

AIP BELARUS

STANDARD ARRIVAL CHART
INSTRUMENT (STAR) - ICAO

TRANSITION LEVEL: by ATC
TRANSITION ALTITUDE: 6000

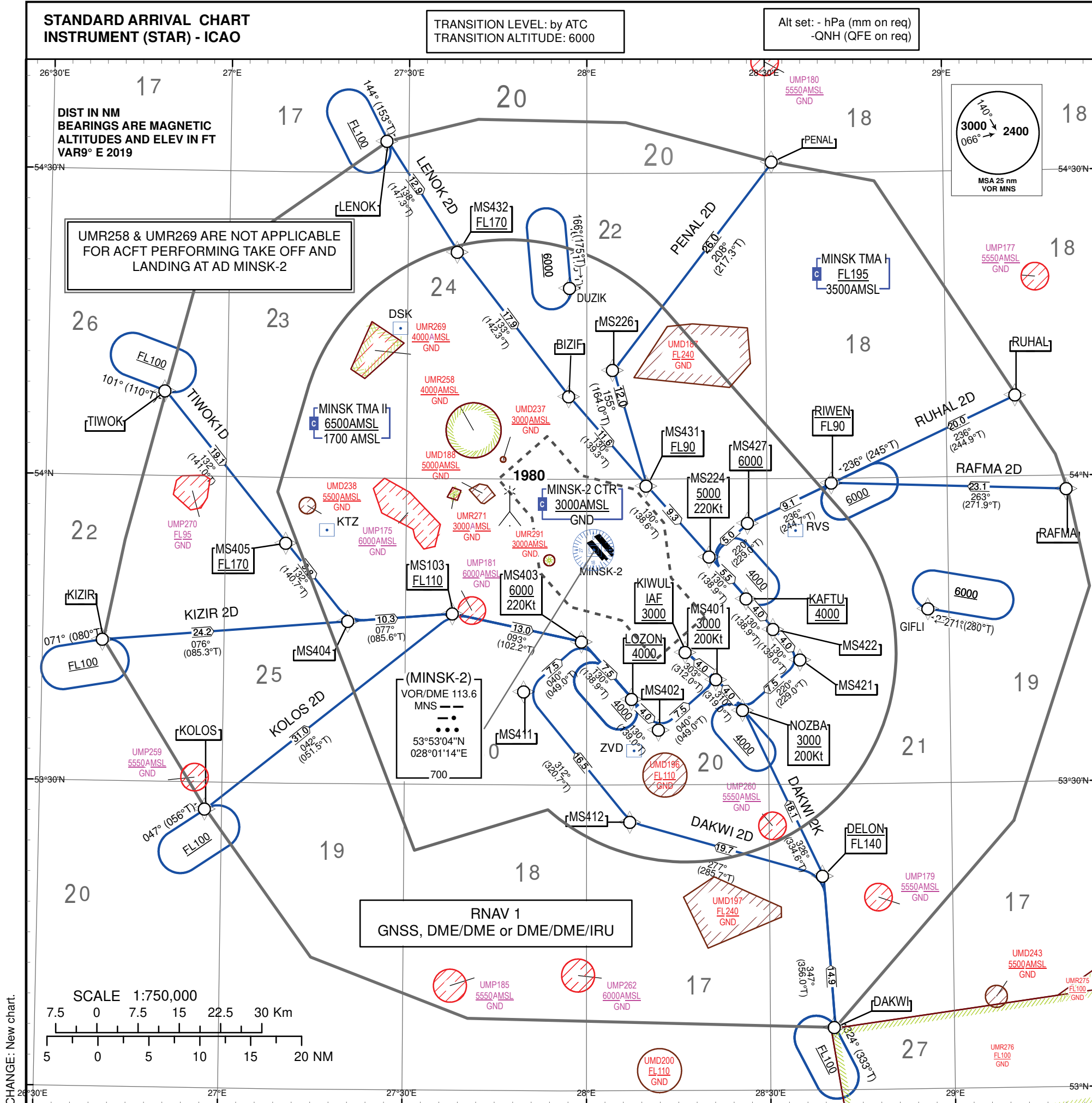
Alt set: - hPa (mm on req)
-QNH (QFE on req)

MINSK APP	125.900
MINSK RADAR	125.250
MINSK TOWER RWY 13R/31L	118.300
MINSK TOWER RWY 13L/31R	130.400
MINSK-2 ATIS	128.850 EN 135.850 RUS

MINSK-2
RNAV RWY 31L

DAKWI2D, DAKWI2K,
KIZIR2D, KOLOS2D,
LENOK2D, PENAL2D,
RAFMA2D, RUHAL2D,
TIWOK2D.

RNAV 1 approval required. Otherwise advise ATC.
ALT / FL / SPEED restrictions must always be followed as published unless explicitly cancelled by ATC. If unable to comply restrictions report at first contact with MINSK APP.
Descent planning: expect base turn normally abeam 10-15 NM final.
Actual descent clearance will be as directed by ATC.
Expect direct routing/shortcuts by ATC whenever possible (especially during off-peak hours).
Holdings at GIFLI, DUZIK used for RWY configuration change and during unexpected events.
RADIO COMMUNICATION FAILURE PROCEDURE
If available call +375172157600 and listen to navigation aids voice frequencies.
RNAV 1 approved aircraft:
If STAR was assigned and acknowledged by flight crew:
continue with assigned STAR;
set transponder to 7600 and in 2 minutes start descending in accordance with vertical restrictions specified on chart;
execute approach and land.
If STAR was assigned, acknowledged by flight crew and vectoring was initiated:
continue on assigned heading, adhering to last assigned and acknowledged altitude;
set transponder to 7600, in 2 minutes start descending and proceed to initial approach fix (IAF) in accordance with vertical restrictions;
execute approach and land.
If STAR was not assigned:
continue according to FPL;
set transponder to 7600 and in 2 minutes start descending in accordance with vertical restrictions specified on chart;
execute approach and land.
RNAV 1 not approved aircraft:
maintain last assigned and acknowledged altitude/flight level;
set transponder to 7600;
proceed to MNS VOR/DME;
hold over MNS VOR/DME descending to altitude 4000 (all turn LEFT, 1 min, inbound course 130°);
then proceed to TP (R 109.9° D11.9 MNS VOR/DME) descending to 3000;
execute turn final intercept IGH LOC, approach and land.
If landing is not possible, climb on track 310° to 3000, turn LEFT to MNS VOR/DME and follow crew decision.
SPEED RESTRICTION
IAS 200 KT on base leg/closing heading to final approach up to 12 NM to touchdown.
IAS 180 KT on final approach course within 12 NM to 6 NM to touchdown.
IAS 160 KT on final approach course within 6NM to 4NM to touchdown.
These speeds are applied for ATC separation purposes and are mandatory.
All speed restrictions are to be flown as accurately as possible.
Aircraft unable to confirm to these speeds should inform ATC and state what speeds to be used.



TABULAR DESCRIPTION

DAKWI2D										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	DAKWI	-	-	9	-	-	-	-	RNAV1
002	TF	DELON	-	347(356.0)	9	14.9	-	-FL140	-	RNAV1
003	TF	MS412	-	277(285.7)	9	19.7	-	-	-	RNAV1
004	TF	MS411	-	312(320.7)	9	16.5	-	-	-	RNAV1
005	TF	MS403	-	040(049.0)	9	7.5	-	+6000	-220	RNAV1
006	TF	LOZON	-	130(138.9)	9	7.5	-	@4000	-	RNAV1
007	TF	MS402	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	MS401	-	040(049.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1
DAKWI2K										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	DAKWI	-	-	9	-	-	-	-	RNAV1
002	TF	DELON	-	347(356.0)	9	14.9	-	-FL140	-	RNAV1
003	TF	NOZBA	-	326(334.6)	9	18.1	-	+3000	-200	RNAV1
004	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
005	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1
KIZIR2D										
Serial Number	Path Descriptor	Waypoint Identifier	Fly – over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	KIZIR	-	-	9	-	-	-	-	RNAV1
002	TF	MS404	-	076(085.3)	9	24.2	-	-	-	RNAV1
003	TF	MS103	-	077(085.6)	9	10.3	-	+FL110	-	RNAV1
004	TF	MS403	-	093(102.2)	9	13.0	-	+6000	-220	RNAV1
005	TF	LOZON	-	130(138.9)	9	7.5	-	@4000	-	RNAV1
006	TF	MS402	-	130(139.0)	9	4.0	-	-	-	RNAV1
007	TF	MS401	-	040(049.0)	9	7.5	-	+3000-	-200	RNAV1
008	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1
KOLOS2D										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	KOLOS	-	-	9	-	-	-	-	RNAV1
002	TF	MS103	-	042(051.5)	9	31.0	-	+FL110	-	RNAV1
003	TF	MS403	-	093(102.2)	9	13.0	-	+6000	-220	RNAV1
004	TF	LOZON	-	130(138.9)	9	7.5	-	@4000	-	RNAV1
005	TF	MS402	-	130(139.0)	9	4.0	-	-	-	RNAV1
006	TF	MS401	-	040(049.0)	9	7.5	-	+3000	-200	RNAV1
007	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1
LENOK2D										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	LENOK	-	-	9	-	-	-	-	RNAV1
002	TF	MS432	-	138(147.3)	9	12.9	-	+FL170	-	RNAV1
003	TF	BIZIF	-	133(142.3)	9	17.9	-	-	-	RNAV1
004	TF	MS431	-	130(139.3)	9	11.6	-	+FL90	-	RNAV1
005	TF	MS224	-	130(138.6)	9	9.3	-	+5000	-220	RNAV1
006	TF	KAFTU	-	130(138.9)	9	5.5	-	@4000	-	RNAV1
007	TF	MS422	-	130(138.9)	9	4.0	-	-	-	RNAV1
008	TF	MS421	-	130(139.0)	9	4.0	-	-	-	RNAV1
009	TF	NOZBA	-	220(229.0)	9	7.5	-	+3000	-200	RNAV1
010	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
011	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1

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PENAL2D										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	PENAL	-	-	9	-	-	-	-	RNAV1
002	TF	MS226	-	208(217.3)	9	26.0	-	-	-	RNAV1
003	TF	MS431	-	155(164.0)	9	12.0	-	+FL90	-	RNAV1
004	TF	MS224	-	130(138.6)	9	9.3	-	+5000	-220	RNAV1
005	TF	KAFTU	-	130(138.9)	9	5.5	-	@4000	-	RNAV1
006	TF	MS422	-	130(138.9)	9	4.0	-	-	-	RNAV1
007	TF	MS421	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	NOZBA	-	220(229.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
010	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1

RAFMA2D										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	RAFMA	-	-	9	-	-	-	-	RNAV1
002	TF	RIWEN	-	263(271.9)	9	23.1	-	-FL90	-	RNAV1
003	TF	MS427	-	236(244.7)	9	9.1	-	+6000	-	RNAV1
004	TF	MS224	-	2201(229.0)	9	5.0	-	+5000	-220	RNAV1
005	TF	KAFTU	-	130(138.9)	9	5.5	-	@4000	-	RNAV1
006	TF	MS422	-	130(138.9)	9	4.0	-	-	-	RNAV1
007	TF	MS421	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	NOZBA	-	220(229.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
010	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1

RUHAL2D										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	RUHAL	-	-	9	-	-	-	-	RNAV1
002	TF	RIWEN	-	236(244.9)	9	20.0	-	-FL90	-	RNAV1
003	TF	MS427	-	236(244.7)	9	9.1	-	+6000	-	RNAV1
004	TF	MS224	-	220 (229.0)	9	5.0	-	+5000	-220	RNAV1
005	TF	KAFTU	-	130(138.9)	9	5.5	-	@4000	-	RNAV1
006	TF	MS422	-	130(138.9)	9	4.0	-	-	-	RNAV1
007	TF	MS421	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	NOZBA	-	220(229.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
010	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1

TIWOK2D										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	TIWOK	-	-	9	-	-	-	-	RNAV1
002	TF	MS405	-	132(140.9)	9	19.1	-	+FL170	-	RNAV1
003	TF	MS404	-	132(141.0)	9	9.8	-	-	-	RNAV1
004	TF	MS103	-	077(085.6)	9	10.3	-	+FL110	-	RNAV1
005	TF	MS403	-	093(102.2)	9	13.0	-	+6000	-220	RNAV1
006	TF	LOZON	-	130(138.9)	9	7.5	-	@4000	-	RNAV1
007	TF	MS402	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	MS401	-	040(049.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	KIWUL	-	303(312.0)	9	4.0	-	@3000	-	RNAV1

RNAV HOLDING INDIFICATION					
Path Descriptor	Holding Fix	Inbound MAG Track° (True Track°)	Altitude (ft) / Flight Level	Time / Distance outbound	Turn Direction
HM	DAKWI	324(333.0)	+FL100	1MIN	L
HM	DUZIK	166(175.0)	+6000	1.5 MIN	R
HM	GIFLI	271(280.0)	+6000	1.5 MIN	R
HM	KAFTU	130(138.9)	+4000	1MIN	L
HM	KIZIR	071(080.0)	+FL100	1MIN	R
HM	KOLOS	047(056.0)	+FL100	1MIN	R
HM	LENOK	144(153.0)	+FL100	1MIN	R
HM	LOZON	130(139.0)	+4000	1MIN	R
HM	NOZBA	310(319.0)	+4000	1MIN	L
HM	RIWEN	236(245.0))	+6000	1MIN	L
HM	TIWOK	101(110.0)	+FL100	1MIN	L

WAYPOINT LIST		
Waypoint Identifier	Coordinates	
BIZIF	540807.2N	0275712.1E
DAKWI	530607.0N	0284037.0E
DELON	532059.0N	0283853.0E
KAFTU	534814.6N	0282637.0E
KIWUL	534301.1N	0281629.9E
KIZIR	534352.4N	0264004.0E
KOLOS	532723.0N	0265723.0E
LENOK	543305.0N	0272629.0E
LOZON	533825.2N	0280737.4E
MS103	534646.4N	0273757.1E
MS224	535222.7N	0282030.3E
MS226	541041.5N	0280431.5E
MS401	534019.6N	0282132.1E
MS402	533524.4N	0281202.0E
MS403	534403.8N	0275919.7E
MS404	534557.3N	0272038.9E
MS405	535333.4N	0271014.1E
MS411	533908.6N	0274948.7E
MS412	532621.6N	0280718.1E
MS421	534213.1N	0283528.2E
MS422	534513.9N	0283102.9E
MS427	535539.4N	0282654.5E
MS431	535921.0N	0281003.8E
MS432	542214.9N	0273826.7E
MS710	535757.7N	0281207.8E
NOZBA	533718.6N	0282556.5E
PENAL	543105.0N	0283117.0E
RAFMA	535841.0N	0291959.0E
RIWEN	535932.9N	0284054.6E
RUHAL	540758.0N	0291142.0E
TIWOK	540820.0N	0264945.0E