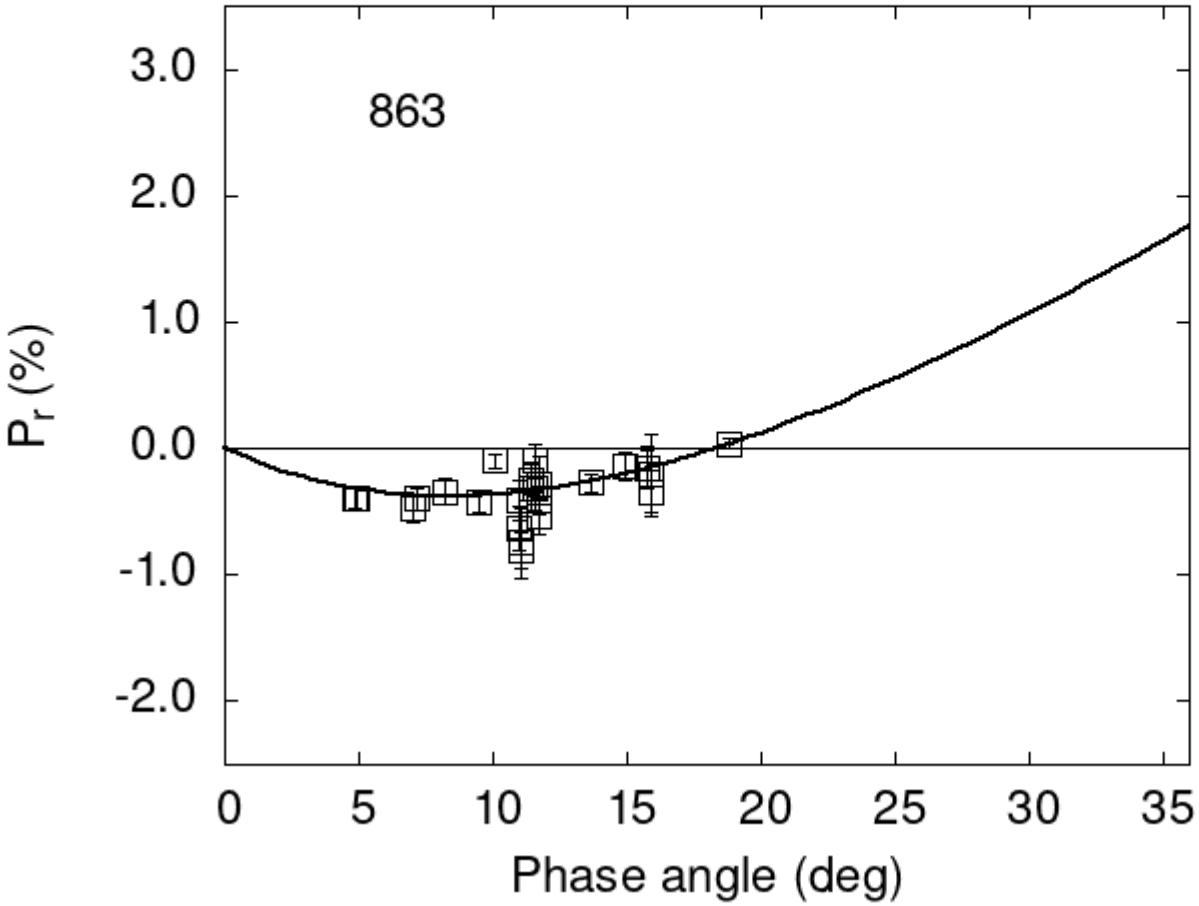
Catalogue of Asteroid Polarization Curves

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.

```
863  4.89 -0.39 0.09 V f
863  4.90 -0.40 0.09 V f
863  6.99 -0.48 0.11 V f
863  7.15 -0.40 0.09 V f
863  8.23 -0.34 0.10 V f
863 11.73 -0.41 0.11 V f
```

```
863 14.92 -0.14 0.11 V f
863 10.96 -0.63 0.17 V f
863 10.96 -0.41 0.16 R f
863 11.07 -0.75 0.27 V f
863 11.07 -0.81 0.14 R f
863 11.44 -0.31 0.20 V f
863 11.44 -0.25 0.12 R f
863 11.59 -0.10 0.14 V f
863 11.59 -0.32 0.17 R f
863 11.73 -0.28 0.22 V f
863 11.73 -0.54 0.14 R f
863 15.89 -0.34 0.16 R f
863 10.10 -0.10 0.05 V f
863 13.70 -0.27 0.07 V a
863 18.80  0.04 0.04 V a
863  9.50 -0.42 0.08 V a
863 11.07 -0.75 0.27 V b
863 11.07 -0.81 0.14 R b
863 10.96 -0.63 0.17 V b
863 10.96 -0.41 0.16 R b
863 11.44 -0.31 0.20 V b
863 11.44 -0.25 0.12 R b
863 11.59 -0.10 0.14 V b
863 11.59 -0.32 0.17 R b
863 11.73 -0.28 0.22 V b
863 11.73 -0.54 0.14 R b
863 15.89 -0.21 0.32 V b
863 15.89 -0.34 0.16 R b
863 15.75 -0.15 0.16 V b
863 15.75 -0.16 0.14 R b
```

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
#    4.0271   0.1484  16.2569   0.9013   0.1484   0.0066
#
#     Phmin   err   Pmin    err  Ph0    err    k      err
#      8.33  1.04 -0.378  0.106 18.36  0.59 0.0683 0.0073
```