Radial velocity

Note that radial velocity data have *not* been log-transformed.

0.5º elevation angle

```
velocity.e1.model = stationary.radar.model.light("velocity.cyl.e1",dt1,elev="e1")
```

```
##                     df       AIC
## mod.interact   29.28329 814.1776
## mod.light.year 25.70874 817.0279
## mod.light      23.24699 819.2017
```

```
bm = velocity.e1.model
```

The best model includes the *light × year* interaction term.

```
summary(bm)
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## eval(parse(text = response.name)) ~ eval(LIGHT) * year + s(as.numeric(eval(TIME)),
##     by = year) + s(eval(BIRD_DENSITY), by = year)
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)            5.221e+04  2.260e+04   2.310   0.0221 *
## eval(LIGHT)1          -1.670e+00  7.951e-01  -2.101   0.0372 *
## year2012              -5.063e+04  2.314e+04  -2.188   0.0301 *
## year2013              -5.197e+04  2.286e+04  -2.274   0.0243 *
## year2015              -4.947e+04  2.287e+04  -2.163   0.0320 *
## year2016              -9.960e+03  3.079e+04  -0.323   0.7468
## eval(LIGHT)1:year2012 -3.714e+00  1.558e+00  -2.384   0.0183 *
## eval(LIGHT)1:year2013 -1.773e+00  1.496e+00  -1.185   0.2376
## eval(LIGHT)1:year2015 -2.678e+00  1.062e+00  -2.521   0.0127 *
## eval(LIGHT)1:year2016 -5.909e-01  1.223e+00  -0.483   0.6296
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Approximate significance of smooth terms:
##                                    edf Ref.df     F p-value
## s(as.numeric(eval(TIME))):year2010 1.000  1.000 5.337 0.02212 *
## s(as.numeric(eval(TIME))):year2012 1.000  1.000 0.012 0.91154
## s(as.numeric(eval(TIME))):year2013 1.000  1.000 0.013 0.91010
## s(as.numeric(eval(TIME))):year2015 1.000  1.000 0.600 0.44006
## s(as.numeric(eval(TIME))):year2016 1.000  1.000 4.078 0.04511 *
## s(eval(BIRD_DENSITY)):year2010     3.358  4.210 4.221 0.00181 **
## s(eval(BIRD_DENSITY)):year2012     2.853  2.986 3.346 0.02230 *
## s(eval(BIRD_DENSITY)):year2013     1.769  1.951 0.475 0.64828
## s(eval(BIRD_DENSITY)):year2015     4.303  5.233 3.661 0.00322 **
## s(eval(BIRD_DENSITY)):year2016     1.000  1.000 0.493 0.48343
```