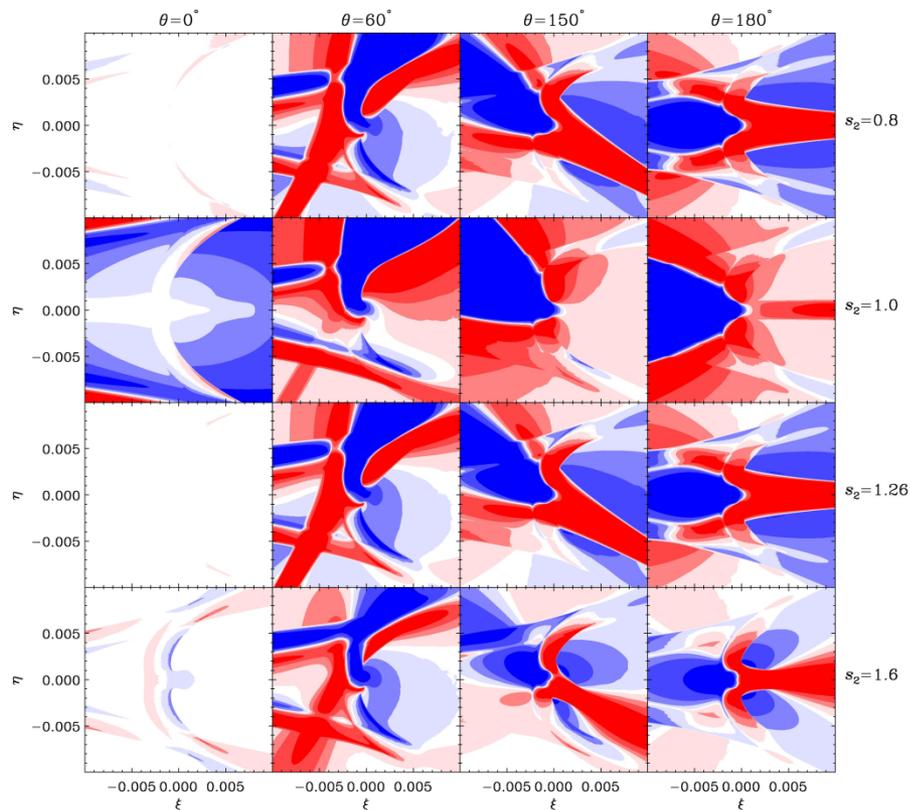


# Detection probability of a low-mass planet for triple lens events

Mon. Not. R. Astron. Soc. 412, 503–510 (2011)

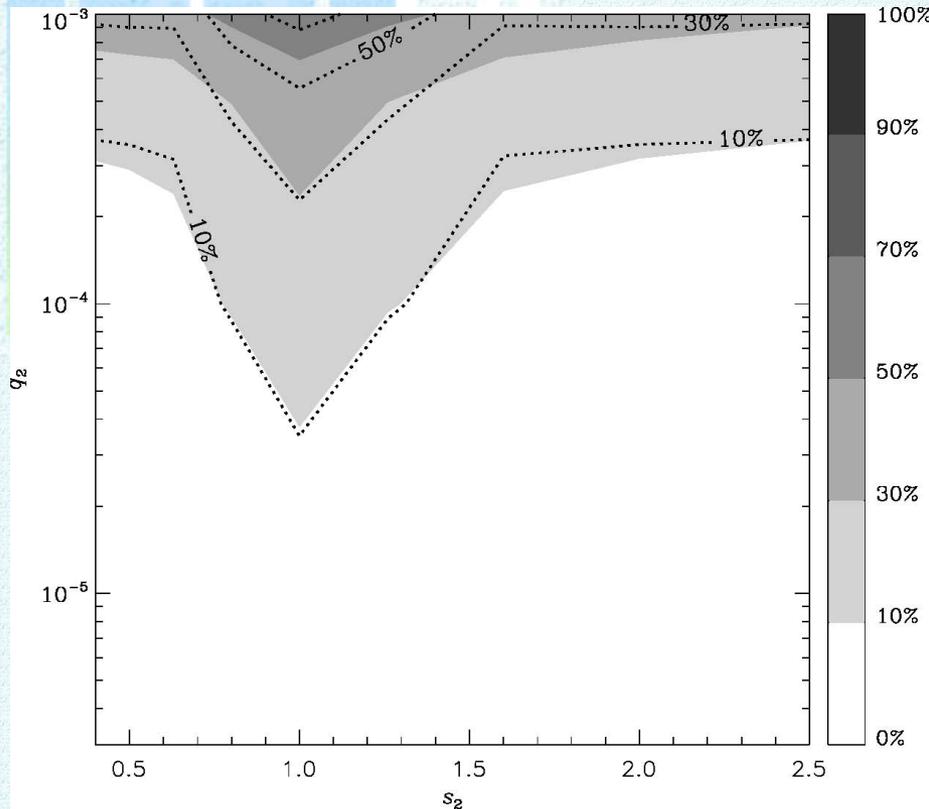
Heon-Young Chang  
(Kyungpook National University, Korea)

In view of the assumption that any planetary system is likely to be composed of more than one planet, and that a multiple planet system with a large-mass planet has a greater chance of detailed follow-up observations, the multiple planet system may be an efficient way to search for sub-Jovian planets.

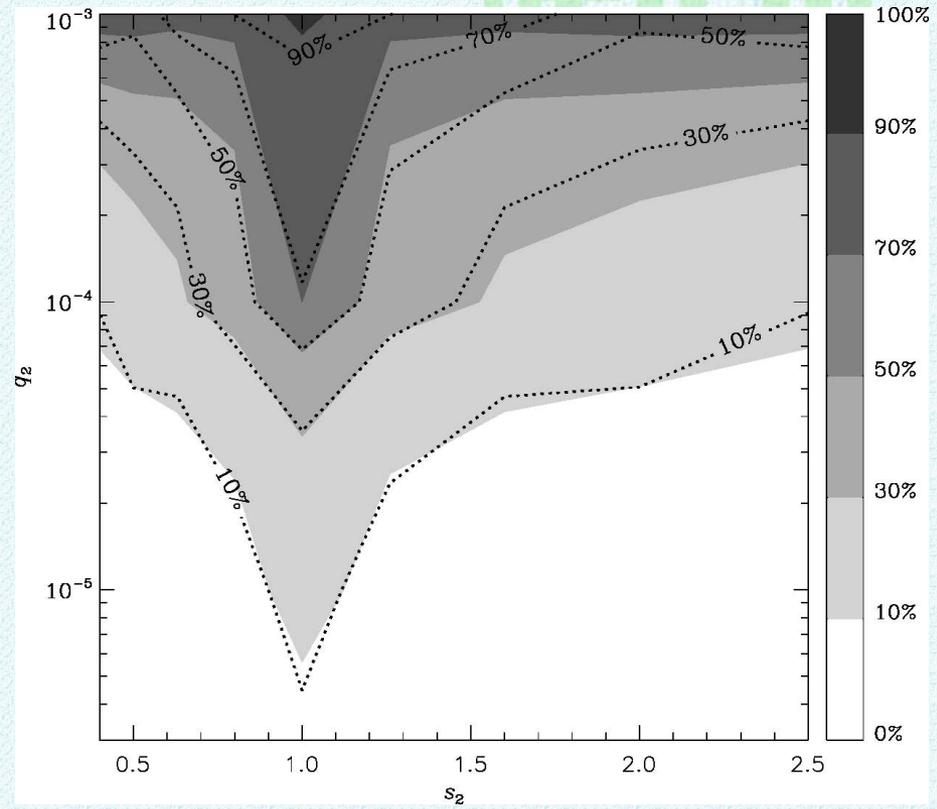


Fractional deviation in magnification of triple lens system from the binary lens system.

Sagan Summer Workshop  
July 24-30, 2011



Probabilities of detecting the low-mass planet in binary systems and in triple systems. The detection probability of the secondary low-mass planet in the triple lens system is represented by grey-scale, and is drawn such that the darker shade represents a higher probability as indicated in the grey index. For comparison, we also present as dotted contours the probability of detecting the same low-mass planet if it is in a binary system. Probabilities are calculated such that the value of  $|\epsilon|$  in the deviation map is greater than 5 per cent, considering only  $|\mu_0| \leq 0.01$  events.



Similar maps as left Figure, except that probabilities are calculated such that the value of  $|\epsilon|$  in the deviation map is greater than 1 per cent, considering only  $|\mu_0| \leq 0.01$  cases.