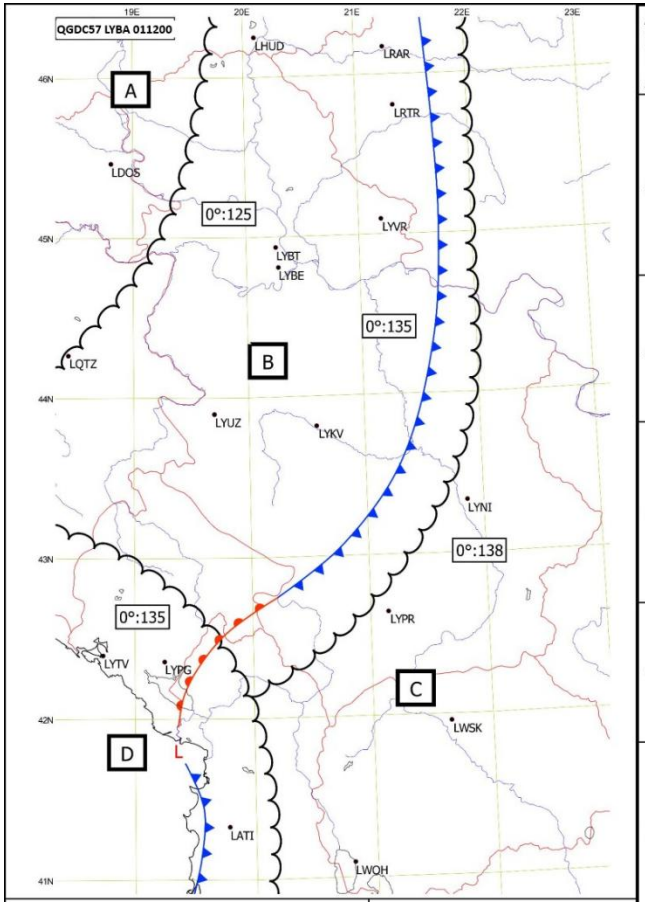
SWL CHART DESCRIPTION

Example of SWL chart



SIGWX SFC - FL150
ISSUED BY SMATSA
VALID 12 - 18 UTC 01.Sep.2020
FRONTS / AREAS / 0°C / WIND / TEMP
VALID AT 15 UTC

CB implies TS, GR, MOD/SEV TURB, ICE;
Units used: speed in KT, heights in FL;
base and tops in FT AGL;
temperatures in C degrees;
xxx means above chart upper limit;

AREA	TIME (UTC)	SFC WSPD (KT)	SFC VIS (M)	WX	MT OBSC (FL)	CLOUD (FT AGL)	TURB (FL)	ICE (FL)
A	12-16	08-15 LCA GUST 25-35	ABV 10000 LCA 3000-5000	LCA MOD SHRA/TSRA	/	ISOL EMBD TCU/CB 2700/XXXXX BKN SCCU 3000-3500/7000 BKN/OVC ACAS 7300-8500/12000	FBL/MOD SFC/050	/
A	16-18	04-08	ABV 10000	/	/	BKN SC 2700/5500 BKN ACAS 8500/11000	/	/
B	12-18	05-15 LCA GUST 20-35	ABV 10000 LCA 3000-5000	LCA FBL/MOD SHRA/TSRA	LCA ABV 033	ISOL EMBD TCU/CB 2500-3000/XXXXX BKN CUSC 3000-3500/7000 BKN/OVC ACAS 7300-8500/12000	FBL/MOD SFC/050	/
C	12-18	02-05	ABV 10000	/	/	SCT/BKN AC 9000/10000	/	/
D	12-18	08-15 LCA GUST 20-30	ABV 10000 LCA 2000-5000	LCA MOD TSRA	/	ISOL/OCNL CB 2700/XXXXX BKN CUSC 3000-3500/8000 SCT/BKN AC 8500/10000	FBL 050/100	/

WIND TEMP	LYBE		LYVR		LYNI		LYPG	
H (FT)	WIND [Deg/KT]	TEMP [°C]	WIND [Deg/KT]	TEMP [°C]	WIND [Deg/KT]	TEMP [°C]	WIND [Deg/KT]	TEMP [°C]
15000	190/55	-05	190/45	-04	190/25	-02	220/55	-04
10000	190/40	+06	190/35	+07	200/15	+09	210/35	+06
5000	220/30	+17	150/35	+18	190/20	+22	200/05	+15
2000	330/15	+15	290/10	+17	120/05	+26	360/05	+19

Important notice: For full information on significant weather check if AIRMET and SIGMET information are issued.

SWL charts issues Meteorological Watch Office (MWO) Beograd, Serbia and Montenegro Air Traffic Services SMATSA llc, for Beograd FIR up to FL150, every day from 0000 to 2400 UTC.
On SWL chart is introduced significant weather (SIGWX) forecasts, in accordance with ICAO Annex 3. Forecast of upper wind and upper-air temperature, in table form, is added to SIGWX forecast.

TIME OF ISSUE and VALIDITY PERIOD of the SWL chart (published in AIP), are given in the table below:

TIME OF ISSUE (UTC)	VALIDITY PERIOD (UTC)
0500	0600-1200
1100	1200-1800
1700	1800-2400
2300	0000-0600

SWL CHART CONTENT

Area chart

SWL chart contains, on the left side, area chart on which aerodromes Beograd, Batajnica, Vršac, Kraljevo, Niš, Užice, Podgorica and Tivat are marked with location indicators LYBE, LYBT, LYVR, LYKV, LYNI, LYUZ, LYPG and LYTV.
Area chart covers Beograd FIR and, in accordance with the forecast, it is shown:

- **Pressure centers** *(L – Low pressure centers and/or H – High pressure centers)*;
- **Position of frontal systems**;
- **Marked zones** *(Zones with the same meteorological conditions are marked with capital letters in alphabetical order; these zones are separated with wavy lines)*;
- **Height of the zero - degree isotherm in flight level** (*e.g.* 0°I *110* *means that height of the zero - degree isotherm is forecasted on flight level 110,* 0°ISFC *means that height of the zero - degree isotherm is forecasted on surface level;* 0°IXXX *means that height of the zero - degree isotherm is forecasted above flight level 150)*.

If within validity period of SWL chart is forecasted moving of pressure centers, position of frontal systems or marked zones, their moving is marked with arrows for direction and with number for speed in knots.

At the left bottom of the chart is the **chart legend**.
Legend is divided in two columns, in English language.
On the left side of the legend, in following order, there is:

- **SIGWX SFC-FL150** (MET information mark – *significant weather in layer from earth's surface to FL 150*);
- **ISSUED BY SMATSA** (originator – *issued by SMATSA*);
- Validity period in UTC, day, month and year of issue of SWL chart. In example given in this description it is **VALID 1200-1800UTC 01.Sep.2020.**;
- Validity time of fronts, zones and height of the zero – degree isotherm at area chart, as a time of validity upper wind and temperature, given at the bottom of the table, on the right side, it is always in the middle of the validity period, as given in the example: **FRONTS/AREAS/0°C/WIND/TEMP VALID AT 1500UTC.**

On the right side of the legend, in following order, there is:

- **CB implies TS, GR, MOD or SEV TURB, ICE;**
- **Units used: speed in KT; heights in FL; base and tops in FT AGL; temperatures in C degrees;**
- **xxx means above chart upper limit.**

Table with description of the zones at area chart

On the right side of SWL chart, there is a table with meteorological conditions in zones given at area chart.
This table contains information in columns, in the following order:

- **AREA** – zone mark given at area chart (e.g. *A, B, C, …)*;
- **TIME** –expected meteorological conditions validity period in the given zone, in hours UTC *(e.g. 06-12 means that validity period of given conditions in zone from 06 to 12 UTC).* The total validity period can be divided into time intervals to show the dynamics of weather development (e.g in the example shown for zone A the total validity period is divided into two periods, 12 - 16 and 16 - 18 UTC).
- **SFC WSPD (KT)** – expected mean surface wind speed in knots *(e.g. 05 means that expected value of mean surface wind is 5 knots)*;
- **SFC VIS (M)** – expected value of visibility in meters *(e.g. 0600 means that expected value of visibility is 600 meters)*;
- **WX** – expected significant weather/phenomenon, or combinations thereof, which follows the indicator for intensity and/or descriptor *(e.g: HVY TSRA means that is expected thunderstorm with heavy rain).*

Significant weather/phenomenon and their indicators are given in the following table:

INDICATOR			METEOROLOGICAL PHENOMENON					
INTENSITY	DESCRIPTOR		PRECIPITATION		OBSCURATION		OTHER	
FBL Light	MI	Shallow	DZ	Drizzle	BR	Mist	PO	Dust/sand whirls (dust devils)
MOD Moderate	BC	Patches	RA	Rain	FG	Fog	SQ	Squall
HVY Heavy	PR	Partial	SN	Snow	FU	Smoke	FC	Funnel cloud (tornado or water spout)
			SG	Snow grains	VA	Volcanic ash		
	DR	Low drifting			DU	Widespread Dust	SS	Sandstorm
	BL	Blowing	PL	Ice pellets	SA	Sand	DS	Duststorm
	SH	Shower	GR	Hail	HZ	Haze		
	TS	Thunderstorm	GS	Small hail and/or snow pellets				
	FZ	Freezing (supercooled)	UP	Unknown precipitation				

Note: Intensity will be given only for precipitation, precipitation with shower and/or thunderstorms and sandstorm or duststorm.

- **MT OBSC (FL)** –The forecasted level up to or above which, or the layer in which the mountains are invisible, is given in flight levels (*e.g. ABV 030 means above flight level 030 mountains are obscured; e.g. 040/070 means mountains are obscured between flight level 040 and 070*);
- **CLOUD (FT AGL)** – Forecasted cloud will be given with cloud amount, type, height of cloud base and cloud top, as follows:
    - Cloud amount as: **FEW**, **SCT**, **BKN** and **OVC**;
    - To indicate cloud type will be used abbreviation of the name of cloud type: AC (Altocumulus), AS (Altostratus), NS (Nimbostratus) SC (Stratocumulus), ST (Stratus), CU (Cumulus), and CB (Cumulonimbus). To indicate Cumulus congestus/Towering cumulus clouds abbreviation TCU will be used. If the height of the forecasted cloud layer is above flight level 150 it is marked with XXXXX;
    - Forecasted height of cloud base and tops will be given in FT AGL (*e.g: SCT SC 4000/6000 BKN AC 9000/12000 means that is expected 3-4/8 stratocumulus with height of cloud base on 4000 and cloud top on 6000 FT AGL and 5-7/8 altocumulus with height of cloud base on 9000 and cloud top on 12000 FT AGL are expected);*
    - Spatial coverage of the area concerned with CB and TCU clouds will be indicated as **ISOL**, **OCNL** or **FRQ**;
    - When clouds CB/TCU are obscured within cloud layers and cannot be readily recognized they will be marked with **EMBD**;
    - When clouds CB/TCU are obscured by haze or smoke or cannot be readily seen due to darkness they will be marked with **OBSC**.
- **TURB (FL)** – When light, moderate, or severe *(FBL, MOD, SEV)* turbulence, not connected with CB clouds, is forecasted the lower and upper limits of the layer are given in flight levels *(e.g. MOD SFC/040 means that moderate turbulence is expected between earth's surface and flight level 040).* Besides turbulence, in this column will be included area with light, moderate or severe *(FBL, MOD, SEV)* mountain waves (**MTW**) with indicated bottom and top of spreading layer in flight levels *(e.g. MTW SEV 080/100 means that severe mountain waves are expected between flight levels 080 and 100);*
- **ICE (FL)** – When it is forecasted light, moderate or severe *(FBL, MOD, SEV)* icing not connecting with CB clouds, bottom and top of the layer will be given in flight levels *(e.g. SEV 030/060 means severe icing is expected between flight levels 030 and 060).*
  When forecasting turbulence, mountain waves and icing, if the upper limit of the forecasted layer is above flight level 150, it is marked with XXX.

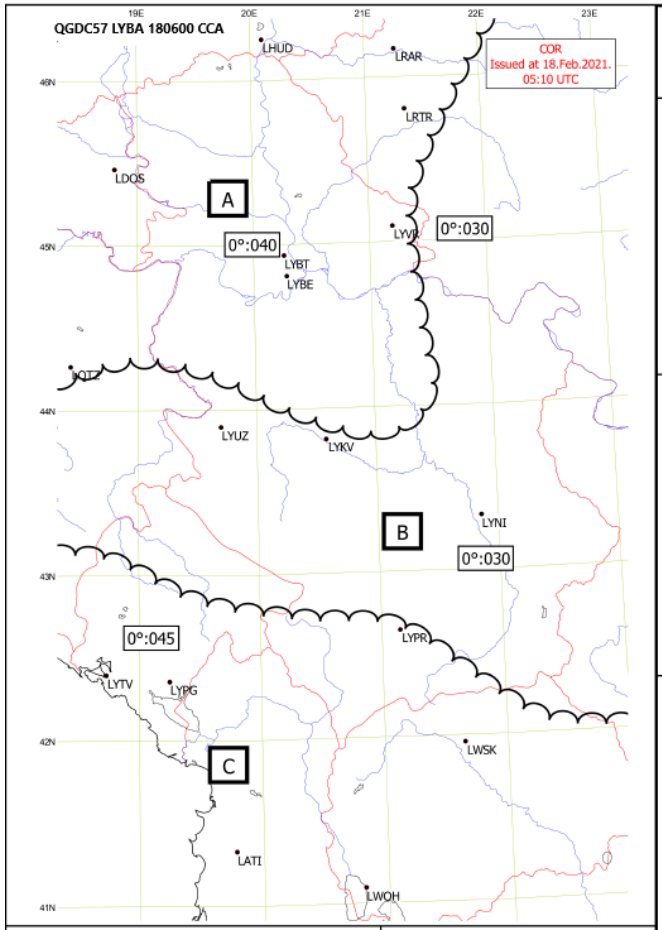
Note: When *I* is in one or more columns it means that in the given zone it is not expected, i.e. not forecasted (for a given period of time) an element from that column.

Table of forecasted upper wind and temperature

Below table of zone description at area chart, there is the table of forecasted upper wind and temperature in points above LYBE, LYVR, LYNI and LYPG in the given order. This table contains forecasted upper wind and temperature on heights: 15000ft, 10000ft, 5000ft and 2000ft above mean sea level (AMSL), above airports Beograd (LYBE), Vršac (LYVR), Niš (LYNI) and Podgorica (LYPG).
Wind direction is given in degrees true rounded to the nearest 10º, wind speed in knots rounded to the nearest 5.
Positive temperature will be given with sign "+", negative with sign "-".

Correction of SWL chart (COR SWL)

In case of a technical error during the creation of the map, a correction of the SWL map (**SWL COR**) is issued.
In the upper right corner of the map, the designation of map corrections (abbreviation "COR") as well as the date and time when the correction was issued are written in red letters.



SIGWX SFC - FL150
ISSUED BY SMATSA
VALID 06 - 12 UTC 18.Feb.2021
FRONTS / AREAS / 0°C / WIND / TEMP
VALID AT 09 UTC

CB implies TS, GR, MOD/SEV TURB, ICE;
Units used: speed in KT, heights in FL;
base and tops in FT AGL;
temperatures in C degrees;
xxx means above chart upper limit;

AREA	TIME (UTC)	SFC WSPD (KT)	SFC VIS (M)	WX	MT OBSC (FL)	CLOUD (FT AGL)	TURB (FL)	ICE (FL)
A	06-12	06-12	ABV 10000	/	/	FEW/SCT SC 4000/6000	/	/
B	06-12	03-06	ABV 10000 LCA 3000-5000	LCA BR/RASN	ABV 030	FEW/SCT ST 2000/2500 BKN SC 3000/6000 SCT/BKN ACAS 7000/11000	/	/
C	06-12	03-06	ABV 10000	/	/	SCT AC 8000/10000	/	/

WIND TEMP	LYBE		LYVR		LYNI		LYPG	
H (FT)	WIND [Deg/KT]	TEMP [°C]	WIND [Deg/KT]	TEMP [°C]	WIND [Deg/KT]	TEMP [°C]	WIND [Deg/KT]	TEMP [°C]
15000	360/35	-20	010/35	-20	340/30	-23	340/45	-18
10000	340/35	-11	340/30	-12	340/35	-11	340/35	-09
5000	330/30	-03	330/25	-03	330/30	-04	020/10	-02
2000	330/20	+02	340/15	+00	320/15	+01	010/05	+04

Amendment of SWL chart

When a meteorological phenomenon hazardous for low level flights is not forecasted on the chart, but has occurred or is forecasted to occur, an AIRMET or SIGMET warning is issued, depending on what is appropriate. An amendment to the SWL chart is not issued.

Marks and abbreviations used at SWL chart

ABV	Above
AGL	Above ground level
AMSL	Above mean sea level
BKN	Broken, cloud amount 5 to 7 oktas
BLW	Below
COR	Correction
EMBD	Embedded in a layer *(Cumulonimbus embedded in layers of other clouds)*
FEW	Few, cloud amount 1 to 2 oktas
FBL	Light
FIR	Flight information region
FL	Flight level
FRQ	Frequent – indicate spatial coverage of more than 75 per cent of the area concerned
FT	Feet (dimensional unit)
GUST	Variations from the mean wind speed
H	The center of high pressure
HVY	Heavy
ISOL	Isolated – indicate spatial coverage of more than 50 per cent of the area concerned
KT	Knots
L	The center of low pressure
LCA	Local
MOD	Moderate
MON	Above mountains
MT	Mountain
MTW	Mountain waves
OBSC	Obscure
OCNL	Occasional – indicate spatial coverage between 50 and 75 per cent of the area concerned
OVC	Overcast, cloud amount 8 oktas
RDOACT	Radioactive
SCT	Scattered, cloud amount 3 to 4 oktas
SEV	Severe
SFC	Earth’s surface
SIGWX	Significant weather
SQL	Squall line
TURB	Turbulence
UTC	Coordinated universal time
VAL	In valleys
VIS	Visibility
WSPD	Wind speed
WX	Weather