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(54) **APPARATUSES AND METHODS FOR
FACILITATING SATELLITE VISIBILITY
FOR EARTH-BASED ANTENNA SYSTEMS**

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(57) **ABSTRACT**

In one embodiment of the present disclosure, a device for detecting a zone of communication between a user terminal and a satellite constellation including a plurality of satellites in non-geosynchronous (non-GEO) orbit includes one or more processors and memory. The memory stores instructions that, as a result of being executed by the one or more processors, cause the device to: determine a location of the device, wherein the location corresponds to a field of regard for detecting the zone of communication, and wherein the field of regard corresponds to an antenna aperture of the phased array antenna; evaluate a level of communication between the phased array antenna and the satellite constellation associated with the field of regard; and output, to a user of the device, an indication of the level of communication between the phased array antenna and the satellite constellation associated with the field of regard.

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