

Masterclass Event No.	CMS ID Run/Event/LS	Event Type (check one)				Calculated Mass (GeV)	Rounded Z Mass (GeV)
		Z	W - elec	W - muon	Zoo		
161	146944/583668131/527					68.3	
162	148031/18672140/23					91.5	
163	146944/574486583/520					66.9	
164	146944/565196864/513					60.7	
165	146944/292827473/317					52.8	
166	195099/137440354/115					127	
167	148031/175301271/204					90	
168	146944/232248618/276					75.8	
169	146944/578190435/522					85.1	
170	148031/172146741/200					90	
171	146944/318382908/335					20.4	
172	146944/198677269/253					87.6	
173	146944/199435731/253					38.6	
174	46944/554548804/505					80.3	
175	148031/178947162/209					90	
176	147114/175550027/273					30.1	
177	148031/180125199/210					71	
178	146944/231706892/275					81.7	
179	146944/326203467/341					56.5	
180	146944/580506722/524					65	
181	146944/308014246/328					73	
182	148031/179597818/209					97.1	
183	147114/80351763/212					44.4	
184	146944/213734973/263					52.7	
185	146944/593267687/534					88	
186	146944/275852186/306					67.1	
187	146944/275299735/305					61.8	
188	146944/299463813/322					80.6	
189	148031/19352048/23					1.1	
190	146944/317573522/335					84.8	
191	146944/231542258/275					50.8	
192	148031/185841234/217					92	
193	146944/316060303/334					46.2	
194	142137/8216898/14					88.5	
195	146944/285049923/312					63.4	
196	146944/569670859/516					81.6	
197	146944/296134473/320					92.8	
198	146944/317435706/335					73	
199	146944/160112278/227					89	
200	42040/129331820/237					89.1	

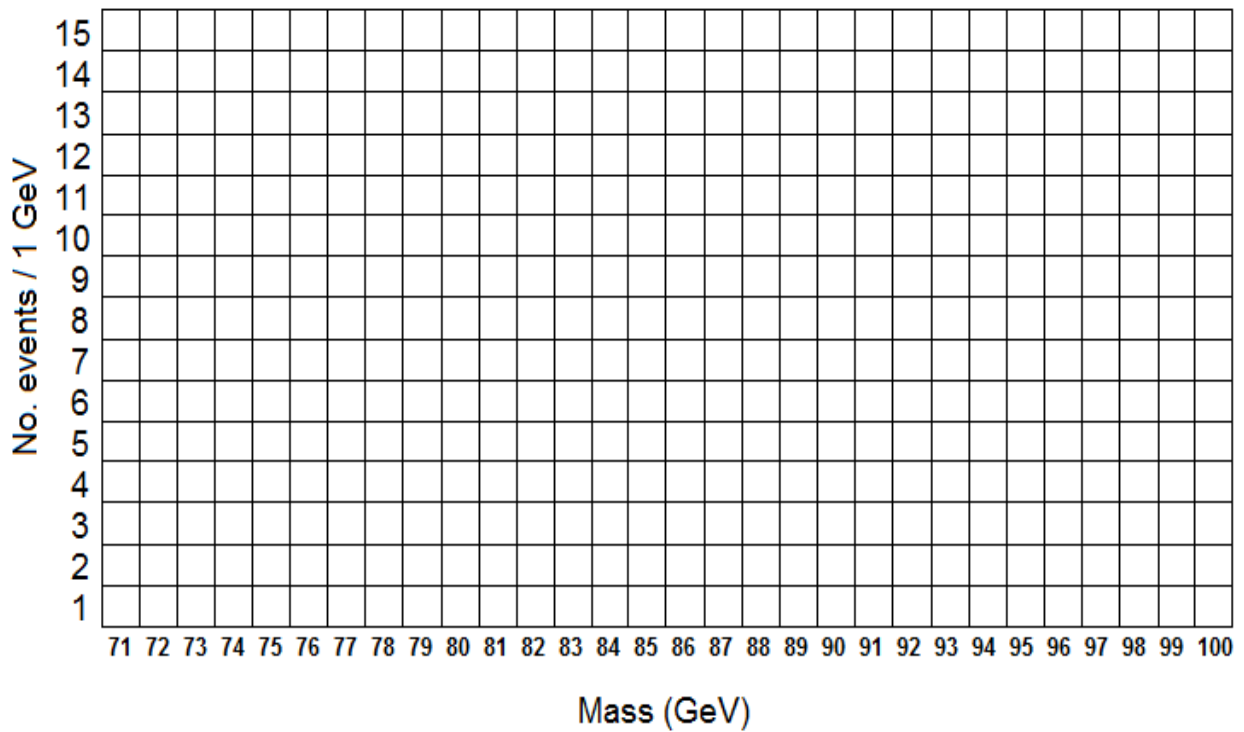
Count the total number of W-electron candidates and the total number of W-muon candidates.

Calculate electron-to-muon ratio:

No. e	No. $\mu$	e/ $\mu$

*Contribute your numbers of e and  $\mu$  to group totals.*

Your Z mass plot:



Place an X in the appropriate mass bin for each event. Start from the bottom so that the vertical axis represents the number of events in that bin.

*Contribute the total number of events in each bin to the group mass plot.*