# Reduction of OTF Map Data

Hiroshige Yoshida
Caltech Submillimeter Observatory

May 25, 2012

## 1 Processing Map Data

```
las\file in my_map_data.dat
las\set source ...
las\set line ...
las\set telescope ...
las\set window ...
las\file out my_map_data.bas multiple
sic\for dx -300 to 300 by 15
sic\for dy -300 to 300 by 15
las\find /offset dx dy
sic\if found then
las\average
las\base 1
las\write
sic\end if
sic\next
sic\next
```

## 2 Making Profile Map

```
las\file in my_map_data.bas
las\find
las\set mode x ...
las\set mode y ...
analyse\map /grid
```

## 3 Making Integrated Intensity Map

```
las\file in my_map_data.bas
las\find
analyse\table my_map_data new /math tdv(0.0,10.0)
```

```
sic\let map%beam = 30.0
map\xy_map my_map_data /nogrid
sic\let name = my_map_data
sic\let type = lmv
sic\@ x_lmv.greg
```

```
greg\image my_map_data
greg\extrema /compute
greg\limits /rgdata
greg\set box_location match
greg\plot
greg\box /absolute
greg\wedge
greg\levels 0 2 to 30 by 2
greg\rgmap
```

# 4 Making Velocity Channel Maps

```
las\file in my_map_data.bas
las\find
analyse\table my_map_data new /resample 21 11 5.0 0.5 v
sic\let map%beam = 30
map\xy_map my_map_data /nogrid
sic\let name = my_map_data
sic\let type = lmv
sic\@ x_lmv.greg
```

# 5 Making Data Cube in FITS

```
vector\fits my_map_data.fits from my_map_data.lmv /bits 32
```