1989	Europe	OBLATE_ELLIPSOID	GRS_1980	[HELM, "EUT"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_MEASUREMENT	1	Europe; +34º ≤ ϕ ≤ +73º; -12º ≤ λ ≤ +30º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1989	[HELM, "EUT"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
EUROPE_1950	72	European	WGS_1984	1950	Europe	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.5, "EUR"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ALGERIA	1	Algeria; +13º ≤ ϕ ≤ +43º; -15º ≤ λ ≤ +11º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Algeria"]
BALEARIC_ISLANDS	2	Balearic Islands; +38º ≤ ϕ ≤ +41º; +0º ≤ λ ≤ +5º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Balearic Islands"]
CHANNEL_ISLANDS	3	Channel Islands; +48º ≤ ϕ ≤ +50º; -4º ≤ λ ≤ -1º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR", "Channel Islands"]
CYPRUS_3	4	Cyprus; +33º ≤ ϕ ≤ +37º; +31º ≤ λ ≤ +36º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-E"]

	CYPRUS_7	5	Cyprus; +33° ≤ ϕ ≤ +37°; +31° ≤ λ ≤ +36°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Cyprus"]
	DENMARK	6	Denmark; +53° ≤ ϕ ≤ +59°; +7° ≤ λ ≤ +17°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Denmark"]
	EGYPT	7	Egypt; +16° ≤ ϕ ≤ +38°; +19° ≤ λ ≤ +42°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-F"]
	ENGLAND_SCOTLAND	8	England, Scotland, Channel Islands and Shetland Islands; +48° ≤ ϕ ≤ +62°; -10° ≤ λ ≤ +3°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-G"]
	GIBRALTAR	9	Gibraltar; +35° ≤ ϕ ≤ +37°; -7° ≤ λ ≤ -4°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR", "Gibraltar"]
	GREECE	10	Greece; +30° ≤ ϕ ≤ +48°; +14° ≤ λ ≤ +34°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-B"]
	IRAN	11	Iran; +19° ≤ ϕ ≤ +47°; +37° ≤ λ ≤ +69°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-H"]
	IRAQ	12	Iraq; -38° ≤ ϕ ≤ -4°; +36° ≤ λ ≤ +57°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. C.2, "EUR-S"]

	IRELAND	13	Ireland, Northern Ireland, Wales, England, Scotland, Channel Islands, and Shetland Islands; +48º ≤ ϕ ≤ +62º; -12º ≤ λ ≤ +3º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-K"]
	LEBANON	14	Lebanon; +32º ≤ ϕ ≤ +35º; +34º ≤ λ ≤ +38º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Lebanon"]
	MALTA	15	Malta; +34º ≤ ϕ ≤ +38º; +12º ≤ λ ≤ +16º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-L"]
	MEAN_SOLUTION	16	Mean Solution (Austria, Belgium, Denmark, Finland, France, FRG, Gibraltar, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden and Switzerland); +30º ≤ ϕ ≤ +80º; +5º ≤ λ ≤ +33º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-M"]
	NORWAY	17	Finland and Norway; +52º ≤ ϕ ≤ +80º; -2º ≤ λ ≤ +38º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-C"]
	OMAN	18	Oman; +10º ≤ ϕ ≤ +32º; +46º ≤ λ ≤ +65º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Oman"]
	PORTUGAL	19	Portugal; +36º ≤ ϕ ≤ +44º; -11º ≤ λ ≤ -5º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR", "Portugal"]

	PORTUGAL_SPAIN	20	Portugal and Spain; +30° ≤ ϕ ≤ +49°; -15° ≤ λ ≤ +10°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-D"]
	SARDINIA	21	Sardinia (Italy); +37° ≤ ϕ ≤ +43°; +6° ≤ λ ≤ +12°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-I"]
	SICILY	22	Sicily (Italy); +35° ≤ ϕ ≤ +40°; +10° ≤ λ ≤ +17°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-J"]
	SPAIN_EXCEPT_NORTHWEST	23	Spain (except Northwest); +35° ≤ ϕ ≤ +45°; -8° ≤ λ ≤ +5°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Spain (except NW)"]
	SPAIN_NW	24	Spain (Northwest); +40° ≤ ϕ ≤ +45°; -11° ≤ λ ≤ -3°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Spain NW"]
	TUNISIA	25	Tunisia; +24° ≤ ϕ ≤ +43°; +2° ≤ λ ≤ +18°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-T"]
	TURKEY	26	Turkey; +34° ≤ ϕ ≤ +44°; +23° ≤ λ ≤ +46°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR-7", "Turkey"]
	W_EUROPE_MEAN_SOLUTION	27	Western Europe Mean Solution (Austria, Denmark, France, FRG, Netherlands and Switzerland); +30° ≤ ϕ ≤ +78°; -15° ≤ λ ≤ +25°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1950	[83502T, App. B.5, "EUR-A"]

	YUGOSLAVIA_NORTH	28	Former Yugoslavia North; +41° ≤ ϕ ≤ +48°; +12° ≤ λ ≤ +23°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1950	[HELM, "EUR", "Former Yugoslavia N"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
EUROPE_1979	73	European	WGS_1984	1979	Europe	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.5, "EUS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MEAN_SOLUTION	1	Mean Solution (Austria, Finland, Netherlands, Norway, Spain, Sweden and Switzerland); +30° ≤ ϕ ≤ +80°; -15° ≤ λ ≤ +24°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1979	[83502T, App. B.5, "EUS"]
PORTUGAL	2	Portugal; +36° ≤ ϕ ≤ +44°; -11° ≤ λ ≤ -5°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1979	[HELM, "EUS", "Portugal"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
FAHUD_1987	74	Fahud	WGS_1984	1987	Oman	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.3, "FAH"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
OMAN_3	1	Oman; +10° ≤ ϕ ≤ +32°; +46° ≤ λ ≤ +65°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.3, "FAH"]
OMAN_7	2	Oman; +10° ≤ ϕ ≤ +32°; +46° ≤ λ ≤ +65°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1987	[HELM, "FAH-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
FORT_THOMAS_1955	75	Fort Thomas	WGS_1984	1955	St. Kitts, Nevis and Leeward Islands	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.8, "FOT"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ST_KITTS_NEVIS_LEEWARD-_ISLANDS	1	St. Kitts, Nevis and Leeward Islands; $+16^o \le \phi \le +19^o$; $-64^o \le \lambda \le -61^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1955	[83502T, App. B.8, "FOT"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GAN_1970	77	Gan	WGS_1984	1970	Republic of Maldives	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.9, "GAA"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MALDIVES	1	Republic of Maldives; $-2^o \le \phi \le +9^o$; $+71^o \le \lambda \le +75^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1970	[83502T, App. B.9, "GAA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GDA_1994	81	GDA	WGS_1984	1994	Australia	OBLATE_ELLIPSOID	GRS_1980	[HELM, "GDS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_MEASUREMENT	1	Australia; $-42^o \le \phi \le -8^o$; $+110^o \le \lambda \le +155^o$	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1994	[HELM, "GDS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEODETIC_DATUM_1949	82	Geodetic Datum	WGS_1984	1949	New Zealand	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "GEO"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
NEW_ZEALAND_3	1	New Zealand; -48° ≤ ϕ ≤ -33°; +165° ≤ λ ≤ +180°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1949	[83502T, App. B.10, "GEO"]
NEW_ZEALAND_7	2	New Zealand; -48° ≤ ϕ ≤ -33°; +165° ≤ λ ≤ +180°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1949	[HELM, "GEO-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GGRS_1987	95	GGRS 87)	WGS_1984	1987	Greece	OBLATE_ELLIPSOID	GRS_1980	[HELM, "GRX"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
GREECE	1	Greece; +30° ≤ ϕ ≤ +48°; +14° ≤ λ ≤ +34°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1987	[HELM, "GRX"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GRACIOSA_BASE_SW_1948	96	Graciosa Base SW	WGS_1984	1948	Central Azores (Faial, Graciosa, Pico, Sao Jorge and Terceira Islands)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "GRA"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	CENTRAL_AZORES	1	Central Azores (Faial, Graciosa, Pico, Sao Jorge and Terceira Islands); +37° ≤ ϕ ≤ +41°; -30° ≤ λ ≤ -26°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1948	[83502T, App. B.8, "GRA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GUAM_1963	97	Guam	WGS_1984	1963	Guam	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.10, "GUA"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	GUAM	1	Guam; +12° ≤ ϕ ≤ +15°; +143° ≤ λ ≤ +146°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1963	[83502T, App. B.10, "GUA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GUNONG_SEGARA_1987	98	Gunung Segara	WGS_1984	1987	Kalimantan Island (Indonesia)	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. C.2, "GSE"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	KALIMANTAN_ISLAND	1	Kalimantan Island (Indonesia); -6° ≤ ϕ ≤ +9°; +106° ≤ λ ≤ +121°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. C.2, "GSE"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GUX_1_1987	99	GUX1 (astronomic)	WGS_1984	1987	Guadalcanal Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "DOB"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	GUADALCANAL_ISLAND	1	Guadalcanal Island; -12° ≤ ϕ ≤ -8°; +158° ≤ λ ≤ +163°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.10, "DOB"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HARTEBEESTHOCK_1994	100	Hartebeesthock	WGS_1984	1994	South Africa	OBLATE_ELLIPSOID	GRS_1980	[HELM, "HARTEBEESTHOCK 1994"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	SOUTH_AFRICA	1	South Africa; -43° ≤ ϕ ≤ -15°; +10° ≤ λ ≤ +40°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1994	[HELM, "HARTEBEESTHOCK 1994"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HERAT_NORTH_1987	106	Herat North	WGS_1984	1987	Afghanistan	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. C.2, "HEN"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	AFGHANISTAN	1	Afghanistan; +23° ≤ ϕ ≤ +44°; +55° ≤ λ ≤ +81°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. C.2, "HEN"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

HERMANNSKOGEL_1871	107	Hermannskogel	WGS_1984	1871	Austria, Yugoslavia (prior to 1990), Slovenia, Croatia, Bosnia and Herzegovina, and Serbia	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. C.2, "HER"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
AUSTRIA	1	Austria; +46° ≤ ϕ ≤ +50°; +8° ≤ λ ≤ +18°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1871	[HELM, "HER-7", "MGI DATUM / HERMANNSKOGEL"]
YUGOSLAVIA_3	2	Yugoslavia (prior to 1990), Slovenia, Croatia, Bosnia and Herzegovina, and Serbia; +35° ≤ ϕ ≤ +52°; +7° ≤ λ ≤ +29°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1997	[83502T, App. C.2, "HER"]
YUGOSLAVIA_7	3	Yugoslavia (prior to 1990), Slovenia, Croatia, Bosnia and Herzegovina, and Serbia; +35° ≤ ϕ ≤ +52°; +7° ≤ λ ≤ +29°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1871	[HELM, "HER-7", "Former Yugoslavia"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HJORSEY_1955	108	Hjorsey	WGS_1984	1955	Iceland	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.5, "HJO"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	ICELAND	1	Iceland; +61° ≤ ϕ ≤ +69°; -24° ≤ λ ≤ -11°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1955	[83502T, App. B.5, "HJO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HONG_KONG_1963	109	Hong Kong	WGS_1984	1963	Hong Kong	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.3, "HKD"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	HONG_KONG	1	Hong Kong; +21° ≤ ϕ ≤ +24°; +112° ≤ λ ≤ +116°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1963	[83502T, App. B.3, "HKD"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HONG_KONG_1980	110	Hong Kong	WGS_1984	1980	Hong Kong	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[HELM, "HKE"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	HONG_KONG	1	Hong Kong; +21° ≤ ϕ ≤ +24°; +112° ≤ λ ≤ +116°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1980	[HELM, "HKE"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HU_TZU_SHAN_1991	111	Hu-Tzu-Shan	WGS_1984	1991	Taiwan	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.3, "HTN"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	TAIWAN	1	Taiwan; +20° ≤ ϕ ≤ +28°; +117° ≤ λ ≤ +124°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1991	[83502T, App. B.3, "HTN"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HUNGARIAN_1972	112	Hungarian	WGS_1984	1972	Hungary	OBLATE_ELLIPSOID	GRS_1967	[HELM, "HUY"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	HUNGARY	1	Hungary; +40° ≤ ϕ ≤ +54°; +11° ≤ λ ≤ +29°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1972	[HELM, "HUY-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
INDIAN_1916	115	Indian	WGS_1984	1991	Bangladesh	OBLATE_ELLIPSOID	EVEREST_ADJ_1937	[83502T, App. B.3, "IND-B"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	BANGLADESH_3	1	Bangladesh; +15° ≤ ϕ ≤ +33°; +80° ≤ λ ≤ +100°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1991	[83502T, App. B.3, "IND-B"]
	BANGLADESH_7	2	Bangladesh; +15° ≤ ϕ ≤ +33°; +80° ≤ λ ≤ +100°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1916	[HELM, "IND-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
INDIAN_1954	116	Indian	WGS_1984	1954	Thailand	OBLATE_ELLIPSOID	EVEREST_ADJ_1937	[83502T, App. B.3, "INF"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	THAILAND	1	Thailand; +0° ≤ ϕ ≤ +27°; +91° ≤ λ ≤ +111°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1954	[83502T, App. B.3, "INF-A"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
INDIAN_1956	117	Indian	WGS_1984	1991	India and Nepal	OBLATE_ELLIPSOID	EVEREST_1956	[83502T, App. B.3, "IND-I"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	INDIA_NEPAL	1	India and Nepal; +2° ≤ ϕ ≤ +44°; +62° ≤ λ ≤ +105°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1991	[83502T, App. B.3, "IND-I"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
INDIAN_1960	118	Indian	WGS_1984	1960	Vietnam	OBLATE_ELLIPSOID	EVEREST_ADJ_1937	[83502T, App. B.3, "ING"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	CON_SON_ISLAND	1	Con Son Island (Vietnam); +6° ≤ ϕ ≤ +11°; +104° ≤ λ ≤ +109°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1960	[83502T, App. B.3, "ING-B"]
	VIETNAM_16_N	2	Vietnam (near 16°N); +11° ≤ ϕ ≤ +23°; +101° ≤ λ ≤ +115°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1960	[83502T, App. B.3, "ING-A"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
INDIAN_1962	119	Indian	WGS_1984	1962	Pakistan	OBLATE_ELLIPSOID	EVEREST_REVISED_1962	[83502T, App. C.2, "IND-P"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	PAKISTAN	1	Pakistan; +17° ≤ ϕ ≤ +44°; +55° ≤ λ ≤ +81°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1993	[83502T, App. C.2, "IND-P"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
INDIAN_1975	120	Indian	WGS_1984	1975	Thailand	OBLATE_ELLIPSOID	EVEREST_ADJ_1937	[83502T, App. B.3, "INH"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	THAILAND_1991	1	Thailand; +0° ≤ ϕ ≤ +27°; +91° ≤ λ ≤ +111°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1991	[83502T, App. B.3, "INH-A"]
	THAILAND_1997	2	Thailand; +0° ≤ ϕ ≤ +27°; +91° ≤ λ ≤ +111°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1997	[83502T, App. B.3, "INH-A1"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
INDONESIAN_1974	121	Indonesian	WGS_1984	1974	Indonesia	OBLATE_ELLIPSOID	INDONESIAN_1974	[83502T, App. B.3, "IDN"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	INDONESIA	1	Indonesia; -16° ≤ ϕ ≤ +11°; +89° ≤ λ ≤ +146°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1974	[83502T, App. B.3, "IDN"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
IRAQ_KUWAIT_BNDRY_1992	123	Iraq/Kuwait Boundary	WGS_1984	1992	Iraq and Kuwait	OBLATE_ELLIPSOID	GRS_1980	[HELM, "IKB"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IRAQ_KUWAIT	1	Iraq and Kuwait; +27° ≤ ϕ ≤ +39°; +37° ≤ λ ≤ +50°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1992	[HELM, "IKB"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
IRELAND_1965	124	Ireland 1965	WGS_1984	1965	Ireland	OBLATE_ELLIPSOID	MODIFIED_AIRY_1849	[83502T, App. B.5, "IRL"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IRELAND_3	1	Ireland; +50° ≤ ϕ ≤ +57°; -12° ≤ λ ≤ -4°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1965	[83502T, App. B.5, "IRL"]
IRELAND_7	2	Ireland; +50° ≤ ϕ ≤ +57°; -12° ≤ λ ≤ -4°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1965	[HELM, "IRL-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ISTS_061_1968	125	ISTS 061 (astronomic)	WGS_1984	1968	South Georgia Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "ISG"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SOUTH_GEORGIA_ISLAND	1	South Georgia Island; -56° ≤ ϕ ≤ -52°; -38° ≤ λ ≤ -34°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1968	[83502T, App. B.8, "ISG"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ISTS_073_1969	126	ISTS 073 (astronomic)	WGS_1984	1969	Diego Garcia	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.9, "IST"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
DIEGO_GARCIA	1	Diego Garcia; $-10^o \le \phi \le -4^o$; $+69^o \le \lambda \le +75^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1969	[83502T, App. B.9, "IST"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
JGD_2000	128	Japanese Geodetic Datum 2000 (JGD2000)	WGS_1984	2000	Japan	OBLATE_ELLIPSOID	GRS_1980	[GRFJ]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_MEASUREMENT	1	Japan; $+19^o \le \phi \le +51^o$; $+119^o \le \lambda \le +156^o$	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = \omega_2 = \omega_3 = 0''$, $\Delta s = 0$	2000	[GRFJ]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
JOHNSTON_1961	129	Johnston	WGS_1984	1961	Johnston Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "JOH"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
JOHNSTON_ISLAND	1	Johnston Island; $-46^o \le \phi \le -43^o$; $-76^o \le \lambda \le -73^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1961	[83502T, App. B.10, "JOH"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

KANDAWALA_1987	138	Kandawala	WGS_1984	1987	Sri Lanka	OBLATE_ELLIPSOID	EVEREST_ADJ_1937	[83502T, App. B.3, "KAN"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SRI_LANKA_3	1	Sri Lanka; $+4^o \le \phi \le +12^o$; $+77^o \le \lambda \le +85^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.3, "KAN"]
SRI_LANKA_7	2	Sri Lanka; $+4^o \le \phi \le +12^o$; $+77^o \le \lambda \le +85^o$	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1987	[HELM, "KAN-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
KERGUELEN_1949	139	Kerguelen	WGS_1984	1949	Kerguelen Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.9, "KEG"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
KERGUELEN_ISLAND	1	Kerguelen Island; $-81^o \le \phi \le -74^o$; $+139^o \le \lambda \le +180^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1949	[83502T, App. B.9, "KEG"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
KERTAU_1948	140	Kertau	WGS_1984	1948	West Malaysia and Singapore	OBLATE_ELLIPSOID	EVEREST_1948	[83502T, App. B.3, "KEA"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	W_MALAYSIA_SINGAPORE_3	1	West Malaysia and Singapore; -5° ≤ ϕ ≤ +12°; +94° ≤ λ ≤ +112°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1948	[83502T, App. B.3, "KEA"]
	W_MALAYSIA_SINGAPORE_7	2	West Malaysia and Singapore; -5° ≤ ϕ ≤ +12°; +94° ≤ λ ≤ +112°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1948	[HELM, "KEA-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
KOREAN_GEODETIC_1995	141	Korean Geodetic System	WGS_1984	1995	South Korea	OBLATE_ELLIPSOID	WGS_1984	[83502T, App. B.3, "KGS"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	SOUTH_KOREA	1	South Korea; +27° ≤ ϕ ≤ +45°; +120° ≤ λ ≤ +139°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	2000	[83502T, App. B.3, "KGS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
KUSAIE_1951	142	Kusaie 1951 (astronomic)	WGS_1984	1951	Caroline Islands (Federated States of Micronesia)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "KUS"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	CAROLINE_ISLANDS	1	Caroline Islands (Federated States of Micronesia); -1° ≤ ϕ ≤ +12°; +134° ≤ λ ≤ +167°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1951	[83502T, App. B.10, "KUS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

LANDESVERMESSUNG-_1995	143	Landesvermessung (CH1903+)	WGS_1984	1995	Switzerland	OBLATE_ELLIPSOID	BESSEL_1841-_ETHIOPIA	[HELM, "CHW"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SWITZERLAND	1	Switzerland; $+44° \le \phi \le +49°$; $+5° \le \lambda \le +12°$	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1995	[HELM, "CHW-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
LC5_1961	145	LC5 (astronomic)	WGS_1984	1961	Cayman Brac Island	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.8, "LCF"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
CAYMAN_BRAC_ISLAND	1	Cayman Brac Island; $+18° \le \phi \le +21°$; $-81° \le \lambda \le -78°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0″$: precise, Δs = 0 : precise	1961	[83502T, App. B.8, "LCF"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
LEIGON_1991	146	Leigon	WGS_1984	1991	Ghana	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "LEH"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
GHANA_3	1	Ghana; $-1° \le \phi \le +17°$; $-9° \le \lambda \le +7°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0″$: precise, Δs = 0 : precise	1991	[83502T, App. B.2, "LEH"]
GHANA_7	2	Ghana; $-1° \le \phi \le +17°$; $-9° \le \lambda \le +7°$	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1991	[HELM, "LEH-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
LIBERIA_1964	147	Liberia	WGS_1984	1964	Liberia	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "LIB"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
LIBERIA	1	Liberia; $-1° \le \phi \le +14°$; $-17° \le \lambda \le -1°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1964	[83502T, App. B.2, "LIB"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
LISBON_D73	148	Lisbon D73 (Castelo di Sao Jorge)	WGS_1984	1973	Portugal	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[HELM, "LIS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
PORTUGAL	1	Portugal; $+36° \le \phi \le +44°$; $-11° \le \lambda \le -5°$	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1973	[HELM, "LIS-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
LKS_1994	149	LKS94	WGS_1984	1994	Lithuania	OBLATE_ELLIPSOID	GRS_1980	[HELM, "LTH"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
LITHUANIA	1	Lithuania; $+52° \le \phi \le +58°$; $+18° \le \lambda \le +28°$	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1994	[HELM, "LTH"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
LUZON_1987	150	Luzon	WGS_1984	1987	Philippines	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.10, "LUZ"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	MINDANAO_ISLAND	1	Mindanao Island (Philippines); +4° ≤ ϕ ≤ +12°; +120° ≤ λ ≤ +128°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.10, "LUZ-B"]
	PHILIPPINES_EXCLUDING-_MINDANAO_ISLAND	2	Philippines (excluding Mindanao Island); +3° ≤ ϕ ≤ +23°; +115° ≤ λ ≤ +128°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.10, "LUZ-A"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
M_PORALOKO_1991	151	M'Poraloko	WGS_1984	1991	Gabon	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "MPO"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	GABON	1	Gabon; -10° ≤ ϕ ≤ +8°; +3° ≤ λ ≤ +20°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.2, "MPO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MAHE_1971	152	Mahe	WGS_1984	1971	Mahe Island (Seychelles)	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.9, "MIK"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	MAHE_ISLAND	1	Mahe Island (Seychelles); -6° ≤ ϕ ≤ -3°; +54° ≤ λ ≤ +57°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1971	[83502T, App. B.9, "MIK"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MARCUS_STATION_1952	153	Marcus Station (astronomic)	WGS_1984	1952	Marcus Islands	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "ASQ"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MARCUS_ISLANDS	1	Marcus Islands; +22° ≤ ϕ ≤ +26°; +152° ≤ λ ≤ +156°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1952	[83502T, App. B.10, "ASQ"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MASS_1999	157	MASS	WGS_1984	1999	Earth, Global	SPHERE	MASS_1999	[FENWM, Table 1, "MASS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_DEFAULT	1	Global (Earth)	{Relationship to WGS84 ellipsoid}	1999	[FENWM, Table 1, "MASS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MASSAWA_1987	158	Massawa	WGS_1984	1987	Eritrea and Ethiopia	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. B.2, "MAS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ERITREA_ETHIOPIA	1	Eritrea and Ethiopia; +7° ≤ ϕ ≤ +25°; +37° ≤ λ ≤ +53°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.2, "MAS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MERCHICH_1987	159	Merchich	WGS_1984	1987	Morocco	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "MER"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MOROCCO	1	Morocco; +22° ≤ ϕ ≤ +42°; -19° ≤ λ ≤ +5°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.2, "MER"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

MIDWAY_1961	163	Midway 1961 (astronomic)	WGS_1984	1961	Midway Islands	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "MID"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MIDWAY_ISLANDS	1	Midway Islands; $+25^o \le \phi \le +30^o$; $-180^o \le \lambda \le -169^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1961	[83502T, App. B.10, "MID"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MINNA_1991	165	Minna	WGS_1984	1991	Cameroon and Nigeria	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "MIN"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
CAMEROON	1	Cameroon; $-4^o \le \phi \le +19^o$; $+3^o \le \lambda \le +23^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1991	[83502T, App. B.2, "MIN-A"]
NIGERIA	2	Nigeria; $-1^o \le \phi \le +21^o$; $-4^o \le \lambda \le +20^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.2, "MIN-B"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MM5_1997	167	MM5 (AFWA)	WGS_1984	1997	Earth, Global	SPHERE	MM5_1997	[FENWM, Table 1, "MM5 (AFWA)"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_DEFAULT	1	Global (Earth)	{Relationship to WGS84 ellipsoid}	1997	[FENWM, Table 1, "MM5 (AFWA)"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

MODTRAN_MIDLATITUDE_N-_1989	168	MODTRAN	WGS_1984	1989	Earth northern midlatitude regions	SPHERE	MODTRAN_MIDLATITUDE_1989	[FENWM, Table 1, "MODTRAD, Midlatitude"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_DEFAULT	1	Northern midlatitude regions (Earth); $+30^o \le \phi \le +60^o$; $-180^o \le \lambda \le +180^o$	{Relationship to WGS84 ellipsoid}	1989	[FENWM, Table 1, "MODTRAN, Midlatitude"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MODTRAN_MIDLATITUDE_S-_1989	169	MODTRAN	WGS_1984	1989	Earth southern midlatitude regions	SPHERE	MODTRAN_MIDLATITUDE_1989	[FENWM, Table 1, "MODTRAD, Midlatitude"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_DEFAULT	1	Southern midlatitude regions (Earth); $-60^o \le \phi \le -30^o$; $-180^o \le \lambda \le +180^o$	{Relationship to WGS84 ellipsoid}	1989	[FENWM, Table 1, "MODTRAN, Midlatitude"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MODTRAN_SUBARCTIC_N_1989	170	MODTRAN	WGS_1984	1989	Earth northern subarctic regions	SPHERE	MODTRAN_SUBARCTIC_1989	[FENWM, Table 1, "MODTRAN, Subarctic"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_DEFAULT	1	Northern subarctic regions (Earth); $+60^o \le \phi \le +75^o$; $-180^o \le \lambda \le +180^o$	{Relationship to WGS84 ellipsoid}	1989	[FENWM, Table 1, "MODTRAN, Subarctic"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

MODTRAN_SUBARCTIC_S_1989	171	MODTRAN	WGS_1984	1989	Earth southern subarctic regions	SPHERE	MODTRAN_SUBARCTIC_1989	[FENWM, Table 1, "MODTRAN, Subarctic"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_DEFAULT	1	Southern subarctic regions (Earth); $-75^o \le \phi \le -60^o$; $-180^o \le \lambda \le +180^o$	{Relationship to WGS84 ellipsoid}	1989	[FENWM, Table 1, "MODTRAN, Subarctic"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MODTRAN_TROPICAL_1989	172	MODTRAN	WGS_1984	1989	Earth tropical regions	SPHERE	MODTRAN_TROPICAL_1989	[FENWM, Table 1, "MODTRAN, Tropical"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_DEFAULT	1	Tropical regions (Earth); $-30^o \le \phi \le +30^o$; $-180^o \le \lambda \le +180^o$	{Relationship to WGS84 ellipsoid}	1989	[FENWM, Table 1, "MODTRAN, Tropical"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MONTSERRAT_1958	173	Montserrat (astronomic)	WGS_1984	1958	Montserrat and Leeward Islands	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.8, "ASM"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MONTSERRAT_LEEWARD-_ISLANDS	1	Montserrat and Leeward Islands; $+15^o \le \phi \le +18^o$; $-64^o \le \lambda \le -61^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1958	[83502T, App. B.8, "ASM"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MULTIGEN_FLAT_EARTH_1989	175	Multigen flat Earth	WGS_1984	1989	Earth, Global	SPHERE	MULTIGEN_FLAT_EARTH_1989	[MFCG]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	IDENTITY_BY_DEFAULT	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = \omega_2 = \omega_3 = 0''$, $\Delta s = 0$	1989	[MFCG]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
N_AM_1927	176	North American	WGS_1984	1927	North America	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.6, "NAS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ALASKA_EXCLUDING-_ALEUTIAN_ISLANDS	1	Alaska (excluding Aleutian Islands); $+47° \le \phi \le +78°$; $-175° \le \lambda \le -130°$	$\Delta x = \{\Delta X(m)\}$, $\Delta y = \{\Delta Y(m)\}$, $\Delta z = \{\Delta Z(m)\}$, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1927	[83502T, App. B.6, "NAS-D"]
ALBERTA_BRITISH_COLUMBIA	2	Canada (Alberta and British Columbia); $+43° \le \phi \le +65°$; $-145° \le \lambda \le -105°$	$\Delta x = \{\Delta X(m)\}$, $\Delta y = \{\Delta Y(m)\}$, $\Delta z = \{\Delta Z(m)\}$, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1927	[83502T, App. B.6, "NAS-F"]
BAHAMAS_EXCLUDING_SAN-_SALVADOR_ISLAND	3	Bahamas (excluding San Salvador Island); $+19° \le \phi \le +29°$; $-83° \le \lambda \le -71°$	$\Delta x = \{\Delta X(m)\}$, $\Delta y = \{\Delta Y(m)\}$, $\Delta z = \{\Delta Z(m)\}$, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1927	[83502T, App. B.6, "NAS-Q"]
CANADA	4	Canada; $+36° \le \phi \le +90°$; $-150° \le \lambda \le -50°$	$\Delta x = \{\Delta X(m)\}$, $\Delta y = \{\Delta Y(m)\}$, $\Delta z = \{\Delta Z(m)\}$, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1927	[83502T, App. B.6, "NAS-E"]
CANAL_ZONE	5	Canal Zone; $+3° \le \phi \le +15°$; $-86° \le \lambda \le -74°$	$\Delta x = \{\Delta X(m)\}$, $\Delta y = \{\Delta Y(m)\}$, $\Delta z = \{\Delta Z(m)\}$, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1927	[83502T, App. B.6, "NAS-O"]
CARIBBEAN	6	Caribbean (Antigua Island, Barbados, Barbuda, Caicos Islands, Cuba, Dominican Republic, Grand Cayman, Jamaica and Turks Islands); $+8° \le \phi \le +29°$; $-87° \le \lambda \le -58°$	$\Delta x = \{\Delta X(m)\}$, $\Delta y = \{\Delta Y(m)\}$, $\Delta z = \{\Delta Z(m)\}$, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1927	[83502T, App. B.6, "NAS-P"]

	CENTRAL_AMERICA	7	Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua); +3º ≤ ϕ ≤ +25º; -98º ≤ λ ≤ -77º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-N"]
	CONTINENTAL_US	8	Continental United States Mean Solution; +15º ≤ ϕ ≤ +60º; -135º ≤ λ ≤ -60º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-C"]
	CUBA	9	Cuba; +18º ≤ ϕ ≤ +25º; -87º ≤ λ ≤ -72º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-T"]
	EAST_ALEUTIAN_ISLANDS	10	Aleutian Islands (east of 180ºW); +50º ≤ ϕ ≤ +58º; -180º ≤ λ ≤ -161º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-V"]
	EASTERN_CANADA	11	Eastern Canada (New Brunswick, Newfoundland, Nova Scotia and Quebec); +38º ≤ ϕ ≤ +68º; -85º ≤ λ ≤ -45º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-G"]
	EASTERN_US	12	Eastern United States (Alabama, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia and Wisconsin); +18º ≤ ϕ ≤ +55º; -102º ≤ λ ≤ -60º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-A"]

	HAYES_PENINSULA	13	Hayes Peninsula (Greenland); +74º ≤ ϕ ≤ +81º; -74º ≤ λ ≤ -56º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-U"]
	MANITOBA_ONTARIO	14	Canada (Manitoba and Ontario); +36º ≤ ϕ ≤ +63º; -108º ≤ λ ≤ -69º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-H"]
	MEXICO	15	Mexico; +10º ≤ ϕ ≤ +38º; -122º ≤ λ ≤ -80º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-L"]
	NORTHWEST_TERRITORIES-_SASKATCHEWAN	16	Canada (Northwest Territories and Saskatchewan); +43º ≤ ϕ ≤ +90º; -144º ≤ λ ≤ -55º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-I"]
	SAN_SALVADOR_ISLAND	17	San Salvador Island; +23º ≤ ϕ ≤ +26º; -75º ≤ λ ≤ -74º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-R"]
	WEST_ALEUTIAN_ISLANDS	18	Aleutian Islands (west of 180ºW); +50º ≤ ϕ ≤ +58º; +169º ≤ λ ≤ +180º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-W"]
	WESTERN_US	19	Western United States (Arizona, Arkansas, California, Colorado, Idaho, Iowa, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming); +19º ≤ ϕ ≤ +55º; -132º ≤ λ ≤ -87º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-B"]

	YUKON	20	Canada (Yukon); +53° ≤ ϕ ≤ +75°; -147° ≤ λ ≤ -117°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1927	[83502T, App. B.6, "NAS-J"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
N_AM_1983	177	North American	WGS_1984	1983	North America	OBLATE_ELLIPSOID	GRS_1980	[83502T, App. B.6, "NAR"], [NAD83]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	ALASKA_EXCLUDING-_ALEUTIAN_ISLANDS	1	Alaska (excluding Aleutian Islands); +48° ≤ ϕ ≤ +78°; -175° ≤ λ ≤ -135°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1983	[83502T, App. B.6, "NAR-A"]
	ALEUTIAN_ISLANDS	2	Aleutian Islands; +51° ≤ ϕ ≤ +74°; -180° ≤ λ ≤ +180°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1983	[83502T, App. B.6, "NAR-E"]
	CANADA	3	Canada; +36° ≤ ϕ ≤ +90°; -150° ≤ λ ≤ -50°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1983	[83502T, App. B.6, "NAR-B"]
	CONTINENTAL_US	4	Continental United States; +15° ≤ ϕ ≤ +60°; -135° ≤ λ ≤ -60°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1983	[83502T, App. B.6, "NAR-C"]
	HAWAII	5	Hawaii; +17° ≤ ϕ ≤ +24°; -164° ≤ λ ≤ -153°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1983	[83502T, App. B.6, "NAR-H"]
	MEXICO_CENTRAL_AMERICA	6	Mexico and Central America; +11° ≤ ϕ ≤ +35°; -122° ≤ λ ≤ -72°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1983	[83502T, App. B.6, "NAR-D"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
N_SAHARA_1959	178	North Sahara	WGS_1984	1959	Algeria	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "NSD"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ALGERIA	1	Algeria; $+13^o \le \phi \le +43^o$; $-15^o \le \lambda \le +11^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1959	[83502T, App. B.2, "NSD"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
NAHRWAN_1987	179	Nahrwan	WGS_1984	1987	Oman, Saudi Arabia, and the United Arab Emirates	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.3, "NAH"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MASIRAH_ISLAND	1	Masirah Island (Oman); $+19^o \le \phi \le +22^o$; $+57^o \le \lambda \le +60^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.3, "NAH-A"]
SAUDI_ARABIA	2	Saudi Arabia; $+8^o \le \phi \le +38^o$; $+28^o \le \lambda \le +62^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1991	[83502T, App. B.3, "NAH-C"]
UNITED_ARAB_EMIRATES	3	United Arab Emirates; $+17^o \le \phi \le +32^o$; $+45^o \le \lambda \le +62^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.3, "NAH-B"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
NAPARIMA_1991	181	Naparima BWI	WGS_1984	1991	Trinidad and Tobago (British West Indies)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "NAP"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	TRINIDAD_TOBAGO	1	Trinidad and Tobago (British West Indies); +8° ≤ ϕ ≤ +13°; -64° ≤ λ ≤ -59°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.8, "NAP"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
NOGAPS_1988	185	NOGAPS	WGS_1984	1988	Earth, Global	SPHERE	NOGAPS_1988	[FENWM, Table 1, "NOGAPS"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY_BY_DEFAULT	1	Global (Earth)	{Relationship to WGS84 ellipsoid}	1988	[FENWM, Table 1, "NOGAPS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
NTF_1896	186	NTF	WGS_1984	1896	France	OBLATE_ELLIPSOID	CLARKE_1880_IGN	[HELM, "NFR"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	FRANCE	1	France; +42° ≤ ϕ ≤ +52°; -6° ≤ λ ≤ +10°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1896	[HELM, "NFR"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
NTF_1896_PM_PARIS	187	NTF (with the Prime Meridian at Paris)	WGS_1984	1896 The x-positive *xz*-half-plane contains Paris, France (IGN 1936 determination).	France	OBLATE_ELLIPSOID	CLARKE_1880_IGN	[HELM, "NFR"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	FRANCE	1	France; +42° ≤ ϕ ≤ +52°; -8° ≤ λ ≤ +8°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ + 2° 20′ 14,025″ : unknown, Δs = {ds} x 10^{-6} : assumed precise Note: The referenced *z*-axis rotation has been offset so that Paris is contained in the *x*-positive *xz*-plane.	1896	[HELM, "NFR"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

OBSERV_METEORO_1939	189	Observatorio Meteorologico	WGS_1984	1939	Corvo Flores Islands (Azores)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "FLO"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
CORVO_FLORES_ISLANDS	1	Corvo Flores Islands (Azores); $+38^o \le \phi \le +41^o$; $-33^o \le \lambda \le -30^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1939	[83502T, App. B.8, "FLO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
OLD_EGYPTIAN_1907	190	Old Egyptian	WGS_1984	1907	Egypt	OBLATE_ELLIPSOID	HELMERT_1906	[83502T, App. B.2, "OEG"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
EGYPT	1	Egypt; $+16^o \le \phi \le +38^o$; $+19^o \le \lambda \le +42^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1907	[83502T, App. B.2, "OEG"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
OLD_HAWAIIAN_CLARKE_1987	191	Old Hawaiian (Clarke)	WGS_1984	1987	Hawaiian Islands	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.10, "OHA"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
HAWAII	1	Hawaii (US); $+17^o \le \phi \le +22^o$; $-158^o \le \lambda \le -153^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.10, "OHA-A"]
KAUAI	2	Kauai (US); $+20^o \le \phi \le +24^o$; $-161^o \le \lambda \le -158^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.10, "OHA-B"]

	MAUI	3	Maui (US); +19° ≤ ϕ ≤ +23°; -158° ≤ λ ≤ -154°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.10, "OHA-C"]
	MEAN_SOLUTION	4	Mean Solution (Hawaii (US)); +17° ≤ ϕ ≤ +24°; -164° ≤ λ ≤ -153°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.10, "OHA-M"]
	OAHU	5	Oahu (US); +20° ≤ ϕ ≤ +23°; -160° ≤ λ ≤ -156°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.10, "OHA-D"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
OLD_HAWAIIAN_INT_1987	192	Old Hawaiian (International)	WGS_1984	1987	Hawaiian Islands	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "OHI"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	HAWAII	1	Hawaii (US); +17° ≤ ϕ ≤ +22°; -158° ≤ λ ≤ -153°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	2000	[83502T, App. B.10, "OHI-A"]
	KAUAI	2	Kauai (US); +20° ≤ ϕ ≤ +24°; -161° ≤ λ ≤ -158°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	2000	[83502T, App. B.10, "OHI-B"]
	MAUI	3	Maui (US); +19° ≤ ϕ ≤ +23°; -158° ≤ λ ≤ -154°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	2000	[83502T, App. B.10, "OHI-C"]
	MEAN_SOLUTION	4	Mean Solution (Hawaii (US)); +17° ≤ ϕ ≤ +24°; -164° ≤ λ ≤ -153°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	2000	[83502T, App. B.10, "OHI-M"]
	OAHU	5	Oahu (US); +20° ≤ ϕ ≤ +23°; -160° ≤ λ ≤ -156°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	2000	[83502T, App. B.10, "OHI-D"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
OSGB_1936	194	Ordnance Survey of Great Britain	WGS_1984	1936	Great Britain	OBLATE_ELLIPSOID	AIRY_1830	[83502T, App. B.5, "OGB"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ENGLAND	1	England; +44° ≤ ϕ ≤ +61°; -12° ≤ λ ≤ +7°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1936	[83502T, App. B.5, "OGB-A"]
ENGLAND_ISLE_OF_MAN-_WALES	2	England, Isle of Man, and Wales; +44° ≤ ϕ ≤ +61°; -12° ≤ λ ≤ +7°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1936	[83502T, App. B.5, "OGB-B"]
GREAT_BRITAIN_7	3	Great Britain; +49° ≤ ϕ ≤ +60°; -9° ≤ λ ≤ +3°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1936	[HELM, "OGB-7"]
MEAN_SOLUTION_3	4	Mean Solution (England, Isle of Man, Scotland, Shetland, and Wales); +44° ≤ ϕ ≤ +66°; -14° ≤ λ ≤ +7°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1936	[83502T, App. B.5, "OGB-M"]
SCOTLAND_SHETLAND-_ISLANDS	5	Scotland and Shetland Islands; +49° ≤ ϕ ≤ +66°; -14° ≤ λ ≤ +4°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1936	[83502T, App. B.5, "OGB-C"]
WALES	6	Wales; +46° ≤ ϕ ≤ +59°; -11° ≤ λ ≤ +3°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1936	[83502T, App. B.5, "OGB-D"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PALESTINE_1928	195	Palestine	WGS_1984	1928	Israel and Jordan	OBLATE_ELLIPSOID	CLARKE_1880_PALESTINE	[HELM, "PAL"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	ISRAEL_JORDAN	1	Israel and Jordan; +28° ≤ ϕ ≤ +34°; +33° ≤ λ ≤ +41°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1928	[HELM, "PAL"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PICO_DE_LAS_NIEVES_1987	200	Pico de las Nieves	WGS_1984	1987	Canary Islands (Spain)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "PLN"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	CANARY_ISLANDS	1	Canary Islands (Spain); +26° ≤ ϕ ≤ +31°; -20° ≤ λ ≤ -12°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.8, "PLN"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PITCAIRN_1967	201	Pitcairn (astronomic)	WGS_1984	1967	Pitcairn Island	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "PIT"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	PITCAIRN_ISLAND	1	Pitcairn Island; -27° ≤ ϕ ≤ -21°; -134° ≤ λ ≤ -119°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1967	[83502T, App. B.10, "PIT"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
POINT_58_1991	204	Point 58	WGS_1984	1991	Burkina Faso and Niger	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "PTB"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	MEAN_SOLUTION	1	Mean Solution (Burkina Faso and Niger); +0º ≤ ϕ ≤ +10º; -15º ≤ λ ≤ +25º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.2, "PTB"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
POINTE_NOIRE_1948	205	Pointe Noire	WGS_1984	1948	Congo	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "PTN"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	CONGO	1	Congo; -11º ≤ ϕ ≤ +10º; +5º ≤ λ ≤ +25º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1948	[83502T, App. B.2, "PTN"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PORTO_SANTO_1936	207	Porto Santo	WGS_1984	1936	Porto Santo and Madeira Islands	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "POS"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	PORTO_SANTO_MADEIRA-_ISLANDS	1	Porto Santo and Madeira Islands; +31º ≤ ϕ ≤ +35º; -18º ≤ λ ≤ -15º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1936	[83502T, App. B.8, "POS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PROV_S_AM_1956	210	Provisional South American	WGS_1984	1956	South America	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.7, "PRP"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	BOLIVIA	1	Bolivia; -28º ≤ ϕ ≤ -4º; -75º ≤ λ ≤ -51º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-A"]

	COLOMBIA	2	Colombia; -10º ≤ ϕ ≤ +16º; -85º ≤ λ ≤ -61º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-D"]
	ECUADOR	3	Ecuador; -11º ≤ ϕ ≤ +7º; -85º ≤ λ ≤ -70º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-E"]
	GUYANA	4	Guyana; -4º ≤ ϕ ≤ +14º; -67º ≤ λ ≤ -51º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-F"]
	MEAN_SOLUTION	5	Mean Solution (Bolivia, Chile, Colombia, Ecuador, Guyana, Peru and Venezuela); -64º ≤ ϕ ≤ +18º; -87º ≤ λ ≤ -51º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-M"]
	N_CHILE_19_S	6	Northern Chile (near 19ºS); -45º ≤ ϕ ≤ -12º; -83º ≤ λ ≤ -60º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-B"]
	PERU	7	Peru; -24º ≤ ϕ ≤ +5º; -87º ≤ λ ≤ -63º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-G"]
	S_CHILE_43_S	8	Southern Chile (near 43ºS); -64º ≤ ϕ ≤ -20º; -83º ≤ λ ≤ -60º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-C"]
	VENEZUELA_3	9	Venezuela; -5º ≤ ϕ ≤ +18º; -79º ≤ λ ≤ -54º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1956	[83502T, App. B.7, "PRP-H"]
	VENEZUELA_7	10	Venezuela; -5º ≤ ϕ ≤ +18º; -79º ≤ λ ≤ -54º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1956	[HELM, "PRP-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PROV_S_CHILEAN_1963	211	Provisional South Chilean (Hito xVIII)	WGS_1984	1963	South Chile	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.7, "HIT"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SOUTH_CHILE	1	South Chile (near 53ºS); -64º ≤ ϕ ≤ -25º; -83º ≤ λ ≤ -60º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1963	[83502T, App. B.7, "HIT"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PUERTO_RICO_1987	213	Puerto Rico	WGS_1984	1987	Puerto Rico and Virgin Islands	OBLATE_ELLIPSOID	CLARKE_1866	[83502T, App. B.8, "PUR"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
PUERTO_RICO_VIRGIN-_ISLANDS	1	Puerto Rico and Virgin Islands; +16º ≤ ϕ ≤ +20º; -69º ≤ λ ≤ -63º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.8, "PUR"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PULKOVO_1942	214	Pulkovo	WGS_1984	1942	Eastern Europe and Russia	OBLATE_ELLIPSOID	KRASSOVSKY_1940	[83502T, App. C.2, "PUK"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ESTONIA	1	Estonia; +52º ≤ ϕ ≤ +65º; +16º ≤ λ ≤ +34º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1942	[HELM, "PUK-7", "Estonia"]
GERMANY	2	FRG; +46º ≤ ϕ ≤ +57º; +4º ≤ λ ≤ +16º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1942	[HELM, "PUK-7", "Germany"]

	RUSSIA	3	Russia; +36° ≤ ϕ ≤ +89°; -180° ≤ λ ≤ +180°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1942	[83502T, App. C.2, "PUK"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
QATAR_NATIONAL_1974	215	Qatar National	WGS_1984	1974	Qatar	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.3, "QAT"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	QATAR_3	1	Qatar; +19° ≤ ϕ ≤ +32°; +45° ≤ λ ≤ +57°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.3, "QAT"]
	QATAR_7	2	Qatar; +19° ≤ ϕ ≤ +32°; +45° ≤ λ ≤ +57°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1974	[HELM, "QAT-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
QATAR_NATIONAL_1995	216	Qatar National	WGS_1984	1995	Qatar	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[HELM, "QAR"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	QATAR	1	Qatar; +19° ≤ ϕ ≤ +32°; +45° ≤ λ ≤ +57°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1995	[HELM, "QAR-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
QORNOQ_1987	217	Qornoq	WGS_1984	1987	South Greenland	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "QUO"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SOUTH_GREENLAND	1	South Greenland; +57° ≤ ϕ ≤ +85°; -77° ≤ λ ≤ -7°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.8, "QUO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
REUNION_1947	218	Reunion	WGS_1984	1947	Mascarene Islands	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.9, "REU"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MASCARENE_ISLANDS	1	Mascarene Islands; -27° ≤ ϕ ≤ -12°; +47° ≤ λ ≤ +65°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1947	[83502T, App. B.9, "REU"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
RGF_1993	219	Reseau Geodesique Francais	WGS_1984	1993 The x-positive *xz*-half-plane contains Paris, France (IGN 1936 determination).	France	OBLATE_ELLIPSOID	GRS_1980	[RGF]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_MEASUREMENT	1	France; +42° ≤ ϕ ≤ +52°; -6° ≤ λ ≤ +10°	$\Delta x = \Delta y = \Delta z$ = 0, ω_1 = 0″, ω_2 = 0″, ω_3 = 2° 20′ 14,025″, Δs = 0 Note: The referenced *z*-axis rotation has been offset so that Paris is contained in the *x*-positive *xz*-plane.	1993	[RGF]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ROME_1940	221	Rome (also known as Monte Mario)	WGS_1984	1940	Italy, Sardinia, and Sicily	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.5, "MOD"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ITALY_7	1	Italy mainland; +37° ≤ ϕ ≤ +43°; +4° ≤ λ ≤ +20°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1940	[HELM, "MOD-7", "Italy mainland"]
SARDINIA	2	Sardinia (Italy); +37° ≤ ϕ ≤ +43°; +6° ≤ λ ≤ +12°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1940	[83502T, App. B.5, "MOD"]
SARDINIA_7	3	Sardinia (Italy); +37° ≤ ϕ ≤ +43°; +6° ≤ λ ≤ +12°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1940	[HELM, "MOD-7", "Italy - Sardinia"]
SICILY	4	Sicily (Italy); +35° ≤ ϕ ≤ +40°; +10° ≤ λ ≤ +17°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1940	[HELM, "MOD-7", "Italy - Sicily"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ROME_1940_PM_ROME	222	Rome (also known as Monte Mario) (with the Prime Meridian at Rome)	WGS_1984	1940 The x-positive *xz*-half-plane contains Rome, Italy.	Italy, Sardinia, and Sicily	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.5, "MOD"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ITALY_7	1	Italy mainland; +37º ≤ ϕ ≤ +43º; -8º ≤ λ ≤ +8º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ + 12º 27′ 8,4″ : unknown, Δs = {ds} x 10^{-6} : assumed precise Note: The referenced *z*-axis rotation has been offset so that Rome is contained in the *x*-positive *xz*-plane.	1940	[HELM, "MOD-7", "Italy mainland"]
SARDINIA	2	Sardinia (Italy); +37º ≤ ϕ ≤ +43º; -8º ≤ λ ≤ +8º	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = 0″ : precise, ω_3 = 12º 27′ 8,4″ : assumed precise, Δs = 0 : precise Note: The referenced *z*-axis rotation has been offset so that Rome is contained in the *x*-positive *xz*-plane.	1940	[83502T, App. B.5, "MOD"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
RT_1990	224	RT	WGS_1984	1990	Sweden	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[HELM, "RTS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SWEDEN	1	Sweden; +54º ≤ ϕ ≤ +71º; +10º ≤ λ ≤ +26º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1990	[HELM, "RTS-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
RT_1990_PM_STOCKHOLM	225	RT (with the Prime Meridian at Stockholm)	WGS_1984	1990	Sweden	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[HELM, "RTS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SWEDEN	1	Sweden; +54º ≤ ϕ ≤ +71º; -8º ≤ λ ≤ +8º	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ + 18º 3′ 29,8″ : unknown, Δs = {ds} x 10^{-6} : assumed precise Note: The referenced *z*-axis rotation has been offset so that Stockholm is contained in the *x*-positive *xz*-plane.	1990	[HELM, "RTS-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
S_AM_1969	226	South American	WGS_1984	1969	South America	OBLATE_ELLIPSOID	SOUTH_AMERICAN_1969	[83502T, App. B.7, "SAN"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ARGENTINA	1	Argentina; -62° ≤ ϕ ≤ -23°; -76° ≤ λ ≤ -47°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-A"]
BALTRA_GALAPAGOS_ISLANDS	2	Baltra and Galapagos Islands (Ecuador); -2° ≤ ϕ ≤ +1°; -92° ≤ λ ≤ -89°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-J"]
BOLIVIA	3	Bolivia; -28° ≤ ϕ ≤ -4°; -75° ≤ λ ≤ -51°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-B"]
BRAZIL	4	Brazil; -39° ≤ ϕ ≤ -2°; -80° ≤ λ ≤ -29°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-C"]
CHILE	5	Chile; -64° ≤ ϕ ≤ -12°; -83° ≤ λ ≤ -60°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-D"]
COLOMBIA	6	Colombia; -10° ≤ ϕ ≤ +16°; -85° ≤ λ ≤ -61°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-E"]
ECUADOR_EXCLUDING-_GALAPAGOS_ISLANDS	7	Ecuador (excluding Galapagos Islands); -11° ≤ ϕ ≤ +7°; -85° ≤ λ ≤ -70°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-F"]
GUYANA	8	Guyana; -4° ≤ ϕ ≤ +14°; -67° ≤ λ ≤ -51°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-G"]
MEAN_SOLUTION	9	Mean Solution (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Trinidad and Tobago, and Venezuela); -65° ≤ ϕ ≤ -50°; -90° ≤ λ ≤ -25°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-M"]

	PARAGUAY	10	Paraguay; -33° ≤ ϕ ≤ -14°; -69° ≤ λ ≤ -49°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-H"]
	PERU	11	Peru; -24° ≤ ϕ ≤ +5°; -87° ≤ λ ≤ -63°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-I"]
	TRINIDAD_TOBAGO	12	Trinidad and Tobago (British West Indies); +4° ≤ ϕ ≤ +17°; -68° ≤ λ ≤ -55°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-K"]
	VENEZUELA	13	Venezuela; -5° ≤ ϕ ≤ +18°; -79° ≤ λ ≤ -54°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1969	[83502T, App. B.7, "SAN-L"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
S_ASIA_1987	227	South Asia	WGS_1984	1987	Singapore	OBLATE_ELLIPSOID	MODIFIED_FISCHER_1960	[83502T, App. B.3, "SOA"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	SINGAPORE	1	Singapore; +0° ≤ ϕ ≤ +3°; +102° ≤ λ ≤ +106°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. B.3, "SOA"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
S_JTSK_1993	228	S-JTSK	WGS_1984	1993	Czech Republic and Slovakia	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. B.5, "CCD"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	CZECH_REPUBLIC	1	Czech Republic; +47° ≤ ϕ ≤ +52°; +11° ≤ λ ≤ +20°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1993	[HELM, "CCD-7", "Czech Republic"]

	CZECH_REPUBLIC_SLOVAKIA	2	Czech Republic and Slovakia; +43° ≤ ϕ ≤ +56°; +6° ≤ λ ≤ +28°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1993	[83502T, App. B.5, "CCD"]
	SLOVAKIA	3	Slovakia; +46° ≤ ϕ ≤ +51°; +16° ≤ λ ≤ +24°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1993	[HELM, "CCD-7", "Slovakia"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
S42_PULKOVO	229	S-42 (Pulkovo)	WGS_1984	1942	Eastern Europe	OBLATE_ELLIPSOID	KRASSOVSKY_1940	[HELM, "SPK", "Afghanistan"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	AFGHANISTAN	1	Afghanistan; +23° ≤ ϕ ≤ +44°; +55° ≤ λ ≤ +81°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1942	[HELM, "SPK", "Afghanistan"]
	ALBANIA	2	Albania; +34° ≤ ϕ ≤ +48°; +14° ≤ λ ≤ +26°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1942	[83502T, App. B.5, "SPK-F"]
	CZECH_REPUBLIC_SLOVAKIA	3	Czech Republic and Slovakia; +42° ≤ ϕ ≤ +57°; +6° ≤ λ ≤ +28°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1942	[83502T, App. B.5, "SPK-C"]
	HUNGARY	4	Hungary; +40° ≤ ϕ ≤ +54°; +11° ≤ λ ≤ +29°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1942	[83502T, App. B.5, "SPK-A"]
	KAZAKHSTAN	5	Kazakhstan; +35° ≤ ϕ ≤ +62°; +41° ≤ λ ≤ +93°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1942	[83502T, App. B.5, "SPK-E"]
	LATVIA	6	Latvia; +50° ≤ ϕ ≤ +64°; +15° ≤ λ ≤ +34°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1942	[83502T, App. B.5, "SPK-D"]

	POLAND_3	7	Poland; $+43° \le \phi \le +60°$; $+8° \le \lambda \le +30°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1942	[83502T, App. B.5, "SPK-B"]
	POLAND_7	8	Poland; $+43° \le \phi \le +60°$; $+8° \le \lambda \le +30°$	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1942	[HELM, "SPK-7"]
	ROMANIA	9	Romania; $+38° \le \phi \le +54°$; $+15° \le \lambda \le +35°$	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1942	[HELM, "SPK", "Romania"]
	ROMANIA_G	10	Romania; $+38° \le \phi \le +54°$; $+15° \le \lambda \le +35°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1942	[83502T, App. B.5, "SPK-G"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SANTO_DOS_1965	230	Santo (DOS)	WGS_1984	1965	Espirito Santo Island (Vanuatu)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "SAE"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	ESPIRITO_SANTO_ISLAND	1	Espirito Santo Island (Vanuatu); $-17° \le \phi \le -13°$; $+160° \le \lambda \le +169°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1965	[83502T, App. B.10, "SAE"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SAO_BRAZ_1987	231	Sao Braz	WGS_1984	1987	Sao Miguel and Santa Maria Islands (Azores)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "SAO"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	SAO_MIGUEL_SANTA_MARIA-_ISLANDS	1	Sao Miguel and Santa Maria Islands (Azores); $+35° \le \phi \le +39°$; $-27° \le \lambda \le -23°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1987	[83502T, App. B.8, "SAO"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SAPPER_HILL_1943	232	Sapper Hill	WGS_1984	1943	East Falkland Islands	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "SAP"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
E_FALKLAND_ISLANDS_3	1	East Falkland Islands; -54° ≤ ϕ ≤ -50°; -61° ≤ λ ≤ -56°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1943	[83502T, App. B.8, "SAP"]
E_FALKLAND_ISLANDS_ADJ-_2000_7	2	East Falkland Islands (adjusted 2000); -54° ≤ ϕ ≤ -50°; -61° ≤ λ ≤ -56°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	2000	[HELM, "SAP-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SCHWARZECK_1991	236	Schwarzeck	WGS_1984	1991	Namibia	OBLATE_ELLIPSOID	BESSEL_1841_NAMIBIA	[83502T, App. B.2, "SCK"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
NAMIBIA	1	Namibia; -35° ≤ ϕ ≤ -11°; +5° ≤ λ ≤ +31°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1991	[83502T, App. B.2, "SCK"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SELVAGEM_GRANDE_1938	237	Selvagem Grande	WGS_1984	1938	Salvage Islands (Ilhas Selvagens; Savage Islands)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "SGM"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SALVAGE_ISLANDS	1	Salvage Islands (Ilhas Selvagens; Savage Islands); +28° ≤ ϕ ≤ +32°; -18° ≤ λ ≤ -14°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1938	[83502T, App. B.8, "SGM"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SIERRA_LEONE_1960	238	Sierra Leone	WGS_1984	1960	Sierra Leone	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "SRL"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
SIERRA_LEONE	1	Sierra Leone; +1° ≤ ϕ ≤ +16°; -19° ≤ λ ≤ -4°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1960	[83502T, App. B.2, "SRL"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SIRGAS_2000	239	SIRGAS	WGS_1984	2000	South America	OBLATE_ELLIPSOID	GRS_1980	[83502T, App. B.7, "SIR"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY_BY_MEASUREMENT	1	South America; -65° ≤ ϕ ≤ -50°; -90° ≤ λ ≤ -25°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, ω_1 = ω_2 = ω_3 = 0″ : precise, Δs = 0 : precise	1988	[83502T, App. B.7, "SIR"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SOUTHEAST_1943	240	Southeast	WGS_1984	1943	Seychelles Islands	OBLATE_ELLIPSOID	CLARKE_1880	[HELM, "SEI"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	SEYCHELLES_ISLANDS	1	Seychelles Islands; -12° ≤ ϕ ≤ -2°; +45° ≤ λ ≤ +57°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1943	[HELM, "SEI-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SOVIET_GEODETIC_1985	241	Soviet Geodetic System	WGS_1984	1985	Russia	OBLATE_ELLIPSOID	SOVIET_GEODETIC_1985	[HELM, "SGA"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	RUSSIA	1	Russia; +36° ≤ ϕ ≤ +89°; -180° ≤ λ ≤ +180°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1985	[HELM, "SGA-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SOVIET_GEODETIC_1990	242	Soviet Geodetic System	WGS_1984	1990	Russia	OBLATE_ELLIPSOID	SOVIET_GEODETIC_1990	[HELM, "SGB"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	RUSSIA	1	Russia; +36° ≤ ϕ ≤ +89°; -180° ≤ λ ≤ +180°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1990	[HELM, "SGB-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TANANARIVE_OBS_1925	244	Tananarive Observatory	WGS_1984	1925	Madagascar	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. C.2, "TAN"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MADAGASCAR_3	1	Madagascar; -34° ≤ ϕ ≤ -8°; +40° ≤ λ ≤ +53°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1925	[83502T, App. C.2, "TAN"]
MADAGASCAR_7	2	Madagascar; -34° ≤ ϕ ≤ -8°; +40° ≤ λ ≤ +53°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1925	[HELM, "TAN-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TANANARIVE_OBS_1925_PM-_PARIS	245	Tananarive Observatory (with the Prime Meridian at Paris)	WGS_1984	1925 The x-positive *xz*-half-plane contains Paris, France (IGN 1936 determination).	Madagascar	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. C.2, "TAN"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MADAGASCAR_3	1	Madagascar; -34° ≤ ϕ ≤ -8°; +38° ≤ λ ≤ +51°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = 0''$: precise, ω_3 = 2° 20′ 14,025″ : assumed precise, Δs = 0 : precise Note: The referenced *z*-axis rotation has been offset so that Paris is contained in the *x*-positive *xz*-plane.	1925	[83502T, App. C.2, "TAN"]
MADAGASCAR_7	2	Madagascar; -34° ≤ ϕ ≤ -8°; +38° ≤ λ ≤ +51°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ + 2° 20′ 14,025″ : unknown, Δs = {ds} x 10^{-6} : assumed precise Note: The referenced *z*-axis rotation has been offset so that Paris is contained in the *x*-positive *xz*-plane.	1925	[HELM, "TAN-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TERN_1961	247	Tern (astronomic)	WGS_1984	1961	Tern Island (French Frigate Shoals, Hawaiian Islands)	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "TRN"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
TERN_ISLAND	1	Tern Island (French Frigate Shoals, Hawaiian Islands); +22° ≤ ϕ ≤ +26°; -167° ≤ λ ≤ -165°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1961	[83502T, App. B.10, "TRN"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TIMBALAI_BESSEL_1948	251	Timbali (Bessel)	WGS_1984	1948	Brunei and East Malaysia (Sabah and Sarawak)	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[HELM, "TIV"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
BRUNEI_E_MALAYSIA_7	1	Brunei and East Malaysia (Sabah and Sarawak); -5° ≤ ϕ ≤ +15°; +101° ≤ λ ≤ +125°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1948	[HELM, "TIV-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TIMBALAI_BESSEL_ADJ_1968	252	Timbali (Bessel) - adjusted	WGS_1984	1968	Brunei and East Malaysia (Sabah and Sarawak)	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[HELM, "TIM"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
BRUNEI_E_MALAYSIA_7	1	Brunei and East Malaysia (Sabah and Sarawak); -5° ≤ ϕ ≤ +15°; +101° ≤ λ ≤ +125°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1968	[HELM, "TIM-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TIMBALAI_EVEREST_1948	253	Timbali (Everest)	WGS_1984	1948	Brunei and East Malaysia (Sabah and Sarawak)	OBLATE_ELLIPSOID	EVEREST_BRUNEI_1967	[83502T, App. B.3, "TIL"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
BRUNEI_E_MALAYSIA_3	1	Brunei and East Malaysia (Sabah and Sarawak); -5° ≤ ϕ ≤ +15°; +101° ≤ λ ≤ +125°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1948	[83502T, App. B.3, "TIL"]
BRUNEI_E_MALAYSIA_7	2	Brunei and East Malaysia (Sabah and Sarawak); -5° ≤ ϕ ≤ +15°; +101° ≤ λ ≤ +125°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1948	[HELM, "TIL-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TIMBALAI_EVEREST_ADJ-_1968	254	Timbali (Everest) - adjusted	WGS_1984	1968	Brunei and East Malaysia (Sabah and Sarawak)	OBLATE_ELLIPSOID	EVEREST_BRUNEI_1967	[HELM, "TIN"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
BRUNEI_E_MALAYSIA_7	1	Brunei and East Malaysia (Sabah and Sarawak); -5° ≤ ϕ ≤ +15°; +101° ≤ λ ≤ +125°	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1968	[HELM, "TIN-7"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

TOKYO_1991	257	Tokyo	WGS_1984	1991	Japan, Korea, and Okinawa	OBLATE_ELLIPSOID	BESSEL_1841_ETHIOPIA	[83502T, App. B.3, "TOY"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
JAPAN	1	Japan; $+19° \le \phi \le +51°$; $+119° \le \lambda \le +156°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.3, "TOY-A"]
MEAN_SOLUTION	2	Mean Solution (Japan, Korea, and Okinawa); $+23° \le \phi \le +53°$; $+120° \le \lambda \le +155°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.3, "TOY-M"]
OKINAWA	3	Okinawa (Japan); $+19° \le \phi \le +31°$; $+119° \le \lambda \le +134°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.3, "TOY-C"]
SOUTH_KOREA_1991	4	South Korea; $+27° \le \phi \le +45°$; $+120° \le \lambda \le +139°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1991	[83502T, App. B.3, "TOY-B"]
SOUTH_KOREA_1997	5	South Korea; $+27° \le \phi \le +45°$; $+120° \le \lambda \le +139°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1997	[83502T, App. B.3, "TOY-B1"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TRISTAN_1968	258	Tristan (astronomic)	WGS_1984	1968	Tristan da Cunha	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.8, "TDC"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
TRISTAN_DA_CUHNA	1	Tristan da Cunha; $-39° \le \phi \le -36°$; $-14° \le \lambda \le -11°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1968	[83502T, App. B.8, "TDC"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
VITI_LEVU_1916	266	Viti Levu	WGS_1984	1916	Viti Levu Island (Fiji Islands)	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.10, "MVS"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
VITI_LEVU_ISLANDS	1	Viti Levu Island (Fiji Islands); $-20° \le \phi \le -16°$; $+176° \le \lambda \le +180°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1916	[83502T, App. B.10, "MVS"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
VOIROL_1874	267	Voirol	WGS_1984	1874	Algeria	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. C.2, "VOI"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ALGERIA	1	Algeria; $+13° \le \phi \le +43°$; $-15° \le \lambda \le +11°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1874	[83502T, App. C.2, "VOI"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
VOIROL_1874_PM_PARIS	268	Voirol (with the Prime Meridian at Paris)	WGS_1984	1874 The x-positive *xz*-half-plane contains Paris, France (IGN 1936 determination).	Algeria	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. C.2, "VOI"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
ALGERIA	1	Algeria; $+13° \le \phi \le +43°$; $-17° \le \lambda \le +9°$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = 0''$: precise, $\omega_3 = 2° 20' 14{,}025''$: assumed precise, Δs = 0 : precise Note: The referenced *z*-axis rotation has been offset so that Paris is contained in the *x*-positive *xz*-plane.	1874	[83502T, App. C.2, "VOI"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
VOIROL_1960	269	Voirol - Revised	WGS_1984	1960	Algeria	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "VOR"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	ALGERIA	1	Algeria; +13° ≤ ϕ ≤ +43°; -15° ≤ λ ≤ +11°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1960	[83502T, App. B.2, "VOR"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
VOIROL_1960_PM_PARIS	270	Voirol - Revised (with the Prime Meridian at Paris)	WGS_1984	1960 The x-positive *xz*-half-plane contains Paris, France (IGN 1936 determination).	Algeria	OBLATE_ELLIPSOID	CLARKE_1880	[83502T, App. B.2, "VOR"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	ALGERIA	1	Algeria; +13° ≤ ϕ ≤ +43°; -17° ≤ λ ≤ +9°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = 0''$: precise, ω_3 = 2° 20′ 14,025″ : assumed precise, Δs = 0 : precise Note: The referenced *z*-axis rotation has been offset so that Paris is contained in the *x*-positive *xz*-plane.	1960	[83502T, App. B.2, "VOR"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
WAKE_1952	271	Wake (astronomic)	WGS_1984	1952	Wake Atoll	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.10, "WAK"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	WAKE_ATOLL	1	Wake Atoll; +17° ≤ ϕ ≤ +21°; -176° ≤ λ ≤ -171°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, Δs = 0 : precise	1952	[83502T, App. B.10, "WAK"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
WAKE_ENIWETOK_1960	272	Wake-Eniwetok	WGS_1984	1960	Marshall Islands	OBLATE_ELLIPSOID	HOUGH_1960	[83502T, App. B.10, "ENW"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
MARSHALL_ISLANDS	1	Marshall Islands; +1° ≤ ϕ ≤ +16°; +159° ≤ λ ≤ +175°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1960	[83502T, App. B.10, "ENW"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
WGS_1972	273	World Geodetic System	WGS_1984	1972	Earth, Global	OBLATE_ELLIPSOID	WGS_1972	[WGS72]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
GLOBAL	1	Global (Earth)	Δx = {dx} : {second column before last} m, Δy = {dy} : {column next to last} m, Δz = {dz} : {last column} m, ω_1 = {rx}″ : unknown, ω_2 = {ry}″ : unknown, ω_3 = {rz}″ : unknown, Δs = {ds} x 10^{-6} : assumed precise	1972	[HELM, "WGC-7"], [83502T, Table E.1]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
WGS_1984	274	World Geodetic System	This is the reference ORM for Earth.	1984 Note: The x-positive *xz*-half-plane contains Greenwich, UK.	Earth, Global	OBLATE_ELLIPSOID	WGS_1984	[83502T]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Earth)	The reference ORM for the Earth.	1984	[83502T, Section 3]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
YACARE_1987	275	Yacare (Uruguay)	WGS_1984	1987	Uruguay	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. C.2, "YAC"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
URUGUAY	1	Uruguay; -40° ≤ ϕ ≤ -25°; -65° ≤ λ ≤ -47°	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3$ = 0″ : precise, Δs = 0 : precise	1987	[83502T, App. C.2, "YAC"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ZANDERIJ_1987	276	Zanderij (Suriname)	WGS_1984	1987	Suriname	OBLATE_ELLIPSOID	INTERNATIONAL_1924	[83502T, App. B.7, "ZAN"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	SURINAME	1	Suriname; $-10^o \le \phi \le +20^o$; $-76^o \le \lambda \le -47^o$	Δx = {ΔX(m)}, Δy = {ΔY(m)}, Δz = {ΔZ(m)}, $\omega_1 = \omega_2 = \omega_3 = 0''$: precise, $\Delta s = 0$: precise	1987	[83502T, App. B.7, "ZAN"]

Table E.5 — Dynamic ERM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameter-ization	References
EARTH_INERTIAL_ARIES-_1950	58	Earth equatorial inertial, Aries mean of 1950	WGS_1984	DBC EQUATORIAL_INERTIAL Note: First point of Aries, mean of 1950.	Vicinity of Earth	BI_AXIS-_ORIGIN_3D	N/A	Clause 7.5.3
EARTH_INERTIAL_ARIES-_TRUE_OF_DATE	59	Earth equatorial inertial, Aries true of date	WGS_1984	DBC EQUATORIAL_INERTIAL Note: First point of Aries, true of date.	Vicinity of Earth	BI_AXIS-_ORIGIN_3D	N/A	Clause 7.5.3
EARTH_INERTIAL_J2000r0	60	Earth equatorial inertial, J2000.0	WGS_1984	DBC EQUATORIAL_INERTIAL Note: First point of Aries as of 2000 Jan 1 11:58:55.816 UTC.	Vicinity of Earth	BI_AXIS-_ORIGIN_3D	N/A	Clause 7.5.3
EARTH_SOLAR_ECLIPTIC	61	Solar ecliptic	WGS_1984	DBC SOLAR_ECLIPTIC	Vicinity of Earth	BI_AXIS-_ORIGIN_3D	N/A	[HAPG]
EARTH_SOLAR-_EQUATORIAL	62	Solar equatorial	WGS_1984	DBC SOLAR_EQUATORIAL	Vicinity of Earth	BI_AXIS-_ORIGIN_3D	N/A	[CRUS]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameter-ization	References
EARTH_SOLAR_MAG-_DIPOLE	63	Solar magnetic dipole	WGS_1984	DBC SOLAR_MAGNETIC_DIPOLE	Vicinity of Earth	BI_AXIS-_ORIGIN_3D	N/A	[CRUS], [BHAV]
EARTH_SOLAR-_MAGNETOSPHERIC	64	Solar magnetospheric	WGS_1984	DBC SOLAR_MAGNETIC_ECLIPTIC	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[CRUS]

Table E.6 — Time fixed instances of a dynamic ERM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1945	83	Geomagnetic	WGS_1984	1945 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1945 to 1950.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1945"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1945	[DAGF, Table I, "DGRF 1945"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1950	84	Geomagnetic	WGS_1984	1950 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1950 to 1955.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1950"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1950	[DAGF, Table I, "DGRF 1950"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1955	85	Geomagnetic	WGS_1984	1955 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1955 to 1960.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1955"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1955	[DAGF, Table I, "DGRF 1955"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1960	86	Geomagnetic	WGS_1984	1960 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1960 to 1965.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1960"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1960	[DAGF, Table I, "DGRF 1960"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1965	87	Geomagnetic	WGS_1984	1965 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1965 to 1970.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1965"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1965	[DAGF, Table I, "DGRF 1965"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1970	88	Geomagnetic	WGS_1984	1970 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1970 to 1975.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1970"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1970	[DAGF, Table I, "DGRF 1970"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1975	89	Geomagnetic	WGS_1984	1975 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1975 to 1980.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1975"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1975	[DAGF, Table I, "DGRF 1975"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

GEOMAGNETIC_1980	90	Geomagnetic	WGS_1984	1980 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1980 to 1985.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1980"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1980	[DAGF, Table I, "DGRF 1980"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1985	91	Geomagnetic	WGS_1984	1985 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1985 to 1990.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1985"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1985	[DAGF, Table I, "DGRF 1985"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1990	92	Geomagnetic	WGS_1984	1990 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1990 to 1995.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "DGRF 1990"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	DGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1990	[DAGF, Table I, "DGRF 1990"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_1995	93	Geomagnetic	WGS_1984	1995 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 1995 to 2000.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "IGRF 1995"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	1995	[DAGF, Table I, "IGRF 1995"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GEOMAGNETIC_2000	94	Geomagnetic	WGS_1984	2000 DBC CELESTIOMAGNETIC Note: Object-fixed base epoch for the 5 year period 2000 to 2005.	Vicinity of Earth	BI_AXIS_ORIGIN_3D	N/A	[DAGF, Table I, "IGRF 2000"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IGRF	1	Global (Earth)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = 90^o$ - {Latitude}^{o} : unknown, $\omega_3 = 360^o$ - {Longitude}^{o} : unknown, $\Delta s = 0$ Note: Centred dipole model northern pole.	2000	[DAGF, Table I, "IGRF 2000"]

Table E.7 — Object-fixed planet (non-Earth) ORM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
EROS_2000	68	Eros (asteroid 433)	This is the reference ORM for Eros (asteroid 433, a minor planet).	2000 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Eros"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Eros, Global	SPHERE	EROS_2000	[RIIC, Table III, "Eros"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Eros)	The reference ORM for Eros.	2000	[RIIC, Table III, "Eros"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GASPRA_1991	80	Gaspra (asteroid 951)	This is the reference ORM for Gaspra (asteroid 951, a minor planet).	1991 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Gaspra"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Gaspra, Global	TRI_AXIAL_ELLIPSOID	GASPRA_1991	[RIIC, Table III, "Gaspra"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Gaspra)	The reference ORM for Gaspra.	1991	[RIIC, Table III, "Gaspra"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
IDA_1991	114	Ida (asteroid 243)	This is the reference ORM for Ida (asteroid 243, a minor planet).	1991 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Ida"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Ida, Global	TRI_AXIAL_ELLIPSOID	IDA_1991	[RIIC, Table III, "Ida"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Ida)	The reference ORM for Ida.	1991	[RIIC, Table III, "Ida"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
JUPITER_1988	131	Jupiter	This is the reference ORM for Jupiter (a planet).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table I, "Jupiter"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Jupiter, Global	OBLATE_ELLIPSOID	JUPITER_1988	[RIIC, Table I, "Jupiter"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Jupiter)	The reference ORM for Jupiter.	2000	[RIIC, Table I, "Jupiter"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MARS_2000	154	Mars	This is the reference ORM for Mars (a planet).	2000 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table I, "Mars"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Mars, Global	OBLATE_ELLIPSOID	MARS_2000	[RIIC, Table I, "Mars"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Mars)	The reference ORM for Mars.	2000	[RIIC, Table I, "Mars"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MARS_SPHERE_2000	156	Mars (spherical)	MARS_2000	2000 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table I, "Mars"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Mars, Global	SPHERE	MARS_SPHERE_2000	[RIIC, Table I, "Mars"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
GLOBAL	1	Global (Mars)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = \omega_2 = \omega_3 = 0''$, $\Delta s = 0$	2000	[RIIC, Table I, "Mars"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MERCURY_1988	160	Mercury	This is the reference ORM for Mercury (a planet).	1988 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table I, "Mercury"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Mercury, Global	SPHERE	MERCURY_1988	[RIIC, Table I, "Mercury"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Mercury)	The reference ORM for Mercury.	1988	[RIIC, Table I, "Mercury"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
NEPTUNE_1991	182	Neptune	This is the reference ORM for Neptune (a planet).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table I, "Neptune"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Neptune, Global	OBLATE_ELLIPSOID	NEPTUNE_1991	[RIIC, Table I, "Neptune"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References

	IDENTITY	1	Global (Neptune)	The reference ORM for Neptune.	1991	[RIIC, Table I, "Neptune"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PLUTO_1994	202	Pluto	This is the reference ORM for Pluto (a planet).	1994 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table I, "Pluto"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Pluto, Global	SPHERE	PLUTO_1994	[RIIC, Table I, "Pluto"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Pluto)	The reference ORM for Pluto.	1994	[RIIC, Table I, "Pluto"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SATURN_1988	233	Saturn	This is the reference ORM for Saturn (a planet).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table I, "Saturn"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Saturn, Global	OBLATE_ELLIPSOID	SATURN_1988	[RIIC, Table I, "Saturn"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Saturn)	The reference ORM for Saturn.	1991	[RIIC, Table I, "Saturn"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
URANUS_1988	261	Uranus	This is the reference ORM for Uranus (a planet).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table I, "Uranus"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Uranus, Global	OBLATE_ELLIPSOID	URANUS_1988	[RIIC, Table I, "Uranus"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Uranus)	The reference ORM for Uranus.	1988	[RIIC, Table I, "Uranus"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
VENUS_1991	264	Venus	This is the reference ORM for Venus (a planet).	1991 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table I, "Venus"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Venus, Global	SPHERE	VENUS_1991	[RIIC, Table I, "Venus"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Venus)	The reference ORM for Venus.	1991	[RIIC, Table I, "Venus"]

Table E.8 — Dynamic planet (non-Earth) ORM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameter-ization	References
JUPITER_INERTIAL	132	Jupiter equatorial inertial	JUPITER_1988	DBC EQUATORIAL_INERTIAL Note: Vernal equinox, true of date.	Vicinity of Jupiter	BI_AXIS_ORIGIN_3D	N/A	Clause 7.5.3
JUPITER_SOLAR_ECLIPTIC	134	Jupiter solar ecliptic	JUPITER_1988	DBC SOLAR_ECLIPTIC	Vicinity of Jupiter	BI_AXIS_ORIGIN_3D	N/A	[HAPG]
JUPITER_SOLAR_EQUATORIAL	135	Jupiter solar equatorial	JUPITER_1988	DBC SOLAR_EQUATORIAL	Vicinity of Jupiter	BI_AXIS_ORIGIN_3D	N/A	[CRUS]
JUPITER_SOLAR_MAG_DIPOLE	136	Jupiter solar magnetic dipole	JUPITER_1988	DBC SOLAR_MAGNETIC_DIPOLE	Vicinity of Jupiter	BI_AXIS_ORIGIN_3D	N/A	[CRUS], [BHAV]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameter-ization	References
JUPITER_SOLAR_MAG-_ECLIPTIC	137	Jupiter solar magnetic ecliptic	JUPITER_1988	DBC SOLAR_MAGNETIC_ECLIPTIC	Vicinity of Jupiter	BI_AXIS_ORIGIN_3D	N/A	[CRUS]
MARS_INERTIAL	155	Mars equatorial inertial	MARS_2000	DBC EQUATORIAL_INERTIAL Note: Vernal equinox, true of date.	Vicinity of Mars	BI_AXIS_ORIGIN_3D	N/A	Clause 7.5.3
MERCURY_INERTIAL	161	Mercury equatorial inertial	MERCURY_1988	DBC EQUATORIAL_INERTIAL Note: Vernal equinox, true of date.	Vicinity of Mercury	BI_AXIS_ORIGIN_3D	N/A	Clause 7.5.3
NEPTUNE_INERTIAL	183	Neptune equatorial inertial	NEPTUNE_1991	DBC EQUATORIAL_INERTIAL Note: Vernal equinox, true of date.	Vicinity of Neptune	BI_AXIS_ORIGIN_3D	N/A	Clause 7.5.3
PLUTO_INERTIAL	203	Pluto equatorial inertial	PLUTO_1994	DBC EQUATORIAL_INERTIAL Note: Vernal equinox, true of date.	Vicinity of Pluto	BI_AXIS_ORIGIN_3D	N/A	Clause 7.5.3
SATURN_INERTIAL	234	Saturn equatorial inertial	SATURN_1988	DBC EQUATORIAL_INERTIAL Note: Vernal equinox, true of date.	Vicinity of Saturn	BI_AXIS_ORIGIN_3D	N/A	Clause 7.5.3
URANUS_INERTIAL	262	Uranus equatorial inertial	URANUS_1988	DBC EQUATORIAL_INERTIAL Note: Vernal equinox, true of date.	Vicinity of Uranus	BI_AXIS_ORIGIN_3D	N/A	Clause 7.5.3
VENUS_INERTIAL	265	Venus equatorial inertial	VENUS_1991	DBC EQUATORIAL_INERTIAL Note: Vernal equinox, true of date.	Vicinity of Venus	BI_AXIS_ORIGIN_3D	N/A	Clause 7.5.3

Table E.9 — Time fixed instance of a dynamic planet (non-Earth) ORM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
JUPITER_MAGNETIC_1993	133	Jupiter magnetic	JUPITER_1988	1992 DBC CELESTIOMAGNETIC Note: Object-fixed based on the "eccentric dipoles" of an octopole representation of a sixth degree and order field (O_6) model that was derived from empirical measurements made by the Pioneer 10/11 and Voyager 1/2 spacecraft.	Vicinity of Jupiter	BI_AXIS_ORIGIN_3D	N/A	[MFOP, Table 5, "Jupiter"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
VOYAGER	1	Global (Jupiter)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = \{\theta$, deg$\}$: unknown, $\omega_3 = 360° - \{\phi$, deg$\}$: unknown, $\Delta s = 0$	1993	[MFOP, Table 5, "Jupiter"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

NEPTUNE_MAGNETIC_1993	184	Neptune magnetic	NEPTUNE_1991	1993 DBC CELESTIOMAGNETIC Note: Object-fixed based on the "eccentric dipoles" of an octopole representation of an eighth degree field (O_8) model that was derived from empirical measurements made by the Voyager 2 spacecraft.	Vicinity of Neptune	BI_AXIS_ORIGIN_3D	N/A	[MFOP, Table 5, "Neptune"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
VOYAGER	1	Global (Neptune)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = \{\theta$, deg$\}$: unknown, $\omega_3 = 360^o - \{\phi$, deg$\}$: unknown, $\Delta s = 0$	1993	[MFOP, Table 5, "Neptune"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SATURN_MAGNETIC_1993	235	Saturn magnetic	SATURN_1988	1993 DBC CELESTIOMAGNETIC Note: Object-fixed based on the "eccentric dipoles" of a Z_3 zonal harmonic model that was derived from empirical measurements made by the Pioneer 11 and Voyager 1/2 spacecraft.	Vicinity of Saturn	BI_AXIS_ORIGIN_3D	N/A	[MFOP, Table 5, "Saturn"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
VOYAGER	1	Global (Saturn)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = \{\theta$, deg$\}$: < 0,1° (page 18 667), $\omega_3 = 360^o - \{\phi$, deg$\}$: N/A, $\Delta s = 0$	1993	[MFOP, Table 5, "Saturn"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
URANUS_MAGNETIC_1993	263	Uranus magnetic	URANUS_1988	1993 DBC CELESTIOMAGNETIC Note: Object-fixed based on the "eccentric dipoles" of an Q_3 model that was derived from empirical measurements made by the Voyager 2 spacecraft.	Vicinity of Uranus	BI_AXIS_ORIGIN_3D	N/A	[MFOP, Table 5, "Uranus"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
VOYAGER	1	Global (Uranus)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, $\omega_2 = \{\theta$, deg$\}$: unknown, $\omega_3 = 360° - \{\phi$, deg$\}$: unknown, $\Delta s = 0$	1993	[MFOP, Table 5, "Uranus"]

Table E.10 — Object-fixed satellite ORM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ADRASTEA_2000	4	Adrastea	This is the reference ORM for Adrastea (a satellite of Jupiter).	2000 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Adrastea"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Adrastea, Global	TRI_AXIAL_ELLIPSOID	ADRASTEA_2000	[RIIC, Table II, "Adrastea"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Adrastea)	The reference ORM for Adrastea.	2000	[RIIC, Table II, "Adrastea"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

AMALTHEA_2000	7	Amalthea	This is the reference ORM for Amalthea (a satellite of Jupiter).	2000 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Amalthea"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Amalthea, Global	TRI_AXIAL_ELLIPSOID	AMALTHEA_2000	[RIIC, Table II, "Amalthea"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Amalthea)	The reference ORM for Amalthea.	2000	[RIIC, Table II, "Amalthea"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ARIEL_1988	14	Ariel	This is the reference ORM for Ariel (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Ariel"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Ariel, Global	SPHERE	ARIEL_1988	[RIIC, Table II, "Ariel"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Ariel)	The reference ORM for Ariel.	1988	[RIIC, Table II, "Ariel"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ATLAS_1988	16	Atlas	This is the reference ORM for Atlas (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Atlas"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Atlas, Global	OBLATE_ELLIPSOID	ATLAS_1988	[RIIC, Table II, "Atlas"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Atlas)	The reference ORM for Atlas.	1988	[RIIC, Table II, "Atlas"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

BELINDA_1988	22	Belinda	This is the reference ORM for Belinda (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Belinda"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Belinda, Global	SPHERE	BELINDA_1988	[RIIC, Table II, "Belinda"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Belinda)	The reference ORM for Belinda.	1988	[RIIC, Table II, "Belinda"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
BIANCA_1988	27	Bianca	This is the reference ORM for Bianca (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Bianca"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Bianca, Global	SPHERE	BIANCA_1988	[RIIC, Table II, "Bianca"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Bianca)	The reference ORM for Bianca.	1988	[RIIC, Table II, "Bianca"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CALLISTO_2000	32	Callisto	This is the reference ORM for Callisto (a satellite of Jupiter).	2000 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Callisto"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Callisto, Global	SPHERE	CALLISTO_2000	[RIIC, Table II, "Callisto"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Callisto)	The reference ORM for Callisto.	1988	[RIIC, Table II, "Bianca"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

CALYPSO_1988	33	Calypso	This is the reference ORM for Calypso (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Calypso"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Calypso, Global	TRI_AXIAL_ELLIPSOID	CALYPSO_1988	[RIIC, Table II, "Calypso"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Calypso)	The reference ORM for Calypso.	2000	[RIIC, Table II, "Calypso"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CHARON_1991	40	Charon	This is the reference ORM for Charon (a satellite of Pluto).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Charon"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Charon, Global	SPHERE	CHARON_1991	[RIIC, Table II, "Charon"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Charon)	The reference ORM for Charon.	1991	[RIIC, Table II, "Charon"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
CORDELIA_1988	44	Cordelia	This is the reference ORM for Cordelia (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Cordelia"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Cordelia, Global	SPHERE	CORDELIA_1988	[RIIC, Table II, "Cordelia"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Cordelia)	The reference ORM for Cordelia.	1988	[RIIC, Table II, "Cordelia"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

CRESSIDA_1988	46	Cressida	This is the reference ORM for Cressida (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Cressida"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Cressida, Global	SPHERE	CRESSIDA_1988	[RIIC, Table II, "Cressida"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Cressida)	The reference ORM for Cressida.	1988	[RIIC, Table II, "Cressida"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DEIMOS_1988	50	Deimos	This is the reference ORM for Deimos (a satellite of Mars).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Deimos"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Deimos, Global	TRI_AXIAL_ELLIPSOID	DEIMOS_1988	[RIIC, Table II, "Deimos"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Deimos)	The reference ORM for Deimos.	1988	[RIIC, Table II, "Deimos"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DESDEMONA_1988	51	Desdemona	This is the reference ORM for Desdemona (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Desdemona"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Desdemona, Global	SPHERE	DESDEMONA_1988	[RIIC, Table II, "Desdemona"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Desdemona)	The reference ORM for Desdemona.	2000	[RIIC, Table II, "Desdemona"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

DESPINA_1991	52	Despina	This is the reference ORM for Despina (a satellite of Neptune).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Despina"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Despina, Global	SPHERE	DESPINA_1991	[RIIC, Table II, "Despina"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Despina)	The reference ORM for Despina.	1991	[RIIC, Table II, "Despina"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
DIONE_1982	53	Dione	This is the reference ORM for Dione (a satellite of Saturn).	1982 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Dione"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Dione, Global	SPHERE	DIONE_1982	[RIIC, Table II, "Dione"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Dione)	The reference ORM for Dione.	2000	[RIIC, Table II, "Dione"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ENCELADUS_1994	66	Enceladus	This is the reference ORM for Enceladus (a satellite of Saturn).	1994 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Enceladus"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Enceladus, Global	SPHERE	ENCELADUS_1994	[RIIC, Table II, "Enceladus"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Enceladus)	The reference ORM for Enceladus.	1994	[RIIC, Table II, "Enceladus"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

EPIMETHEUS_1988	67	Epimetheus	This is the reference ORM for Epimetheus (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Epimetheus"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Epimetheus, Global	TRI_AXIAL_ELLIPSOID	EPIMETHEUS_1988	[RIIC, Table II, "Epimetheus"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Epimetheus)	The reference ORM for Epimetheus.	2000	[RIIC, Table II, "Epimetheus"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
EUROPA_2000	71	Europa	This is the reference ORM for Europa (a satellite of Jupiter).	2000 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Europa"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Europa, Global	SPHERE	EUROPA_2000	[RIIC, Table II, "Europa"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Europa)	The reference ORM for Europa.	2000	[RIIC, Table II, "Europa"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GALATEA_1991	76	Galatea	This is the reference ORM for Galatea (a satellite of Neptune).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Galatea"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Galatea, Global	SPHERE	GALATEA_1991	[RIIC, Table II, "Galatea"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Galatea)	The reference ORM for Galatea.	1991	[RIIC, Table II, "Galatea"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GANYMEDE_2000	78	Ganymede	This is the reference ORM for Ganymede (a satellite of Jupiter).	2000 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Ganymede"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Ganymede, Global	SPHERE	GANYMEDE_2000	[RIIC, Table II, "Ganymede"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Ganymede)	The reference ORM for Ganymede.	2000	[RIIC, Table II, "Ganymede"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HELENE_1992	101	Helene	This is the reference ORM for Helene (a satellite of Saturn).	1992 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Helene"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Helene, Global	TRI_AXIAL_ELLIPSOID	HELENE_1992	[RIIC, Table II, "Helene"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Helene)	The reference ORM for Helene.	1992	[RIIC, Table II, "Helene"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
IAPETUS_1988	113	Iapetus	This is the reference ORM for Iapetus (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Iapetus"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Iapetus, Global	SPHERE	IAPETUS_1988	[RIIC, Table II, "Iapetus"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Iapetus)	The reference ORM for Iapetus.	2000	[RIIC, Table II, "Iapetus"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
IO_2000	122	Io	This is the reference ORM for Io (a satellite of Jupiter).	2000 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Io"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Io, Global	SPHERE	IO_2000	[RIIC, Table II, "Io"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Io)	The reference ORM for Io.	2000	[RIIC, Table II, "Io"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
JANUS_1988	127	Janus	This is the reference ORM for Janus (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Janus"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Janus, Global	TRI_AXIAL_ELLIPSOID	JANUS_1988	[RIIC, Table II, "Janus"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Janus)	The reference ORM for Janus.	2000	[RIIC, Table II, "Janus"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
JULIET_1988	130	Juliet	This is the reference ORM for Juliet (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Juliet"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Juliet, Global	SPHERE	JULIET_1988	[RIIC, Table II, "Juliet"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Juliet)	The reference ORM for Juliet.	2000	[RIIC, Table II, "Juliet"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

LARISSA_1991	144	Larissa	This is the reference ORM for Larissa (a satellite of Neptune).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Larissa"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Larissa, Global	OBLATE_ELLIPSOID	LARISSA_1991	[RIIC, Table II, "Larissa"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Larissa)	The reference ORM for Larissa.	1991	[RIIC, Table II, "Larissa"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
METIS_2000	162	Metis	This is the reference ORM for Metis (a satellite of Jupiter).	2000 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Metis"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Metis, Global	SPHERE	METIS_2000	[RIIC, Table II, "Metis"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Metis)	The reference ORM for Metis.	2000	[RIIC, Table II, "Metis"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MIMAS_1994	164	Mimas	This is the reference ORM for Mimas (a satellite of Saturn).	1994 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Mimas"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Mimas, Global	SPHERE	MIMAS_1994	[RIIC, Table II, "Mimas"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Mimas)	The reference ORM for Mimas.	1994	[RIIC, Table II, "Mimas"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

MIRANDA_1988	166	Miranda	This is the reference ORM for Miranda (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Miranda"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Miranda, Global	SPHERE	MIRANDA_1988	[RIIC, Table II, "Miranda"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Miranda)	The reference ORM for Miranda.	1988	[RIIC, Table II, "Miranda"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
MOON_1991	174	Moon	This is the reference ORM for Moon (a satellite of Earth).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Moon"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Moon, Global	SPHERE	MOON_1991	[RIIC, Table II, "Moon"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Moon)	The reference ORM for Moon.	1991	[RIIC, Table II, "Moon"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
NAIAD_1991	180	Naiad	This is the reference ORM for Naiad (a satellite of Neptune).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Naiad"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Naiad, Global	SPHERE	NAIAD_1991	[RIIC, Table II, "Naiad"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Naiad)	The reference ORM for Naiad.	1991	[RIIC, Table II, "Naiad"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
OBERON_1988	188	Oberon	This is the reference ORM for Oberon (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Oberon"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Oberon, Global	SPHERE	OBERON_1988	[RIIC, Table II, "Oberon"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Oberon)	The reference ORM for Oberon.	1988	[RIIC, Table II, "Oberon"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
OPHELIA_1988	193	Ophelia	This is the reference ORM for Ophelia (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Ophelia"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Ophelia, Global	SPHERE	OPHELIA_1988	[RIIC, Table II, "Ophelia"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Ophelia)	The reference ORM for Ophelia.	1988	[RIIC, Table II, "Ophelia"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PAN_1991	196	Pan	This is the reference ORM for Pan (a satellite of Saturn).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Pan"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Pan, Global	SPHERE	PAN_1991	[RIIC, Table II, "Pan"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Pan)	The reference ORM for Pan.	1991	[RIIC, Table II, "Pan"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PANDORA_1988	197	Pandora	This is the reference ORM for Pandora (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Pandora"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Pandora, Global	TRI_AXIAL_ELLIPSOID	PANDORA_1988	[RIIC, Table II, "Pandora"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Pandora)	The reference ORM for Pandora.	1988	[RIIC, Table II, "Pandora"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

PHOBOS_1988	198	Phobos	This is the reference ORM for Phobos (a satellite of Mars).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Phobos"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Phobos, Global	TRI_AXIAL_ELLIPSOID	PHOBOS_1988	[RIIC, Table II, "Phobos"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Phobos)	The reference ORM for Phobos.	1988	[RIIC, Table II, "Phobos"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PHOEBE_1988	199	Phoebe	This is the reference ORM for Phoebe (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Phoebe"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Phoebe, Global	SPHERE	PHOEBE_1988	[RIIC, Table II, "Phoebe"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Phoebe)	The reference ORM for Phoebe.	1988	[RIIC, Table II, "Phoebe"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PORTIA_1988	206	Portia	This is the reference ORM for Portia (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Portia"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Portia, Global	SPHERE	PORTIA_1988	[RIIC, Table II, "Portia"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Portia)	The reference ORM for Portia.	1988	[RIIC, Table II, "Portia"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

PROMETHEUS_1988	208	Prometheus	This is the reference ORM for Prometheus (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Prometheus"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Prometheus, Global	TRI_AXIAL_ELLIPSOID	PROMETHEUS_1988	[RIIC, Table II, "Prometheus"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Prometheus)	The reference ORM for Prometheus.	1988	[RIIC, Table II, "Prometheus"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PROTEUS_1991	209	Proteus	This is the reference ORM for Proteus (a satellite of Neptune).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Proteus"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Proteus, Global	TRI_AXIAL_ELLIPSOID	PROTEUS_1991	[RIIC, Table II, "Proteus"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Proteus)	The reference ORM for Proteus.	1991	[RIIC, Table II, "Proteus"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
PUCK_1988	212	Puck	This is the reference ORM for Puck (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Puck"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Puck, Global	SPHERE	PUCK_1988	[RIIC, Table II, "Puck"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Puck)	The reference ORM for Puck.	1988	[RIIC, Table II, "Puck"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
RHEA_1988	220	Rhea	This is the reference ORM for Rhea (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Rhea"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Rhea, Global	SPHERE	RHEA_1988	[RIIC, Table II, "Rhea"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Rhea)	The reference ORM for Rhea.	1988	[RIIC, Table II, "Rhea"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
ROSALIND_1988	223	Rosalind	This is the reference ORM for Rosalind (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Rosalind"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Rosalind, Global	SPHERE	ROSALIND_1988	[RIIC, Table II, "Rosalind"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References
	IDENTITY	1	Global (Rosalind)	The reference ORM for Rosalind.	1988	[RIIC, Table II, "Rosalind"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TELESTO_1988	246	Telesto	This is the reference ORM for Telesto (a satellite of Saturn).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Telesto"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Telesto, Global	TRI_AXIAL_ELLIPSOID	TELESTO_1988	[RIIC, Table II, "Telesto"]

	RT Label	RT Code	RT Region	RT Parameters	Date published	References

	IDENTITY	1	Global (Telesto)	The reference ORM for Telesto.	1988	[RIIC, Table II, "Telesto"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TETHYS_1991	248	Tethys	This is the reference ORM for Tethys (a satellite of Saturn).	1991 The *x*-positive *xz*-half-plane as determined by an observable fixed surface feature and approximated by an ephemeris as specified in {Table II, "Tethys"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Tethys, Global	SPHERE	TETHYS_1991	[RIIC, Table II, "Tethys"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Tethys)	The reference ORM for Tethys.	1991	[RIIC, Table II, "Tethys"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
THALASSA_1991	249	Thalassa	This is the reference ORM for Thalassa (a satellite of Neptune).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Thalassa"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Thalassa, Global	SPHERE	THALASSA_1991	[RIIC, Table II, "Thalassa"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Thalassa)	The reference ORM for Thalassa.	1991	[RIIC, Table II, "Thalassa"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
THEBE_2000	250	Thebe	This is the reference ORM for Thebe (a satellite of Jupiter).	2000 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Thebe"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Thebe, Global	OBLATE_ELLIPSOID	THEBE_2000	[RIIC, Table II, "Thebe"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Thebe)	The reference ORM for Thebe.	2000	[RIIC, Table II, "Thebe"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References

TITAN_1982	255	Titan	This is the reference ORM for Titan (a satellite of Saturn).	1982 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Titan"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Titan, Global	SPHERE	TITAN_1982	[RIIC, Table II, "Titan"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Titan)	The reference ORM for Titan.	1988	[RIIC, Table II, "Titan"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TITANIA_1988	256	Titania	This is the reference ORM for Titania (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Titania"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Titania, Global	SPHERE	TITANIA_1988	[RIIC, Table II, "Titania"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Titania)	The reference ORM for Titania.	1988	[RIIC, Table II, "Titania"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
TRITON_1991	259	Triton	This is the reference ORM for Triton (a satellite of Neptune).	1991 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Triton"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Triton, Global	SPHERE	TRITON_1991	[RIIC, Table II, "Triton"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Triton)	The reference ORM for Triton.	1991	[RIIC, Table II, "Triton"]

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
UMBRIEL_1988	260	Umbriel	This is the reference ORM for Umbriel (a satellite of Uranus).	1988 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table II, "Umbriel"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Umbriel, Global	SPHERE	UMBRIEL_1988	[RIIC, Table II, "Umbriel"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Umbriel)	The reference ORM for Umbriel.	1988	[RIIC, Table II, "Umbriel"]

Table E.11 — Dynamic satellite ORM specifications

In this International Standard, there are no dynamic satellite ORM specifications, therefore this table is empty.

Table E.12 — Time fixed instance of a dynamic satellite ORM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
GANYMEDE_MAGNETIC_2000	79	Ganymede magnetic	GANYMEDE_2000	2000 DBC CELESTIOMAGNETIC Note: Object-fixed based on empirical measurements made by the Galileo spacecraft.	Vicinity of Ganymede	BI_AXIS_ORIGIN_3D	N/A	[DGMF]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
GALILEO	1	Global (Ganymede)	$\Delta x = \Delta y = \Delta z = 0$, $\omega_1 = 0$, ω_2 = {dipole north pole tilt} : unknown, ω_3 = {dipole north pole Ganymede east longitude} - 360°: unknown, $\Delta s = 0$	2000	[DGMF]

Table E.13 — Stellar ORM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
SUN_1992	243	Sun	This is the reference ORM for the Sun (a star).	1992 The *x*-positive *xz*-half-plane as determined by an ephemeris as specified in {Table I, "Sun"}, with its associated accuracy as specified in {Section 2, paragraph 5}.	Sun, Global	SPHERE	SUN_1992	[RIIC, Table I, "Sun"]

RT Label	RT Code	RT Region	RT Parameters	Date published	References
IDENTITY	1	Global (Sun)	The reference ORM for the Sun.	1992	[RIIC, Table I, "Sun"]

Table E.14 — Dynamic Stellar ORM specifications

Label	Code	Published name	Reference ORM	Binding information	Region	ORMT	RD parameterization	References
HELIO_ARIES_ECLIPTIC-_J2000r0	102	Heliocentric Aries ecliptic, J2000.0	SUN_1992	DBC HELIOCENTRIC_ARIES-_ECLIPTIC Note: First point of Aries as of 2000 Jan 1 11:58:55.816 UTC.	Solar system	BI_AXIS_ORIGIN_3D	N/A	[HAPG]
HELIO_ARIES_ECLIPTIC-_TRUE_OF_DATE	103	Heliocentric Aries ecliptic, true of date	SUN_1992	DBC HELIOCENTRIC_ARIES-_ECLIPTIC Note: First point of Aries, true of date.	Solar system	BI_AXIS_ORIGIN_3D	N/A	[HAPG]
HELIO_EARTH_ECLIPTIC	104	Heliocentric Earth ecliptic	SUN_1992	DBC HELIOCENTRIC_PLANET-_ECLIPTIC	Solar system	BI_AXIS_ORIGIN_3D	N/A	[HAPG]
HELIO_EARTH_EQUATORIAL	105	Heliocentric Earth equatorial	SUN_1992	DBC HELIOCENTRIC_PLANET-_EQUATORIAL	Solar system	BI_AXIS_ORIGIN_3D	N/A	[HAPG]

Table E.15 — Time fixed instance of a dynamic stellar ORM specifications

In this International Standard there are no time fixed instance of a dynamic stellar ORM specifications, therefore this table is empty.