DATABASE SEARCH -- LOOP ANTENNAS
Mark Connelly - WA1ION
21 NOV 1984

By using the DIALOG data retrieval service, a list of recent technical and general articles pertaining to loop antennas has been acquired. As this is a subject of considerable interest to those who DX below 3 MHz, this list of articles is presented herein.

1314212 B84047670
THE EFFECT OF A SCREEN ON THE PERFORMANCE OF TRAVELLING-WAVE LOOP ANTENNAS
KONTOROVICH, M.I.; NOVIKOV, YU.N.
RADIOTEKH. AND ELEKTRON. (USSR) VOL.28, NO.9 1708-13
SEPT. 1983 CODEN: RAELA4 ISSN: 0033-8494
Trans in: RADIO ENG. AND ELECTRON. PHYS. (USA) VOL.28,
NO.9 26-31 SEPT. 1983 CODEN: RENPAL ISSN: 0033-7889
U.   S.   Copyright   Clearance   Center   Code
0033-7889/83/0009-002657.50/0
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(5 Refs)
THE EFFECT OF A SCREEN IS INVESTIGATED BY SOLVING THE MODEL DIFFRACTION PROBLEM OF EXCITATION OF A CONDUCTING DISC BY A TRAVELLING-WAVE CURRENT RING. INTEGRAL EQUATIONS FOR PROJECTIONS OF THE SURFACE CURRENT ARE DERIVED AND SOLVED NUMERICALLY. THE COMPUTATION USES AN ITERATIVE ALGORITHM, BASED ON THE METHOD OF MINIMUM DISCREPANCIES. COMPUTED SURFACE CURRENT AND DIRECTIVE PROPERTIES OF THE ANTENNA ARE GIVEN AS FUNCTIONS OF DISC DIMENSIONS.

1301471 B84044593
EVALUATE EMI REDUCTION SCHEMES WITH SHIELDED-LOOP ANTENNAS
ROLESON, S.
HEWLETT-PACKARD CO., SAN DIEGO, CA, USA
EDN (USA) VOL.29, NO.10 203-7 17 MAY 1984 CODEN
EDNSBH ISSN: 0012-7515
Treatment: PRACTICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(4 Refs)
REDUCING RFI AND MAGNETIC INTERFERENCE FROM SOURCES SUCH AS SWITCHING POWER SUPPLIES, HIGH-FREQUENCY CLOCKS AND OSCILLATORS REQUIRES CAREFUL CIRCUIT LAYOUT AND EFFECTIVE SHIELDING. FOR EVALUATING THE EFFECTIVENESS OF THESE SCHEMES AND FOR CHARACTERISING ANY MAGNETIC FIELD'S MAGNITUDE AND DIRECTION IN GENERAL, SMALL SHIELDED-LOOP ANTENNAS SERVE AS ACCURATE DIRECTIONAL MEASUREMENT TOOLS. BECAUSE OF THEIR SMALL SIZE AND ABILITY TO RESPOND ONLY TO THE MAGNETIC COMPONENT OF RADIATED FIELDS, THE ANTENNAS YIELD HIGH RESOLUTION AND ACCURACY AS EMI/RFI PROBES. THE TECHNIQUE IS EXPLAINED AND DISCUSSED.

1184974 B84006009
IMPEDANCE CHARACTERISTICS OF FAT HALF-LOOP ANTENNAS ABOVE A GROUNDPLANE
SCHROEDER, K.G.
Sponsor: IEEE
1983 INTERNATIONAL SYMPOSIUM DIGEST. ANTENNAS AND PROPAGATION 269-72 VOL.1 1983
23-26 MAY 1983 HOUSTON, TX, USA
Publ: IEEE, NEW YORK, USA
2 VOL. 725 pp.
U.   S.   Copyright   Clearance   Center   Code
CH1860-6/83/0000-0269101.00
Treatment: THEORETICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(1 Refs)
SEVERAL FAT HALF-LOOP CONFIGURATIONS ARE INVESTIGATED WITH LOOP FATNESS-TO-CIRCUMFERENCE RATIOS OF UP TO 1:6, I.E. MUCH ABOVE THOSE REPORTED IN THE LITERATURE. IT IS FOUND THAT THE INPUT (AND, HENCE, RADIATION) RESISTANCE IS CONSIDERABLY HIGHER THAN EXPECTED FROM FULL LOOP THEORY, AND THE REACTANCE IS VERY LOW, WHICH SHOULD MAKE EFFICIENT BROADBAND MATCHING RELATIVELY EASY.

1170670 B84001977
LOOP ANTENNAS FOR DIRECTIVE TRANSMISSION INTO A MATERIAL HALF SPACE
SMITH, G.S.; AN, L.N.
SCHOOL OF ELECTRICAL ENGNG., GEORGIA INST. OF TECHNOL., ATLANTA, GA, USA
RADIO SCI. (USA) VOL.18, NO.5 664-74 SEPT.-OCT. 1983
CODEN: RASCAD ISSN: 0048-6604
U.   S.   Copyright   Clearance   Center   Code
0048-6604/83/0910-0966508.00
Treatment: APPLIC; THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(5 Refs)
THE HORIZONTAL CIRCULAR LOOP AND THE COAXIAL ARRAY OF LOOPS ABOVE A MATERIAL HALF SPACE ARE STUDIED AS ANTENNAS FOR DIRECTIVE TRANSMISSION INTO THE HALF SPACE IN A PRACTICAL SITUATION THE LOOPS MIGHT BE LOCATED IN AIR WITH THE DIRECTIVE TRANSMISSION INTO THE EARTH. IN DETERMINING THE OPTIMUM GEOMETRY FOR THE SINGLE LOOP AND THE ARRAY, THE FAR-ZONE FIELD PATTERNS AND DIRECTIVITIES OF THESE ANTENNAS WHEN PLACED OVER LOSSLESS DIELECTRICS ARE CONSIDERED.

1119293 B83050219
LOOP ANTENNAS FOR VLF-LF. V
BURHANS, R.W.
RADIO-ELECTRON. (USA) VOL.54, NO.6 83-7 JUNE 1983
CODEN: RAECAB ISSN: 0033-7862
Treatment: GENERAL REVIEW
Document Type: JOURNAL PAPER
Languages: ENGLISH
FOR PT.IV SEE IBID., VOL.54, NO.6, P.83 (1983) A DISCUSSION OF LOW-FREQUENCY RECEPTION WOULD NOT BE COMPLETE WITHOUT MENTIONING LOOP ANTENNAS-THE SUBJECT OF THIS ARTICLE.

1089502 A83070089; B83040993
STANDARD MAGNETIC FIELD RADIATED BY TWO LOOP ANTENNAS IN A COPLANE
NAKANE, H.; OBUKI, S.; OMORI, S.; YOKOSHIMA, I.
DEPT. OF ELECTRICAL ENGNG., SCI. UNIV. OF TOKYO, TOKYO JAPAN;
Sponsor: NBS; IEEE; URSI
IEEE TRANS. INSTRUM. AND MEAS. (USA) VOL.IM-32, NO.1
238-40 1982 CODEN: IEIMAO ISSN: 0018-9456
CPEM 82 DIGEST. CONFERENCE ON PRECISION ELECTROMAGNETIC MEASUREMENTS 28 JUNE-1 JULY 1982 BOULDER, CO, USA
U.   S.   Copyright   Clearance   Center   Code
0018-9456/83/0300-0238$01.00
Treatment: APPLIC; PRACTICAL; EXPERIMENTAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(6 Refs)
A RF MAGNETIC FIELD GENERATOR CONSISTING OF TWO RADIATING LOOP ANTENNAS PLACED IN A COPLANE IS PROPOSED, WHICH HAS RELATIVELY UNIFORM FIELD DISTRIBUTION AND PERMITS EASY ALIGNMENT OF THE ANTENNAS. A STANDARD FIELD GENERATOR BASED ON THIS IDEA, HAVING FLAT FREQUENCY CHARACTERISTICS UP TO 30 MHZ, HAS BEEN DESIGNED AND TESTED. IT WAS CONFIRMED THAT MISALIGNMENT OF THE RECEIVING ANTENNA UP TO 2 CM, FOR A DISTANCE OF 30 CM BETWEEN THE RADIATING LOOP AND THE TEST POINT, CAUSES AN ERROR OF ONLY +OR- 0.1 DB. IN TERMS OF FREQUENCY CHARACTERISTICS, THE FIELD STRENGTH AT THE TEST POINT WAS FLAT WITHIN +OR- 0.15 DB FROM 1 TO 30 MHZ.

1010287 B83013828
A NOTE FOR REACTIVELY LOADED LOOP ANTENNAS WITH REFLECTORS FOR CIRCULAR POLARIZATION
OKUBO, S.; KOJIMA, T.; TOKUMARU, S.
FACULTY OF SCI. AND ENGNG., KEIO UNIV., YOKOHAMA, JAPAN
TRANS. INST. ELECTRON. ENG. AND COMMUN. ENG. JPN. SECT. E (JAPAN)
VOL.E65, NO.10 597 OCT. 1982 CODEN: TIEEDU ISSN: 0387-236X
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
SUMMARY FORM ONLY GIVEN, AS FOLLOWS. A REACTIVELY LOADED LOOP ANTENNA WITH A REFLECTOR GENERATES CIRCULARLY POLARIZED FIELD. IN THIS LETTER, A STRUCTURE GIVING GOOD AXIAL RATIO IS OBTAINED BY VARYING THE LOADING REACTANCE AND LOADING POINT ALONG LOOP CONDUCTOR. THE RELATION OF THE LOADING POINT AND AXIAL RATIO IS ALSO SHOWED BY THE COMPUTED RESULT.

580780 B80044875
ON POLYGONAL LOOP ANTENNAS
TSUKIJI, T.; TOU, S.
DEPT. OF ELECTRONICS ENGNG., FUKUOKA UNIV., FUKUOKA, JAPAN
IEEE TRANS. ANTENNAS AND PROPAG. (USA) VOL.AP-28, NO.4
571-5 JULY 1980 CODEN: IETPAK
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(14 Refs)
SEVERAL TYPES OF POLYGONAL LOOP ANTENNAS ARE INVESTIGATED AND THEIR FUNDAMENTAL PROPERTIES DEMONSTRATED. FOR EXAMPLE, A WIDE RANGE OF INPUT IMPEDANCES CAN BE OBTAINED, DEPENDING ON THE SHAPE OF THE LOOP. SOME LOOP CONFIGURATIONS EXHIBIT A MORE BROAD-BAND PROPERTY THAN OTHERS. THIS PROPERTY IS EXPLAINED BY EXAMINING THE CURRENT DISTRIBUTIONS ON THE LOOPS OBTAINED BY THE MOMENT METHOD.

580777 B80044872
ON TWO PARALLEL LOOP ANTENNAS
ABUL-KASSEM, A.S.; CHANG, D.C.
DEPT. OF ELECTRICAL ENGNG., UNIV. OF COLORADO, BOULDER, CO, USA
IEEE TRANS. ANTENNAS AND PROPAG. (USA) VOL.AP-28, NO.4
491-6 JULY 1980 CODEN: IETPAK
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(13 Refs)
THE PROBLEM CONCERNING THE MUTUAL COUPLING OF TWO PARALLEL THIN-WIRE LOOP ANTENNAS IN AIR IS ANALYZED BY FORMULATING TWO COUPLED INTEGRAL EQUATIONS FOR THE CURRENTS ON THE LOOPS WHICH ARE THEN SOLVED BY A TYPICAL FOURIER SERIES EXPANSION METHOD. MOMENT FUNCTIONS ASSOCIATED WITH THE MUTUAL COUPLING OF THE TWO LOOPS ARE COMPUTED USING A DOUBLE GAUSSIAN QUADRATURE SCHEME. IT IS SHOWN THAT THE RESULTS AS OBTAINED FROM THE INTEGRAL EQUATIONS AGREE WITH THE CONVENTIONAL MAGNETIC DIPOLE APPROACH PROVIDED THAT THE LOOPS ARE SUFFICIENTLY SMALL. ANY WHEN THE SECOND LOOP IS A PERFECT IMAGE OF THE FIRST FOR LARGER LOOPS HOWEVER THE MAGNETIC DIPOLE APPROACH CANNOT ADEQUATELY TAKE INTO ACCOUNT THE PROXIMITY EFFECT, SINCE THE CURRENT IS ASSUMED TO BE UNIFORM. INPUT CONDUCTANCE OF EACH LOOP IS OBTAINED FOR A WIDE RANGE OF SEPARATIONS AS WELL AS THE STAGGERING ANGLES BETWEEN THE TWO LOOPS. AS SPECIAL CASES, RESULTS OF A COLLINEAR AND A COPLANAR ARE RECOVERED.

474807 B80010615
BEST POSSIBLE THERMAL NOISE SENSITIVITY OF ELECTRICALLY SMALL LOOP ANTENNAS
DISHAL, M.
ITT AVIONICS, NUTLEY, NJ, USA
Sponsor: IEEE
1979 INTERNATIONAL SYMPOSIUM DIGEST. ANTENNAS AND PROPAGATION 684-7 1979
Part II 18-22 JUNE 1979 SEATTLE, WA, USA
Publ: IEEE, NEW YORK, USA
27+455 pp.
Treatment: PRACTICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
DESIGN GRAPHS ARE USED TO OBTAIN THE MINIMUM PHYSICAL SIZE OF AN ELECTRICALLY SMALL RECEIVING LOOP ANTENNA FOR A SPECIFIED THERMAL NOISE SENSITIVITY AND ALSO TO OBTAIN THE BEST THERMAL NOISE SENSITIVITY FOR A LOOP ANTENNA WITHIN A SPECIFIED PHYSICAL SPACE.

456176 B80005654
DESIGN OF TUNED COAXIAL PARASITIC LOOP ANTENNAS
STRUCKMAN, K.A.
SANDERS ASSOCIATES INC., NASHUA, NH, USA
Sponsor: IEEE
1979 INTERNATIONAL SYMPOSIUM DIGEST. ANTENNAS AND PROPAGATION 400-3 1979
Part II 18-22 JUNE 1979 SEATTLE, WA, USA
Publ: IEEE, NEW YORK, USA
27+455 pp.
Treatment: THEORETICAL; EXPERIMENTAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(4 Refs)
MANY ELECTRICALLY SMALL ANTENNA REQUIREMENTS CAN BE SATISFIED WITH A PAIR OF SMALL LOOPS. ONE OPERATES AS A TRANSFORMER PRIMARY THE OTHER OPERATES AS THE TUNED SECONDARY. THIS ANTENNA COMBINATION EXHIBITS HIGH QS (COMMENSURATE WITH THE SMALL ELECTRICAL SIZE), IS EASY TO FABRICATE AND EASY TO TUNE. THIS PAPER PROVIDES SOME PRACTICAL DESIGN CHARACTERISTICS THAT WERE THEORETICALLY CALCULATED AND AT SPOT CONDITIONS EXPERIMENTALLY VERIFIED.

458175 B80005653
IMPEDANCE CHARACTERISTICS OF POLYGONAL LOOP ANTENNAS
TSUKIJI, T.; TOU, S.
FACULTY OF ENGNG., FUKUOKA UNIV., FUKUOKA, JAPAN
Sponsor: IEEE
1979 INTERNATIONAL SYMPOSIUM DIGEST. ANTENNAS AND PROPAGATION 396-9 1979
Part II 18-22 JUNE 1979 SEATTLE, WA, USA
Publ: IEEE, NEW YORK, USA
27+455 pp.

1010281 883013822
THEORETICAL ANALYSIS AND SOME EXPERIMENTS ON 2L-TYPE TWIN LOOP ANTENNAS BY THE MOMENT METHOD
SATO, G.; KAWAKAMI, H.; SATO, M.; ISHII, Y.
SOPHIA UNIV., TOKYO, JAPAN
J. INST. TELEV. ENG. JPN. (JAPAN)   VOL.36, NO.2   132-7
FEB. 1982 CODEN: JITJA7 ISSN: 0386-6831
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: JAPANESE
(13 Refs)
TWIN LOOP ANTENNAS ARE THE MOST COMMONLY USED UHF BAND ANTENNAS IN JAPAN. THE USE OF THE MOMENT METHOD FOR ANALYSIS OF ANTENNAS ESPECIALLY TWIN LOOP ANTENNAS IS EXPLAINED. THEORETICAL ANALYSIS AND DATA ON TWIN LOOP ANTENNAS USING AN INFINITE REFLECTOR PLATE OR A WIRE SCREEN REFLECTOR PLATE ARE SHOWN. DATA ON TWIN LOOP ANTENNA MATCHING CONDITIONS INCLUDING DEPENDENCE OF INPUT IMPEDANCE ON THE LENGTH OF THE PARALLEL LINE; IMPEDANCE TRAJECTORY ON CHANGING JUMPER, LINE DIAMETER, PARALLEL LINE WIDTH AND REFLECTOR SEPARATION; VERTICAL RADIATION PATTERN OF 2-L TYPE TWIN LOOP ANTENNA AND THEIR INPUT IMPEDANCE CHARACTERISTICS ARE SHOWN.

977561 883002670
REACTIVELY LOADED LOOP ANTENNAS WITH REFLECTORS FOR CIRCULAR POLARIZATION
OKUBO, S.; TOKUMARU, S.
FACULTY OF SCI. AND ENGNG., KEIO UNIV., YOKOHAMA, JAPAN
TRANS. INST. ELECTRON. AND COMMUN. ENG. JPN. SECT. E (JAPAN)
VOL.E65, NO.8   507   AUG. 1982   CODEN: TIEEDU
Treatment: THEORETICAL; EXPERIMENTAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
SUMMARY FORM ONLY GIVEN, AS FOLLOWS. PROPOSES A REACTIVELY LOADED LOOP ANTENNA WITH A REFLECTOR FOR GENERATING CIRCULARLY POLARIZED FIELD. THE LOADING REACTANCE IS SITUATED AT THE POSITION WITH AN ANGLE OF 45 DEGREES FROM THE FEED POINT OF THE LOOP CONDUCTOR. A STRUCTURE GIVING GOOD AXIAL RATIO IS OBTAINED THROUGH SOME COMPUTATIONS BY VARYING THE LOADING REACTANCE AND THE ANTENNA SIZE AT THE SAME TIME. INPUT IMPEDANCE, CURRENT DISTRIBUTION AND RADIATION PATTERNS ARE CALCULATED TO SHOW GENERAL CHARACTERISTICS OF THIS ANTENNA. THESE COMPUTED RESULTS ARE PROVIDED BY MEASURED VALUES.

964239 A82112941, 882061661
STANDARD MAGNETIC FIELD RADIATED BY TWO LOOP ANTENNAS IN A COPLANE
NAKANE, H.; OBUKI, S.; OMORI, S.; YOKOSHIMA, I.
SCI. UNIV. OF TOKYO, TOKYO, JAPAN
ALSPACH, W.J. (Editors)
Sponsor: NBS; IEEE; URSI
CPEM 82 DIGEST. CONFERENCE ON PRECISION ELECTROMAGNETIC MEASUREMENTS   P/5-7   1982
28 JUNE-1 JULY 1982   BOULDER, CO, USA
Publ: IEEE,   NEW YORK, USA
XIV+292 pp.
Treatment: PRACTICAL; EXPERIMENTAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(5 Refs)
FOR THE SENSITIVITY TEST OF FIELD INTENSITY METERS, A RF MAGNETIC FIELD GENERATOR WITH TWO RADIATING LOOP ANTENNAS PLACED IN A COPLANE HAS BEEN DEVELOPED. A FIELD GENERATOR HAVING UNIFORM DISTRIBUTION AND UNIFORM FREQUENCY CHARACTERISTICS UP TO 30 MHZ HAS BEEN DESIGNED AND TESTED. THE UNIFORM MAGNETIC FIELD HAS BEEN OBTAINED WITHIN +OR- 0.1 DB FOR THE REGION OF +OR- 2 CM AROUND THE TEST POINT OVER FREQUENCY FROM 10 TO 30 MHZ.

942422 882053862
ACTIVE LOOP ANTENNAS
HOFP, J.; LINDENMEIER, H.
UNIV. OF THE BUNDESWEHR, MUNICH, GERMANY
Sponsor: IEEE
1982 APS INTERNATIONAL SYMPOSIUM DIGEST. ANTENNAS AND PROPAGATION   560-3 VOL.2   1982
24-28 MAY 1982   ALBUQUERQUE, NM, USA
Publ: IEEE,   NEW YORK, USA
2 VOL. 734 pp.
Treatment: PRACTICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(3 Refs)
OPTIMUM COUPLING BETWEEN THE LOOP AND THE ACTIVE CIRCUIT PROVIDES MAXIMUM SENSITIVITY AS WELL AS HIGH LINEARITY IN A BROAD FREQUENCY RANGE.

942353 882053793
MODELLING HF LOOP ANTENNAS ON THE CHSS-2 'SEA KING' HELICOPTER
BAHSOUN, Y.A.; KUBINA, S.J.; TRUEMAN, C.W
CONCORDIA UNIV., MONTREAL, CANADA
Sponsor: IEEE
1982 APS INTERNATIONAL SYMPOSIUM DIGEST ANTENNAS AND PROPAGATION   402-44 VOL.2   1982
24-28 MAY 1982   ALBUQUERQUE, NM, USA
Publ: IEEE,   NEW YORK, USA
2 VOL. 734 pp
Treatment: THEORETICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(4 Refs)
VARIOUS WIRE ANTENNAS HAVE BEEN USED FOR HF COMMUNICATIONS ON THE CHSS-2 'SEA KING' HELICOPTER, BUT ALL SUFFER FROM POOR OVERALL SYSTEM EFFICIENCY BECAUSE AT LOWER FREQUENCIES THE IMPEDANCE OF THE WIRE ANTENNAS RESULTS IN POOR POWER TRANSFER EFFICIENCY IN THE ANTENNA COUPLER. MUCH HIGHER EFFICIENCIES ARE OBTAINED FOR LOOP ANTENNAS, AND SO POTENTIALLY A MUCH HIGHER SYSTEM EFFICIENCY COULD BE ACHIEVED. IN THIS PAPER RADIATION PATTERNS FOR THREE LOOP ANTENNA LOCATIONS ARE EXAMINED BY COMPUTER MODELLING.

924029 882017349
HF LOOP ANTENNAS FOR AIR, LAND AND SEA MOBILES
BURBERRY, R.A
BRITISH AEROSPACE DYNAMICS GROUP, BRISTOL, ENGLAND
SECOND CONFERENCE ON HF COMMUNICATION SYSTEMS AND TECHNIQUES   18-22   1982
15-17 FEB. 1982   LONDON, ENGLAND
Publ: IEE,   LONDON, ENGLAND
VII+144 pp.
Treatment: PRACTICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(1 Refs)
THE ANTENNA DESCRIBED WAS ORIGINALLY CONCEIVED FOR HELICOPTERS AND AIRCRAFT ENGAGED IN LOW LEVEL, NAP-OF-THE-EARTH (NOE) OPERATIONS, BUT ITS APPLICATION TO LAND AND MARINE VEHICLES IS ALSO DESCRIBED. THE US ARMY HAVE RECENTLY DECIDED TO EQUIP ALL ITS HELICOPTERS WITH LOOP ANTENNAS FOR WHAT IT DESCRIBES AS NVIS (NEAR VERTICAL INCIDENCE SKY WAVE) COMMUNICATIONS THE ANTENNA CAN PROVIDE SATISFACTORY PERFORMANCE IN BOTH THE GROUND WAVE AND THE HIGH ANGLE MODES.

943692 882021224
MEASUREMENT AND CALCULATION OF THE SHORT-CIRCUIT SREMP RESPONSE OF VERTICAL OSCILLATING HELICAL ANTENNAS AND OSCILLATING LOOP ANTENNAS
BUSHELL, M.; MANRIQUEZ, R.; MERKEL, G.; SCHARF, W.D
US ARMY ELECTRONICS RES. AND DEV. COMMAND, HARRY DIAMOND LABS., ADELPHI, MD, USA
IEEE TRANS. NUCL. SCI. (USA)   VOL.NS-28, NO.6   4495-500
DEC. 1991   CODEN: IETNAE
IEEE ANNUAL CONFERENCE ON NUCLEAR AND SPACE RADIATION EFFECTS   21-24 JULY 1981   SEATTLE, WA, USA
Treatment: THEORETICAL; EXPERIMENTAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(8 Refs)
GENERALIZES THE AUTHORS' EXPERIMENTAL AND THEORETICAL APPROACHES DEVELOPED FOR LINEAR ANTENNAS (M BUSHELL ET AL., 1990) TO OTHER TYPES OF ANTENNAS: (1) LOOP ANTENNAS AND (2) HELICAL ANTENNAS. THEY HAVE MEASURED THE RESPONSE OF (1) A HELICAL ANTENNA, AND (2) TWO DIFFERENT RECTANGULAR LOOP ANTENNAS, MOUNTED INSIDE THE MARK I SOURCE-REGION EMP SIMULATOR-A 3-M-WIDE AIR TRANSMISSION LINE PROPAGATING AN EMP-LEVEL PULSE. THEY HAVE BEEN QUITE SUCCESSFUL IN DEVELOPING EQUIVALENT CIRCUITS THAT PREDICT THEIR EXPERIMENTAL ANTENNA RESPONSE MEASUREMENTS TO SREMP-LIKE ENVIRONMENTS AND COMPARE WELL WITH MORE COMPLICATED FINITE DIFFERENCE CODES OF COURSE, THEIR EQUIVALENT CIRCUITS, BASED ON FOSTER CANONICAL FORMS, ARE MODAL, AND APPLY ONLY TO ANTENNAS IN SPATIALLY HOMOGENEOUS MEDIA WITH TIME-VARYING CONDUCTIVITY.

Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(8 Refs)
THE MARKOV THEORY OF NONLINEAR FILTERING IN THE GAUSSIAN APPROXIMATION IS USED TO SOLVE THE PROBLEM OF THE QUASI-OPTIMUM PROCESSING OF CW RADIO SIGNALS WHEN THE ANTENNA SYSTEM OF A RADIO DIRECTION FINDER IS IN THE FORM OF AN ANTENNA ARRAY OF ARBITRARY CONFIGURATION.

746239 881039723, C81029037
COUPLING BETWEEN SUBMERGED, VERTICALLY ALIGNED LOOP ANTENNAS
LAYMAN, G.E.
NAVAL RES. LAB., WASHINGTON, DC, USA
Sponsor: IEEE
IEEE SOUTHEASTCON 1981 CONFERENCE PROCEEDINGS   868-72   1981
5-8 APRIL 1981   HUNTSVILLE, AL, USA
Publ: IEEE,   NEW YORK, USA
913 pp.
Treatment: APPLIC; THEORETICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(7 Refs)
PRESENTS THE DERIVATION OF A CLOSED FORM SOLUTION FOR THE COUPLING BETWEEN VERTICALLY ALIGNED, COPLANAR LOOP ANTENNAS LOCATED WITHIN A CONDUCTIVE HALF SPACE. THE FORMAL SOLUTION TO THIS PROBLEM IS EXPRESSED AS A COMPLEX INTEGRAL EQUATION FOR WHICH THERE IS NO KNOWN SOLUTION. PREVIOUS APPROXIMATIONS HAVE BEEN CONSTRAINED TO SPECIAL CASES (E.G., LARGE DISTANCES BETWEEN ANTENNA, NEITHER ANTENNA NEAR THE SURFACE). THE AUTHOR DEVELOPS APPROXIMATIONS WITHIN THE INTEGRAND THAT ALLOWS AN ACCURATE SOLUTION TO BE FOUND FOR ANY COMBINATION OF ANTENNA DEPTHS, INCLUDING ONE ANTENNA LOCATED AT THE SURFACE.

739709 881041386
CHARACTERISTICS OF CIRCULAR LOOP ANTENNAS ABOVE A LOSSLESS GROUND PLANE
SHOAMANESH, A.; SHAFAI, L.
MPB TECHNOL. INC., QUEBEC, CANADA
IEEE TRANS. ANTENNAS AND PROPAG. (USA)   VOL.AP-29, NO.3   528-9   MAY 1981   CODEN: IETPAK
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(6 Refs)
THE CIRCUIT AND RADIATION CHARACTERISTICS OF A CIRCULAR LOOP ANTENNA ABOVE A LOSSLESS GROUND PLANE ARE STUDIED. IT IS SHOWN THAT THE GAIN OF THIS ANTENNA IS HIGHER THAN THAT OF A HALF-WAVE DIPOLE ABOVE THE GROUND PLANE. A GAIN AS HIGH AS 10 DB IS OBTAINABLE WITH THIS SIMPLE GEOMETRY.

648844 881011906
RADIATION EFFICIENCY OF SUPERCONDUCTOR LOOP ANTENNAS
KRIVOSHEEV, E.F.; PAVLYUK, V.A.; TARASOV, A.V.
RADIOTEKHNIKA, KHARKOV (USSR)   NO.48   116-20   1979
CODEN: RTKHAJ
Treatment: THEORETICAL; EXPERIMENTAL
Document Type: JOURNAL PAPER
Languages: RUSSIAN
(5 Refs)
THEORETICAL AND EXPERIMENTAL INVESTIGATIONS ARE CARRIED OUT TO DETERMINE THE RADIATION EFFICIENCY AND QUALITY OF SMALL-SIZE SUPERCONDUCTOR LOOP ANTENNAS, TAKING INTO ACCOUNT THE RELATIVE SIZE, FREQUENCY RANGE, AND LOSSES IN THE STRUCTURAL MEMBERS AND INSULATING MATERIALS.

634420 881007292
DIRECTIVE PROPERTIES OF ECCENTRICALLY INSULATED CIRCULAR-LOOP ANTENNAS
AN, L.N.; SMITH, G.S.
GEORGIA INST. OF TECHNOL., ATLANTA, GA, USA
Sponsor: IEEE
1980 INTERNATIONAL SYMPOSIUM DIGEST. ANTENNAS AND PROPAGATION   713-16   1980
Part II   2-6 JUNE 1980   QUEBEC, CANADA
Publ: IEEE,   NEW YORK, USA
XLI+396 pp.
Treatment: THEORETICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(4 Refs)
THE ANALYSIS OF THE CIRCULAR-LOOP ANTENNA WITH A CONCENTRIC SPHERICAL INSULATION IMMERSED IN A MATERIAL MEDIUM IS EXTENDED TO TREAT LOOPS THAT ARE ECCENTRICALLY LOCATED WITHIN THE SPHERICAL INSULATION. IN PARTICULAR, THE EFFECT OF THE ECCENTRIC INSULATION ON THE DIRECTIVE PROPERTIES OF THE ANTENNA IS EXAMINED.

581394 880046633
A SIMPLE ADCOCK-DIRECTION-FINDING SYSTEM BY MEANS OF KEYING CROSSED LOOP ANTENNAS, NOT AFFECTED BY POLARISATION
ECKART, G.
ARCH. ELEKTRON. AND UEBERTRAGUNGSTECH. (GERMANY)   VOL.34, NO.7-8   339   JULY-AUG. 1980   CODEN: AEUTAH
Treatment: NEW DEVELOPMENTS
Document Type: JOURNAL PAPER
Languages: GERMAN
A DIRECTION FINDING SYSTEM IS GIVEN BASED ON THE ADCOCK PRINCIPLE BY USE OF KEYING CROSSED LOOP ANTENNAS.

828103 882015780
LOOP ANTENNAS
ZIMA, V.
CSAV. PRAHA. CZECHOSLOVAKIA
SLABOPROUDY OBZ. (CZECHOSLOVAKIA)   VOL.42, NO.11   532-6
NOV. 1981 CODEN: SLOZAE
Treatment: THEORETICAL: EXPERIMENTAL
Document Type: JOURNAL PAPER
Languages: CZECH
(9 Refs)
THE FACTORS OF ENERGY COUPLING EXPRESSING THE OPTIMUM REMOVAL OF ENERGY FROM AN AC MAGNETIC FIELD BY A LOOP ANTENNA ARE INTRODUCED. THE DEEP-ROOTED VIEW IS DISAPPROVED THAT THE PROPERTIES OF A LOOP ANTENNA DEPEND PRINCIPALLY ON THE NUMBER OF WINDING TURNS. A METHOD IS DESCRIBED FOR DETERMINING EXPERIMENTALLY THE BASIC PROPERTIES OF AIR AND FERRITE CORED LOOP ANTENNAS. FINALLY FORMULAS ARE DERIVED FOR ESTABLISHING THE TRANSMISSION PROPERTIES OF A COMMUNICATION SYSTEM FEATURING IDENTICAL LOOP ANTENNAS ON THE TRANSMITTING AND RECEIVING SIDE SUITABLE FOR SHORT-HAUL LINKS WITH LOW RADIATED POWER.

828099 882015776
OPTIMUM DIRECTIVITY OF ELLIPTIC LOOP ANTENNAS
CHENG, D.K ; LIANG, C H.
DEPT. OF ELECTRICAL AND COMPUTER ENGNG., SYRACUSE UNIV., SYRACUSE, NY, USA
ELECTRON. LETT. (GB)   VOL.17, NO.20   736-8   1 OCT. 1981
CODEN: ELLEAK
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(5 Refs)
THE DIRECTIVITY OF AN ELLIPTIC LOOP ANTENNA HAVING A GIVEN PERIMETER AND MADE OF A CONDUCTING WIRE OF A GIVEN RADIUS IS MAXIMISED WITH RESPECT TO THE MINOR-AXIS/MAJOR-AXIS RATIO, XI. IT IS FOUND THAT A CIRCULAR LOOP DOES NOT YIELD A MAXIMUM DIRECTIVITY AND THAT THE VALUE OF XI AT WHICH MAXIMUM -DIRECTIVITY OCCURS DEPENDS ON THE PERIMETER.

812361 882010548
CROSS-SPECTRAL DENSITIES OF ARRAY ELEMENTS FOR FOLDED DIPOLE AND LOOP ANTENNAS
MACLEAN, T.S.M.; SAINI, S.P.S ; BARBOZA, Z
DEPT OF ELECTRONICS AND ELECTRICAL ENGNG., UNIV. OF BIRMINGHAM, BIRMINGHAM, ENGLAND
ELECTRON. LETT. (GB)   VOL.17, NO.20   749-51   1 OCT. 1981
CODEN: ELLEAK
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(5 Refs)
WHEN A LOOP OR FOLDED DIPOLE ANTENNA IS PLACED IN A NOISE FIELD THE RESULTANT MEAN-SQUARE NOISE CURRENT IS A FUNCTION OF THE CROSS-SPECTRAL DENSITIES BETWEEN THE DIFFERENT SEGMENTS OF THE ANTENNA. EARLIER WORK ON THE EVALUATION OF CROSS-SPECTRAL DENSITIES BETWEEN THE COLLINEAR SEGMENTS OF A DIPOLE PLACED IN AN ISOTROPIC NOISE FIELD IS HERE EXTENDED TO INCLUDE THE PARALLEL AND ORTHOGONAL SEGMENTS OF RECTANGULAR LOOP AND FOLDED DIPOLE ANTENNAS.

787857 882002184
A NUMERICAL STUDY ON REALIZABLE BROAD-BAND AND EQUIVALENT ADMITTANCES FOR DIPOLE AND LOOP ANTENNAS
STREABLE, G.V.; PEARSON, W.
DEPT. OF ELECTRICAL ENGNG., UNIV. OF KENTUCKY, LEXINGTON, KY, USA
IEEE TRANS. ANTENNAS AND PROPAG (USA)   VOL.AP-29, NO.5
707-17   SEPT. 1981 CODEN: IETPAK
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(15 Refs)
SOME REALIZABLE BROAD-BAND EQUIVALENT CIRCUITS FOR STRAIGHT-WIRE AND WIRE-LOOP STRUCTURES ARE DEVELOPED. THE REALIZABILITY OF THE CIRCUITS IS EXPLORED IN TERMS OF THE POSITIVE-REAL (PR) FUNCTION PROPERTIES OF THE CIRCUIT ADMITTANCES. THE POSTULATE OF PR 'TERMINAL EIGENADMITTANCES' AS COUCHED BY PEARSON AND WILTON (SEE IBID., VOL.AP-29, NO.5, P.687-707, 1981) IS GENERALLY SUPPORTED IN THE NUMERICAL EXAMPLES, BUT A POTENTIAL COUNTEREXAMPLE-THAT OF THE QUARTER-DRIVEN WIRE-OCCURS AS WELL. A 'DOMINANT POLE-PAIR' APPROACH LEADS TO A SATISFACTORY APPROXIMATE SYNTHESIS FOR THE STRUCTURES STUDIED HERE. THE CONDUCT OF THIS APPROXIMATE SYNTHESIS IS DESCRIBED IN THE CONTEXT OF THE BOTT-DUFFIN SYNTHESIS PROCEDURE. THE CIRCUITS DEVELOPED ARE TESTED BY COMPARING THEIR COMPUTED TRANSIENT RESPONSE WITH THE RESPONSE OF ELECTRODYNAMIC MODELS FOR THE SAME STRUCTURES.

772263 881052173
OPTIMUM ESTIMATION OF THE ANGULAR COORDINATES OF AN AIRCRAFT BY MEANS OF MULTICHANNEL RADIO DIRECTION FINDING (NONLINEAR FILTERING METHOD)
BOGACHEV, A.S.
RADIOTEKHNIKA, MOSKVA (USSR)   VOL.35, NO.6   28-31 JUNE 1980 CODEN: RATEAO
Trans in: TELECOMMUN. AND RADIO ENG. PART 2 (USA)   VOL.35. NO.6   56-9 JUNE 1980 CODEN: TCREAG

Treatment: PRACTICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(5 Refs)
FOR THE TRIANGULAR LOOP ANTENNA AND RECTANGULAR ANTENNA, INPUT IMPEDANCE CHARACTERISTICS OF SEVERAL TYPES OF LOOP SHAPES ARE PRESENTED. AND SIMILAR IMPEDANCE CHARACTERISTICS WHICH ARE FOUND IN BOTH TYPES OF LOOP ANTENNAS ARE DISCUSSED

406276 879039811
SINGLE CHANNEL RADIO DIRECTION FINDING SYSTEM TYPE EP 1650 FOR THE 20 TO 1000 MHZ RANGE
ESPRESTER, R.; SCHLICHT, H.
TECH. MITT. AEG-TELEFUNKEN (GERMANY)   VOL.69, NO.3-4
149-52 1978 CODEN: TMATBO
Treatment: GENERAL,REVIEW
Document Type: JOURNAL PAPER
Languages: GERMAN
(3 Refs)
COMPARES MECHANICALLY ROTATING AND ELECTRICALLY STEERED DIRECTION FINDERS. ELECTRONIC ROTATION YIELDS AZIMUTH INFORMATION. USING ACTIVE ANTENNAE, SMALL VEHICLE MOUNTED ARRAYS CAN BE PRODUCED. THE NUMBER OF ANTENNAE USED CAN VARY BETWEEN FOUR AND FORTY-EIGHT. THE APPARATUS CAN DETECT ALL VHF AND UHF TRANSMISSIONS WITH AMPLITUDE OF FREQUENCY MODULATION A TECHNICAL SPECIFICATION IS PRESENTED.

288980 879001878
RADIO DIRECTION FINDING
GETHING, P.J.D.
1978
Publ: PETER PEREGRINUS,   STEVENAGE, ENGLAND
XIV+329 pp.   ISBN O 901223 71 9
Treatment: APPLIC: GENERAL,REVIEW
Document Type: BOOK
Languages: ENGLISH
(243 Refs)
THE BOOK IS WRITTEN AT POST-GRADUATE LEVEL AND SOME KNOWLEDGE OF THE BASIC FEATURES OF RADIO PROPAGATION AND ANTENNA-ARRAY THEORY IS ASSUMED. THE MAIN EMPHASIS IS ON DIRECTION FINDING IN THE HF BAND, BUT THE UNDERLYING PRINCIPLES ARE APPLICABLE TO THE FIELDS OF RADAR, SONAR AND RADIOASTRONOMY. VARIOUS SOLUTIONS TO THE PROBLEM OF RA,

RESOLUTION ARE DESCRIBED, WITH PARTICULAR EMPHASIS ON THE METHODS OF WAVEFRONT ANALYSIS; THE COLLECTION AND INTERPRETATION OF IONOSPHERIC DATA FOR THE PURPOSE OF MODE IDENTIFICATION ARE ALSO TREATED. THE TEXT IS ILLUSTRATED WITH COMPUTER PLOTS OF MODEL WAVE-FIELDS AND CONTAINS PREVIOUSLY UNPUBLISHED RESULTS ON THE LOCI OF CONSTANT PHASE AND AMPLITUDE, AND ON THE STATISTICAL PROPERTIES OF THE BEARING-ERROR DISTRIBUTIONS FOR SPECIFIED MODELS.

218358 478049174, 878031125
IMPROVING CHARACTERISTICS OF MEASURING LOOP ANTENNAS (FOR GEOPHYSICAL PROSPECTING)
NEDIKOV, N.F.; VORONOV, G.M.; KORABEL'SHCHIKOV, G.V
IZMER. TEKH. (USSR)   VOL.20, NO.5   75-7   MAY 1977
CODEN: IZTEAV
Trans in: MEAS. TECH. (USA)   VOL.20, NO.5   728-30   MAY 1977 CODEN: MSTCAL
Treatment: APPLIC
Document Type: JOURNAL PAPER
Languages: ENGLISH
(2 Refs)

152924 878006713
A STUDY ON LOG-PERIODIC LOOP ANTENNAS
ROJARAYANONT, B.; SEKIGUCHI, T
FACULTY OF ENGNG., TOKYO INST. OF TECHNOL., TOKYO, JAPAN
TRANS. INST. ELECTRON. AND COMMUN. ENG. JPN. SECT. E (JAPAN)
VOL.E60, NO.8   426-7   AUG. 1977
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(2 Refs)
A LOG-PERIODIC DIPOLE ANTENNA (LPDA) WHOSE ELEMENTS ARE ALTERNATIVELY EXCITED WITH A TRANSMISSION LINE BEHAVES FREQUENCY INDEPENDENTLY WITHIN THE DESIGNED BANDWIDTH. IN THIS PAPER, AN INVESTIGATION OF CHARACTERISTICS SUCH AS BANDWIDTH, DIRECTIVITY, RADIATION PATTERNS AND ETC., IS MADE FOR THE SAME STRUCTURE WITH CIRCULAR LOOPS IN PLACE OF DIPOLE ANTENNAS, AND FUNDAMENTAL DESIGN DATA ARE OBTAINED. THE ANALYSIS IS BASED ON CARREL'S THEORETICAL WORKS TOGETHER WITH THE THEORY OF MULTI-ELEMENT LOOP ANTENNA IN WHICH THE CURRENTS IN LOOP ELEMENTS ARE EXPANDED IN FOURIER SERIES.

152909 878006698
COMMENTS ON 'CALCULATION OF THE RADIATION RESISTANCE OF LOOP ANTENNAS WITH SINUSOIDAL CURRENT DISTRIBUTION'
ADACHI, S.
DEPT. OF ELECTRICAL ENGNG., TOHOKU UNIV., SENDAI, JAPAN
IEEE TRANS. ANTENNAS AND PROPAG. (USA)   VOL.AP25, NO.6
900-1 NOV. 1977 CODEN: IETPAK
Treatment: THEORETICAL
Document Type: JOURNAL PAPER

Languages: ENGLISH
(3 Refs)
RICHTSCHEID'S PAPER (SEE IBID., VOL.24, P.889-891, NOV. 1976) USED THE FAR ZONE POYNTING POWER TO DETERMINE THE RADIATION RESISTANCE. THE SAME CALCULATION HAS BEEN CARRIED OUT USING THE CONVENTIONAL INDUCED EMF METHOD (SEE SCI. REP. RITU B, VOL.9, P.9-10 (1957) AND P.70-103, SIMILARLY ELECTRONS AND COMMUNICATIONS IN

062421 877022050
PRECIPITATION STATIC NOISE AND SHIELDING IN AIRCRAFT ADF LOOP ANTENNAS
GRABOWIECKI, A.; KUNACHOWICZ, K.
INST. LOTNICTWA, WARSZAVA, POLAND
Sponsor: INTERNAT. UNION OF RADIO SCI.; INTERNAT. SPECIAL COMMITTEE ON RADIO INTERFERENCE; IEEE; ET AL.
PR. NAUK. INST. TELEKOMUN. AND AKUST. POLITECH. WROCLAW SER. KONF. (POLAND)   VOL.27, NO.7   232-7   1976
3RD WROCLAW SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY
22-24 SEPT. 1976 WROCLAW, POLAND
Treatment: APPLIC: PRACTICAL
Document Type: CONFERENCE PAPER
Languages: ENGLISH
(7 Refs)
A NOISE-PRODUCING MECHANISM ASSOCIATED WITH THE IN-FLIGHT CHARGING OF AN AIRCRAFT AND ITS EFFECT ON THE PERFORMANCE OF AIRBORNE MF AUTOMATIC DIRECTION FINDERS ARE CONSIDERED. THE PRECIPITATION STATIC NOISE IS PRODUCED IN ANTENNAS MOUNTED UNDER PLASTIC RADOMES. IN THE PRESENTED MODEL OF A FLUSH FERRITE LOOP ANTENNA, THE SPARK DISCHARGE BETWEEN THE RADOME AND THE SURROUNDING METALLIC SURFACE IS PREVENTED BY COATING OF THE ANTENNA SURFACE WITH A CONDUCTING FILM OF EPOXY-CARBON BLACK GEL. MEASUREMENTS SHOW THAT THIS SHIELDING DOES NOT AFFECT ADVERSELY THE SIGNAL PICK-UP CHARACTERISTICS OF THE LOOP WINDING.

009278 877003973
THE NEAR FIELD OF LOOP ANTENNAS IN THE COUPLING ZONE
SHVARTS, E.A.; KAGANSKIY, A.M.
RADIOTEKHNIKA, MOSKVA (USSR)   VOL.31, NO.1   93   JAN. 1976 CODEN: RATEAO
Trans in: TELECOMMUN. AND RADIO ENG. PT. 2 (USA)   VOL.31, NO.1   126   JAN. 1976 CODEN: TRERBS
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(2 Refs)
CURVES PLOTTED FROM COMPUTER CALCULATIONS OF THE VALUES OF THE VERTICAL COMPONENT OF THE FIELD SHOW THE BEHAVIOR AS A FUNCTION OF THE GRAND CONDUCTIVITY SIGMA=3·10/SUP -2/, 1·10/SUP -2/, 1·10/SUP -3/ SM/M FOR THE OPERATION OF A CIRCULAR HORIZONTAL TRANSMITTING LOOP WITH A RADIUS OF 30 M AT HEIGHTS OF ZERO AND 5 M ABOVE THE GROUND AT WAVELENGTHS OF 2000, 3000 AND 7500 M. THE OBSERVATION POINT IS AT A HEIGHT 1.2 M IN THE COUPLING ZONE-UP TO 90 M FROM THE LOOP WIRE AT THE SPACINGS USED IN PRACTICE. THE GRAPHS ARE PLOTTED FOR A CURRENT OF 1 A IN THE LOOP.

000754 877001053
CALCULATION OF THE RADIATION RESISTANCE OF LOOP ANTENNAS WITH SINUSOIDAL CURRENT DISTRIBUTION
RICHTSCHEID, A.
TECH. HOCHSCHULE DARMSTADT, DARMSTADT, GERMANY
IEEE TRANS. ANTENNAS AND PROPAG. (USA)   VOL.AP.24, NO.6
889-91 NOV. 1976 CODEN: IETPAK
Treatment: THEORETICAL
Document Type: JOURNAL PAPER
Languages: ENGLISH
(3 Refs)
LOOP ANTENNAS WITH DIMENSIONS COMPARABLE TO THE WAVELENGTH ARE SOMETIMES OF PRACTICAL INTEREST. IN ORDER TO USE SUCH ANTENNAS, DESIGN ENGINEERS WOULD NEED SIMPLE FORMULAS OR DATAS ABOUT THE RADIATION RESISTANCE OF SUCH ANTENNAS. FOR THE REASON, THAT NOTHING ELSE HAS BEEN KNOWN, THE RADIATION RESISTANCE HAS BEEN CALCULATED BY MEANS OF A DIGITAL COMPUTER