How To Create Complex Data Tables (Advanced)

Authorea Help

October 30, 2019

This post showcases some complex tables created using LaTeX. In Authorea Beta, select **Insert** → **LaTeX** and use the source code added after each table.

1 Adding horizontal lines

m	$\Re\{\mathfrak{X}(m)\}$	$-\Im\{\underline{\mathfrak{X}}(m)\}$	$\mathfrak{X}(m)$	$\frac{\mathfrak{X}(m)}{23}$	A_m	$\varphi(m)$ / °	φ_m / °
1	16.128	+8.872	16.128	1.402	1.373	-146.6	-137.6
2	3.442	-2.509	3.442	0.299	0.343	133.2	152.4
3	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
4	0.993	-0.429	0.993	0.086	0.08	25.6	90
5	1.29	+0.099	1.29	0.112	0.097	-175.6	-114.7
6	0.483	-0.183	0.483	0.042	0.063	22.3	122.5
7	0.766	-0.475	0.766	0.067	0.039	141.6	-122
8	0.624	+0.365	0.624	0.054	0.04	-35.7	90
9	0.641	-0.466	0.641	0.056	0.045	133.3	-106.3
10	0.45	+0.421	0.45	0.039	0.034	-69.4	110.9
11	0.598	-0.597	0.598	0.052	0.025	92.3	-109.3

```
\begin{tabular}{cccccccc}
    {$m$} & {$\Re\{\underline{\mathfrak{X}}(m)\}$} & {$-\Im\{\underline{\mathfra
    {$\frac{\mathfrak{X}(m)}{23}$} & {$A_m$} & {$\varphi(m)\ /\ ^{\circ}$} & {$\
    1  & 16.128 & +8.872 & 16.128 & 1.402 & 1.373 & −146.6 & −137.6 \\
    2  & 3.442  & −2.509 & 3.442  & 0.299 & 0.343 & 133.2
& 152.4   \\
    3  & 1.826  & −0.363 & 1.826  & 0.159 & 0.119 & 168.5
& −161.1 \\
    4  & 0.993  & −0.429 & 0.993  & 0.086 & 0.08  & 25.6
& 90       \\
    5  & 1.29   & +0.099 & 1.29   & 0.112 & 0.097 & −175.6 & −114.7 \\
    6  & 0.483  & −0.183 & 0.483  & 0.042 & 0.063 & 22.3
& 122.5   \\
    7  & 0.766  & −0.475 & 0.766  & 0.067 & 0.039 & 141.6
& −122    \\
```

```latex
    8   &  0.624   & +0.365 & 0.624   & 0.054 & 0.04   & −35.7
& 90       \\
    9   &  0.641   & −0.466 & 0.641   & 0.056 & 0.045 & 133.3
& −106.3 \\
   10 &  0.45    & +0.421 & 0.45    & 0.039 & 0.034 & −69.4
& 110.9  \\
   11 &  0.598   & −0.597 & 0.598   & 0.052 & 0.025 & 92.3
& −109.3 \\
\end{tabular}
```

2   Multicolumn Tables

Team sheet		
Goalkeeper	GK	Paul Robinson
Defenders	LB	Lucus Radebe
	DC	Michael Duberry
	DC	Dominic Matteo
	RB	Didier Domi
Midfielders	MC	David Batty
	MC	Eirik Bakke
	MC	Jody Morris
Forward	FW	Jamie McMaster
Strikers	ST	Alan Smith
	ST	Mark Viduka

```latex
\begin{tabular}{|l|l|l|}
\hline
\multicolumn{3}{|c|}{Team sheet} \\
\hline
Goalkeeper & GK & Paul Robinson \\ \hline
\multirow{4}{*}{Defenders} & LB & Lucus Radebe \\
 & DC & Michael Duberry \\
 & DC & Dominic Matteo \\
 & RB & Didier Domi \\ \hline
\multirow{3}{*}{Midfielders} & MC & David Batty \\
 & MC & Eirik Bakke \\
 & MC & Jody Morris \\ \hline
Forward & FW & Jamie McMaster \\ \hline
\multirow{2}{*}{Strikers} & ST & Alan Smith \\
 & ST & Mark Viduka \\
\hline
\end{tabular}
```

3 Adding colors

Country List		
Country Name or Area Name	ISO ALPHA 2 Code	ISO ALPHA 3
Afghanistan	AF	AFG
Aland Islands	AX	ALA
Albania	AL	ALB
Algeria	DZ	DZA
American Samoa	AS	ASM
Andorra	AD	AND
Angola	AO	AGO

```
{\rowcolors{3}{green!80!yellow!50}{green!70!yellow!40}
\begin{tabular}{ |p{3cm}|p{3cm}|p{3cm}|  }
\hline
\multicolumn{3}{|c|}{Country List} \\
\hline
Country Name or Area Name & ISO ALPHA 2 Code & ISO ALPHA 3 \\
\hline
Afghanistan & AF &AFG \\
Aland Islands & AX  & ALA \\
Albania &AL & ALB \\
Algeria    &DZ & DZA \\
American Samoa & AS & ASM \\
Andorra & AD & AND   \\
Angola  & AO & AGO \\
\hline
\end{tabular}
}
```

Country List		
Country Name or Area Name	ISO ALPHA 2 Code	ISO ALPHA 3
Afghanistan	AF	AFG
Aland Islands	AX	ALA
Albania	AL	ALB
Algeria	DZ	DZA
American Samoa	AS	ASM
Andorra	AD	AND
Angola	AO	AGO

```
\newcolumntype{s}{>{\columncolor[HTML]{AAACED}} p{3cm}}
\arrayrulecolor[HTML]{DB5800}

\begin{tabular}{ |s|p{3cm}|p{3cm}|   }
\hline
```

Table 1 Hover on the table headers to see the definitions of the different quantities.

| $M_{\rm ini}$ | $R_\star$ | $R_{\rm FeCZ}$ [1] | $\Delta R_{\rm FeCZ}$ [2] | $H_{\rm P}$ [3] | $v_{\rm c}$ [4] | ρ [5] | $\Delta M_{\rm FeCZ}$ [6] | $\Delta M_{\rm top}$ [7] | $\tau_{\rm turn}$ [8] | |
$M_\odot$	$R_\odot$	$R_\odot$	$R_\odot$	$R_\odot$	km s^{-1}	g cm^{-3}	$M_\odot$	$M_\odot$	days	
20	10.46	10.20	0.28	0.08 - 0.24	10.74	7.4×10^{-8}	3.6×10^{-6}	5.8×10^{-7}	0.53	
60	22.04	21.34	2.84	0.23 - 1.93	69.26	6.2×10^{-9}	1.6×10^{-5}	9.8×10^{-7}	0.61	

```
\rowcolor{lightgray} \multicolumn{3}{|c|}{Country List} \\
\hline
Country Name  or  Area Name & ISO ALPHA 2 Code & ISO ALPHA 3 \\
\hline
Afghanistan & AF &AFG \\
\rowcolor{gray}
Aland Islands & AX & ALA \\
Albania    &AL & ALB \\
Algeria   &DZ & DZA \\
American Samoa & AS & ASM \\
Andorra & AD & \cellcolor[HTML]{AA0044} AND      \\
Angola & AO & AGO \\
\hline
\end{tabular}
```

4 Hover Footnotes

```
\begin{table*}
\caption{{Hover on the table headers to see what the definitions for the
different quantities.}}
\label{table}
\begin{tabular}{l c | c c c c c c  c c c c c c}
\hline\hline
   $M_{\rm{ini}}$     & $R_{\star}$     & $R_{\mathrm{FeCZ}}$\footnote{Radial coo
   & $\Delta R_{\mathrm{FeCZ}}$\footnote{Radial extension of the FeCZ.}
&      $\hp$\footnote{Pressure scale height at top/bottom of the FeCZ.}
   & $\vca$\footnote{Maximum of the convective velocity inside the FeCZ.}
& $\rho$\footnote{Density at $\vca$.}
   & $\Delta M_{\rm FeCZ}$\footnote{Mass contained in the convective region.}
   & $\Delta M_{\rm top}$\footnote{Mass in the radiative layer between the stell
   & $\tau_{\rm turn}$\footnote{Convective turnover time, $\tau_{\rm turn}:= \hp
$\tau_{\rm conv}$\footnote{Time that a piece of stellar material spends
inside a convective region, $\tau_{\rm conv}:= \Delta M_{\rm FeCZ}/\dot M$.} & $
 $\mso$ &  $\rso$   & $\rso$   & $\rso$ & $\rso$ &  km~s$^{-1}$
& g~cm$^{-3}$           & $\mso$               & $\mso$
&       days              & days    & $\mso \rm{ yr}^{-1}$ \\
```

4

Table 2.

QSO Division	R Range (Mpc/h)	$\langle f \rangle$	r_0	γ	W	Separation (%)	Result Strength
1/3 Bright	[0.3,3]	$4.24 \cdot 10^{-4}$	6.19	1.77	96.97	96.7	1.9σ
2/3 Dim		$4.26 \cdot 10^{-4}$	4.48		52.77		

Note. — Luminosity dependent quasar clustering using a cross-correlation technique between CS82 galaxies ($M < 23.5$) and SDSS, BOSS, and 2SLAQ quasars ($0.5 < z < 1.0$). The quasars were broken up into 1/3 brightest and 2/3 dimmest...

```
\hline
20      &  10.46    &   10.20 & 0.28     & 0.08 − 0.24 &    10.74
&  $7.4\times10^{−8}$     & $3.6\times10^{−6}$      & $5.8\times10^{−7}$
&    0.53       & 18250    & $7.3\times10^{−8}$     \\
60     &  22.04    &    21.34 & 2.84    & 0.23 − 1.93 &    69.26
&    $6.2\times10^{−9}$   & $1.6\times10^{−5}$      & $9.8\times10^{−7}$
&    0.61        &    1570    & $3.7\times10^{−6}$        \\
\hline
\end{tabular}
\end{table*}
```

5 Deluxe Tables

```
\begin{deluxetable}{cccccccc}
\centering
\tabletypesize{\footnotesize}
\tablecolumns{8}
\tablewidth{0pt}
 \tablehead{
 \colhead{QSO} \vspace{−0.2cm}& \colhead{$R$ Range} &  & & &
&\colhead{Separation} & \colhead{Result}\\ \vspace{−0.2cm}
  & & \colhead{$\langle f \rangle$} & \colhead{$r_0$} &  \colhead{$\gamma$}& $W$
 \colhead{Division} & \colhead{(Mpc/h)} & \colhead{} & \colhead{} & \colhead{}&&
 \startdata
 \vspace{−0.2cm} 1/3 Bright &  & $4.24 \cdot 10^{−4}$ & 6.19 && 96.97 & &\\ \vsp
  & [0.3,3] & & & 1.77 & &  96.7 & 1.9$\sigma$ \\
   2/3 Dim & & $4.26 \cdot 10^{−4}$ & 4.48 & & 52.77
 \enddata
 \vspace{−0.8cm}
 \tablecomments{Luminosity dependent quasar clustering using a cross−correlation
 CS82 galaxies ($M<23.5$) and SDSS, BOSS, and 2SLAQ quasars~($0.5 < z < 1.0$).
 The quasars were broken up into 1/3 brightest and 2/3 dimmest... }
\end{deluxetable}
```