WHAT IS CLAIMED IS:

1. A method for determining a serving cell, performed by a user equipment (UE), wherein a current serving cell of the UE is a non-terrestrial network (NTN) cell, the method comprising:

when location information of the UE is not obtained by the UE, determining a new serving cell,

wherein determining the new serving cell comprises:

determining the new serving cell via a cell selection, wherein the UE is in a non-connected state,

wherein determining the new serving cell via the cell selection comprises:

based on a preset frequency priority configuration, determining the new serving cell in an order from a high frequency priority to a low frequency priority, wherein the preset frequency priority configuration is configured to indicate that a priority of a frequency used by an NTN cell is lower than a priority of a frequency used by a terrestrial network (TN) cell, wherein a frequency band used by the NTN cell is different from a frequency band used by the TN cell.

2. The method according to claim 1, wherein determining the new serving cell via the cell selection comprises:

based on a preset cell priority configuration, determining the new serving cell in an order from a high cell priority to a low cell priority, wherein the preset cell priority configuration is configured to indicate that a priority of the NTN cell is lower than a priority of the TN cell; wherein a frequency band used by the NTN is the same as or partially same as a frequency band used by the TN.

3. The method according to any one of claims 1 to 2, further comprising:

based on a preset measurement standard, performing a cell measurement.

4. The method according to claim 3, wherein the preset measurement standard comprises at least one of:

when a signal quality of the current serving cell is greater than a preset co-frequency measurement threshold, and the acquisition situation meets the preset condition, the cell measurement not being performed for a co-frequency cell; otherwise, the cell measurement being performed for the co-frequency cell, wherein the co-frequency cell has a same frequency as the current serving cell;

when the signal quality of the current serving cell is greater than a preset inter-frequency measurement threshold, and the acquisition situation meets the preset condition, the cell measurement not being performed for a first type of cell; otherwise, the cell measurement being performed for the first type of cell, wherein a priority of a frequency used by the first type of cell

is equal to or lower than a priority of a frequency used by the current serving cell; or

when the signal quality of the current serving cell is greater than the preset inter-frequency measurement threshold, the UE is configured with a high-priority measurement relaxation, and the acquisition situation meets the preset condition, the cell measurement not being performed for a second type of cell; otherwise, the cell measurement being performed for the second type of cell, wherein a priority of a frequency used by the second type of cell is higher than the priority of the frequency used by the current serving cell.

5. The method according to any one of claims 1 to 4, further comprising:

recording information that the acquisition situation does not meet the preset condition via a minimization drive test (MDT) record.

6. The method according to claim 1, wherein determining the new serving cell comprises:

handing over a serving cell of the UE from the NTN cell to the new serving cell according to preconfigured handover information, wherein the preconfigured handover information is configured to indicate the TN cell that is capable of being used as the new serving cell when the acquisition situation does not meet the preset condition; wherein the UE is in a connected state.

7. The method according to claim 1, further comprising:

sending a first message to a network device, wherein the first message is configured to indicate the network device to hand over a serving cell of the UE from the NTN cell to the TN cell, wherein the UE is in a connected state.

8. The method according to claim 1, wherein determining the new serving cell comprises:

determining the TN cell as the new serving cell via a connection reestablishment process, wherein the UE is in a connected state.

9. A method for determining a serving cell, performed by a network device and comprising:

based on a message sent by a user equipment (UE), determining a new serving cell for the UE, wherein a current serving cell of the UE is a non-terrestrial network (NTN) cell, and the message is sent by the UE when location information of the UE is not obtained by the UE,

wherein the UE is in a non-connected state, and the new serving cell is determined by the UE via a cell selection by: based on a preset frequency priority configuration, determining the new serving cell in an order from a high frequency priority to a low frequency priority, wherein the preset frequency priority configuration is configured to indicate that a priority of a frequency used by an NTN cell is lower than a priority of a frequency used by a terrestrial network (TN) cell, wherein a frequency band used by the NTN cell is different from a frequency band used by the TN cell.

10. The method according to claim 9, further comprising:

handing over a serving cell of the UE from the NTN cell to the TN cell.

11. The method according to any one of claims 9 to 10, wherein determining the new serving cell for the UE further comprises:

sending a measurement indication message to the UE;

receiving a measurement report reported by the UE after performing a cell measurement based on the measurement indication message; and

determining the TN cell as the new serving cell according to the measurement report.

12. An apparatus for determining a serving cell, wherein a current serving cell of the apparatus is a non-terrestrial network (NTN) cell, the apparatus comprising:

a processing module configured to determine a new serving cell when location information of the UE is not obtained by the UE,

wherein the processing module is configured to: determine the new serving cell via a cell selection, the UE is in a non-connected state,

wherein the processing module is configured to determine the new serving cell via the cell selection based on a following step: based on a preset frequency priority configuration, determining the new serving cell in an order from a high frequency priority to a low frequency priority, wherein the preset frequency priority configuration is configured to indicate that a priority of a frequency used by an NTN cell is lower than a priority of a frequency used by a terrestrial network (TN) cell, and a frequency band used by the NTN cell is different from a frequency band used by the TN cell.

13. An apparatus for determining a serving cell, comprising:

a processing module configured to determine a new serving cell for a user equipment (UE) based on a message sent by the UE, wherein a current serving cell of the UE is a non-terrestrial network (NTN) cell, and the message is sent by the UE when location information of the UE is not obtained by the UE,

wherein the UE is in a non-connected state, and the new serving cell is determined by a processing module at the UE via a cell selection by: based on a preset frequency priority configuration, determining the new serving cell in an order from a high frequency priority to a low frequency priority, wherein the preset frequency priority configuration is configured to indicate that a priority of a frequency used by an NTN cell is lower than a priority of a frequency used by a terrestrial network (TN) cell, wherein a frequency band used by the NTN cell is different from a frequency band used by the TN cell.

14. A user equipment, comprising:

a transceiver;

a memory; and

a processor,

wherein the processor is connected to the transceiver and the memory respectively, and configured to perform the method according to any one of claims 1 to 8.

15. A network device, comprising:

a transceiver;

a memory; and

a processor,

wherein the processor is connected to the transceiver and the memory respectively, and configured to perform the method according to any one of claims 9 to 11.

16. A non-transitory computer-readable storage medium having stored therein computer-executable instructions that, when executed by a processor, cause the method according to any one of claims 1 to 11 to be implemented.