Catalogue of Asteroid Polarization Curves
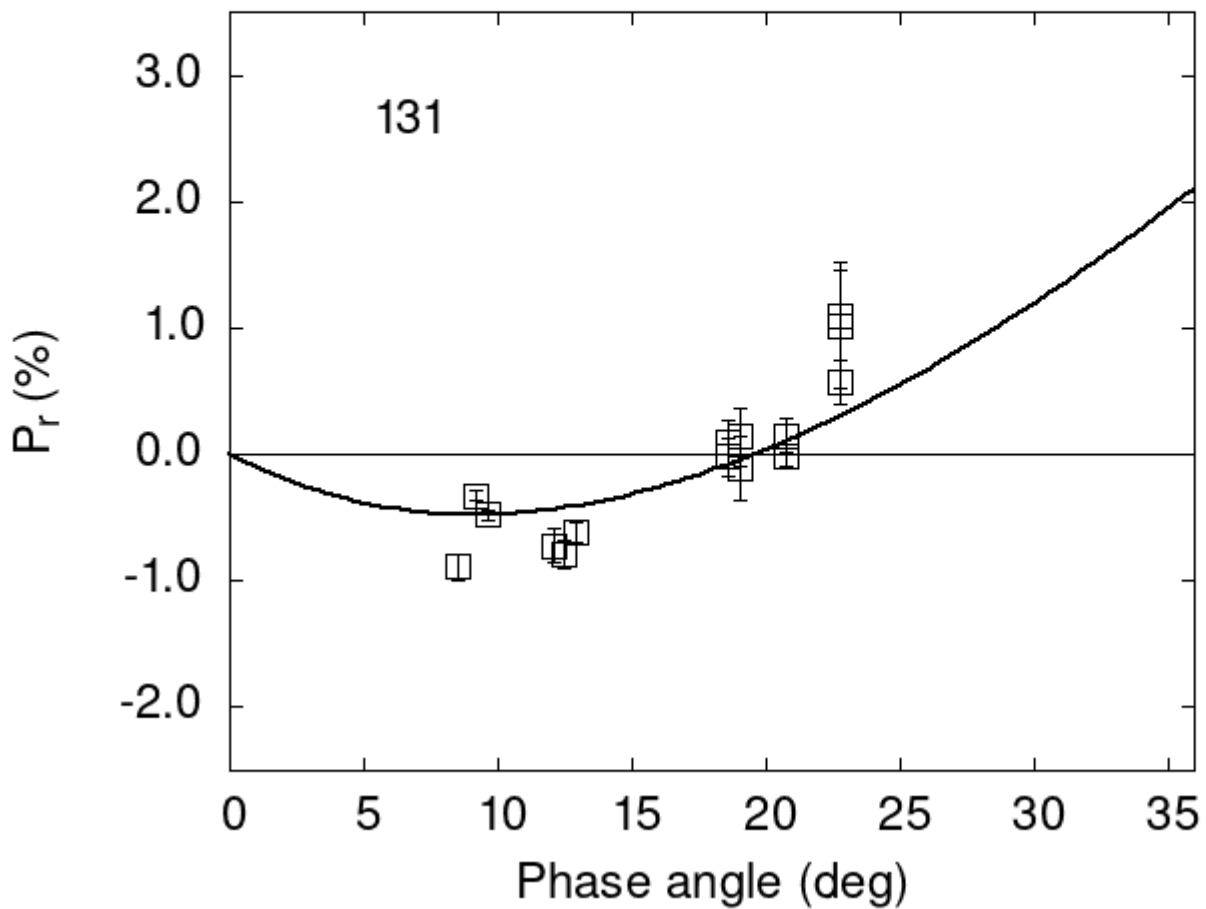
Gil-Hutton (2023)

Polarimetric data:

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

```
131   8.54 -0.89 0.10 V f
131   9.20 -0.33 0.04 V f
131   9.60 -0.48 0.04 V f
131  18.57  0.10 0.17 V f
131  18.57 -0.02 0.15 R f
131  19.01  0.14 0.23 V f
```

```
131 19.01 -0.11 0.26 R f
131 20.73  0.15 0.14 V f
131 20.73 -0.01 0.09 R f
131 22.80  0.57 0.18 R f
131 12.10 -0.72 0.13 V f
131 12.50 -0.79 0.11 V f
131 12.90 -0.62 0.08 V f
131  9.60 -0.48 0.04 V a
131  9.20 -0.33 0.04 V a
131 12.10 -0.72 0.13 V a
131 12.50 -0.79 0.11 V a
131 12.90 -0.62 0.08 V a
131 18.58  0.10 0.17 V b
131 18.58 -0.02 0.15 R b
131 19.01  0.14 0.23 V b
131 19.01 -0.11 0.26 R b
131 22.80  1.10 0.36 V b
131 22.80  0.57 0.18 R b
131 22.81  1.02 0.50 R b
131 20.73  0.15 0.14 V b
131 20.73 -0.01 0.09 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
#   8.6300    0.3540   24.3416   1.1254    0.2433    0.0078
#
#    Phmin   err    Pmin     err   Ph0    err    k       err
#     9.17   1.45  -0.478   0.168 19.65   0.47 0.0851  0.0103
```