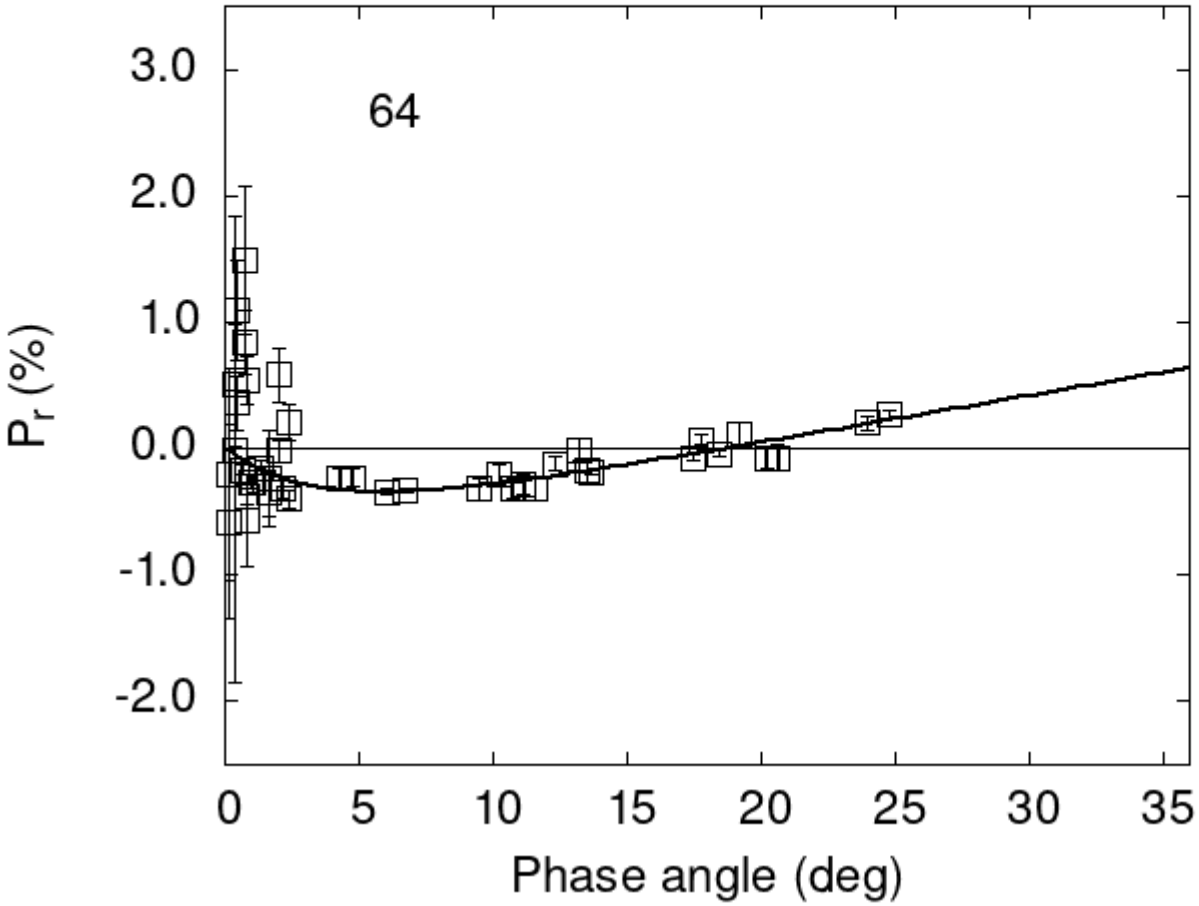
Catalogue of Asteroid Polarization Curves

Gil-Hutton (2023)



Polarimetric data:

The columns list the object number, the phase angle (degrees),P_r (%), its error, the filter used, and the reference code.

```
64  9.49 -0.32 0.09 V f
64 10.21 -0.21 0.08 V f
64 10.79 -0.32 0.08 V f
64 11.10 -0.29 0.08 V f
64 19.21  0.12 0.09 V f
64 20.25 -0.07 0.08 V f
```

```
64 20.60 -0.07 0.10 V f
64  6.69 -0.33 0.02 G a
64  6.04 -0.34 0.03 G a
64 13.69 -0.19 0.02 G a
64 17.81  0.07 0.04 G a
64 18.43 -0.04 0.02 G a
64 24.01  0.20 0.05 G a
64  0.76  1.49 0.59 V a
64  0.76  0.84 0.25 R a
64  0.36 -0.01 1.84 V a
64  0.36  0.50 0.49 R a
64  0.12 -0.20 0.84 V a
64  0.12 -0.58 0.77 R a
64  0.46  1.09 0.40 V a
64  0.46  0.36 0.21 R a
64  0.84 -0.57 0.36 V a
64  0.84  0.54 0.19 R a
64  1.62 -0.24 0.38 V a
64  1.62 -0.35 0.18 R a
64  2.01  0.58 0.21 V a
64  2.01 -0.02 0.09 R a
64  2.40  0.21 0.14 V a
64  2.40 -0.40 0.07 R a
64  4.80 -0.23 0.07 V a
64 11.60 -0.32 0.09 V a
64 12.30 -0.12 0.06 V a
64 13.20 -0.01 0.09 V a
64 13.50 -0.17 0.10 V a
64  0.80 -0.38 0.06 R a
64  0.69 -0.17 0.04 R a
64  1.01 -0.27 0.07 R a
64  1.34 -0.15 0.05 R a
64  2.20 -0.32 0.07 R a
64  4.22 -0.23 0.08 R a
64 24.80  0.27 0.03 V a
64 17.50 -0.07 0.02 V a
64  1.00 -0.26 0.05 V a
```

Polarization Curve Parameters:

The polarimetric parameters were obtained fitting the observations to a polarization curve using the function:

$$P_r(\alpha) = Coe_1 \times \left[\exp\left(-\frac{\alpha}{Coe_2}\right) - 1\right] + Coe_3 \times \alpha,$$

where α is the phase angle in degrees. The minimum of the polarization curve is identified by Pmin, Phmin is the phase angle where Pmin is reached, Ph0 is the inversion angle, and k is the slope of the polarization curve at Ph0.

#

```
#      Coe1    eCoe1     Coe2    eCoe2     Coe3    eCoe3
#    0.6976   0.0614   3.5714   0.6641   0.0370   0.0031
#
#     Phmin   err   Pmin    err  Ph0    err    k      err
#      5.94  0.62 -0.345  0.067 18.74  1.11 0.0360 0.0032
```