

SYSTEM AND METHOD OF CALIBRATING A RADAR ROTATABLE ANTENNA SYSTEM

ABSTRACT

Techniques for calibrating a radar antenna mounted at a predetermined position relative to a reference point on a rotatable support are disclosed. The calibration utilizes reference data indicative of a position of a target element relative to a reference location, of a position of the reference point on the rotatable support relative to the reference location, orientation data indicative of at least one angular position of the rotatable support, and antenna measurement data indicative of electromagnetic echo signals received by the radar antenna from the reference target element. A measured position of the target element relative to the radar antenna is determined based on at least a portion of the antenna measurement data. A reference position of the target element relative to the radar antenna is determined based on the reference data and on at least a portion of the orientation data. At least one bias value or function associated with at least one of the orientation data and the antenna measurement data is determined based on a deviation between the determined measured position and reference position of the target element.

Fig. 2