for this may lie with the high observational uncertainty in our

that no line could fit the data effectively. Some of the reason

ever, the relation becomes somewhat murky for our full set

fourteen planets in MF2011, we see the same result. How-

lot et al. (2006) and Burrows et al. (2007) for similar re-

ent of its protoplanetary disk, increasing the speed and mag-

possibly due to the small number of circumbinary planets in

value of 0.26 that the circumbinary planets were drawn from

accurate to a factor of a few.

around our fit. While some of this may be from observa-

wide margin, but the distribution has a fair amount of spread

Distributions for points near

of constant

spectral type sub-samples, motivated by the lack of any

sume the planet mass-radius relation is the same for all

(2012).

confirming that the planet population extends closer in

planets with RV masses. Planets in our sample are in blue. Planets in red

The metallicity of a star directly impacts the metal con-

We note that the low number of detected large planets

orbits of the nebula that are too close to the central star to be

set to the co-rotation radius, from where material is funneled onto

the co-rotation radius, from where material is funneled onto

We note that the low number of detected large planets

the heavy-element mass is about 20%.

than 2

95% of the heavy-element mass is concentrated in planets smaller

than 2

Table 2

§

3.2.

which only has an upper

and a

Planet Mass (M_J)

Heavy-Element Mass (M_⊕)

Fit: (46 ± 5.2)M_△M_15 ± 0.77)

Circumbinary Planets

(8.1 ± 1.3)M_△M_51 ± 0.11 (Fit Line)

Jupiter & Saturn

Note the lack of planets around low-metallicity stars above about 1

planets with RV masses. Planets in our sample are in blue. Planets in red

and a

middle panel of Figure 4). The curves can be

momentum to lower mass stars, as already noted by Plavchan et al.

confirming that the planet population extends closer in

for F,G,K, and M stars, respectively, consistent with the

pre-main-sequence luminosity scaling is based on the Bara

Since the di

parameters that define the location of the turnover, or

the shape of this curve, but simply note that it may

the plateau for di

of each planet

and the abundance of stellar oxy-

References between FGK stars

(2014), so we revisited the pattern with our larger sample. We

in subsequent population synthesis models (Mordasini et al.

Discussion for formation and population synthesis models. In the fu-

the number of giant planets and the total detected planetary

iron-metallicity stars.

Note: Figure 8 is not visible in the image.