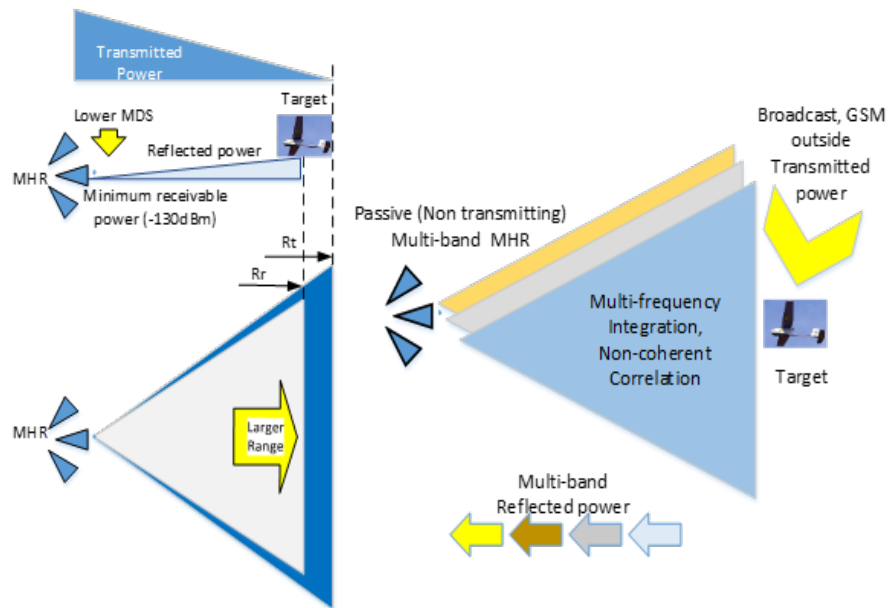




PASSIVE RADAR FOR SMALL UAS



Technical Description:

Proposed new concept of passive monopulse RF sensor system provide **entire sky all-weather momentary** awareness and targeting capability.

- Monopulse **multi-beam** method provides simultaneous **high-accuracy ratio measurement** for **360°** by azimuth and elevation;
- Array of angular shifted directional antennas is not phase dependent and can be **multi-band** and **multi-function**;
- Directional antennas may be installed **closely** or **loosely distributed** over the perimeter of the carrier platform or between separate robotic carriers in swarm;
- Receiving 2-4 orders more signals than regular scanning systems provides 2-3 orders **longer passive radar range**;
- Directional antennas can be close positioned or distributed in **small size** aperture and installed on small aircraft or **UAS**.

REFERENCES

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- [3] P. Molchanov, O. Asmolova. "Sense and avoid radar for micro-nano robots (Invited Paper)," Security+Defense Conference, Amsterdam, September 24, 2014, (<http://spie.org/Publications/Proceedings/Paper/10.1117/12.2071366>).