Application of the reduced runway separation minima at the Sheremetyevo airport
Aerodrome has two close parallel RWYs
Separation between RWYs centerlines is 285 meters
For dependent operations on the runways apply the separation rules as for single runway.

Minimum time and linear intervals during all take-off-landing operations shall be established the same which are used when one RWY is available, except that variant when take-off is executed after landing if these operations are conducted from different RWY.

The controller can issue the take-off clearance to the second ACFT after landing of the first ACFT (when landing ACFT is on the parallel RWY and the pilot did not report about go-around).

The combined and semicombined take-off - landing operations shall be carried out at the aerodrome as follows:

1. One RWY shall be used for departures, the other one - for approaches or for departures
2. Both RWY shall be used both for departures and for approaches

Application of RRSM - one of the ways of Increasing the capacity of the airdrome
Implementation of RRSM

Implementation of RRSM made in accordance with standard ICAO

The RRSM shall be applied only in the day-time (starting in 30 minutes after the sunrise and terminating 30 minutes before the sunset)

Meteorological conditions conform to the following criteria:
- visibility is 5 km or above, ceiling is 300 m or above
- tailwind component shall not exceed 3 m/s

RWY is dry or wet, measured friction coefficient is 0.5 or above

Information about application of RRSM is included into ATIS

SMR provides the ATC unit with position information on aircraft

Traffic information shall be provided to the flight crew of the succeeding ACFT

Procedures are published in the AIP and in local technologies for ATC

ATC Tower received adequate and targeted training in RRSM application.
Take-off clearance to the succeeding ACFT can be issued when the preceding departing ACFT is airborne and has passed the point located at a distance of not less than 2500 m from the succeeding ACFT.

Landing clearance can be issued to the flight crew of the succeeding ACFT when there is a reasonable confidence that at the moment of crossing the runway threshold:

- The preceding ACFT has landed and has passed the point located at a distance of not less than 2500 m from runway threshold, is moving and will vacate RWY without backtracking.

- The departing ACFT is airborne and has passed the point located at a distance of not less than 2500 m from runway threshold.

- The flight crew of the succeeding ACFT is informed about the preceding ACFT by indicating the type of the preceding ACFT.

- The flight crew shall inform the controller when the preceding ACFT is in sight and confirm the landing clearance.

- Reasonable confidence of the controller is based on observance by the flight crews of the published time of RWY occupation after landing (or passing the distance of not less than 2500 m from RWY threshold) of not more than 70 seconds.

- If the flight crew is not ready to observe the published requirements, the flight crew must inform the controller about it on first radio contact or as early as possible.
The procedures of the reduction of time of the aircraft occupation of the runway shall be applied to provide the RRSM.

The time standards for RWY occupation after landing are established and published for to accelerate RWY vacation- not more than 70 sec.

The aircraft must be ready for take-off without a stop on the runway or for the immediate take-off by the instruction of TWR controller.

The aircraft shall start movement within 10 seconds after getting take-off clearance.

If the aircraft movement has not begun after the expiration of 10 seconds, TWR controller can prohibit take-off and give the instruction to the flight crew to clear the runway via the nearest TWY.
Procedure of the RRSM

Landing clearance can be issued by TWR controller at any moment at the stage prior to crossing the runway threshold by aircraft.

The landing clearance shall not be issued until the preceding landing aircraft has not crossed the runway threshold.

Minimum Radar Separation 7 km

The final decision about landing operation shall be made by a pilot-in-command. Landing clearance is not a compulsion to execute landing. The pilot must make missed approach if there are obstacles on the runway threatening the safety of landing.

Time standards for RWY occupation after landing are established: not more than 70 sec

Minimum Horizontal Radar Separation established under aerodrome traffic service is 5 km

Longitudinal distance between aircraft performing a landing one after the other, takes into account the runway occupancy time 70, seconds are determined 7 km
Procedure of the RRSM

Departure procedure

Climbing from (120) to (900) shall be carried out with MAX climb gradient according to the Aeroplane Flight Manual.

Initially cleared height of climb after take-off is (900) for all SID.

Climbing after departure

The conditions of application of the RRSM procedure was performed

No necessary separation

Minimum Horizontal Radar Separation established under aerodrome traffic service is 5 km.

During missed approach the flight crew shall execute the procedures published in AIP, report the reason and initiation of the missed approach to ATS unit controller.

MISSED APPROACH
Climb straight ahead to (150) or above. Turn RIGHT onto track 274° (but not earlier than crossing RWY 24R THR) climbing to (600), establish on QDM 026° KN, proceed to NDB KN to pass it at HGT (FL) by ATC instruction.
What if a landing aircraft makes a go-around at the same time as another aircraft takes off?

How is separation maintained?

Would it be enough for the missed approach procedure to keep published pattern?

What shall ATCC do to take action to ensure safety and separation (altitude, distance, or divergence)?

Questions of investigation of this event and its classification?

Questions of TCAS (STCA) indications during applying reduced runway separation minima?

Are there any standards and recommendations of ICAO or EUROCONTROL for this situation?
The application RRSM procedure has allowed to increase capacity for two dependent runways from 48 to 65 take-off - landing operations per hour.