~~CLAIMS~~

~~**What is claimed is:**~~

CLAIMS

1. A method for wireless communication by a user equipment (UE), comprising:

~~receiving an indicator indicating to derive a quasi co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first bandwidth part from a reference signal of a second bandwidth part;~~

receiving configuration information configuring the UE to utilize, for a first bandwidth part, a first transmission configuration indicator (TCI) state of a plurality of TCI states associated with a second bandwidth part, wherein each TCI state of the plurality of TCI states, including the first TCI state, identifies at least one reference signal and indicates a parameter for a receive beam configured for receiving a transmission in the second bandwidth part, the configuration information indicating to the UE to derive a first quasi co-location (QCL) assumption for a transmission to be transmitted in the first bandwidth part from the at least one reference signal in the second bandwidth part associated with the first TCI state;

receiving a grant in the second bandwidth part instructing the UE to switch from the second bandwidth part to the first bandwidth part; ~~and~~

~~demodulating, based at least in part on the QCL assumption,~~ receiving a transmission in the first bandwidth part ~~received~~ in accordance with the first TCI state within a transition time window occurring after the UE receives the grant~~.~~;

demodulating, based at least in part on the first QCL assumption, the transmission in the first bandwidth part;

deriving a second QCL assumption for the first bandwidth part from at least one reference signal received in the first bandwidth part; and

demodulating, after the transition time window has expired, a second transmission in the first bandwidth part based at least in part on the second QCL assumption.

2. The method of claim 1, wherein a duration of the transition time window corresponds to a duration of a first data channel on the first bandwidth part, the first data channel comprising the transmission in the first bandwidth part.

3. The method of claim 1, wherein the indicator indicates that the reference signal of the second bandwidth part is cross bandwidth part quasi co-located with a second reference signal of the first bandwidth part, the method further comprising:

filtering the reference signal and the second reference signal across the first and second bandwidth parts to determine a QCL parameter, wherein the transmission in the first bandwidth part is demodulated based at least in part on the QCL parameter.

4. The method of claim 1, wherein the indicator indicates that the reference signal of the second bandwidth part is not cross bandwidth part quasi co-located with a second reference signal of the first bandwidth part, the method further comprising:

determining not to filter the reference signal and the second reference signal across the first and second bandwidth parts.

~~5. The method of claim 1, further comprising:~~

~~determining that the transition time window has expired;~~

~~deriving a second QCL assumption for the DMRS for the first bandwidth part from a reference signal of the first bandwidth part; and~~

~~demodulating, after the transition time window has expired, a second transmission in the first bandwidth part based at least in part on the second QCL assumption.~~

~~6~~5. The method of claim 1, wherein the QCL assumption indicates to derive a QCL parameter for the first bandwidth part based at least in part on the reference signal of the second bandwidth part, and wherein the transmission in the first bandwidth part is demodulated based at least in part on the QCL parameter.

~~7~~6. The method of claim ~~6~~5, wherein the QCL parameter is a delay spread parameter, a Doppler parameter, an average delay parameter, a Doppler shift parameter, a spatial receive parameter, or any combination thereof.

~~8~~7. The method of claim 1, further comprising:

receiving radio resource control signaling, or downlink control information, or a control element that indicates a duration of the transition time window.

~~9~~8. The method of claim 1, further comprising:

receiving radio resource control signaling, or downlink control information, or a control element that indicates whether the reference signal of the second bandwidth part is cross bandwidth part quasi co-located with a second reference signal of the first bandwidth part.

~~10~~9. The method of claim 1, wherein the UE locally stores a duration of the transition time window.

~~11~~10. The method of claim 1, wherein a duration of the transition time window is a function of a periodicity of a second reference signal of the first bandwidth part.

~~12~~11. The method of claim 1, wherein the reference signal is a channel state information reference signal (CSI-RS), a synchronization signal block (SSB), or a tracking reference signal (TRS).

~~13~~12. The method of claim 1, wherein the indicator is a transmission configuration indicator (TCI) that indicates a QCL parameter set from a plurality of different QCL parameter sets.

~~14~~13. The method of claim 1, further comprising:

deriving a transmission configuration indicator (TCI) state for the first bandwidth part based at least in part on a configured TCI state for the second bandwidth part.

~~15. The method of claim 1, further comprising:~~

~~receiving configuration information configuring the UE to utilize a first transmission configuration indicator (TCI) state for the first bandwidth part of a plurality of different TCI states, and wherein each TCI state of the plurality of TCI states identifies at least one reference signal and includes a parameter for a receive beam configured for receiving a direction transmission in the second bandwidth part; and~~

~~receiving the transmission in the first bandwidth part in accordance with the first TCI state.~~

~~16~~14. The method of claim 1, further comprising:

receiving, prior to the grant, a control element configuring the UE to utilize a transmission configuration indicator (TCI) interpretation in the second bandwidth part;

determining that an application time of the control element occurs within the transition time window; and

receiving the transmission in the first bandwidth part in accordance with the TCI interpretation.

~~17~~15. The method of claim 1, further comprising:

receiving, prior to the grant, a control element configuring the UE to utilize a transmission configuration indicator (TCI) interpretation in the second bandwidth part; and

determining whether to apply or reject the TCI interpretation for transmissions received in the first bandwidth part during the transition time window based at least in part on an application time of the control element extending after the transition time window.

~~18~~16. The method of claim 1, further comprising:

monitoring a shared data channel or a control channel of the first bandwidth part for the transmission.

~~19~~17. The method of claim 1, wherein the transmission is a control resource set (CORESET), and wherein demodulating the transmission in the first bandwidth part during the transition time window further comprises:

demodulating the CORESET in the first bandwidth part based at least in part on the QCL assumption.

~~20~~18. The method of claim 1, wherein the transmission is a first control resource set (CORESET), and wherein demodulating the transmission in the first bandwidth part during the transition time window further comprises:

mapping the first CORESET and a second CORESET in the first bandwidth part; and

demodulating the first CORESET and the second CORESET based at least in part on the QCL assumption and the mapping.

~~21. A method~~19. An apparatus for wireless communication by a ~~base station, comprising:~~

~~transmitting, to a~~ user equipment (UE), ~~an~~comprising:

means for receiving configuration information configuring the UE to utilize, for a first bandwidth part, a first transmission configuration indicator (TCI) state of a plurality

of TCI states associated with a second bandwidth part, wherein each TCI state of the plurality of TCI states, including the first TCI state, identifies at least one reference signal and indicates a parameter for a receive beam configured for receiving a transmission in the second bandwidth part, the configuration information indicating to the UE to derive a first quasi co-location (QCL) assumption for a ~~demodulation reference signal (DMRS) for a~~transmission to be transmitted in the first bandwidth part from ~~a~~the at least one reference signal ~~of a second bandwidth part;~~

~~transmitting a grant in the second bandwidth part instructing the UE to switch from the~~ in the second bandwidth part ~~to the first bandwidth part;~~

~~generating a transmission in accordance with the QCL assumption; and~~

~~transmitting the transmission in the first bandwidth part during a transition time window occurring after the UE is instructed to switch from the second bandwidth part to~~ associated with the first ~~bandwidth part.~~TCI state;

~~22. The method of claim 21, wherein a duration of the transition time window corresponds to a duration of a first data channel on the first bandwidth part, the first data channel comprising the transmission in the first bandwidth part.~~

~~23. The method of claim 21, further comprising:~~

~~determining that the transition time window has expired;~~

~~generating a second transmission in accordance a second QCL assumption corresponding to the first bandwidth part; and~~

~~transmitting, after the transition time window has expired, the second transmission in the first bandwidth part.~~

~~24. The method of claim 21, further comprising:~~

~~transmitting radio resource control signaling, or downlink control information, or a control element that indicates a duration of the transition time window.~~

~~25. The method of claim 21, further comprising:~~

~~transmitting radio resource control signaling, or downlink control information, or a control element that indicates whether the reference signal of the second bandwidth part is cross bandwidth part quasi co-located with a second reference signal of the first bandwidth part.~~

~~26. The method of claim 21, further comprising:~~

~~transmitting the reference signal in the second bandwidth part; and~~

~~transmitting a second reference signal in the first bandwidth part.~~

~~27. The method of claim 21, wherein the reference signal is a channel state information reference signal (CSI-RS), a synchronization signal block (SSB), or a tracking reference signal.~~

~~28. An apparatus for wireless communication by a user equipment (UE), comprising:~~

~~means for receiving an indicator indicating to derive a quasi co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first bandwidth part from a reference signal of a second bandwidth part;~~

means for receiving a grant in the second bandwidth part instructing the UE to switch from the second bandwidth part to the first bandwidth part; ~~and~~

means for ~~demodulating, based at least in part on the QCL assumption,~~receiving a transmission in the first bandwidth part ~~received~~ in accordance with the first TCI state within a transition time window occurring after the UE receives the grant~~.~~;

~~29. An apparatus for wireless communication by a base station, comprising:~~

~~means for transmitting, to a user equipment (UE), an indicator indicating to derive a quasi co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first bandwidth part from a reference signal of a second bandwidth part;~~

~~means for transmitting a grant in the second bandwidth part instructing the UE to switch from the second bandwidth part to the first bandwidth part;~~

~~means for generating a transmission in accordance with the QCL assumption; and~~

~~means for transmitting~~ means for demodulating, based at least in part on the first QCL assumption, the transmission in the first bandwidth part ~~during a~~ ;

means for deriving a second QCL assumption for the first bandwidth part from at least one reference signal received in the first bandwidth part; and

means for demodulating, after the transition time window ~~occurring after the UE is instructed to switch from the second bandwidth part to~~has expired, a second transmission in

the first bandwidth part based at least in part on the second QCL assumption.

3020. An apparatus for wireless communication by a user equipment (UE), comprising:

a processor;

memory in electronic communication with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

receive an indicator indicating to derive a quasi co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first bandwidth part from a reference signal of a second bandwidth part;

receive configuration information configuring the UE to utilize, for a first bandwidth part, a first transmission configuration indicator (TCI) state of a plurality of TCI states associated with a second bandwidth part, wherein each TCI state of the plurality of TCI states, including the first TCI state, identifies at least one reference signal and indicates a parameter for a receive beam configured for receiving a transmission in the second bandwidth part, the configuration information indicating to the UE to derive a first quasi co-location (QCL) assumption for a transmission to be transmitted in the first bandwidth part from the at least one reference signal in the second bandwidth part associated with the first TCI state;

receive a grant in the second bandwidth part instructing the UE to switch from the second bandwidth part to the first bandwidth part; and

demodulate, based at least in part on the QCL assumption,receive a transmission in the first bandwidth part receivedin accordance with the first TCI state within a transition time window occurring after the UE receives the grant.;

demodulate, based at least in part on the first QCL assumption, the transmission in the first bandwidth part;

derive a second QCL assumption for the first bandwidth part from at least one reference signal received in the first bandwidth part; and

demodulate, after the transition time window has expired, a second transmission in the first bandwidth part based at least in part on the second QCL assumption.

3121. The apparatus of claim 3020, wherein the indicator indicates that the reference

signal of the second bandwidth part is cross bandwidth part quasi co-located with a second reference signal of the first bandwidth part, and wherein the instructions are further executable by the processor to cause the apparatus to:

filter the reference signal and the second reference signal across the first and second bandwidth parts to determine a QCL parameter, wherein the transmission in the first bandwidth part is demodulated based at least in part on the QCL parameter.

~~32~~22. The apparatus of claim ~~30~~20, wherein the indicator indicates that the reference signal of the second bandwidth part is not cross bandwidth part quasi co-located with a second reference signal of the first bandwidth part, and wherein the instructions are further executable by the processor to cause the apparatus to:

determine not to filter the reference signal and the second reference signal across the first and second bandwidth parts.

~~33~~23. The apparatus of claim ~~30~~20, wherein the instructions are further executable by the processor to cause the apparatus to:

determine that the transition time window has expired;

derive a second QCL assumption for the DMRS for the first bandwidth part from a reference signal of the first bandwidth part; and

demodulate, after the transition time window has expired, a second transmission in the first bandwidth part based at least in part on the second QCL assumption.

~~34~~24. The apparatus of claim ~~30~~20, wherein the QCL assumption indicates to derive a QCL parameter for the first bandwidth part based at least in part on the reference signal of the second bandwidth part, and wherein the transmission in the first bandwidth part is demodulated based at least in part on the QCL parameter.

~~35~~25. The apparatus of claim ~~34~~24, wherein the QCL parameter is a delay spread parameter, a Doppler parameter, an average delay parameter, a Doppler shift parameter, a spatial receive parameter, or any combination thereof.

~~36~~26. The apparatus of claim ~~30~~20, wherein the instructions are further executable by the processor to cause the apparatus to:

~~receive radio resource control signaling, or downlink control information, or a control element that indicates a duration of the transition time window.~~

~~37. The apparatus of claim 30, wherein the instructions are further executable by the processor to cause the apparatus to:~~

receive radio resource control signaling, or downlink control information, or a control element that indicates ~~whether the reference signal of the second bandwidth part is cross bandwidth part quasi co-located with a second reference signal of the first bandwidth part~~a duration of the transition time window.

~~38~~27. The apparatus of claim ~~30~~20, wherein the instructions are further executable by the processor to cause the apparatus to:

receive radio resource control signaling, or downlink control information, or a control element that indicates whether the reference signal of the second bandwidth part is cross bandwidth part quasi co-located with a second reference signal of the first bandwidth part.

28. The apparatus of claim 20, wherein the UE locally stores a duration of the transition time window.

~~39~~29. The apparatus of claim ~~30~~20, wherein a duration of the transition time window is a function of a periodicity of a second reference signal of the first bandwidth part.

~~40~~30. The apparatus of claim ~~30~~20, wherein the reference signal is a channel state information reference signal (CSI-RS), a synchronization signal block (SSB), or a tracking reference signal (TRS).

~~41~~31. The apparatus of claim ~~30~~20, wherein the indicator is a transmission configuration indicator (TCI) that indicates a QCL parameter set from a plurality of different QCL parameter sets.

~~42~~32. The apparatus of claim ~~30~~20, wherein the instructions are further executable by the processor to cause the apparatus to:

derive a transmission configuration indicator (TCI) state for the first bandwidth part based at least in part on a configured TCI state for the second bandwidth part.

~~43~~33. The apparatus of claim ~~30, wherein the instructions are further executable by the processor to cause the apparatus to:~~

~~receive configuration information configuring the UE to utilize a first transmission configuration indicator (TCI) state for the first bandwidth part of a plurality of different TCI states, and wherein each TCI state of the plurality of TCI states identifies at least one reference signal and includes a parameter for a receive beam configured for receiving a direction transmission in the second bandwidth part; and~~

~~receive the transmission in the first bandwidth part in accordance with the first TCI state.~~

~~44. The apparatus of claim 30~~20, wherein the instructions are further executable by the processor to cause the apparatus to:

receive, prior to the grant, a control element configuring the UE to utilize a transmission configuration indicator (TCI) interpretation in the second bandwidth part;

determine that an application time of the control element occurs within the transition time window; and

receive the transmission in the first bandwidth part in accordance with the TCI interpretation.

~~45~~34. The apparatus of claim ~~30~~20, wherein the instructions are further executable by the processor to cause the apparatus to:

receive, prior to the grant, a control element configuring the UE to utilize a transmission configuration indicator (TCI) interpretation in the second bandwidth part; and

determine whether to apply or reject the TCI interpretation for transmissions received in the first bandwidth part during the transition time window based at least in part on an application time of the control element extending after the transition time window.

~~46~~35. The apparatus of claim ~~30~~20, wherein the instructions are further executable by the processor to cause the apparatus to:

monitor a shared data channel or a control channel of the first bandwidth part for the transmission.

~~47~~36. The apparatus of claim ~~30~~20, wherein the instructions to the transmission is a

control resource set (CORESET), and wherein demodulating the transmission in the first bandwidth part during the transition time window further are executable by the processor to cause the apparatus to:

demodulate the CORESET in the first bandwidth part based at least in part on the QCL assumption.

~~48~~37. The apparatus of claim ~~30~~20, wherein the instructions to the transmission is a first control resource set (CORESET), and wherein demodulating the transmission in the first bandwidth part during the transition time window further are executable by the processor to cause the apparatus to:

map the first CORESET and a second CORESET in the first bandwidth part; and

demodulate the first CORESET and the second CORESET based at least in part on the QCL assumption and the mapping.

~~49. An apparatus~~38. A method for wireless communication by a ~~base station, comprising:~~

~~a processor;~~

~~memory in electronic communication with the processor; and~~

~~instructions stored in the memory and executable by the processor to cause the apparatus to:~~

~~transmit, to a~~ user equipment (UE), comprising:

receiving, from a base station, an indication of a first transmission configuration indicator (TCI) state of a set of TCI states associated with a first bandwidth part, each TCI state being associated with a respective set of reference signals and indicating ~~to derive~~ a quasi co-location (QCL) ~~assumption for a demodulation~~ relationship associated with the set of reference signals;

determining, based at least in part on the indication of the first TCI state, that one or more antenna ports associated with receiving one or more first reference signals in the first bandwidth part are quasi co-located with one or more antenna ports associated with receiving one or more second reference signals, data or control information in a second bandwidth part;

receiving, from the base station, the one or more first reference signals in the first bandwidth part;

determining one or more first QCL parameters for the first bandwidth part based on the

one or more first reference signals;

determining to switch from the first bandwidth part to the second bandwidth part;

receiving, from the base station, the one or more second reference signals, the data or the control information, or a combination thereof, in the second bandwidth part after switching to the second bandwidth part;

demodulating, prior to processing any other reference signal ~~(DMRS)~~in the second bandwidth part after switching to the second bandwidth part, at least a portion of the one or more second reference signals, the data or the control information, or the combination thereof, in the second bandwidth part based on the one or more first QCL parameters;

receiving, from the base station, one or more third reference signals in the second bandwidth part after demodulating the portion of the one or more second reference signals, the data or the control information, or the combination thereof, in the second bandwidth part based on the one or more first QCL parameters;

determining one or more second QCL parameters for ~~a first bandwidth part from a reference signal of a~~the second bandwidth part based on the one or more third reference signals;

~~transmit a grant~~receiving, from the base station, one or more fourth reference signals, second data or second control information, or a combination thereof, in the second bandwidth part ~~instructing~~ after receiving the one or more third reference signals; and

demodulating the one or more fourth reference signals, the second data or the second control information, or the combination thereof, in the second bandwidth part based on the one or more second QCL parameters.

39. The method of claim 38, further comprising receiving, from the base station, downlink control information that schedules the one or more second reference signals, the data or the control information in the second bandwidth part or that includes a request for the UE to switch from the ~~second~~first bandwidth part to the ~~first bandwidth part;~~second bandwidth part, wherein the determination to switch to the second bandwidth part is based on receiving the downlink control information.

~~generate~~

40. The method of claim 38, wherein the determination to switch to the second bandwidth part is based on an expiration of a ~~transmission in accordance~~timer associated with ~~the QCL assumption; and~~

~~transmit the transmission in~~one or both of the first bandwidth part ~~during a transition~~

~~time window occurring after the UE is instructed to switch from the second bandwidth part to the first~~or the second bandwidth part.

~~50~~41. The ~~apparatus~~method of claim ~~49~~38, wherein the ~~instructions are further executable by~~one or more second reference signals, the ~~processor to cause~~data or the ~~apparatus to:~~

~~determine that~~ control information is received in the second bandwidth part within a transition time window ~~has expired;~~

~~generate a second transmission in accordance a second QCL assumption corresponding~~after switching, or determining to switch, to the ~~first~~second bandwidth part~~;~~, and

~~transmit, after~~ wherein the demodulation of the one or more second reference signals, the data or the control information in the second bandwidth part based on the one or more QCL parameters is based on receiving the one or more second reference signals, the data or the control information before an end of the transition time window ~~has expired, the second transmission in the first bandwidth part~~.

~~51~~42. The ~~apparatus~~method of claim ~~49, wherein the instructions are~~41, further ~~executable by~~comprising receiving, from the ~~processor to cause the apparatus to:~~

~~transmit radio resource control signaling,~~base station, an indication of a length or ~~downlink control information, or a control element that indicates~~ a duration of the transition time window.

~~52. The apparatus of claim 49, wherein the instructions are further executable by the processor to cause the apparatus to:~~

~~transmit~~

43. The method of claim 38, wherein the data or the control information includes an indication of a second TCI state, and wherein the reception of the one or more third reference signals or the determination of the one or more second QCL parameters is based on the second TCI state.

44. The method of claim 38, wherein the determination of the one or more QCL

parameters for receiving the one or more second reference signals, the data or the control information in the second bandwidth part is not based on receiving any reference signals in the second bandwidth part.

45. The method of claim 38, further comprising receiving an indication in radio resource control signaling, a medium access control control element, or downlink control information~~, or a control element~~ that indicates ~~whether the reference signal of the second bandwidth part is cross bandwidth part quasi co-located with a second reference signal of the~~ that one or more antenna ports associated with transmitting the one or more first ~~bandwidth part.~~

~~53. The apparatus of claim 49, wherein the instructions are further executable by the processor to cause the apparatus to:~~

~~transmit the reference signal in the second bandwidth part; and~~

~~transmit a second~~ reference ~~signal~~signals in the first bandwidth part~~.~~

~~54. The apparatus of claim 49, wherein the~~ are quasi co-located with one or more antenna ports associated with transmitting the one or more second reference ~~signal is a channel state information reference signal (CSI-RS), a synchronization signal block (SSB), or a tracking reference signal.~~

~~55. A non-transitory computer-readable medium storing code for wireless communication by a user equipment (UE), the code comprising instructions executable by a processor to:~~

~~receive an indicator indicating to derive a quasi co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first bandwidth part from a reference signal of a second bandwidth part;~~

~~receive a grant in the second bandwidth part instructing the UE to switch from the second bandwidth part to~~signals, the ~~first bandwidth part; and~~

~~demodulate, based at least in part on~~data or the ~~QCL assumption, a transmission~~control information in the ~~first bandwidth part received within a transition time window occurring after the UE receives the grant.~~

~~56. A non-transitory computer-readable medium storing code for wireless communication by a base station, the code comprising instructions executable by a processor to:~~

~~transmit, to a user equipment (UE), an indicator indicating to derive a quasi co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first bandwidth part from a reference signal of a~~ second bandwidth part~~;~~

~~transmit a grant in the second bandwidth part instructing the UE to switch from the second bandwidth part to the first bandwidth part;~~

~~generate a transmission in accordance with the QCL assumption; and~~

~~transmit the transmission in the first bandwidth part during a transition time window occurring after the UE is instructed to switch from the second bandwidth part to the first bandwidth part~~.