```
ka=    3.11400000000000      radius=  0.272584671033489
Series truncated at n=          10
Refractive index: (1.36600000000000,5.000000000000000E-003)

eta= (4.25372400000000,1.557000000000000E-002)
n=  1    zp(n)= -.2585533046D+00 0.1850317085D-01
         ZA(n)= -.4083052251D+01 -.2745163684D+00
         a1(n)= -.6932650986D+00 0.4419931752D+00
         a2(n)= -.8081538665D+00 0.3794687506D+00


n=  2    zp(n)= 0.4553222202D+01 0.2727953949D+00
         ZA(n)= -.2513307917D+00 -.1139025024D-01
         a1(n)= -.4624422357D+00 0.4880016405D+00
         a2(n)= -.6645787177D+00 0.4498766502D+00


n=  3    zp(n)= 0.9565857181D+00 0.8808790043D-02
         ZA(n)= 0.3400410574D+00 -.7044224860D-02
         a1(n)= -.9608315488D-01 0.2859257558D+00
         a2(n)= -.2997308374D-01 0.1576405566D+00


n=  4    zp(n)= 0.6002988445D+00 0.3602277928D-02
         ZA(n)= 0.7254370704D+00 -.6554060348D-02
         a1(n)= -.2968023696D-02 0.4777048192D-01
         a2(n)= -.4844895657D-03 0.1407878600D-01


n=  5    zp(n)= 0.4499878070D+00 0.2251626683D-02
         ZA(n)= 0.1046801920D+01 -.6817034625D-02
         a1(n)= -.8281637441D-04 0.4767187597D-02
         a2(n)= -.1836958419D-04 0.9556666168D-03


n=  6    zp(n)= 0.3637079331D+00 0.1654114226D-02
         ZA(n)= 0.1338892142D+01 -.7341137226D-02
         a1(n)= -.4164634575D-05 0.3378488619D-03
         a2(n)= -.8561779216D-06 0.4905888249D-04


n=  7    zp(n)= 0.3067026863D+00 0.1317730095D-02
         ZA(n)= 0.1614831590D+01 -.7984823659D-02
         a1(n)= -.2061867670D-06 0.1759563980D-04
         a2(n)= -.3276739809D-07 0.1933639199D-05


n=  8    zp(n)= 0.2658482136D+00 0.1100929795D-02
         ZA(n)= 0.1880800618D+01 -.8693137151D-02
         a1(n)= -.8044105731D-08 0.6971917751D-06
         a2(n)= -.1000282366D-08 0.6002979204D-07


n=  9    zp(n)= 0.2349641609D+00 0.9487565535D-03
         ZA(n)= 0.2140134044D+01 -.9440418502D-02
         a1(n)= -.2478955321D-09 0.2168249758D-07
         a2(n)= -.2476819618D-10 0.1503303372D-08


n= 10    zp(n)= 0.2107157103D+00 0.8355511714D-03
         ZA(n)= 0.2394806253D+01 -.1021308616D-01
         a1(n)= -.6170232518D-11 0.5430988023D-09
         a2(n)= -.5065103397D-12 0.3099086060D-10
```

```
  n         psi(ka)              chi(ka)                A(ka)
  1    0.1008479062D+01    0.2934189872D+00    -.2937731898D+00
  2    0.9439706374D+00   -.7169420952D+00     0.4260765631D+00
  3    0.5072091806D+00   -.1444578421D+01     0.8977160227D+00
  4    0.1961912972D+00   -.2530344014D+01     0.1300757178D+01
  5    0.5981768988D-01   -.5868554569D+01     0.1674168800D+01
  6    0.1511075439D-01   -.1819993866D+02     0.2031834769D+01
  7    0.3265099822D-02   -.7011063702D+02     0.2380048273D+01
  8    0.6170867531D-03   -.3195198929D+03     0.2722108992D+01
  9    0.1037103264D-03   -.1674217616D+04     0.3059926010D+01
 10    0.1569943893D-04   -.9895680716D+04     0.3394685564D+01


 QSCA=   2.21497846895375
 QABS=   6.490491169026580E-002
 QABS=   6.490491169026628E-002 from direct expansion.
 albedo=  0.971531477337261
 <cos>=  0.785913677112242



Values for the scattering matrix
   theta  S11(itheta)        S12(itheta)        S33(itheta)        S44(itheta)
    0.00  0.46098132E+00  0.00000000E+00  0.46098132E+00  0.00000000E+00
   10.00  0.42538500E+00  0.27486097E-02  0.42536474E+00  0.31115491E-02
   20.00  0.33343211E+00  0.81715827E-02  0.33317161E+00  0.10338012E-01
   30.00  0.22020301E+00  0.10743403E-01  0.21929121E+00  0.16891009E-01
   40.00  0.12055659E+00  0.77536738E-02  0.11885133E+00  0.18658321E-01
   50.00  0.53224322E-01  0.15284560E-02  0.51112958E-01  0.14763394E-01
   60.00  0.18430223E-01  -.33178826E-02  0.16453059E-01  0.76132532E-02
   70.00  0.58427734E-02  -.40449283E-02  0.41304133E-02  0.84631085E-03
   80.00  0.39606401E-02  -.13679637E-02  0.21848506E-02  -.30069542E-02
   90.00  0.50920678E-02  0.20557677E-02  0.29680482E-02  -.35907747E-02
  100.00  0.57643610E-02  0.39977082E-02  0.35041388E-02  -.22287211E-02
  110.00  0.51719686E-02  0.38515760E-02  0.33909470E-02  -.64505836E-03
  120.00  0.37160244E-02  0.23458683E-02  0.28801379E-02  0.10268785E-03
  130.00  0.21724335E-02  0.61745546E-03  0.20821388E-02  -.53982509E-04
  140.00  0.12363791E-02  -.52407524E-03  0.97605627E-03  -.54890134E-03
  150.00  0.12184206E-02  -.84910096E-03  -.37325161E-03  -.79010097E-03
  160.00  0.19155822E-02  -.59167895E-03  -.17242216E-02  -.58858377E-03
  170.00  0.27468244E-02  -.18400574E-03  -.27338338E-02  -.19323367E-03
  180.00  0.31084962E-02  0.00000000E+00  -.31084962E-02  0.00000000E+00


 QBACK=  0.167342971550455      from direct expansion.
 QREFL=  2.393380756383418E-002(normal incidence reflectance)
```