

Title (en)

CONICAL SCAN WEATHER RADAR

Title (de)

WETTERRADAR MIT KONISCHER ABTASTUNG

Title (fr)

RADAR MÉTÉOROLOGIQUE À BALAYAGE CONIQUE

Publication

EP 4127772 A4 20240410 (EN)

Application

EP 21779017 A 20210331

Priority

- US 202063002479 P 20200331
- US 202117163640 A 20210201
- US 2021025253 W 20210331

Abstract (en)

[origin: WO2021202797A1] A new measurement approach is disclosed that facilitates significantly smaller size, weight, and power (SWaP) spaceborne radar systems that can provide wide swath, high resolution observations. Multiple beams employed in the scan and the complex volume and/or surface backscatter signals of each beam is recorded. Each beam is electronically swept in azimuth where each beam is held at a constant incidence angle over the azimuth sector that covers the swath. Once the sweep is complete, the platform moves forward, by one along track pixel, and the sweep is repeated in order to provide continuous mapping of the volume and surface covered by the swath. Complex volume backscatter is recorded and mapped to each altitude layer to provide full mapping of the atmosphere.

IPC 8 full level

G01S 13/42 (2006.01); **G01S 13/95** (2006.01)

CPC (source: EP)

G01S 13/422 (2013.01); **G01S 13/89** (2013.01); **G01S 13/955** (2013.01); **Y02A 90/10** (2018.01)

Citation (search report)

- [X1] US 6137437 A 20001024 - LIN CHUNG-CHI [NL], et al
- [A] CN 101672914 A 20100317 - XI AN INST OF SPACE RADIO TECH
- [A] CN 103675788 A 20140326 - CT SPACE SCI & APPLIED RES CAS
- [A] WANG YUE-XIA ET AL: "Novel Scanning Strategy for Future Spaceborne Doppler Weather Radar With Application to Tropical Cyclones", IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, IEEE, USA, vol. 10, no. 6, 1 June 2017 (2017-06-01), pages 2685 - 2693, XP011656871, ISSN: 1939-1404, [retrieved on 20170719], DOI: 10.1109/JSTARS.2017.2672826
- See also references of WO 2021202797A1

Designated contracting state (EPC)

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