

**For Detailed Help on IRT use IRT HELP**

**(Raytracing Help)**

**For Detailed Help on Command Language Use PCL HELP**

**(Plotting etc)**

## **IRT PROCEDURES:**

**ADDRAYS**, *name*

**COMPACT**

**CONE**, *halfang*

**CONIC**, *e, rad, sol, pol*

**CONICX**, *e, rad, sol*

**DETECTOR**

**DISP**, *dx, dy, dz*

**ELLIPSOID**, *a, b, c, sol*

**FLAT**

**FOCUS**, *ax*

**GETRAYS**, *name*

**GLASS**( *mat, lam*)

**GRATING**, *nord, d*

**GROUP**

**GROUPEND**

**HOLOGRAT**, *nord, x1, y1, z1, x2, y2, z2, laser*

**KNIFE**, *edge*

**LENS**, *index, r1, thick, r2*

**MASK**, *shape, a, b, xc, yc*

**MIRROR**

**MTF**, *freqmax, nbins*

**MULTIEND**

**MULTIPATH**

**NEW\_COORD**, *d0, d1, d2, r0, r1, r2, r3, r4, r5, r6, r7, r8*

**OBJCA**, *ro, nrad, nsec, xc, yc, obd, lamt*

**OBJCR**, *ri, ro, xc, yc, obd, nr, lamt*

**OBJFAN**, *sx, nx, sy, ny, xc, yc, obd, lamt*

**OBJGR**, *sig, xc, yc, obd, nr, lamt*

**OBJP**, *xc, yc, obd, nr, lamt*

**OBJSA**, *sx, nx, sy, ny, xc, yc, obd, lamt*

**OBJSR**, *xl, yl, xc, yc, obd, nr, lamt*

**OPROF**, *xbin*

**OPTIMIZE**, *file, par0, par1, --, par9*

**PUPCA**, *ro, nrad, nsec, xc, yc, zc*

**PUPCR**, *ri, ro, xc, yc, zc*

**PUPFAN**, *xo, nx, yo, ny, xc, yc, zc*

**PUPP**, *xo, yo, zo*

**PUPSA**, *xo, nx, yo, ny, xc, yc, zc*

**PUPSR**, *xo, yo, xc, yc, zc*

**PV**, *n*

**QRMS**( *ax* )

**RAYS**, *theta, phi, nf, nl*

**REFRACT**, *index*

**RETRACE**

**RFOC**, *zmin, zmax*

**RMS**( *ax* )

**ROT**, *dx, dy, dz*  
**RPROF**, *rbin, xc, yc*  
**RSPOT**, *nel*  
**SAVERAYS**, *name*  
**SIMPLEX**, *file, par0, par1, -- ,par9*  
**SPOT**, *scale*  
**SPOTS**, *theta, phi, nf, nl*  
**THIN**, *f*  
**TORUS**, *rx, ry*  
**TRANGRAT**, *nord, d*  
**TRAVEL**, *ax, dis*  
**UNTRACE**  
**VIEW**, *theta, phi, nf, nl*  
**XFOC**, *zmin, zmax*  
**XPROF**, *xbin, xc*

## **PCL PROCEDURES**

**ABS( x )**  
**ACOS( x )**  
**ASIN( x )**  
**ATAN( x )**  
**ATAN2( y, x )**  
**AVERAGE( x )**  
**CLOSEPLOT**  
**CONTINUE**  
**COS( x )**  
**DATE()**  
**END**  
**ERASE**  
**EXIT**  
**EXP( x )**  
**FABS( x )**  
**FCLOSE, lun**  
**FIX( x )**  
**FLOAT( x )**  
**FLTARR( n )**  
**FOPEN( name, rw )**  
**FPRINTF, lun, x1, x2, ...**  
**HISTOGRAM( x, bin, xmin, xmax )**  
**INDICES( n )**  
**INTARR( n )**  
**LOG( x )**  
**LOG10( x )**  
**MAX( x )**  
**MIN( x )**  
**LENGTH( x )**  
**OPLOT, x, y, color**  
**PAUSE**  
**PLOT, x, y, color**  
**POW( x, y )**  
**PRINT, x1, x2, ...**  
**PRINTF, x1, x2, ...**  
**QUIT**  
**READD( filename, nvalues)**

**READI( filenum, nvalues)**  
**READS( filenum )**  
**SIGMA( x )**  
**SIN( x )**  
**SQRT( x )**  
**STRING( x )**  
**TAN( x )**  
**TOTAL( x )**  
**WHERE( x )**



