



Supplementary material: Biometry and biostratigraphy of the Early Cretaceous belemnite genus *Castellanibelus* from the southeast of France

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Abbreviations used:**VALANGINIAN AMMONITES ZONES (Azs)**

IV: Lower Valanginian		UV: Upper Valanginian	
Inos.	Inostranzewi Az	Furc.	Furcillata Az
Neoc.	Neocomiensiformis Az	Pere.	Peregrinus Az
Pert.	Pertransiens Az	Verr.	Verrucosum Az

CASTELLANIBELUS SPECIES (sp.)

orb.	<i>C. orbignyanus</i> (Duval-Jouve, 1841)	vaub.	<i>C. vaubellensis</i> (Janssen, 2018)
suborb.	<i>C. suborbignyanus</i> (Toucas, 1890)	touc.	<i>C. toucasi</i> sp. nov.

ONTOGENIC STAGE (ont.)

mj	most juvenile	sa	sub-adult
vj	very juvenile	a	adult
j	juvenile		

ROSTRUM PRESERVATION STATE (st.)

pa	anterior part	c	complete
pm	median part	c - ap	complete except apex
pp	posterior part	c - pa	complete except anterior part
f	fragment		

MEASUREMENTS**Longitudinal measures (in mm)**

L	Total Length of rostrum
L_{rc}	Preserved length of rostrum
L_{tp}	Reference length (a-zone to apex excluding mucro).
L_{pp}	Posterior part length (p-zone to apex excluding mucro).
L_s	Groove length (a-zone to groove end)

Transverse measures (in mm)

ha	Anterior dorsoventral diameter
la	Anterior lateral diameter
hp	Posterior dorsoventral diameter
lp	Posterior lateral diameter

RATIOS**Compression indices (ic)**

ica = ha/la	anterior compression index
icp = hp/lp	posterior compression index

Dilation indices (id)

iddv = lp/la	dorsoventral dilation index
idlat = hp/ha	lateral dilation index

Posterior ratios

L_{pr} = L _{pp} /L _{tp}	posterior length ratio
Psr = L _{pp} /lp	posterior shape ratio

Mucro's position (lateral view)

c	centred
dc	dorso-centred
d	dorsal

Apical and alveolar angles (in degrees)

alv. agl.	angle of the alveolar cavity	L_{al} = L _{ad} /L _{tp}	Alveolar relative length
L_{ad}	Alveolar depth (a-zone to protoconch)	ap. agl.	apical angle (INVTAN[(L _{max} /2)/L _{pp}])*2))

1. Ratios and additional data

1.1. Ratios and graphs

Ratios and graphs were established for a population of 1762 rostra of the genus *Castellanibelus* collected in the Valanginian of the Vocontian Basin

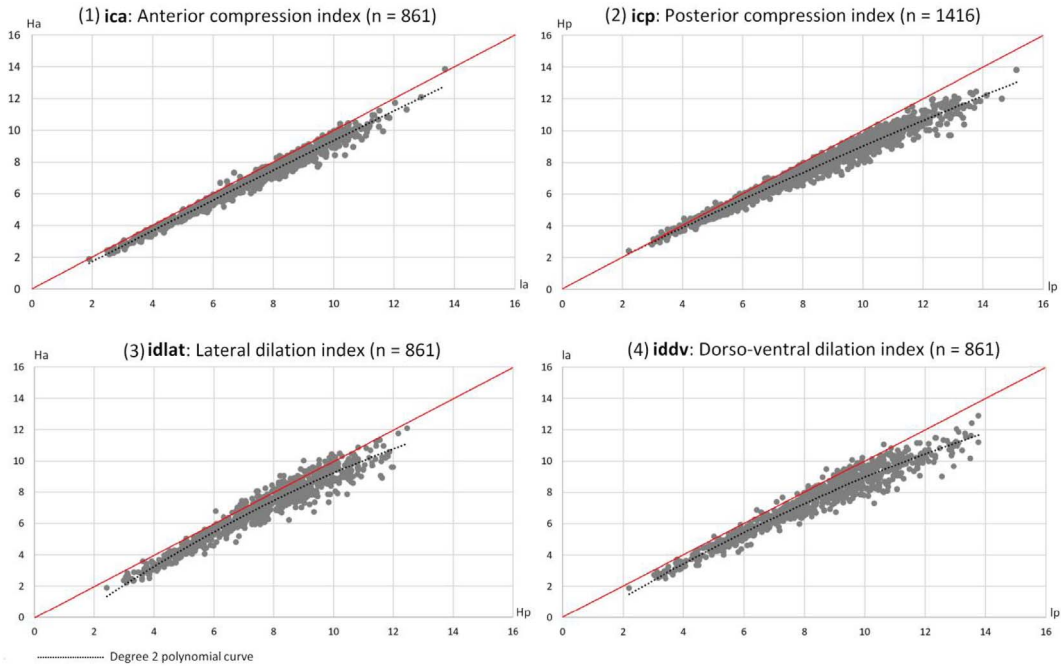
(south-eastern France). They belong to the Thomel-Picollier collection. The full data are available in paragraph 2.

ont.	A - Transverse ratios—compression and dilation indices							
	icp (<i>n</i> = 1416)		ica (<i>n</i> = 861)		iddv (<i>n</i> = 861)		idlat (<i>n</i> = 861)	
	Mean	Extreme val.	Mean	Extreme val.	Mean	Extreme val.	Mean	Extreme val.
Genre <i>Castellanibelus</i>								
Σ	0.92	0.75 ≤ icp ≤ 1.10	0.93	0.82 ≤ ica ≤ 1.10	1.12	0.92 ≤ iddv ≤ 1.41	1.11	0.87 ≤ idlat ≤ 1.53
mj	1.00	0.89 ≤ icp ≤ 1.10	0.92	0.85 ≤ ica ≤ 1.01	1.16	1.06 ≤ iddv ≤ 1.37	1.26	1.09 ≤ idlat ≤ 1.49
vj	0.95	0.84 ≤ icp ≤ 1.10	0.92	0.82 ≤ ica ≤ 0.99	1.14	0.97 ≤ iddv ≤ 1.39	1.18	1.01 ≤ idlat ≤ 1.53
j	0.92	0.78 ≤ icp ≤ 1.04	0.93	0.82 ≤ ica ≤ 1.10	1.11	0.93 ≤ iddv ≤ 1.35	1.10	0.89 ≤ idlat ≤ 1.18
sa	0.90	0.76 ≤ icp ≤ 0.99	0.94	0.82 ≤ ica ≤ 1.02	1.12	0.92 ≤ iddv ≤ 1.41	1.07	0.92 ≤ idlat ≤ 1.39
a	0.89	0.75 ≤ icp ≤ 0.99	0.94	0.86 ≤ ica ≤ 1.02	1.13	1.19 ≤ iddv ≤ 1.39	1.08	0.87 ≤ idlat ≤ 1.31
<i>Castellanibelus orbignyana</i> [Duval-Jouve, 1841] [= B]								
Σ	0.93	0.82 ≤ icp ≤ 1.04	0.94	0.87 ≤ ica ≤ 1.10	1.12	0.96 ≤ iddv ≤ 1.34	1.10	0.87 ≤ idlat ≤ 1.36
mj	0.97	0.92 ≤ icp ≤ 1.02	0.94	0.90 ≤ ica ≤ 0.99	1.14	1.07 ≤ iddv ≤ 1.21	1.17	1.09 ≤ idlat ≤ 1.25
vj	0.96	0.89 ≤ icp ≤ 1.04	0.91	0.87 ≤ ica ≤ 0.97	1.14	1.06 ≤ iddv ≤ 1.24	1.20	1.09 ≤ idlat ≤ 1.36
j	0.93	0.85 ≤ icp ≤ 1.00	0.94	0.87 ≤ ica ≤ 1.10	1.12	0.98 ≤ iddv ≤ 1.31	1.10	0.93 ≤ idlat ≤ 1.29
sa	0.92	0.86 ≤ icp ≤ 0.99	0.95	0.88 ≤ ica ≤ 1.01	1.12	0.97 ≤ iddv ≤ 1.33	1.07	0.92 ≤ idlat ≤ 1.34
a	0.90	0.82 ≤ icp ≤ 0.98	0.95	0.89 ≤ ica ≤ 1.02	1.12	0.96 ≤ iddv ≤ 1.34	1.06	0.87 ≤ idlat ≤ 1.31
<i>Castellanibelus suborbignyana</i> [Toucas, 1890] [= C]								
Σ	0.93	0.82 ≤ icp ≤ 1.03	0.94	0.86 ≤ ica ≤ 1.03	1.09	0.93 ≤ iddv ≤ 1.39	1.08	0.89 ≤ idlat ≤ 1.40
mj	1.00	0.93 ≤ icp ≤ 1.03	0.89	0.87 ≤ ica ≤ 0.92	1.14	1.06 ≤ iddv ≤ 1.19	1.26	1.15 ≤ idlat ≤ 1.40
vj	0.95	0.85 ≤ icp ≤ 0.99	0.92	0.86 ≤ ica ≤ 0.98	1.12	1.02 ≤ iddv ≤ 1.39	1.14	1.04 ≤ idlat ≤ 1.20
j	0.94	0.82 ≤ icp ≤ 1.00	0.94	0.88 ≤ ica ≤ 1.03	1.08	0.93 ≤ iddv ≤ 1.35	1.07	0.89 ≤ idlat ≤ 1.31
sa	0.92	0.87 ≤ icp ≤ 0.99	0.95	0.88 ≤ ica ≤ 1.00	1.07	0.95 ≤ iddv ≤ 1.26	1.04	0.94 ≤ idlat ≤ 1.25
a	0.90	0.84 ≤ icp ≤ 0.99	0.94	0.91 ≤ ica ≤ 1.00	1.09	1.03 ≤ iddv ≤ 1.14	1.07	1.00 ≤ idlat ≤ 1.15
<i>Castellanibelus vaubellensis</i> [Janssen, 2018] [= A]								
Σ	0.94	0.84 ≤ icp ≤ 1.10	0.94	0.82 ≤ ica ≤ 1.08	1.13	0.96 ≤ iddv ≤ 1.41	1.13	0.90 ≤ idlat ≤ 1.49
mj	1.01	0.93 ≤ icp ≤ 1.10	0.93	0.85 ≤ ica ≤ 1.01	1.16	1.07 ≤ iddv ≤ 1.37	1.27	1.13 ≤ idlat ≤ 1.49
vj	0.96	0.88 ≤ icp ≤ 1.10	0.92	0.82 ≤ ica ≤ 0.99	1.15	0.97 ≤ iddv ≤ 1.34	1.19	1.02 ≤ idlat ≤ 1.53
j	0.94	0.86 ≤ icp ≤ 1.04	0.94	0.83 ≤ ica ≤ 1.08	1.11	0.96 ≤ iddv ≤ 1.34	1.11	0.96 ≤ idlat ≤ 1.41
sa	0.90	0.86 ≤ icp ≤ 0.99	0.94	0.86 ≤ ica ≤ 1.00	1.13	0.99 ≤ iddv ≤ 1.41	1.10	0.96 ≤ idlat ≤ 1.39
a	0.91	0.84 ≤ lcm ≤ 0.97	0.94	0.86 ≤ ica ≤ 1.00	1.14	1.00 ≤ iddv ≤ 1.39	1.11	0.90 ≤ idlat ≤ 1.28
<i>Castellanibelus toucasi</i> sp. nov. [= D]								
Σ	0.87	0.75 ≤ icp ≤ 0.98	0.91	0.82 ≤ ica ≤ 1.02	1.13	0.92 ≤ iddv ≤ 1.35	1.09	0.91 ≤ idlat ≤ 1.44
mj	0.95	0.89 ≤ icp ≤ 0.98	0.90	0.82 ≤ ica ≤ 0.93	1.17	1.12 ≤ iddv ≤ 1.26	1.23	1.10 ≤ idlat ≤ 1.44
vj	0.91	0.84 ≤ icp ≤ 0.98	0.89	0.82 ≤ ica ≤ 0.95	1.15	1.07 ≤ iddv ≤ 1.32	1.19	1.09 ≤ idlat ≤ 1.29
j	0.87	0.78 ≤ icp ≤ 0.93	0.90	0.82 ≤ ica ≤ 1.00	1.13	1.00 ≤ iddv ≤ 1.29	1.09	0.91 ≤ idlat ≤ 1.32
sa	0.86	0.76 ≤ icp ≤ 0.91	0.91	0.82 ≤ ica ≤ 1.02	1.13	0.92 ≤ iddv ≤ 1.35	1.06	0.93 ≤ idlat ≤ 1.18
a	0.83	0.75 ≤ icp ≤ 0.89	0.91	0.86 ≤ ica ≤ 0.95	1.15	1.06 ≤ iddv ≤ 1.24	1.04	0.97 ≤ idlat ≤ 1.13

B - Longitudinal ratios—Apical part—Alveolar groove											
ont.	L_{pr}	Psr (n = 1416)			Apical angle		L_s*	Mucro (n = 1423)			
		Mean	Mean	Extreme val.	Mean	Extreme val.		Mean	c	dc	d
Genre <i>Castellanibelus</i>											
Σ	38%	1.51	0.73 ≤ L_{pp}/lm ≤ 2.76		38°	21° ≤ a.ap. ≤ 68°		70%	33%	54%	13%
mj	38%	1.80	1.39 ≤ L _{pp} /lm ≤ 2.18		31°	26° ≤ a.ap. ≤ 39°		63%	11%	74%	15%
vj	39%	1.75	1.28 ≤ L _{pp} /lm ≤ 2.76		32°	21° ≤ a.ap. ≤ 43°		67%	23%	62%	15%
j	38%	1.53	0.84 ≤ L _{pp} /lm ≤ 2.33		37°	24° ≤ a.ap. ≤ 61°		70%	31%	54%	15%
sa	37%	1.41	0.96 ≤ L _{pp} /lm ≤ 2.19		40°	26° ≤ a.ap. ≤ 55°		72%	39%	50%	11%
a	36%	1.31	0.73 ≤ L _{pp} /lm ≤ 2.05		43°	27° ≤ a.ap. ≤ 68°		73%	42%	54%	4%
<i>Castellanibelus orbignyanus</i> [Duval-Jouve, 1841] [= B]											
Σ	32%	1.20	0.73 ≤ L_{pp}/lm ≤ 1.66		46°	34° ≤ a.ap. ≤ 68°		72%	67%	32.5%	0.5%
mj	34%	1.43	1.39 ≤ L _{pp} /lm ≤ 1.47		39°	38° ≤ a.ap. ≤ 39°		63%	17%	83%	
vj	35%	1.43	1.28 ≤ L _{pp} /lm ≤ 1.66		39°	34° ≤ a.ap. ≤ 43°		69%	50%	50%	
j	32%	1.22	0.91 ≤ L _{pp} /lm ≤ 1.54		45°	36° ≤ a.ap. ≤ 58°		72%	62%	38%	
sa	31%	1.14	0.96 ≤ L _{pp} /lm ≤ 1.35		48°	41° ≤ a.ap. ≤ 55°		73%	79%	20%	1%
a	31%	1.04	0.73 ≤ L _{pp} /lm ≤ 1.19		52°	45° ≤ a.ap. ≤ 68°		74%	82%	18%	
<i>Castellanibelus suborbignyanus</i> [Toucas, 1890] [= C]											
Σ	47%	2.01	1.63 ≤ L_{pp}/lm ≤ 2.76		28°	21° ≤ a.ap. ≤ 34°		68%	77%	22%	1%
mj	44%	2.09	2.01 ≤ L _{pp} /lm ≤ 2.18		27°	26° ≤ a.ap. ≤ 28°		62%	60%	40%	
vj	46%	2.15	2.01 ≤ L _{pp} /lm ≤ 2.76		26°	21° ≤ a.ap. ≤ 28°		66%	64%	33%	3%
j	47%	2.05	1.80 ≤ L _{pp} /lm ≤ 2.33		27°	24° ≤ a.ap. ≤ 31°		68%	79%	20%	1%
sa	47%	1.91	1.69 ≤ L _{pp} /lm ≤ 2.19		29°	26° ≤ a.ap. ≤ 33°		69%	87%	13%	
a	46%	1.82	1.63 ≤ L _{pp} /lm ≤ 2.05		31°	27° ≤ a.ap. ≤ 34°		72%	69%	31%	
<i>Castellanibelus vaubellensis</i> [Janssen, 2018] [= A]											
Σ	39%	1.57	1.21 ≤ L_{pp}/lm ≤ 1.99		36°	28° ≤ a.ap. ≤ 45°		69%	12%	85%	3%
mj	37%	1.80	1.58 ≤ L _{pp} /lm ≤ 1.99		31°	28° ≤ a.ap. ≤ 35°		62%	3%	90%	7%
vj	39%	1.73	1.44 ≤ L _{pp} /lm ≤ 1.88		32°	30° ≤ a.ap. ≤ 38°		66%	6%	92%	2%
j	39%	1.60	1.33 ≤ L _{pp} /lm ≤ 1.65		35°	30° ≤ a.ap. ≤ 37°		69%	9%	88%	3%
sa	38%	1.46	1.22 ≤ L _{pp} /lm ≤ 1.68		38°	33° ≤ a.ap. ≤ 45°		71%	17%	79%	4%
a	37%	1.35	1.21 ≤ L _{pp} /lm ≤ 1.56		41°	35° ≤ a.ap. ≤ 45°		71%	25%	74%	1%
<i>Castellanibelus toucasi</i> sp. nov. [= D]											
Σ	37%	1.46	1.06 ≤ L_{pp}/lm ≤ 1.94		38°	29° ≤ a.ap. ≤ 50°		71%	2%	43%	55%
mj	37%	1.74	1.58 ≤ L _{pp} /lm ≤ 1.92		32°	29° ≤ a.ap. ≤ 35°		66%			100%
vj	37%	1.72	1.48 ≤ L _{pp} /lm ≤ 1.94		33°	29° ≤ a.ap. ≤ 37°		68%		23%	77%
j	38%	1.50	1.13 ≤ L _{pp} /lm ≤ 1.90		37°	29° ≤ a.ap. ≤ 50°		70%	3%	34%	63%
sa	36%	1.35	1.06 ≤ L _{pp} /lm ≤ 1.64		41°	35° ≤ a.ap. ≤ 50°		73%	2%	59%	39%
a	36%	1.22	1.08 ≤ L _{pp} /lm ≤ 1.40		45°	39° ≤ a.ap. ≤ 50°		76%		75%	25%

*Related to L_{tp} (length of stem-post), itself estimated at 83% of the total length (L).

C - Graphs from index values



Supplementary Figures S1–S4. Distribution of *Castellanibelus* rostra according to compression and expansion indices.

1.2. Malformations and taphonomic traces

The study of malformed rostra was carried out using the Keupp [2012] observation grid. Rostra showing traces of taphonomic origin or related to exogenous post-mortem intervention were excluded.

72 rostra out of 1762 show malformations (4% of *Castellanibelus*). Some specimens show more than one type of malformation, with the pathologies linked to each other (Plate 5).

forma aegra	nbr	forma aegra	nbr
<i>angulata</i>	2	<i>hamata</i>	11
<i>bullata</i>	6	<i>manca</i>	2
<i>clavata</i>	29	<i>ulifera</i>	14
<i>collata</i>	6	<i>saepia</i>	2
<i>dissulcata</i>	4		

168 specimens show a granular zone (Plate 5, Figures 13–14), more or less extended (~10% of all the

Castellanibelus). The central point of this zone is located in the protoconch area on the ventral side, at all stages of growth.

The hypothesis that this granular zone is related to disorders of the mantle tissue [f. a. *granulata* Keupp] is excluded because of the regularity of its positioning and the relatively high number of rostra that show it.

It could be taphonomic in origin, caused by a different chemical microenvironment, e.g. due to the presence of blood vessels that have been repeatedly reported on the ventral side of the rostra. This hypothesis, proposed by Dirk Fuchs (personal communication), would explain both the regularity of the positioning and its relative frequency.

2. Complete data (1762 *Castellanibelus* rostra—Valanginian—Vocontian Basin, southeast France)

1	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddv	ldlat	Ltp	Lpp	Ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex (INVTAN apex)/2	ap. agl.	alv. agl.	Lad	Lal	muco	
LV	Neoc.	1	<i>touc.</i>	3019	c	j	41.6	7.0	8.7	0.81	6.3	6.9	0.92	1.26	1.11	36.0	12.0	25.0	0.69	0.33	1.39	0.36	0.69	40		13.5	0.38	dc
LV	Neoc.	1	<i>touc.</i>	3020	c-pa	j	38.0	8.5	9.9	0.86	7.3	7.9	0.93	1.26	1.16	35.0	15.0	27.0		0.43	1.52	0.33	0.64	36		13.0	0.37	dc
LV	Neoc.	1	<i>orb.</i>	3023	pmpp	a	43.2	10.2	11.4	0.89	10.5	10.7	0.98	1.07	0.97	40.0	11.5	28.0	0.70	0.29	1.01	0.50	0.92	53		16.0	0.40	dc
LV	Pert.	1	<i>touc.</i>	3024	pmpp	j/sa	37.3																					
LV	Pert.	1	<i>suborb.</i>	3025	c-pa	sa	49.3	9.2	10.4	0.89	8.8	9.5	0.93	1.09	1.05	41.0	20.0	34.0	0.83	0.49	1.92	0.26	0.51	29		17.5	0.43	c
LV	Pert.	1	<i>touc.</i>	3026	pmpp	sa	45.3	9.2	11.1	0.83	8.2	9.2	0.89	1.20	1.13	40.0	14.0	31.0	0.78	0.35	1.27	0.40	0.75	43		17.0	0.43	d
LV	Pert.	1	<i>touc.</i>	3027	c-pa	j	41.5	7.8	9.6	0.81	7.3	8.0	0.91	1.20	1.07	35.5	12.0	29.0	0.82	0.34	1.25	0.40	0.76	44		14.5	0.41	dc
LV	Pert.	1	<i>touc.</i>	3028	c	a	58.9	9.8	12.5	0.78	9.6	10.8	0.89	1.15	1.01	50.0	14.0	42.0	0.84	0.28	1.12	0.45	0.84	48		21.5	0.43	dc
LV	Pert.	1	<i>touc.</i>	3029	c	sa	51.2	8.4	9.5	0.88	7.7	8.3	0.93	1.14	1.08	45.0	15.0	35.5	0.79	0.33	1.58	0.32	0.61	35		16.0	0.36	dc
LV	Neoc.	1	<i>orb.</i>	3175	c	j	40.6	6.6	7.0	0.94	5.9	6.1	0.97	1.16	1.12	34.0	8.5	23.5	0.69	0.25	1.21	0.41	0.79	45		10.0	0.29	c
UV	Verr.	1	<i>orb.</i>	3202	c	a	53.2	10.7	11.9	0.90	10.1	10.5	0.96	1.13	1.06	44.5	12.0	33.0	0.74	0.27	1.01	0.49	0.92	53		20.5	0.46	c
UV	Verr.	1	<i>vaub.</i>	3211	c	a	53.3	12.0	12.3	0.97	9.6	10.3	0.93	1.19	1.25	42.5	15.0	29.0	0.68	0.35	1.22	0.41	0.78	45		16.0	0.38	c
UV	Verr.	1	<i>touc.</i>	3225	c-pa	sa	49.8	8.9	10.3	0.86	9.0	9.7	0.92	1.06	0.99	42.0	14.5	30.0	0.71	0.35	1.41	0.36	0.68	39		19.5	0.46	dc
UV	Verr.	1	<i>orb.</i>	3226	c	sa	47.3	10.5	11.1	0.95	8.8	9.2	0.95	1.20	1.19	44.0	12.0	32.5	0.74	0.27	1.08	0.46	0.87	50		22.0	0.50	c
UV	Verr.	1	<i>vaub.</i>	3256	c	sa	51.4	10.6	11.4	0.93	9.4	9.8	0.96	1.16	1.12	46.0	15.0	35.5	0.77	0.33	1.32	0.38	0.72	41		20.0	0.43	c
UV	Verr.	1	<i>orb.</i>	3257	pmpp	j	37.0	9.6	10.5	0.92	8.3	8.5	0.98	1.23	1.15	31.5	11.0	21.0	0.67	0.35	1.05	0.48	0.89	51		13.0	0.41	c
LV	Neoc.	1	<i>touc.</i>	3261	pmpp	j	35.6	9.1	10.8	0.85	7.7	8.4	0.92	1.29	1.18	34.5	13.5	22.0	0.64	0.39	1.25	0.40	0.76	44				dc
LV	Neoc.	1	sp.	3262	pmpp	sa	38.7																					
UV	Verr.	1	sp.	4190	c-pa	j	38.2	10.1	10.5	0.97	7.9	8.1	0.97	1.29	1.28	35.0	12.0	23.0	0.66	0.34	1.15	0.44	0.82	47		12.5	0.36	c
LV	Pert.	1	<i>touc.</i>	4514	pmpp	sa	39.9	8.9	9.8	0.91	8.7	9.1	0.96	1.08	1.02	37.0	14.0	28.0	0.76	0.38	1.43	0.35	0.67	38		14.5	0.39	d
LV	Pert.	1	<i>touc.</i>	4515	c	vj	26.2	4.0	4.4	0.91	3.5	4.1	0.86	1.07	1.13	20.5	6.5	14.0	0.68	0.32	1.49	0.34	0.65	37		5.5	0.27	d
LV	Pert.	1	<i>touc.</i>	4516	pmpp	j	31.0	7.8	8.9	0.89	7.5	8.0	0.93	1.10	1.05	30.0	10.0	22.0	0.73	0.33	1.13	0.44	0.83	48		12.0	0.40	dc
LV	Neoc.	1	<i>touc.</i>	4528	pp	sa	26.7	8.7	10.3	0.84											1.16	0.43	0.81	47				dc
LV	Neoc.	1	<i>vaub.</i>	4529	pmpp	sa	38.9	8.2	9.3	0.88	8.5	9.3	0.91	0.99	0.96	36.0	15.0	20.0	0.56	0.42	1.62	0.31	0.60	34		8.0	0.22	dc
UV	Verr.	1	<i>touc.</i>	4576	c-pa	j	28.6	6.3	7.1	0.89	6.0	6.6	0.91	1.07	1.05	26.5	9.5	19.0	0.72	0.36	1.34	0.37	0.72	41		13.0	0.49	dc
UV	Verr.	1	<i>orb.</i>	4577	pmpp	vj	20.5	4.7	5.0	0.96	3.5	4.0	0.87	1.24	1.36	19.5	6.5	12.0	0.62	0.33	1.31	0.38	0.73	42		5.0	0.26	dc
UV	Verr.	1	<i>vaub.</i>	4578	c	sa	51.2	9.5	10.6	0.90	9.0	9.6	0.94	1.11	1.06	45.5	15.0	32.0	0.70	0.33	1.41	0.35	0.68	39		20.5	0.45	dc
UV	Verr.	1	<i>vaub.</i>	4579	pmpp	a	34.9	10.5	11.2	0.94	9.0	9.0	0.99	1.24	1.17	33.0	15.0	23.0	0.70	0.45	1.34	0.37	0.71	41		12.0	0.36	dc
UV	Verr.	1	<i>orb.</i>	4580	pmpp	vj/j	23.0	5.9	6.2	0.96	4.6	5.2	0.88	1.18	1.27	21.0	8.5	19.0	0.90	0.40	1.38	0.36	0.69	40		5.0	0.24	dc
UV	Verr.	1	<i>vaub.</i>	4581	c	a	51.9	10.3	11.0	0.93	9.3	10.0	0.93	1.11	1.11	44.5	15.0	31.5	0.71	0.34	1.36	0.37	0.70	40		21.0	0.47	c
UV	Verr.	1	<i>vaub.</i>	4582	pmpp	sa	35.1	8.2	9.2	0.90	7.4	7.8	0.96	1.18	1.10	33.5	12.0	21.0	0.63	0.36	1.31	0.38	0.73	42		15.0	0.45	dc
UV	Verr.	1	<i>vaub.</i>	4583	pmpp	a	38.1	9.9	10.8	0.91	8.7	9.6	0.91	1.13	1.13	36.0	15.0	24.0	0.67	0.42	1.38	0.36	0.69	40		12.0	0.33	dc
LV	Neoc.	1	<i>vaub.</i>	4924	c	mj	24.2	3.3	3.2	1.03	2.5	2.6	0.97	1.24	1.32	16.5	5.0	11.0	0.67	0.30	1.58	0.32	0.61	35		3.5	0.21	dc
UV	Verr.	1	<i>vaub.</i>	5211	pmpp	j	26.4	5.4	5.7	0.94	4.3	4.6	0.92	1.24	1.26	25.0	9.5	16.5	0.66	0.38	1.66	0.30	0.59	34		7.0	0.28	dc
UV	Verr.	1	<i>orb.</i>	5214	c	a	59.0	12.0	13.2	0.91	13.9	13.7	1.01	0.96	0.87	42.0	13.0	22.0	0.52	0.31	0.99	0.51	0.94	54		21.0	0.50	c
UV	Verr.	1	<i>orb.</i>	5215	c	j	41.6	6.9	7.2	0.95	6.4	6.5	0.97	1.10	1.08	32.5	11.0	21.0	0.65	0.34	1.53	0.33	0.63	36		12.0	0.37	dc
UV	Verr.	1	<i>vaub.</i>	5839	c	j	42.4	7.8	8.1	0.96	7.8	8.0	0.97	1.01	1.00	38.0	13.5	28.0	0.74	0.36	1.67	0.30	0.58	33		16.0	0.42	dc
UV	Verr.	1	<i>vaub.</i>	5840	c-pa	vj	25.9	4.7	5.3	0.89	3.8	4.3	0.88	1.24	1.24	23.5	8.5	17.0	0.72	0.36	1.60	0.31	0.60	35		6.0	0.26	dc
UV	Verr.	1	<i>orb.</i>	5841	c	j	37.1	7.1	7.3	0.97	6.2	6.5	0.95	1.11	1.14	34.0	10.0	23.0	0.68	0.29	1.37	0.36	0.70	40		13.0	0.38	dc
UV	Verr.	1	<i>orb.</i>	5868	c	a	54.1	10.8	12.1	0.90	10.0	10.0	1.00	1.21	1.09	48.0	13.0	37.0	0.77	0.27	1.07	0.47	0.87	50		23.0	0.48	c
UV	Verr.	1	<i>vaub.</i>	5869	c	vj	32.7	5.4	6.0	0.91	4.8	5.2	0.92	1.15	1.14	28.0	10.5	21.0	0.75	0.38	1.76	0.28	0.55	32		8.0	0.29	dc
UV	Verr.	1	<i>vaub.</i>	5870	c-pa	mj	22.3	3.8	3.9	0.97	3.2	3.5	0.92	1.12	1.17	19.5	7.5	13.0	0.67	0.38	1.92	0.26	0.51	29		5.5	0.28	dc
UV	Verr.	1	sp.	5871	c-pa	j	29.8																					
LV	Neoc.	1	<i>suborb.</i>	6983	c-pa	j	40.9	7.7	8.3	0.92	7.3	7.7	0.94	1.08	1.06	35.5	16.0	25.0	0.70	0.45	1.92	0.26	0.51	29		11.5	0.32	c
LV	Neoc.	1	<i>touc.</i>	6984	pp	j	24.9	6.2	7.1	0.87											1.54	0.32	0.63	36				d
LV	Neoc.	1	<i>vaub.</i>	6986	pmpp	j	28.8	7.0	7.5	0.94	6.0	6.7	0.89	1.12	1.18	28.0	12.0	19.0	0.68	0.43	1.61	0.31	0.60	35		7.0	0.25	dc
LV	Neoc.	1	<i>vaub.</i>	6987	pmpp	j		7.64	8.41	0.91								14			1.66	0.30	0.58	33				dc
UV	Verr.	1	<i>suborb.</i>	17487	c	a	58.4	10.5	11.0	0.95	9.1	9.9	0.92	1.11	1.15	52.5	22.5	35.0	0.67	0.43	2.05	0.24	0.48	27		20.0	0.38	c
UV	Verr.	1	<i>suborb.</i>	17488	c-pa	sa	44.6	9.2	9.9	0.93	9.5	10.0	0.95	0.99	0.98	40.0	20.0	28.0	0.70	0.50	2.02	0.25	0.49	28		19.5	0.49	c
UV	Verr.	1	<i>vaub.</i>	17489	c	sa	53.5	10.4	10.8	0.97	7.9	8.5	0.93	1.27	1.32	44.0	15.0	26.0	0.59	0.34	1.39	0.36	0.69	39		15.0	0.34	c
UV	Verr.	1	<i>vaub.</i>	17490	pmpp	j		7.9	8.5	0.93	7.4	8.4	0.88	1.01	1.07	35.0	14.0	26.0	0.74	0.40	1.65	0.30	0.59	34		15.0	0.43	c
UV	Verr.	1	<i>suborb.</i>	17491	pmpp	j		8.3	9.2	0.90	8.1	9.0	0.90	1.02	1.02	35.0	18.0	28.0	0.80	0.51	1.96	0.26	0.50	29				c
UV	Verr.	1	<i>vaub.</i>	21076	pmpp	sa		9.7	10.1	0.96	9.0	9.6	0.93	1.05	1.07	3												

2	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddv	ldlat	Ltp	Lpp	Ls	Ls/Ltp	Lpp/Ltp	Prs	TAN apex	(INVTAN apex) ²	ap. agl.	alv. agl.	Lad	Lal	micro
UV	Verr.	1	vaub.	29771	pp	a	32.4	9.9	11.1	0.89											1.39	0.36	0.69	40			dc	
UV	Verr.	1	vaub.	30211	pmpp	sa	35.7	9.2	9.3	0.99	8.4	9.2	0.91	1.01	1.09	31.0	13.0	21.0	0.68	0.42	1.40	0.36	0.69	39	10.5	0.34	dc	
LV	Pert.	1	touc.	30282	c	sa/a	49.7	9.0	10.9	0.82	7.9	9.5	0.83	1.15	1.14	43.0	13.0	34.0	0.79	0.30	1.19	0.42	0.80	46	17.0	0.40	dc	
LV	Pert.	1	touc.	30283	pmpp	sa	37.7	7.7	9.1	0.85	6.8	7.4	0.91	1.23	1.14	36.0	14.0	25.5	0.71	0.39	1.54	0.32	0.63	36	14.0	0.39	d	
LV	Pert.	1	vaub.	30284	pmpp	sa	37.6	8.4	9.0	0.93	7.7	8.0	0.96	1.12	1.10	34.0	14.0	25.5	0.75	0.41	1.55	0.32	0.62	36	13.0	0.38	dc	
LV	Pert.	1	touc.	30285	c-pa	sa	46.5	8.3	9.1	0.91	8.0	8.3	0.96	1.10	1.05	37.5	12.5	28.0	0.75	0.33	1.37	0.36	0.70	40	12.0	0.32	dc	
LV	Pert.	1	touc.	30286	pmpp	j	33.4	7.3	8.1	0.91	6.7	7.1	0.95	1.14	1.09	29.0	14.0	21.0	0.72	0.48	1.73	0.29	0.56	32	10.5	0.36	d	
LV	Pert.	1	touc.	30287	pmpp	j	31.4	6.3	7.3	0.87	5.6	6.7	0.84	1.09	1.13	28.0	12.0	20.0	0.71	0.43	1.65	0.30	0.59	34	13.0	0.46	d	
UV	Verr.	1	sp.	30313	pmpp	j	29.4																					
UV	Verr.	1	vaub.	30339	pmpp	j	28.3	8.4	9.2	0.91							14.0				1.52	0.33	0.63	36			dc	
UV	Verr.	1	touc.	30341	pmpp	sa	33.3	9.3	10.9	0.86							14.5				1.33	0.37	0.72	41			dc	
UV	Verr.	1	touc.	30342	pmpp	j	27.6	8.1	9.2	0.88							12.0				1.31	0.38	0.73	42			dc	
UV	Verr.	1	orb.	30343	pp	sa	24.5	8.3	8.9	0.93							8.5				0.95	0.52	0.97	55			c	
UV	Verr.	1	vaub.	30344	pmpp	j	26.6	6.9	7.6	0.91							11.0				1.44	0.35	0.67	38			dc	
UV	Verr.	1	vaub.	30402	pmpp	j	25.5	5.9	6.1	0.96	5.3	5.8	0.91	1.05	1.10	24.0	9.5	16.0	0.67	0.40	1.55	0.32	0.62	36	7.0	0.29	dc	
UV	Verr.	1	sp.	30660	pp	sa	28.5																					
UV	Verr.	1	vaub.	30661	pmpp	j/sa	31.5	9.1	9.4	0.97							13.5				1.44	0.35	0.67	38			dc	
UV	Verr.	1	vaub.	30662	c	vj	28.4	4.5	4.5	1.00	4.1	4.3	0.94	1.03	1.09	24.0	8.0	16.0	0.67	0.33	1.79	0.28	0.55	31	7.0	0.29	dc	
UV	Pere.	1	orb.	30689	pmpp	sa	32.3	8.2	8.9	0.91	8.1	8.4	0.96	1.07	1.01	30.0	11.5	21.0	0.70	0.38	1.29	0.39	0.74	42	10.0	0.33	c	
UV	Verr.	1	vaub.	30847	c	a	60.0	10.7	11.8	0.91	10.3	10.4	0.99	1.13	1.04	48.0	15.0	34.5	0.72	0.31	1.27	0.39	0.75	43	22.0	0.46	dc	
UV	Verr.	1	orb.	30848	pmpp	j	29.0	6.4	6.8	0.93							9.5				1.39	0.36	0.69	40	18		c	
UV	Verr.	1	vaub.	30849	pmpp	sa	38.8	8.9	9.4	0.95	8.0	9.0	0.89	1.04	1.12	37.0	13.5	27.0	0.73	0.36	1.44	0.35	0.67	38	11.5	0.31	dc	
UV	Verr.	1	vaub.	30850	c	j	30.7	5.7	6.1	0.93	5.2	5.7	0.90	1.07	1.11	28.0	10.5	18.5	0.66	0.38	1.71	0.29	0.57	33	9.0	0.32	dc	
UV	Verr.	1	vaub.	30851	pmpp	sa	32.4	9.4	10.4	0.91							14.5				1.40	0.36	0.69	39			dc	
UV	Verr.	1	vaub.	30852	pmpp	vj	23.5	5.6	5.6	0.99							9.0				1.60	0.31	0.61	35			c	
UV	Verr.	1	sp.	30853	f																							
UV	Verr.	1	touc.	30854	pp	vj/j	21.8	6.0	6.6	0.92							9.0				1.37	0.37	0.70	40			d	
UV	Verr.	1	touc.	30855	pmpp	j/sa	28.6	8.5	9.6	0.89							13.0				1.36	0.37	0.70	40			dc	
UV	Verr.	1	vaub.	30856	pp	sa	24.4	10.0	10.6	0.95							15.0				1.42	0.35	0.68	39			c	
UV	Verr.	1	vaub.	30857	paap	a	26.3	9.9	11.0	0.90							15.0				1.36	0.37	0.70	40			dc	
UV	Verr.	1	suborb.	31019	c	j/sa	43.0	8.1	8.3	0.97	8.1	8.2	0.98	1.01	1.00	31.0	17.5	27.0	0.87	0.56	2.10	0.24	0.47	27	16.0	0.52	dc	
UV	Verr.	1	orb.	31020	c-pa	sa	47.7	9.8	10.3	0.95	9.3	9.4	0.99	1.10	1.06	43.0	11.5	31.0	0.72	0.27	1.12	0.45	0.84	48	17.5	0.41	c	
UV	Verr.	1	vaub.	31021	c	j/sa	44.9	8.2	9.5	0.86	7.7	8.0	0.97	1.19	1.06	36.5	14.0	28.0	0.77	0.38	1.48	0.34	0.65	37	14.5	0.40	dc	
UV	Verr.	1	suborb.	31022	c-pa	vj	26.3	4.5	5.1	0.89	4.2	4.8	0.88	1.05	1.07	23.5	11.0	13.0	0.55	0.47	2.16	0.23	0.46	26	7.8	0.33	c	
UV	Verr.	1	suborb.	31024	c	vj	32.1	5.4	5.5	0.97	4.4	4.9	0.90	1.14	1.23	28.0	11.5	20.0	0.71	0.41	2.08	0.24	0.47	27	8.0	0.29	c	
UV	Verr.	1	vaub.	31025	c-pa	vj	25.6	5.0	5.3	0.95	4.3	4.8	0.89	1.10	1.17	22.0	8.5	16.0	0.73	0.39	1.62	0.31	0.60	34	7.0	0.32	dc	
UV	Verr.	1	vaub.	31026	c	j/sa	48.8	9.5	10.1	0.93	8.0	8.1	0.98	1.25	1.19	38.0	16.0	28.5	0.75	0.42	1.58	0.32	0.61	35	12.0	0.32	dc	
UV	Verr.	1	suborb.	31027	pmpp	sa	41.3	9.3	9.6	0.97	9.6	10.1	0.95	0.95	0.97	34.0	21.0	25.0	0.74	0.62	2.19	0.23	0.45	26	13.0	0.38	c	
UV	Verr.	1	vaub.	31028	c	sa	54.6	9.8	10.7	0.91	7.9	8.1	0.97	1.32	1.25	41.0	17.0	37.0	0.90	0.41	1.58	0.32	0.61	35	16.0	0.39	c	
UV	Verr.	1	vaub.	31029	pmpp	j	33.9	7.5	8.6	0.88	7.5	8.3	0.91	1.04	1.00	32.0	14.0	21.0	0.66	0.44	1.63	0.31	0.59	34	13.0	0.41	dc	
UV	Verr.	1	orb.	31030	pp	j	20.5	7.3	7.7	0.95							10.0				1.30	0.38	0.73	42			dc	
UV	Verr.	1	suborb.	31031	pmpp	j	30.6	7.7	8.3	0.93							16.5				2.00	0.25	0.49	28			dc	
UV	Verr.	1	vaub.	31032	pp	sa	28.0	8.8	9.6	0.91							13.8				1.43	0.35	0.67	38			c	
UV	Verr.	1	vaub.	31033	pmpp	vj	24.6	5.8	6.0	0.98	5.4	5.7	0.96	1.05	1.08	22.0	10.0	13.0	0.59	0.45	1.68	0.30	0.58	33	5.0	0.23	dc	
UV	Verr.	1	vaub.	31085	pmpp	sa	39.1	8.1	8.7	0.94	7.6	8.3	0.92	1.04	1.07	36.5	14.5	27.0	0.74	0.40	1.67	0.30	0.58	33	18.0	0.49	dc	
UV	Verr.	1	suborb.	31086	pmpp	sa	49.1	9.6	10.0	0.96	9.2	9.6	0.95	1.04	1.05	43.0	19.0	30.5	0.71	0.44	1.91	0.26	0.51	29	21.0	0.49	c	
UV	Verr.	1	vaub.	31088	pmpp	j	28.2	6.1	6.6	0.92	5.5	5.9	0.93	1.11	1.10	27.0	10.5	19.0	0.70	0.39	1.60	0.31	0.61	35	8.5	0.31	dc	
UV	Verr.	1	suborb.	31089	pmpp	j/sa	34.3	7.7	7.8	0.98	7.6	7.6	1.00	1.04	1.02	32.0	15.8	22.0	0.69	0.49	2.01	0.25	0.49	28	12.0	0.38	c	
UV	Verr.	1	vaub.	31090	pp	sa	26.4	9.4	10.4	0.90							14.0				1.35	0.37	0.71	41			dc	
LV	Pert.	1	suborb.	31405	pmpp	a	44.0	10.5	12.8	0.82	9.8	10.7	0.92	1.19	1.06	42.0	16.5	31.0	0.74	0.39	1.29	0.39	0.74	42	16.0	0.38	dc	
LV	Pert.	1	suborb.	31406	c-pa	j	40.6	7.7	8.3	0.92	7.7	8.2	0.94	1.02	1.00	37.0	16.0	26.0	0.70	0.43	1.92	0.26	0.51	29	15.0	0.41	c	
LV	Pert.	1	vaub.	31407	pmpp	sa	43.9	9.4	10.4	0.90	9.4	9.8	0.95	1.05	1.00	41.0	16.0	27.0	0.66	0.39	1.54	0.32	0.63	36	13.0	0.32	dc	
LV	Pert.	1	touc.	31408	c-pa	sa	48.8	8.7	10.5	0.82	8.9	10.1	0.88	1.05	0.98	46.5	14.0	35.0	0.75	0.30	1.33	0.38	0.72	41	23.0	0.49	d	
LV	Pert.	1	touc.	31409	pmpp	j	30.2	5.7	6.9	0.83	5.6	6.1	0.92	1.13	1.02	27.5	9.5	19.5	0.71	0.35	1.38	0.36	0.70	40	9.0	0.33	d	
LV	Pert.	1	touc.	31410	pmpp	j	31.4	5.3	6.0	0.88	4.6	5.2	0.88	1.14	1.14	29.0	9.5	20.0	0.69	0.33	1.60	0.31	0.61	35	4.0	0.14	d	
LV	Pert.	1	suborb.	31411	c	j	49.5																				c	
LV	Pert.	1	touc.	31412	c	j	46.5	7.8	8.8	0.89	7.5	7.9	0.95	1.11	1.04	41.0	13.5	31.0	0.76	0.33	1.54	0.33	0.63	36	15.0	0.37	d	
LV	Pert.	1	touc.	31413	pmpp	sa	39.4	8.3	9.5	0.87	8.5	9.7	0.88	0.98	0.98	36.0	14.0	25.0	0.69	0								

4	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	iddv	ldlat	Ltp	Lpp	Ls	Ls/Ltp	Lpp/Ltp	Prs	TAN apex	(NVTAN apex) ²	ap. agl.	alv. agl.	Lad	Lal	micro
UV	Verr.	1	orb.	39090	c	j/sa	42.9	8.2	8.5	0.96	7.8	8.2	0.94	1.03	1.06	39.0	9.5	30.0	0.77	0.24	1.12	0.45	0.84	48		17.0	0.44	c
UV	Verr.	1	suborb.	39091	c	a	52.5	9.9	10.4	0.95	9.9	9.9	1.00	1.05	1.00	43.5	20.0	32.0	0.74	0.46	1.92	0.26	0.51	29	18	19.5	0.45	c
UV	Verr.	1	orb.	39092	c	j	38.5	7.0	7.5	0.94	6.8	7.2	0.94	1.04	1.03	35.0	10.0	25.0	0.71	0.29	1.34	0.37	0.71	41		15.0	0.43	c
UV	Verr.	1	sp.	39093	pmpp	j	30.0																					
UV	Verr.	1	orb.	39094	c-pa	a	51.0	10.8	11.4	0.95	10.1	10.9	0.93	1.04	1.07	43.0	11.0	34.0	0.79	0.26	0.97	0.52	0.95	55	18	17.5	0.41	c
UV	Verr.	1	vaub.	39095	c	j/sa	45.1	7.7	8.7	0.89	7.7	8.1	0.95	1.08	1.01	32.5	13.0	21.0	0.65	0.40	1.49	0.34	0.65	37		15.0	0.46	dc
UV	Verr.	1	touc.	39096	pmpp	sa	33.1	8.6	10.0	0.86	8.2	9.2	0.89	1.08	1.04	31.5	14.0	23.0	0.73	0.44	1.40	0.36	0.68	39		11.5	0.37	dc
UV	Verr.	1	vaub.	39097	pmpp	sa	45.7	10.2	11.0	0.93	8.9	9.9	0.90	1.10	1.14	38.0	16.0	24.0	0.63	0.42	1.46	0.34	0.66	38		12.5	0.33	dc
UV	Verr.	1	orb.	39098	pmpp	j/sa	38.5	8.5	8.7	0.98	7.6	7.6	0.99	1.14	1.12	36.0	10.5	26.0	0.72	0.29	1.21	0.41	0.78	45		12.5	0.35	c
UV	Verr.	1	orb.	39099	pmpp	a	34.5	10.7	12.2	0.88						13.0					1.07	0.47	0.88	50				c
UV	Verr.	1	orb.	39100	c-pa	j	31.7	6.6	6.9	0.95	5.5	6.1	0.90	1.13	1.19	27.0	9.0	19.0	0.70	0.33	1.30	0.39	0.74	42	9.0	0.33	dc	
UV	Verr.	1	vaub.	39111	c-pa	sa	44.9	9.2	10.0	0.91	9.0	9.3	0.97	1.08	1.02	40.0	15.0	29.0	0.73	0.38	1.50	0.33	0.65	37		19.5	0.49	dc
UV	Verr.	1	orb.	39112	pmpp	sa	40.2	10.0	10.9	0.93	10.1	10.5	0.96	1.03	1.00	38.0	11.5	25.5	0.67	0.30	1.06	0.47	0.88	51		15.0	0.39	c
UV	Verr.	1	orb.	39113	pmpp	sa	34.9	9.1	10.2	0.89	8.6	9.3	0.92	1.10	1.06	33.0	11.0	24.0	0.73	0.33	1.08	0.46	0.87	50		15.0	0.45	dc
UV	Verr.	1	orb.	39114	pmpp	a	44.1	10.8	12.0	0.90	9.7	10.2	0.95	1.18	1.12	43.0	14.0	34.0	0.79	0.33	1.16	0.43	0.81	47		19.0	0.44	c
UV	Verr.	1	vaub.	39115	pmpp	sa	41.1	9.2	9.9	0.93	8.8	9.1	0.97	1.09	1.05	37.0	15.0	28.0	0.76	0.41	1.51	0.33	0.64	37		14.0	0.38	dc
UV	Verr.	1	suborb.	39279	c-pa	vj	27.3	5.1	5.2	0.98	4.7	5.0	0.92	1.03	1.09	26.5	10.5	19.0	0.72	0.40	2.02	0.25	0.48	28		9.0	0.34	c
UV	Verr.	1	orb.	39336	pmpp	a	39.8	11.6	12.3	0.94	10.3	11.5	0.89	1.07	1.14	37.0	12.5	29.0	0.78	0.34	1.01	0.49	0.92	53		16.0	0.43	c
UV	Verr.	1	orb.	39337	pp	j	23.7	8.6	9.0	0.95						12.3					1.36	0.37	0.71	40				c
UV	Verr.	1	orb.	39422	pp	j	19.6	7.1	7.6	0.94						9.5					1.26	0.40	0.76	43				c
UV	Verr.	1	orb.	39445	c	j	39.6	7.7	8.3	0.92	7.3	7.9	0.92	1.05	1.05	35.0	11.0	25.0	0.71	0.31	1.32	0.38	0.72	41		17.5	0.50	c
UV	Verr.	1	sp.	39446	pmpp	sa	32.4																					
LV	Neoc.	1	touc.	39875	c	a	53.3	10.5	11.8	0.89	9.3	9.8	0.94	1.19	1.13	45.0	13.0	38.0	0.84	0.29	1.11	0.45	0.85	49		15.0	0.33	dc
UV	Furc.	1	sp.	39878	c	j	40.1																					
UV	Verr.	1	touc.	40687	c-pa	sa	40.6	8.1	9.9	0.82	7.0	8.2	0.85	1.21	1.17	37.5	14.0	31.0	0.83	0.37	1.41	0.35	0.68	39		15.0	0.40	d
LV	Neoc.	1	sp.	40713	pmpp	j	43.5	"spir																				
UV	Verr.	1	orb.	40747	c	j	44.3	8.5	9.4	0.90	8.2	9.0	0.92	1.05	1.03	38.5	8.5	29.0	0.75	0.22	0.91	0.55	1.01	58		18.0	0.47	c
UV	Verr.	1	orb.?	40748	pmpp	sa	36.5	8.9	9.9	0.90	9.5	10.2	0.93	0.97	0.94	33.5	13.0	21.0	0.63	0.39	1.31	0.38	0.73	42		14.0	0.42	c
UV	Verr.	1	orb.	40749	pmpp	sa	41.4	9.9	10.8	0.92	8.7	9.4	0.93	1.15	1.13	32.0	11.5	21.0	0.66	0.36	1.07	0.47	0.88	50		10.0	0.31	c
UV	Verr.	1	vaub.	40750	pp	sa	30.9	10.1	10.3	0.98						16.0					1.56	0.32	0.62	36				dc
UV	Verr.	1	suborb.	40751	c	sa	50.4	8.6	9.9	0.87	8.4	8.5	0.99	1.17	1.03	43.0	17.0	33.0	0.77	0.40	1.71	0.29	0.57	33		16.0	0.37	c
UV	Verr.	1	sp.	40752	pmpp	sa																						
UV	Verr.	1	vaub.	40753	pmpp	j	32.8	6.8	7.8	0.88	7.0	7.3	0.96	1.06	0.97	30.5	12.0	19.0	0.62	0.39	1.55	0.32	0.62	36		11.0	0.36	dc
UV	Verr.	1	vaub.	40754	pmpp	j	26.2	5.8	6.1	0.95	5.4	5.8	0.93	1.07	1.09	24.5	9.0	18.0	0.73	0.37	1.47	0.34	0.66	38				d
UV	Verr.	1	orb.	40756	pmpp	a	35.3	10.1	11.8	0.86						12.5					1.06	0.47	0.88	50				dc
UV	Verr.	1	vaub.	40776	pmpp	sa	34.2	9.8	10.5	0.93						15.0					1.43	0.35	0.67	38				c
UV	Verr.	1	vaub.	40799	pp	j/sa	24.5	8.5	9.3	0.91						14.0					1.50	0.33	0.64	37				dc
UV	Verr.	1	touc.	40819	c-pa	j	36.3	7.0	8.0	0.87	6.0	6.6	0.91	1.22	1.16	32.0	11.0	22.0	0.69	0.34	1.37	0.37	0.70	40		12.0	0.38	d
UV	Verr.	1	vaub.	40820	pmpp	sa	32.0	9.8	10.1	0.97						15.0					1.49	0.34	0.65	37				dc
UV	Verr.	1	touc.	40891	pmpp	sa	34.3	8.5	9.8	0.87						13.0					1.33	0.38	0.72	41				dc
UV	Verr.	1	orb.	41077	c-pa	a	51.2	9.7	10.9	0.89	10.0	10.3	0.97	1.06	0.97	42.0	13.0	30.0	0.71	0.31	1.19	0.42	0.79	45		20.0	0.48	c
UV	Verr.	1	vaub.	41078	pp	sa	32.2	9.5	10.1	0.94						13.5					1.33	0.38	0.72	41				dc
UV	Verr.	1	vaub.	41079	pmpp	a	46.4	12.2	13.0	0.93	11.7	12.0	0.98	1.08	1.04	44.5	18.5	32.0	0.72	0.42	1.42	0.35	0.68	39				dc
UV	Verr.	1	vaub.	41080	pmpp	a	40.4	10.0	10.5	0.95	8.7	9.1	0.96	1.16	1.15	38.5	15.0	26.0	0.68	0.39	1.42	0.35	0.68	39		12.0	0.31	dc
UV	Verr.	1	vaub.	41081	pmpp	a	43.2	10.4	11.0	0.95	8.9	9.7	0.92	1.14	1.17	37.0	14.5	30.0	0.81	0.39	1.31	0.38	0.73	42		12.0	0.32	dc
UV	Pere.	1	orb.	41082	pmpp	j	30.8	8.1	9.2	0.89	7.5	8.5	0.88	1.08	1.08	29.0	9.5	21.0	0.72	0.33	1.04	0.48	0.90	52		9.0	0.31	c
LV	Inos.	1	touc.	41083	pmpp	sa	33.3	8.4	9.9	0.84	8.1	9.3	0.87	1.07	1.03	31.5	14.0	21.5	0.68	0.44	1.41	0.35	0.68	39		9.0	0.29	d
LV	Inos.	1	touc.	41084	pmpp	sa	30.4	8.2	10.2	0.81						15.0					1.47	0.34	0.65	38				d
UV	Verr.	1	vaub.	41157	c	sa	55.3	9.9	10.9	0.91	9.1	9.5	0.95	1.14	1.10	43.0	15.0	30.5	0.71	0.35	1.38	0.36	0.69	40		19.0	0.44	dc
UV	Verr.	1	orb.	41158	pmpp	vj/sa	27.7	5.9	6.0	0.98	5.0	5.5	0.90	1.09	1.19	26.0	9.0	19.0	0.73	0.35	1.50	0.33	0.64	37		8.0	0.31	c
UV	Verr.	1	orb.	41159	pp	sa	33.8	8.2	9.3	0.88	7.7	7.9	0.97	1.18	1.07	30.5	10.5	21.0	0.69	0.34	1.12	0.44	0.84	48		12.0	0.39	c
UV	Verr.	1	sp.	41160	pmpp	j	24.3																					
UV	Verr.	1	vaub.	41161	pmpp	j	39.8	8.4	9.0	0.93	7.2	7.6	0.94	1.19	1.17	36.0	13.5	27.0	0.75	0.38	1.49	0.33	0.65	37		12.0	0.33	dc
UV	Verr.	1	orb.	41162	c-pa	vj	29.9	5.6	6.1	0.92	4.8	5.4	0.88	1.12	1.17	25.5	8.0	17.5	0.69	0.31	1.32	0.38	0.73	42		8.5	0.33	dc
UV	Verr.	1	vaub.	41163	pmpp	sa	40.6	9.3	9.6	0.97	7.8	8.3	0.94	1.16	1.19	38.0	14.5	28.0	0.74	0.38	1.51	0.33	0.64	37		12.0	0.32	dc
UV	Verr.	1	orb.	41164	pmpp	j	26.4	6.5	6.4	1.00	6.0	6.3	0.96	1.03	1.08	25.5	8.0	19.0	0.75	0.31	1.24	0.40	0.77	44		10.0	0.3	

5	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	ldev	ldhat	Ltp	Lpp	Ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(NVTAN apex) ^{1/2}	ap. agl.	alv. agl.	Lad	Lal	nuclro	
LV	Neoc.	1	vaub.	43562	pp pm	a	48.5	10.5	12.1	0.86	9.9	11.1	0.90	1.09	1.05	46.0	16.5	33.0	0.72	0.36	1.36	0.37	0.70	40		12.0	0.26	dc	
LV	Neoc.	1	tauc.	43563	pmpp	sa	41.4	8.1	9.4	0.86	8.1	8.6	0.93	1.08	1.00	36.5	13.0	27.5	0.75	0.36	1.39	0.36	0.69	40		14.0	0.38	dc	
LV	Neoc.	1	tauc.	43564	c-pa	j	45.3																						
LV	Neoc.	1	tauc.	43565	pmpp	j	35.3	6.9	8.2	0.84	6.4	6.9	0.93	1.19	1.08	32.0	12.0	22.0	0.69	0.38	1.46	0.34	0.66	38		10.5	0.33	d	
LV	Neoc.	1	tauc.	43566	c-pa	sa	45.4	8.4	9.9	0.85	7.7	8.7	0.89	1.14	1.09	41.0	14.5	29.0	0.71	0.35	1.47	0.34	0.66	38		15.5	0.38	d	
LV	Neoc.	1	tauc.	43567	c-pa	sa	49.1	9.1	11.1	0.82	8.5	9.6	0.89	1.16	1.07	41.5	13.0	31.5	0.76	0.31	1.17	0.43	0.81	46	18	16.0	0.39	dc	
LV	Neoc.	1	tauc.	43568	c-pa	j	33.7	5.4	6.3	0.86	4.7	5.2	0.90	1.21	1.15	29.0	10.0	21.0	0.72	0.34	1.58	0.32	0.61	35		6.5	0.22	d	
LV	Neoc.	1	tauc.	43569	c-pa	j	32.3	5.3	5.9	0.90	4.3	5.0	0.87	1.18	1.21	27.0	9.0	17.0	0.63	0.33	1.54	0.33	0.63	36		6.0	0.22	c	
LV	Neoc.	1	suborb.	43570	c-pa	j	31.6	5.4	5.6	0.98	5.0	5.0	1.00	1.11	1.08	29.0	12.5	20.0	0.69	0.43	2.25	0.22	0.44	25		9.5	0.33	c	
LV	Neoc.	1	suborb.	43571	c-pa	sa	47.6																						
LV	Neoc.	1	tauc.	43572	c-pa	j	39.1	7.6	8.7	0.87	6.9	7.6	0.91	1.14	1.10	36.0	13.5	22.0	0.61	0.38	1.56	0.32	0.62	36		12.5	0.35	d	
LV	Neoc.	1	vaub.	43573	c	j	41.0	6.8	7.5	0.91	5.9	6.4	0.92	1.17	1.15	34.0	11.0	24.5	0.72	0.32	1.47	0.34	0.66	38		10.0	0.29	c	
LV	Neoc.	1	orb.	43574	c	j	32.2	6.0	6.5	0.91	5.5	5.7	0.96	1.14	1.09	28.5	9.0	22.0	0.77	0.32	1.38	0.36	0.69	40		10.0	0.35	c	
LV	Neoc.	1	tauc.	43575	c-pa	j	33.8	5.2	6.0	0.87	4.8	5.5	0.87	1.10	1.09	28.5	10.0	20.0	0.70	0.35	1.67	0.30	0.58	33		7.0	0.25	d	
LV	Neoc.	1	vaub.	43576	pmpp	a	37.4	11.6	13.3	0.87																			dc
LV	Neoc.	1	vaub.	43577	pmpp	sa	42.3	9.1	10.1	0.90	8.5	9.6	0.88	1.05	1.07	37.5	13.5	25.0	0.67	0.36	1.33	0.38	0.72	41	18	14.0	0.37	dc	
LV	Neoc.	1	tauc.	43578	pmpp	a	36.4	10.6	12.2	0.87																			
LV	Neoc.	1	tauc.	43579	pmpp	j	32.0	6.9	7.6	0.90																			d
LV	Neoc.	1	tauc.	43580	pmpp	j	27.0	7.2	8.2	0.88																			dc
LV	Neoc.	1	tauc.	43581	pmpp	j	25.5	6.9	7.7	0.90																			d
LV	Neoc.	1	sp.	43582	section	sa	52.4																		18				
LV	Neoc.	1	tauc.	43583	pmpp	j	28.4	7.5	8.7	0.87	6.3	7.5	0.84	1.15	1.18	27.0	11.0	20.0	0.74	0.41	1.27	0.39	0.75	43		7.0	0.26	dc	
LV	Neoc.	1	vaub.	43585	c-pa	j	28.3	5.6	6.0	0.94	5.4	5.5	0.97	1.08	1.04	25.0	9.5	16.0	0.64	0.38	1.59	0.31	0.61	35		8.5	0.34	dc	
LV	Neoc.	1	suborb.	43586	c-pa	j	33.0	5.3	5.9	0.89	4.0	4.4	0.92	1.35	1.31	28.5	13.0	19.0	0.67	0.46	2.20	0.23	0.45	26		7.0	0.25	dc	
LV	Neoc.	1	vaub.	43587	pmpp	sa	41.5	8.7	9.7	0.91	7.0	8.1	0.87	1.20	1.25	38.0	14.0	28.0	0.74	0.37	1.45	0.34	0.66	38		14.5	0.38	c	
LV	Neoc.	1	tauc.	43588	c-pa	j	33.8	5.8	6.7	0.87	5.5	5.8	0.96	1.17	1.06	29.5	10.0	20.5	0.69	0.34	1.49	0.34	0.65	37		10.0	0.34	dc	
LV	Neoc.	1	suborb.	43589	pmpp	sa	40.0	8.2	9.3	0.88	7.7	8.4	0.92	1.10	1.06	36.5	17.5	24.5	0.67	0.48	1.88	0.27	0.52	30		14.0	0.38	c	
LV	Neoc.	1	orb.	43590	c	mj	16.2	3.0	3.2	0.93	2.4	2.7	0.90	1.21	1.25	13.0	4.5	8.0	0.62	0.35	1.39	0.36	0.69	39		2.5	0.19	dc	
UV	Verr.	1	vaub.	43594	pp	a	24.5	11.4	12.4	0.92																			
UV	Verr.	1	sp.	43595	pmpp	j																							
LV	Pert.	1	tauc.	48582	pmpp	sa	34.9	8.2	10.2	0.81	8.3	9.3	0.90	1.09	0.99	34.0	11.5	24.0	0.71	0.34	1.13	0.44	0.83	48		15.0	0.44	dc	
LV	Pert.	1	tauc.	48583	pmpp	sa	37.0	8.9	10.0	0.90	8.7	9.7	0.89	1.02	1.03	34.5	16.0	23.0	0.67	0.46	1.61	0.31	0.60	35		9.0	0.26	d	
LV	Neoc.	1	suborb.	52162	c	j	43.8	8.9	9.0	0.98	8.3	8.1	1.02	1.11	1.07	37.5	17.0	26.0	0.69	0.45	1.89	0.27	0.52	30		15.0	0.40	c	
LV	Neoc.	1	tauc.	52195	c-pa	j	38.3	6.6	7.8	0.85	6.0	6.6	0.90	1.17	1.09	31.5	13.0	20.0	0.63	0.41	1.68	0.30	0.58	33		9.5	0.30	d	
LV	Neoc.	1	orb.	52196	pmpp	vi	21.6	4.3	4.7	0.91	3.4	3.9	0.88	1.23	1.27	19.0	7.0	14.0	0.74	0.37	1.48	0.34	0.65	37		4.5	0.24	c	
LV	Neoc.	1	vaub.	52197	pmpp	sa	43.6	9.0	10.3	0.87	8.5	8.9	0.95	1.16	1.06	40.0	15.5	26.0	0.65	0.39	1.50	0.33	0.64	37		12.0	0.30	dc	
UV	Verr.	1	sp.	52219	c	j	37.9																						
UV	Verr.	1	tauc.	52702	c-pa	sa	44.9	8.3	9.4	0.89	8.0	8.3	0.96	1.13	1.05	38.5	13.0	29.0	0.75	0.34	1.39	0.36	0.69	40		14.5	0.38	dc	
UV	Verr.	1	orb.	52703	c-pa	j	33.3	7.4	7.8	0.95	6.0	6.7	0.89	1.17	1.24	30.0	11.0	20.0	0.67	0.37	1.41	0.35	0.68	39		11.0	0.37	dc	
UV	Verr.	1	orb.	52704	pmpp	a	41.6	10.1	11.4	0.89	9.7	10.3	0.94	1.11	1.05	36.5	13.0	24.0	0.66	0.36	1.14	0.44	0.83	47		17.0	0.47	c	
LV	Inos.	1	orb.	52730	pmpp	sa	34.8	8.5	9.3	0.91																			c
LV	Inos.	1	orb.	52731	c-pa	j	34.2	7.5	8.0	0.93	6.6	7.2	0.92	1.11	1.13	30.5	9.5	20.0	0.66	0.31	1.18	0.42	0.80	46		10.5	0.34	dc	
LV	Inos.	1	orb.	52732	c	sa	48.5	9.1	10.4	0.88	8.2	8.3	1.00	1.26	1.11	43.0	11.0	29.5	0.69	0.26	1.06	0.47	0.88	50		15.5	0.36	dc	
LV	Inos.	1	orb.	52733	c	j	37.6	8.2	9.0	0.91	6.8	7.3	0.93	1.23	1.21	34.0	9.5	24.5	0.72	0.28	1.06	0.47	0.88	51		14.0	0.41	dc	
LV	Inos.	1	orb.	52734	c	sa	49.9	8.9	9.5	0.94	7.0	7.5	0.93	1.26	1.27	46.0	12.5	36.0	0.78	0.27	1.32	0.38	0.72	42		14.5	0.32	dc	
LV	Inos.	1	sp.	52735	pmpp	sa																							
UV	Verr.	1	vaub.	52738	pmpp	j	31.7	7.9	8.5	0.93																			c
UV	Verr.	1	suborb.	52739	c-pa	j	29.9	6.0	6.1	0.99	5.3	5.6	0.95	1.09	1.13	27.5	13.5	17.0	0.62	0.49	2.23	0.22	0.44	25		10.0	0.36	d	
UV	Verr.	1	orb.	52740	pmpp	sa	43.5	9.9	11.3	0.87	9.7	10.6	0.92	1.07	1.02	41.5	11.0	32.0	0.77	0.27	0.97	0.52	0.54	54		19.0	0.46	c	
UV	Verr.	1	vaub.	52741	pmpp	sa	40.9	9.2	9.7	0.95	8.0	8.2	0.97	1.18	1.15	39.0	13.8	27.0	0.69	0.35	1.42	0.35	0.68	39		13.0	0.33	c	
UV	Verr.	1	orb.	52742	pp	sa	31.7	9.9	10.9	0.91																			c
UV	Verr.	1	vaub.	52743	pmpp	sa	33.9	9.4	10.0	0.94																			dc
UV	Verr.	1	orb.	52744	c	sa	50.7	8.6	9.5	0.91	7.8	8.3	0.94	1.14	1.10	41.5	12.0	36.5	0.88	0.29	1.26	0.40	0.75	43		14.0	0.34	c	
UV	Verr.	1	vaub.	52745	c	vi	30.3	5.7	5.9	0.96	5.1	5.3	0.96	1.11	1.11	26.0	10.0	12.0	0.46	0.38	1.68	0.30	0.58	33		9.5	0.37	d	
UV	Pere.	1	orb.	52894	pmpp	j/sa	31.6	8.6	8.6	1.00	8.3	8.5	0.98	1.02	1.03	30.0	11.0	19.0	0.63	0.37	1.27	0.39	0.75	43		10.0	0.33	c	
UV	Pere.	1	vaub.	52895	pmpp	j	29.6	7.7	8.3	0.93	7.0	7.9	0.89	1.05	1.10	28.0	12.5	19.0	0.68	0.45	1.51	0.33	0.64	37		10.0	0.36	dc	
UV	Pere.	1	vaub.	52896	pmpp	j	31.6	7.9	8.0	0.99																			

6	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	ldev	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nucro
LV	Neoc.	1	touc.	53780	c	j	44.0	7.0	7.9	0.89	6.0	6.4	0.94	1.24	1.18	37.5	10.5	29.5	0.79	0.28	1.33	0.38	0.72	41		10.5	0.28	dc
LV	Neoc.	1	vaub.	53781	c	j	32.2	6.8	7.2	0.94	4.8	5.8	0.83	1.23	1.40	30.0	12.0	18.0	0.60	0.40	1.68	0.30	0.58	33		10.0	0.33	dc
LV	Neoc.	1	touc.	53782	c-ap	sa		7.2	8.3	0.87																		
LV	Neoc.	1	touc.	53783	c-pa	j	35.8	8.1	9.5	0.86	7.7	8.7	0.89	1.09	1.05	32.0	12.0	21.0	0.66	0.38	1.27	0.40	0.75	43		13.0	0.41	dc
LV	Neoc.	1	orb.	53784	pmpp	j	33.4	7.7	8.7	0.89	6.1	6.8	0.89	1.27	1.27	32.0	9.5	25.0	0.78	0.30	1.10	0.46	0.86	49		9.0	0.28	dc
LV	Neoc.	1	sp.	53785	f																							
LV	Neoc.	1	touc.	53786	pmpp	sa	30.5	8.0	10.1	0.80							13.0					1.29	0.39	0.74	42			dc
LV	Neoc.	1	vaub.	53787	pmpp	j	27.7	6.6	7.1	0.93							10.5					1.48	0.34	0.65	37			dc
UV	Pere.	1	suborb.	53916	c-pa	sa	45.1	8.2	8.4	0.97	8.2	8.4	0.97	1.00	1.00	39.5	17.0	32.0	0.81	0.43	2.02	0.25	0.48	28	17.5	0.44	c	
UV	Pere.	1	vaub.	53917	pmpp	j	32.6	7.8	8.2	0.95	6.8	6.5	1.05	1.28	1.15	30.5	13.0	21.5	0.70	0.43	1.58	0.32	0.61	35	9.0	0.30	dc	
UV	Pere.	1	vaub.	53918	c-pa	sa/a	54.4	10.4	11.0	0.94	9.7	10.0	0.97	1.11	1.07	44.5	15.5	34.5	0.78	0.35	1.41	0.36	0.68	39	20.5	0.46	dc	
UV	Pere.	1	orb.	53920	pmpp	j	23.9	5.7	5.9	0.96	4.4	4.9	0.90	1.21	1.29	22.0	8.0	16.0	0.73	0.36	1.35	0.37	0.71	41	8.5	0.39	c	
UV	Pere.	1	suborb.	53922	c-pa	mj/v	21.6	3.6	3.9	0.93	2.9	3.4	0.87	1.16	1.24	17.5	8.5	12.0	0.69	0.49	2.18	0.23	0.45	26	5.0	0.29	c	
UV	Pere.	1	orb.	53923	c-pa	j	41.8	8.9	9.7	0.91	7.6	7.9	0.97	1.23	1.17	34.0	9.0	27.0	0.79	0.26	0.93	0.54	0.99	57	15.0	0.44	dc	
UV	Pere.	1	vaub.	53924	pmpp	a	44.4	10.6	12.1	0.88	9.8	10.8	0.91	1.13	1.09	42.0	17.0	31.0	0.74	0.40	1.40	0.36	0.68	39	23.5	0.56	c	
UV	Pere.	1	vaub.	53925	c	sa	52.2	9.2	9.9	0.93	7.8	9.0	0.88	1.11	1.17	44.0	15.0	32.0	0.73	0.34	1.52	0.33	0.64	36	19.0	0.43	dc	
UV	Pere.	1	vaub.	53926	c-pa	j	35.2	7.2	7.4	0.98	6.7	7.2	0.93	1.03	1.08	31.0	13.0	22.5	0.73	0.42	1.76	0.28	0.55	32	12.0	0.39	dc	
LV	Neoc.	1	orb.	54012	pp	sa	25.6	9.1	10.1	0.90							12.0					1.19	0.42	0.80	46			dc
LV	Neoc.	1	touc.	54016	pp	j	20.9	7.6	9.1	0.83							13.0					1.42	0.35	0.68	39			d
UV	Verr.	1	vaub.	54055	c-pa	sa	46.4	9.8	10.8	0.91	8.7	9.3	0.93	1.16	1.13	40.5	15.0	30.0	0.74	0.37	1.39	0.36	0.69	40	20.5	0.51	dc	
UV	Verr.	1	orb.	54056	pmpp	sa	36.1	9.8	11.0	0.89	8.6	9.2	0.94	1.20	1.13	36.0	12.5	23.0	0.64	0.35	1.14	0.44	0.83	47	14.5	0.40	dc	
UV	Verr.	1	orb.	54057	pp	j/sa	25.3	8.4	9.1	0.93						9.5						1.05	0.48	0.89	51			c
UV	Verr.	1	vaub.	54058	pmpp	sa/a	41.2	9.4	10.5	0.89	9.2	9.7	0.95	1.08	1.02	39.0	15.0	27.0	0.69	0.38	1.43	0.35	0.67	38	16.5	0.42	dc	
UV	Verr.	1	sp.	54059	pp	a																0.00						
LV	Neoc.	1	touc.	54105	pp	a	34.7	10.1	12.4	0.81							15.0					1.21	0.41	0.78	45			dc
LV	Neoc.	1	touc.	54106	pp	j	29.8	8.7	9.8	0.89							13.5					1.38	0.36	0.70	40			d
LV	Neoc.	1	touc.	54107	pmpp	j	36.7	8.4	10.1	0.83	7.6	8.7	0.88	1.17	1.11	33.0	12.0				0.36	1.19	0.42	0.80	46	12.5	0.38	d
LV	Neoc.	1	touc.	54108	pp	j	35.2	8.0	9.0	0.89							14.0					1.56	0.32	0.62	36			d
UV	Verr.	1	vaub.	54111	pmpp	j	31.3	8.6	9.4	0.91							13.0					1.38	0.36	0.70	40			dc
UV	Verr.	1	vaub.	54112	pp	sa	30.0	8.8	9.2	0.95							13.5					1.46	0.34	0.66	38			dc
UV	Verr.	1	orb.	54125	c	j	48.0	9.0	9.6	0.94	7.3	7.6	0.96	1.26	1.24	38.0	10.8	29.0	0.76	0.28	1.12	0.45	0.84	48	16.0	0.42	c	
UV	Verr.	1	orb.	54126	c-pa	j	37.8	7.3	7.9	0.92	6.1	6.6	0.91	1.19	1.20	32.0	8.0	24.0	0.75	0.25	1.01	0.49	0.92	52	9.0	0.28	c	
UV	Verr.	1	suborb.	54127	pmpp	sa	53.1	9.5	10.6	0.89	10.1	11.1	0.91	0.96	0.94	36.0	20.0	26.0	0.72	0.56	1.88	0.27	0.52	30	14.0	0.39	dc	
UV	Verr.	1	suborb.	54128	pmpp	j	37.8	7.9	8.3	0.96	8.1	8.3	0.98	1.01	0.99	32.0	16.8	23.0	0.72	0.52	2.02	0.25	0.49	28	10.0	0.31	c	
UV	Verr.	1	vaub.	54129	c-pa	j	34.4	6.4	7.1	0.90	5.8	6.5	0.89	1.10	1.12	27.5	12.5	20.5	0.75	0.45	1.75	0.29	0.56	32	9.0	0.33	dc	
UV	Verr.	1	touc.	54130	pmpp	a	38.2	9.7	12.9	0.75	9.4	10.9	0.86	1.18	1.03	33.5	14.0	27.0	0.81	0.42	1.08	0.46	0.86	50	16.0	0.48	dc	
UV	Verr.	1	vaub.	54131	pmpp	j	30.9	8.1	8.4	0.97	7.9	8.3	0.95	1.01	1.03	29.0	14.5	19.0	0.66	0.50	1.74	0.29	0.56	32			dc	
UV	Verr.	1	orb.	54132	pmpp	sa	31.5	8.7	9.3	0.94	8.6	8.8	0.99	1.06	1.00	30.0	12.5	19.5	0.65	0.42	1.35	0.37	0.71	41			c	
UV	Verr.	1	sp.	54170	pmpp																							
LV	Inos.	1	orb.	54182	pmpp	a	41.9	12.4	13.6	0.91							13.0					0.96	0.52	0.96	55	18		c
UV	Pere.	1	touc.	54262	pp	sa	24.9	8.4	9.9	0.84							15.0					1.51	0.33	0.64	37			dc
LV	Neoc.	1	vaub.	54291	c-pa	j	45.2	8.3	8.6	0.96	6.7	7.1	0.94	1.21	1.24	37.0	15.0	24.5	0.66	0.41	1.75	0.29	0.56	32	11.5	0.31	dc	
LV	Neoc.	1	orb.	54292	c-pa	vj	25.6	4.9	5.5	0.89	4.2	4.6	0.92	1.20	1.15	23.0	7.5	15.0	0.65	0.33	1.37	0.37	0.70	40	8.0	0.35	c	
LV	Neoc.	1	touc.	54293	c-pa	vj	27.4	4.5	5.0	0.89	3.6	4.4	0.82	1.15	1.26	24.5	8.5	17.5	0.71	0.35	1.69	0.30	0.58	33	6.0	0.24	d	
LV	Neoc.	1	suborb.	54294	c	vj	25.1	3.7	3.9	0.93	3.1	3.4	0.93	1.17	1.18	22.0	8.0	14.0	0.64	0.36	2.03	0.25	0.48	28	5.5	0.25	c	
LV	Neoc.	1	orb.	54295	c-pa	j	39.2	7.3	8.0	0.90	7.0	7.3	0.96	1.10	1.03	33.0	9.5	24.0	0.73	0.29	1.18	0.42	0.80	46	10.5	0.32	dc	
UV	Verr.	1	orb.	54301	c	sa	51.3	10.0	11.1	0.90	8.8	9.1	0.97	1.22	1.14	43.0	11.0	32.5	0.76	0.26	0.99	0.50	0.93	53	17.5	0.41	c	
UV	Verr.	1	orb.	54302	c-pa	vj	24.4	4.8	5.2	0.92	4.2	4.5	0.92	1.16	1.16	22.0	7.5	14.0	0.64	0.34	1.43	0.35	0.67	39	7.0	0.32	dc	
UV	Verr.	1	suborb.	54303	pmpp	sa	42.9	8.9	9.9	0.90						38.0	19.5	25.0	0.66	0.51	1.98	0.25	0.50	28	18	15.0	0.39	c
UV	Verr.	1	vaub.	54304	pmpp	vj	26.4	5.5	5.6	0.98	4.8	5.0	0.96	1.14	1.15	25.0	10.0	16.0	0.64	0.40	1.78	0.28	0.55	31	8.0	0.32	dc	
UV	Verr.	1	orb.	54305	c	sa	50.3	9.5	10.4	0.91	9.0	9.1	0.99	1.15	1.06	41.5	11.5	31.0	0.75	0.28	1.10	0.45	0.85	49	17.0	0.41	c	
UV	Verr.	1	orb.	54306	c-pa	j/sa	38.6	8.6	9.2	0.94	8.4	8.9	0.95	1.03	1.02	33.0	12.0	21.5	0.65	0.36	1.31	0.38	0.73	42	13.5	0.41	c	
UV	Verr.	1	orb.	54348	pmpp	j	28.9	7.0	7.5	0.93	6.6	7.2	0.92	1.05	1.05	25.0	11.5	17.0	0.68	0.46	1.53	0.33	0.63	36	9.0	0.36	c	
LV	Pert.	1	touc.	54604	pmpp	sa	33.5	7.6	8.4	0.90							14.0					1.67	0.30	0.58	33			d
LV	Pert.	1	touc.	54605	pmpp	j	33.0	8.4	9.7	0.87	8.6	9.8	0.88	1.00	0.99	32.0	14.5	22.0	0.69	0.45	1.49	0.34	0.65	37	11.0	0.34	d	
LV	Neoc.	1	touc.	57228	c	vj	32.2	5.3	5.9	0.91	4.8	5.4	0.89	1.10	1.12	26.5	10.0	17.0	0.64	0.38	1.70	0.29	0.57	33	7.0	0.26	d	
LV	Neoc.	1	orb.	57229	c-pa	j	35.3	7.8	7.9	0.99	6.3	6																

7	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddv	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(NVTAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro
LV	Neoc.	1	tauc.	57663	pmpp	a	48.5	11.6	13.6	0.85	11.3	12.4	0.91	1.09	1.02	45.0	17.5	33.5	0.74	0.39	1.29	0.39	0.74	42		16.0	0.36	dc
UV	Verr.	1	orb.	57675	c-pa	vi	26.1	5.0	4.8	1.04	4.3	4.6	0.95	1.06	1.17	22.5	8.0	16.0	0.71	0.36	1.66	0.30	0.59	34		7.0	0.31	c
UV	Verr.	1	vaub.	57676	c	vj	29.8	4.7	4.9	0.97	3.8	4.2	0.88	1.15	1.25	24.5	8.0	16.5	0.67	0.33	1.64	0.30	0.59	34		6.0	0.24	dc
UV	Verr.	1	vaub.	57677	c-pa	mj/v	24.7	4.0	4.3	0.93	3.3	3.8	0.88	1.13	1.19	21.0	7.5	14.0	0.67	0.36	1.75	0.29	0.56	32		7.0	0.33	dc
UV	Verr.	1	sp.	58036	pmpp	j																						
UV	Verr.	1	sp.	58069	pm																							
UV	Verr.	1	vaub.	58070	pp	a	27.7	8.7	9.1	0.95												1.42	0.35	0.68	39			dc
LV	Inos.	1	vaub.	58076	c	j	37.0	7.0	7.2	0.96	6.2	6.8	0.92	1.06	1.12	32.0	12.0	21.0	0.66	0.38	1.66	0.30	0.59	34		12.0	0.38	dc
LV	Inos.	1	vaub.	58077	c	j	41.6	6.9	7.4	0.93	6.7	7.1	0.96	1.05	1.02	37.5	12.0	26.0	0.69	0.32	1.63	0.31	0.60	34		14.0	0.37	dc
LV	Inos.	1	vaub.	58078	c-ap	mj	16.3	3.1	3.2	0.98	2.2	2.6	0.86	1.23	1.39	14.0	5.0	9.0	0.64	0.36	1.59	0.32	0.61	35		3.0	0.21	dc
LV	Inos.	1	tauc.	58079	pp	sa	23.6	7.8	8.9	0.88												1.13	0.44	0.83	48			dc
LV	Pert.	1	tauc.	58085	pmpp	j		6.82	7.71	0.88																		
UV	Verr.	1	orb.	58086	c-pa	j	43.0	8.6	9.2	0.93	7.6	8.2	0.93	1.13	1.13	35.0	11.5	24.0	0.69	0.33	1.25	0.40	0.76	44		14.0	0.40	c
UV	Verr.	1	sp.	58100	pmpp	j																						
UV	Verr.	1	sp.	58106	pp																							
LV	Neoc.	1	tauc.	58108	pmpp	j	31.2	8.0	9.0	0.90	7.6	7.6	1.00	1.18	1.06	29.0	9.5	22.0	0.76	0.33	1.06	0.47	0.88	50		9.0	0.31	d
UV	Verr.	1	vaub.	58118	c-pa	j	41.4	7.8	8.6	0.90	7.3	7.7	0.95	1.12	1.06	36.0	13.5	26.0	0.72	0.38	1.57	0.32	0.62	35		14.5	0.40	dc
UV	Verr.	1	vaub.	58151	c-pa	vj	26.2	4.3	4.4	0.99	4.0	4.2	0.95	1.05	1.10	21.5	8.0	14.0	0.65	0.37	1.83	0.27	0.53	31		7.0	0.33	dc
UV	Verr.	1	sp.	58152	pmpp	j	27.3																					
UV	Verr.	1	sp.	58153	pp	j	24.0																0.00					
UV	Verr.	1	vaub.	58154	c-pa	a	50.4	10.1	10.9	0.93	10.3	10.8	0.95	1.00	0.98	42.0	15.5	31.0	0.74	0.37	1.43	0.35	0.67	39	18	21.5	0.51	c
UV	Verr.	1	suborb.	58158	c-pa	j	37.0	6.6	7.1	0.93	5.5	6.0	0.92	1.18	1.19	33.0	15.0	24.0	0.73	0.45	2.12	0.24	0.46	26		10.0	0.30	c
LV	Inos.	1	vaub.	61217	pmpp	j	32.5	7.4	8.2	0.90	6.3	6.8	0.94	1.21	1.17	31.0	12.5	22.0	0.71	0.40	1.53	0.33	0.63	36		8.0	0.26	dc
LV	Neoc.	1	vaub.	61221	pmpp	vi	20.0	4.1	4.5	0.92	3.0	3.6	0.83	1.23	1.37	17.5	8.0	11.0	0.63	0.46	1.80	0.28	0.54	31		5.0	0.29	dc
UV	Verr.	1	orb.	61226	c-pa	j	37.6	6.9	7.5	0.92	6.4	7.0	0.91	1.06	1.07	33.5	10.0	28.0	0.84	0.30	1.34	0.37	0.71	41		13.5	0.40	dc
UV	Verr.	1	orb.	61227	pmpp	vj	22.6	5.4	5.7	0.94	4.3	5.0	0.87	1.14	1.24	21.0	8.0	12.0	0.57	0.38	1.41	0.36	0.68	39		6.5	0.31	c
UV	Verr.	1	orb.	61229	pmpp	j	24.9	6.1	6.6	0.92												1.52	0.33	0.64	37			dc
LV	Pert.	1	tauc.	61474	c	sa	47.6	8.0	8.7	0.91	7.6	8.2	0.92	1.07	1.06	41.0	11.5	29.5	0.72	0.28	1.32	0.38	0.73	42		16.0	0.39	d
LV	Pert.	1	tauc.	61475	c	a	57.6	11.0	13.2	0.83	9.7	10.7	0.91	1.24	1.13	50.0	18.5	35.0	0.70	0.37	1.40	0.36	0.69	39		20.0	0.40	d
LV	Pert.	1	tauc.	61476	pp	j	26.0	7.5	8.6	0.88												1.28	0.39	0.74	43			d
LV	Pert.	1	tauc.	61477	pmpp	j/sa	25.3	7.8	8.7	0.90												1.32	0.38	0.72	41			d
LV	Pert.	1	tauc.	61478	pmpp	sa	32.5	7.9	9.82	0.80	7.61	8.72	0.87	1.13	1.04	31	12	23	0.74	0.39	1.22	0.41	0.78	45		10	0.32	d
LV	Pert.	1	tauc.	61479	f																							d
LV	Pert.	1	tauc.	61480	c-pa																							d
LV	Pert.	1	tauc.	61481	pa	a																						d
UV	Verr.	1	vaub.	64453	pmpp	sa	39.4	8.5	9.8	0.87	8.0	8.3	0.96	1.18	1.06	34.0	14.0	18.0	0.53	0.41	1.43	0.35	0.67	38		12.0	0.35	c
UV	Verr.	1	orb.	64514	pp	sa	25.0	9.2	10.5	0.88												0.95	0.53	0.97	56			c
UV	Verr.	1	vaub.	64577	pmpp	j	36.6	8.2	8.5	0.96	7.6	8.1	0.94	1.05	1.07	34.0	13.5	23.5	0.69	0.40	1.59	0.32	0.61	35		15.0	0.44	dc
UV	Verr.	1	vaub.	64578	pmpp	vj	23.1	4.6	4.5	1.02	3.5	3.8	0.90	1.17	1.32	21.0	8.0	14.0	0.67	0.38	1.78	0.28	0.55	31		4.5	0.21	dc
UV	Verr.	1	vaub.	64579	c-pa	j	31.6	6.0	6.2	0.97	5.3	5.6	0.96	1.11	1.12	28.5	10.0	19.0	0.67	0.35	1.62	0.31	0.60	34		9.5	0.33	dc
LV	Neoc.	1	tauc.	64619	pmpp	a	40.7	9.7	12.9	0.76	9.0	10.6	0.84	1.21	1.08	38.0	15.0	29.0	0.76	0.39	1.17	0.43	0.81	46		13.0	0.34	dc
LV	Neoc.	1	orb.	64620	pp	a	28.1	11.0	11.6	0.94												1.16	0.43	0.81	47			c
LV	Neoc.	1	orb.	64621	pp	sa	29.4	10.7	12.2	0.88												1.02	0.49	0.91	52			c
UV	Verr.	1	vaub.	64994	pmpp	a	39.1	12.0	12.8	0.94												1.41	0.35	0.68	39			dc
LV	Neoc.	1	orb.	64995	pmpp	j	28.6	7.9	8.7	0.91	7.2	7.9	0.91	1.11	1.10	27.5	11.5	19.0	0.69	0.42	1.32	0.38	0.73	42		8.5	0.31	c
LV	Inos.	1	vaub.	65020	c-pa	j	36.5	6.9	7.3	0.95	6.5	7.0	0.93	1.05	1.07	33.5	12.0	25.0	0.75	0.36	1.64	0.30	0.59	34		12.0	0.36	dc
UV	Verr.	1	vaub.	65029	c	vj	29.2	4.3	4.4	0.99	3.7	4.0	0.92	1.08	1.17	22.5	8.0	14.0	0.62	0.36	1.83	0.27	0.53	30		8.0	0.36	dc
LV	Inos.	1	tauc.	65055	c-pa	j	42.2	7.2	9.3	0.78	6.8	7.3	0.93	1.27	1.06	37.0	13.5	23.0	0.62	0.36	1.45	0.34	0.66	38		13.0	0.35	d
LV	Neoc.	1	vaub.	65074	c-pa	sa	53.7	9.0	10.3	0.87	8.3	9.1	0.90	1.13	1.09	45.0	14.5	31.0	0.69	0.32	1.41	0.35	0.68	39		17.0	0.38	dc
LV	Neoc.	1	vaub.	65075	c-pa	j/sa	42.2	8.7	9.7	0.89	7.5	8.4	0.89	1.15	1.16	35.0	13.5	24.5	0.70	0.39	1.39	0.36	0.69	40		11.0	0.31	dc
LV	Neoc.	1	vaub.	65076	c	j	38.2	6.4	7.2	0.89	5.3	5.6	0.95	1.29	1.21	31.0	12.0	23.0	0.74	0.39	1.67	0.30	0.58	33		6.0	0.19	dc
LV	Neoc.	1	tauc.	65077	c-pa	sa	47.3	8.5	10.0	0.85	7.3	8.3	0.88	1.22	1.17	42.5	13.0	31.0	0.73	0.31	1.29	0.39	0.74	42		15.0	0.35	dc
LV	Neoc.	1	suborb.	65078	c	vj	25.4	4.2	4.3	0.99	3.6	4.0	0.91	1.08	1.17	21.0	10.0	14.0	0.67	0.48	2.33	0.22	0.42	24		4.5	0.21	dc
UV	Verr.	1	vaub.	65099	c	vj	25.2	4.0	3.9	1.03	3.3	3.4	0.96	1.15	1.24	20.0	7.0	14.0	0.70	0.35	1.79	0.28	0.54	31		5.0	0.25	dc
LV	Inos.	1	sp.	65109	c-pa	j	33.2															0.00						
LV	Inos.	1	vaub.	65118	c	j	41.6	7.6	7.9	0.96	6.8	7.6	0.90	1.04	1.12	36.5	13.5	29.0	0.79	0.37	1.72	0.29	0.57	32		12.0	0.33	dc
LV	Inos.	1	orb.	65119	pmpp	j	29.7	8.7	9.3	0.94												1.08	0.46	0.87	50			dc
LV	Inos.	1	sp.	65120	pmpp	j																						
LV	Inos.	1	suborb.	65121	pmpp	j	30.0	7.1	7.6	0.93																		

8	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	ldev	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro
UV	Verr.	1	orb.	65219	pmpp	sa	32.3	8.6	9.7	0.89	8.6	9.6	0.90	1.01	1.00	27.0	12.5	20.0	0.74	0.46	1.29	0.39	0.74	42		10.0	0.37	c
LV	Neoc.	1	touc.	65220	c	j	50.2	7.5	8.6	0.87	6.7	7.5	0.89	1.15	1.12	43.0	14.0	33.5	0.78	0.33	1.63	0.31	0.60	34		12.5	0.29	d
UV	Verr.	1	suborb.	65232	pp	j	28.8	8.4	8.5	0.99							18.0				2.12	0.24	0.46	27				c
UV	Verr.	1	sp.	77903	pmpp	j	25.3																					
UV	Verr.	1	orb.	77950	pmpp	j	27.6	7.3	8.3	0.89	6.4	6.9	0.92	1.20	1.15	24.5	7.0	19.5	0.80	0.29	0.84	0.59	1.07	61		10.0	0.41	c
UV	Verr.	1	vaub.	77951	c	a	64.8	12.0	12.3	0.97	9.6	10.0	0.96	1.24	1.25	54.0	17.0	34.0	0.63	0.31	1.38	0.36	0.69	40		20.5	0.38	v
UV	Verr.	1	orb.	77952	pmpp	sa	33.5	8.9	9.9	0.90	8.5	8.9	0.96	1.12	1.04	32.0	11.0	18.0	0.56	0.34	1.11	0.45	0.85	48		12.5	0.39	c
UV	Verr.	1	orb.	77953	pmpp	sa	35.5	9.8	10.4	0.94	9.7	9.6	1.01	1.08	1.01	31.5	10.0	21.0	0.67	0.32	0.96	0.52	0.96	55		12.5	0.40	c
UV	Verr.	1	touc.	77954	pmpp	j	29.7	7.6	9.1	0.84	6.6	7.6	0.87	1.19	1.15	29.0	12.0	19.0	0.66	0.41	1.32	0.38	0.72	41		10.0	0.34	dc
LV	Pert.	1	touc.	77960	pp	j	21.5	7.5	9.1	0.82							13.0				1.43	0.35	0.67	39				d
LV	Pert.	1	touc.	77961	pmpp	sa	36.0	8.3	9.9	0.84	7.7	8.3	0.92	1.19	1.09	34.5	12.5	21.0	0.61	0.36	1.26	0.40	0.75	43		12.5	0.36	d
LV	Pert.	1	touc.	77962	c-pa	sa	44.2	8.5	10.4	0.82	8.3	8.8	0.94	1.18	1.03	39.0	11.0	29.5	0.76	0.28	1.06	0.47	0.88	50		15.0	0.38	d
LV	Pert.	1	touc.	77970	c	vi	26.8	4.6	5.0	0.93	4.2	4.5	0.95	1.12	1.09	24.5	9.0	17.5	0.71	0.37	1.81	0.28	0.54	31		8.0	0.33	d
LV	Neoc.	1	sp.	78025	pmpp	j	36																					
LV	Neoc.	1	sp.	78026	pp	sa	28																					
LV	Neoc.	1	sp.	78040	pmpp	j	25.9																					
LV	Neoc.	1	vaub.	78122	pmpp	j	30.9	6.3	6.7	0.95	5.9	6.1	0.96	1.09	1.08	28.0	11.0	18.0	0.64	0.39	1.65	0.30	0.59	34		7.0	0.25	dc
UV	Verr.	1	vaub.	78124	c	a	62.8	10.9	12.5	0.87	9.0	9.0	1.00	1.39	1.22	51.0	16.5	39.0	0.76	0.32	1.32	0.38	0.73	42		23.0	0.45	dc
UV	Pere.	1	orb.	78182	c-ap	sa	50.8	10.1	11.0	0.92	9.9	10.2	0.97	1.08	1.02	41.0	12.5	30.5	0.74	0.30	1.14	0.44	0.83	47		20.0	0.49	dc
UV	Pere.	1	vaub.	78183	c-pa		31.1																					
UV	Verr.	1	orb.	78200	c-pa	j	41.8	7.8	8.6	0.91	7.0	7.3	0.96	1.18	1.11	35.0	11.0	28.0	0.80	0.31	1.28	0.39	0.75	43		14.0	0.40	c
UV	Verr.	1	orb.	78212	pmpp	sa	48.0	9.9	11.2	0.88	9.7	10.3	0.94	1.09	1.03	45.5	12.0	37.0	0.81	0.26	1.07	0.47	0.88	50		18.5	0.41	c
UV	Verr.	1	suborb.	78213	pp	j	24.0	8.2	8.4	0.98							17.0				2.03	0.25	0.48	28				c
UV	Verr.	1	vaub.	78316	pmpp	sa	38.9	9.1	10.3	0.89	8.4	9.0	0.93	1.14	1.08	37.0	14.5	26.0	0.70	0.39	1.41	0.35	0.68	39		16.0	0.43	c
UV	Verr.	1	suborb.	78317	c-pa	sa	47.7	9.6	10.3	0.94	9.2	9.7	0.94	1.06	1.05	41.0	19.0	26.5	0.65	0.46	1.85	0.27	0.53	30		18.5	0.45	c
UV	Verr.	1	vaub.	78318	c-pa	vi	18.1														0.00							
UV	Verr.	1	orb.	78319	c	j	43.1	7.0	7.0	1.00	6.6	6.8	0.96	1.02	1.07	32.5	8.5	23.5	0.72	0.26	1.21	0.41	0.78	45		13.5	0.42	dc
UV	Verr.	1	orb.	78320	c	j/sa	49.3	9.0	9.8	0.92	9.3	9.6	0.97	1.02	0.97	41.0	11.5	33.0	0.80	0.28	1.17	0.43	0.81	46		18.5	0.45	c
UV	Verr.	1	vaub.	78321	pmpp	j	39.1	8.5	8.8	0.96	8.3	8.3	0.99	1.05	1.02	36.5	14.0	23.0	0.63	0.38	1.59	0.31	0.61	35		16.5	0.45	dc
UV	Verr.	1	orb.	78322	c-pa	j	38.3	8.0	8.5	0.94	7.4	7.8	0.95	1.09	1.09	34.5	10.5	24.5	0.71	0.30	1.23	0.41	0.77	44		15.0	0.43	c
UV	Verr.	1	vaub.	78323	pmpp	j	25.6	6.3	6.3	1.00							10.5				1.67	0.30	0.58	33				dc
UV	Verr.	1	suborb.	78324	pmpp	j	30.7	7.1	7.4	0.96	6.7	7.1	0.94	1.05	1.07	26.5	15.0	13.0	0.49	0.57	2.02	0.25	0.49	28		9.5	0.36	c
UV	Verr.	1	orb.	78390	pmpp	j	20.5	6.6	7.1	0.93							8.0				1.13	0.44	0.83	48				c
UV	Verr.	1	sp.	78391	pmpp	j	25.3																					
UV	Verr.	1	vaub.	78392	pp	j	19.3	7.3	8.2	0.89							12.0				1.46	0.34	0.66	38				dc
UV	Verr.	1	sp.	78393	pa	sa																						
UV	Verr.	1	sp.	78394	pa	sa																						
UV	Verr.	1	sp.	78395	pa	j																						
UV	Verr.	1	sp.	78396	section																			18				
UV	Verr.	1	vaub.	78455	pp	j	22.3	7.0	7.1	0.98							11.5				1.62	0.31	0.60	34				dc
UV	Verr.	1	vaub.	78750	pmpp	sa	37.3	8.9	9.5	0.94	8.1	9.1	0.88	1.04	1.10	34.0	14.0	24.0	0.71	0.41	1.48	0.34	0.65	37		12.5	0.37	dc
UV	Verr.	1	vaub.	78751	c	vi	29.5	5.4	5.3	1.01	4.6	4.7	0.98	1.13	1.17	24.0	9.0	17.0	0.71	0.38	1.70	0.29	0.57	33		8.0	0.33	dc
UV	Verr.	1	touc.	78752	pp	sa	30.8	9.5	11.2	0.84							13.0				1.16	0.43	0.81	47				dc
UV	Verr.	1	orb.	78753	pmpp	sa	30.4	9.0	10.0	0.90							10.5				1.05	0.48	0.89	51				c
UV	Verr.	1	suborb.	78792	c	sa	52.2	8.6	9.4	0.91	8.4	8.9	0.95	1.06	1.02	42.0	18.0	34.0	0.81	0.43	1.92	0.26	0.51	29		15.0	0.36	c
UV	Verr.	1	suborb.	78793	c	j	36.5	6.1	6.4	0.94	6.8	6.9	0.99	0.93	0.89	31.0	13.5	21.0	0.68	0.44	2.10	0.24	0.47	27		14.0	0.45	c
UV	Verr.	1	vaub.	78794	c-pa	sa	42.0	8.6	9.8	0.88	8.5	8.9	0.95	1.10	1.02	35.5	15.0	28.0	0.79	0.42	1.54	0.33	0.63	36		17.0	0.48	dc
UV	Verr.	1	suborb.	78795	pmpp	j	32.4	6.7	7.2	0.93	6.0	6.3	0.95	1.14	1.12	28.5	15.0	19.0	0.67	0.53	2.08	0.24	0.47	27		11.0	0.39	c
UV	Verr.	1	orb.	78796	pmpp	j	25.6	6.4	6.8	0.95							9.0				1.33	0.38	0.72	41				c
UV	Verr.	1	orb.	78797	pmpp	a	28.4	9.9	11.6	0.86							9.0				0.78	0.64	1.14	66				dc
UV	Verr.	1	sp.	78798	pp	a																						
UV	Verr.	1	orb.	78799	f	j/sa	35.0									34.0							0.00		17	15.0	0.44	c
LV	Neoc.	1	touc.	78848	c-pa	sa	43.9	7.4	9.3	0.80	7.1	8.4	0.85	1.10	1.04	37.5	13.0	27.0	0.72	0.35	1.40	0.36	0.68	39		12.5	0.33	dc
LV	Neoc.	1	touc.	78849	c	j	39.8	7.3	8.3	0.88	7.3	8.2	0.89	1.02	1.01	36.5	15.0	24.0	0.66	0.41	1.81	0.28	0.54	31		13.0	0.36	d
LV	Neoc.	1	touc.	78850	pmpp	j	27.9	6.9	8.0	0.87							10.5				1.32	0.38	0.73	42				d
LV	Neoc.	1	sp.	78851	f																							
LV	Inos.	1	suborb.	78855	c-pa	vi	30.0	5.5	6.2	0.90	5.0	5.7	0.89	1.09	1.10	27.0	13.5	18.0	0.67	0.50	2.18	0.23	0.45	26		8.0	0.30	dc
LV	Neoc.	1	vaub.	78872	c-pa	j	32.8	6.0	6.6	0.90	5.3	5.9	0.89	1.12	1.13	29.0	11.5	18.0	0.62	0.40	1.73	0.29	0.56	32		10.0	0.34	dc
LV	Inos.	1	touc.	78875	pmpp	a	41.2	9.2	11.1	0.83	8.8	9.6	0.91	1.15	1.05	34.5	14.0	27.0	0.78	0.41	1.27	0.40	0.75	43		16.0	0.46	d
LV	Inos.	1	vaub.	78876	c-pa	vi	26.4	4.6	5.2	0.89	3																	

9	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	ldev	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(NVTAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	muero	
LV	Inos.	1	vaub.	79022	c	a	67.6	11.4	13.4	0.86	11.2	11.5	0.98	1.16	1.02	56.5	17.0	36.0	0.64	0.30	1.27	0.39	0.75	43		25.5	0.45	dc	
UV	Verr.	1	vaub.	79023	pp	j	23.1	7.1	7.8	0.91											1.59	0.31	0.61	35				dc	
UV	Verr.	1	vaub.	79280	pp	a	25.6	11.5	12.6	0.91											1.35	0.37	0.71	41				dc	
UV	Verr.	1	orb.	79291	c-pa	j	40.6	8.7	8.9	0.98	8.0	8.3	0.97	1.07	1.09	35.5	10.5	26.0	0.73	0.30	1.18	0.42	0.80	46		12.5	0.35	c	
UV	Verr.	1	sp.	79292	pa	j																							
UV	Verr.	1	suborb.	79439	pmpp	vi	26.6	5.4	5.7	0.93	4.9	5.3	0.92	1.08	1.10	24.5	12.5	16.0	0.65	0.51	2.18	0.23	0.45	26		8.0	0.33	c	
LV	Pert.	1	ouc.	79653	pp	j	27.5	7.5	8.5	0.88											1.47	0.34	0.66	38				d	
LV	Pert.	1	ouc.	79654	pp	sa	25.6	7.9	8.9	0.89																			d
LV	Pert.	1	ouc.	79664	f		37.3																		18			d	
LV	Pert.	1	ouc.	79667	f																								
LV	Pert.	1	ouc.	79670	f																								
UV	Verr.	1	suborb.	79691	c-pa	vi	25.1	4.4	4.5	0.99	3.9	4.1	0.96	1.10	1.14	21.5	10.0	11.5	0.53	0.47	2.25	0.22	0.44	25		6.0	0.28	c	
LV	Inos.	1	suborb.	79693	pmpp	sa		8.6	9.7	0.89											1.97	0.25	0.50	29				c	
LV	Inos.	1	vaub.	79694	pmpp	j	26.4	6.4	6.9	0.92											1.45	0.35	0.67	38				dc	
LV	Inos.	1	ouc.	79695	pp	j	25.6	6.9	8.0	0.86											1.25	0.40	0.76	44				d	
LV	Inos.	1	ouc.	79696	pp	sa	28.2																						
LV	Inos.	1	vaub.	79697	pmpp	j	27.9	7.4	7.8	0.95											1.67	0.30	0.58	33				dc	
LV	Inos.	1	ouc.	79698	pmpp	j	31.1	6.9	7.7	0.89	5.2	6.4	0.82	1.21	1.32	29.0	11.5	19.0	0.66	0.40	1.50	0.33	0.64	37		7.0	0.24	dc	
LV	Inos.	1	orb.	79705	c-pa	sa	44.4	8.1	8.7	0.93	7.7	8.1	0.95	1.07	1.05	39.0	11.5	31.0	0.79	0.29	1.32	0.38	0.72	42		15.0	0.38	dc	
LV	Neoc.	1	vaub.	79726	c	sa	53.5	8.8	9.9	0.89	8.3	8.3	1.00	1.19	1.06	43.0	15.0	31.0	0.72	0.35	1.52	0.33	0.64	36		15.5	0.36	dc	
UV	Verr.	1	orb.	79754	pp	j	23.9	7.2	7.5	0.96											1.27	0.39	0.75	43				c	
UV	Verr.	1	vaub.	79755	pmpp	j	24.1	7.6	7.6	0.99											1.45	0.35	0.67	38				dc	
UV	Verr.	1	suborb.	79756	pmpp	j/sa	43.0	8.4	8.4	0.99	7.3	7.4	0.99	1.14	1.15	41.5	16.5	31.0	0.75	0.40	1.96	0.26	0.50	29		14.0	0.34	c	
UV	Verr.	1	ouc.	79757	pmpp	j	26.1	6.2	7.0	0.89											1.51	0.33	0.64	37				dc	
UV	Verr.	1	suborb.	79758	pp	j	28.5	7.9	8.2	0.97											2.02	0.25	0.49	28				c	
UV	Verr.	1	vaub.	79759	pp	a	28.2	9.3	11.1	0.84											1.49	0.34	0.65	37				dc	
UV	Verr.	1	vaub.	79761	pp	j	23.8	8.2	8.9	0.91											1.51	0.33	0.64	37				dc	
UV	Verr.	1	sp.	80347	f																								
UV	Verr.	1	vaub.	80352	pp	j	25.3	7.8	8.2	0.95											1.65	0.30	0.59	34				dc	
LV	Inos.	1	vaub.	84312	pp	j	19.9	6.1	6.4	0.96											1.57	0.32	0.61	35				dc	
LV	Inos.	1	sp.	84313	pp	j																							
LV	Neoc.	1	vaub.	84359	pmpp	sa	34.5	8.8	10.0	0.88											1.30	0.38	0.73	42				dc	
UV	Verr.	1	suborb.	84361	pmpp	j	27.7	5.8	6.2	0.93	5.6	5.9	0.95	1.05	1.04	26.5	12.5	17.0	0.64	0.47	2.01	0.25	0.49	28		9.0	0.34	dc	
UV	Verr.	1	vaub.	84363	c-pa	sa	40.0	8.4	8.9	0.94	7.6	8.1	0.94	1.10	1.11	37.0	14.0	26.0	0.70	0.38	1.57	0.32	0.62	35		16.5	0.45	dc	
UV	Verr.	1	orb.	84399	pmpp	a	33.8	9.9	11.1	0.89	9.4	10.2	0.93	1.09	1.06	31.0	13.0	23.0	0.74	0.42	1.17	0.43	0.81	46		13.0	0.42	c	
LV	Neoc.	1	ouc.	84440	pp	j	23.9	7.4	8.2	0.90											1.46	0.34	0.66	38				d	
LV	Neoc.	1	ouc.	84448	pmpp	vi	30.7	5.8	6.7	0.87											1.50	0.33	0.64	37				dc	
LV	Neoc.	1	ouc.	84449	pp	sa	23.8	8.7	10.4	0.84											1.63	0.31	0.60	34				dc	
LV	Inos.	1	ouc.	84452	pmpp	j	31.4	7.6	8.7	0.87											1.38	0.36	0.69	40				dc	
LV	Neoc.	1	orb.	84468	c	j/sa	50.8	9.1	9.7	0.94	8.3	8.3	1.00	1.17	1.10	45.0	11.0	32.0	0.71	0.24	1.14	0.44	0.83	47		16.0	0.36	dc	
LV	Neoc.	1	ouc.	84469	c-pa	j	34.4	7.0	7.9	0.89	6.5	7.2	0.91	1.10	1.08	30.5	10.5	20.0	0.66	0.34	1.34	0.37	0.72	41	18	10.0	0.33	d	
UV	Verr.	1	orb.	84473	pp	j	25.5	7.1	7.7	0.93											1.31	0.38	0.73	42				c	
UV	Verr.	1	vaub.	84474	pp	j	21.9	6.2	6.6	0.94											1.74	0.29	0.56	32				dc	
LV	Inos.	1	vaub.	84736	c-pa	vi	27.9	4.6	5.1	0.90	4.0	4.3	0.93	1.18	1.14	22.5	9.5	15.0	0.67	0.42	1.87	0.27	0.52	30		5.5	0.24	dc	
LV	Inos.	1	orb.	84737	c-pa	sa	44.2	10.6	11.6	0.91	8.7	9.3	0.93	1.24	1.22	40.0	13.5	30.5	0.76	0.34	1.16	0.43	0.81	47		17.5	0.44	c	
LV	Inos.	1	sp.	84738	pp	sa	26.4																						
LV	Inos.	1	vaub.	84739	pmpp	j	23.6	5.0	5.1	0.98	4.4	4.7	0.93	1.09	1.14	22.0	8.5	16.0	0.73	0.39	1.65	0.30	0.59	34		4.5	0.20	dc	
LV	Inos.	1	vaub.	84740	pmpp	a	52.1	11.6	13.5	0.86	10.0	11.6	0.86	1.16	1.16	46.0	17.5	29.0	0.63	0.38	1.29	0.39	0.74	42		19.5	0.42	dc	
LV	Inos.	1	vaub.	84742	c	vi	23.7	3.8	3.9	0.98	2.8	3.1	0.89	1.26	1.38	18.0	6.5	13.0	0.72	0.36	1.66	0.30	0.58	33		3.5	0.19	dc	
LV	Inos.	1	sp.	84744	pmpp	j	31.4																						
UV	Verr.	1	orb.	84793	c	sa	58.6	10.0	10.8	0.93	10.3	10.5	0.99	1.03	0.96	46.5	14.0	36.0	0.77	0.30	1.30	0.38	0.73	42		19.0	0.41	dc	
UV	Verr.	1	orb.	84794	c-pa	sa	42.1	8.5	9.0	0.94	8.5	9.1	0.94	0.99	0.99	36.5	11.0	27.0	0.74	0.30	1.23	0.41	0.77	44		17.0	0.47	c	
UV	Verr.	1	vaub.	84795	pmpp	sa	32.8	9.9	10.6	0.93											1.41	0.35	0.68	39				dc	
UV	Pere.	1	vaub.	84804	c-pa	j	41.2	7.4	8.1	0.91	7.3	7.9	0.93	1.04	1.01	36.0	12.0	25.0	0.69	0.33	1.47	0.34	0.65	37		14.0	0.39	c	
LV	Inos.	1	ouc.	84805	pp	j	25.2	7.9	8.7	0.91											1.15	0.44	0.82	47				d	
UV	Verr.	1	vaub.	84878	pp	sa	23.8	9.2	9.9	0.93											1.49	0.33	0.65	37				dc	
LV	Inos.	1	sp.	84887	f	j																							
UV	Verr.	1	orb.	86002	pmpp	vi/j	23.4	6.2	6.7	0.92	5.4	6.0	0.90	1.13	1.15	22.0	9.0	16.0	0.73	0.41	1.34	0.37	0.71	41		7.0	0.32	c	
UV	Verr.	1	suborb.	86003	pp	sa	30.3	10.4	10.5	0.99											1.95	0.26	0.50	29				dc	
UV	Verr.	1	orb.	86004	pp	sa	23.9	9.5	10.1	0.95											1.24	0.40	0.77	44				c	
UV	Verr.	1	vaub.	86005	c	sa	54.9	9.4	10.2	0.92	8.9	9.3	0.96	1.10	1.06	43.0	15.0	32.0	0.74	0.35	1.47	0.34	0.65	37		17.0	0.40	c	
UV	Furc.	1	vaub.	86033	c	mj	20.6	3.3	3.4	0.95	2.5	2.5	0.98	1.37	1.33	18.0	6.0	10.5	0.58	0.33	1.75	0.29	0.56	32		5.8	0.32	dc	
UV</																													

10	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddiv	ldhat	Ltp	Lpp	LS	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro	
LV	Pert.	1	<i>touc.</i>	87570	pmpp	sa	29,3																						
LV	Pert.	1	<i>sp.</i>	87572	pmpp	j	33																						
LV	Pert.	1	<i>touc.</i>	87578	c	mj	19,2	3,3	3,4	0,98	2,3	2,7	0,85	1,26	1,44	18,0	6,5	12,0	0,67	0,36	1,92	0,26	0,51	29		4,0	0,22	d	
UV	Verr.	1	<i>orb.</i>	87631	c	vj	28,2	4,9	5,3	0,93	4,7	4,9	0,95	1,07	1,05	25,0	7,0	21,0	0,84	0,28	1,33	0,38	0,72	41		9,0	0,36	c	
LV	Neoc.	1	<i>touc.</i>	87738	pmpp	j/sa	34,0	8,5	9,8	0,86	7,6	8,5	0,90	1,15	1,11	32,5	13,0	25,0	0,77	0,40	1,33	0,38	0,72	41		10,0	0,31	d	
LV	Neoc.	1	<i>orb.</i>	87739	pmpp	j	26,4	6,7	7,4	0,91							10,5				1,42	0,35	0,68	39				dc	
LV	Neoc.	1	<i>touc.</i>	87756	f																							d	
LV	Neoc.	1	<i>touc.</i>	87757	pmpp	vj	20,0																					d	
LV	Neoc.	1	<i>sp.</i>	87910	c-pa	vj	26,0																						
LV	Neoc.	1	<i>vaub.</i>	87935	pmpp	j	24,6	6,4	7,2	0,89							12,0				1,66	0,30	0,59	34				dc	
LV	Neoc.	1	<i>sp.</i>	87980	pmpp	sa	45,8																						
LV	Neoc.	1	<i>touc.</i>	87981	pp	a	29,3	10,7	12,6	0,85											1,39	0,36	0,69	40				dc	
LV	Neoc.	1	<i>touc.</i>	87982	pp	j	26,2	8,0	8,9	0,90											1,24	0,40	0,77	44				d	
LV	Neoc.	1	<i>suborb.</i>	87983	pmpp	j	25,7	5,6	6,2	0,91											2,09	0,24	0,47	27				c	
LV	Neoc.	1	<i>vaub.</i>	87984	pmpp	sa	37,1	9,8	11,1	0,88											1,44	0,35	0,67	38				dc	
LV	Neoc.	1	<i>sp.</i>	87985	pp	sa	28																						
LV	Neoc.	1	<i>orb.</i>	87986	pp	j	21,6	6,6	7,1	0,92										7,5		1,05	0,48	0,89	51			c	
LV	Neoc.	1	<i>touc.</i>	87987	pp	a	27,1	10,5	12,2	0,86											15,0		1,23	0,41	0,77	44			dc
LV	Neoc.	1	<i>touc.</i>	88010	pp	sa	23,9	8,2	9,5	0,86											14,0		1,48	0,34	0,65	37			d
LV	Neoc.	1	<i>vaub.</i>	88011	pp	j	21,7	8,1	9,1	0,90											14,0		1,54	0,32	0,63	36			dc
LV	Inos.	1	<i>sp.</i>	88034	f																								
LV	Inos.	1	<i>vaub.</i>	88111	pmpp	j	28,8	6,9	7,1	0,97	7,2	7,4	0,97	0,96	0,96	27,5	12,0	18,0	0,65	0,44	1,69	0,30	0,57	33		9,5	0,35	dc	
LV	Pert.	1	<i>touc.</i>	88224	pp	a	30,2	10,1	12,2	0,82											12,5		1,02	0,49	0,91	52			d
LV	Pert.	1	<i>touc.</i>	88225	c-pa	j	42,0	7,8	8,4	0,93	7,0	7,2	0,97	1,16	1,11	37,5	12,0	29,0	0,77	0,32	1,43	0,35	0,67	39		12,0	0,32	d	
LV	Pert.	1	<i>touc.</i>	88226	pmpp	j	26,8	6,4	7,5	0,84																			
LV	Pert.	1	<i>vaub.</i>	88227	pmpp	j	29,3	8,6	9,0	0,95											12,5		1,39	0,36	0,69	39			dc
LV	Pert.	1	<i>vaub.</i>	88228	pmpp	j	34,5	7,9	8,4	0,94	7,2	7,8	0,92	1,08	1,10	29,0	10,0	18,0	0,62	0,34	1,19	0,42	0,79	45		8,5	0,29	dc	
LV	Pert.	1	<i>touc.</i>	88229	pmpp	j	34,9	6,9	7,6	0,91	6,6	7,2	0,92	1,06	1,05	34,0	11,5	22,5	0,66	0,34	1,51	0,33	0,64	37		11,0	0,32	d	
LV	Pert.	1	<i>touc.</i>	88231	pmpp	vj	26,2	5,2	5,6	0,93	4,3	5,0	0,86	1,13	1,21	23,0	9,5	15,0	0,65	0,41	1,70	0,29	0,57	33		6,0	0,26	d	
LV	Pert.	1	<i>touc.</i>	88233	c	j	49,7	7,6	8,5	0,90	7,4	8,0	0,93	1,06	1,03	40,0	13,0	29,0	0,73	0,33	1,53	0,33	0,63	36		12,5	0,31	dc	
LV	Inos.	1	<i>touc.</i>	88286	pmpp	j	31,4	8,1	9,5	0,86											11,0		1,16	0,43	0,81	46			d
UV	Verr.	1	<i>orb.</i>	88287	pmpp	sa	48,6	9,9	10,8	0,92	9,6	10,4	0,92	1,04	1,04	40,5	13,0	28,0	0,69	0,32	1,20	0,42	0,79	45		19,5	0,48	dc	
UV	Verr.	1	<i>orb.</i>	88288	pp	sa	26,0	9,4	9,7	0,96											10,0		1,03	0,49	0,90	52			c
UV	Verr.	1	<i>vaub.</i>	88318	c	mj	24,0	4,4	4,1	1,07	3,2	3,6	0,88	1,12	1,36	20,0	7,5	13,0	0,65	0,38	1,84	0,27	0,53	30		5,5	0,28	dc	
LV	Inos.	1	<i>vaub.</i>	88320	c-pa	j	32,7	6,9	7,4	0,94	5,9	6,4	0,92	1,16	1,18	29,5	11,5	19,0	0,64	0,39	1,56	0,32	0,62	35		10,0	0,34	dc	
LV	Neoc.	1	<i>touc.</i>	88352	pmpp	j	33,4	7,2	8,1	0,89	6,7	7,4	0,91	1,10	1,08	28,0	11,0	18,0	0,64	0,39	1,36	0,37	0,71	40		7,5	0,27	dc	
LV	Neoc.	1	<i>touc.</i>	88357	pmpp	sa	40,3	8,7	10,2	0,85	8,3	8,8	0,95	1,16	1,04	35,0	14,0	24,0	0,69	0,40	1,38	0,36	0,70	40		13,5	0,39	dc	
LV	Neoc.	1	<i>touc.</i>	88555	pmpp	j	29,9	6,1	7,0	0,87	5,6	6,4	0,87	1,10	1,09	26,5	12,0	17,5	0,66	0,45	1,72	0,29	0,57	32		9,0	0,34	d	
LV	Neoc.	1	<i>vaub.</i>	88556	pp	sa	26,6	8,4	9,0	0,93											14,0		1,56	0,32	0,62	36			dc
LV	Neoc.	1	<i>touc.</i>	88557	pmpp	j	25,6	5,1	5,7	0,89	5,1	5,6	0,91	1,03	1,00	22,5	10,5	12,0	0,53	0,47	1,85	0,27	0,53	30		7,5	0,33	dc	
LV	Neoc.	1	<i>suborb.</i>	88563	c-pa	a	60,9	11,1	13,1	0,85	10,8	11,9	0,91	1,11	1,03	56,5	24,0	42,5	0,75	0,42	1,83	0,27	0,53	31		20,0	0,35	c	
LV	Neoc.	1	<i>suborb.</i>	88574	pmpp	j	27,1	5,1	5,3	0,95	4,1	4,5	0,91	1,20	1,25	23,0	11,0	14,0	0,61	0,48	2,06	0,24	0,48	27		6,5	0,28	c	
LV	Pert.	1	<i>suborb.</i>	88591	pmpp	j	31,6	5,6	5,9	0,95	5,0	5,5	0,90	1,07	1,13	28,0	12,0	20,0	0,71	0,43	2,03	0,25	0,48	28		8,0	0,29	c	
LV	Pert.	1	<i>vaub.</i>	88593	pmpp	vj	19,1	4,3	4,5	0,95	3,7	4,0	0,91	1,13	1,17	19,0	8,5	12,0	0,63	0,45	1,88	0,27	0,52	30		5,0	0,26	dc	
LV	Pert.	1	<i>touc.</i>	88595	pmpp	vj	22,5	4,2	4,5	0,93	3,3	3,9	0,85	1,16	1,26	21,0	8,0	13,0	0,62	0,38	1,79	0,28	0,54	31		5,0	0,24	d	
LV	Neoc.	1	<i>sp.</i>	88666	c	sa																							
LV	Neoc.	1	<i>vaub.</i>	88673	pmpp	sa	37,0	8,4	9,2	0,91	7,2	8,4	0,86	1,10	1,18	34,5	15,5	21,0	0,61	0,45	1,68	0,30	0,58	33		7,0	0,20	dc	
LV	Neoc.	1	<i>touc.</i>	88674	pmpp	j	26,3	5,3	6,0	0,88	4,5	5,1	0,89	1,19	1,18	25,0	11,0	18,0	0,72	0,44	1,82	0,27	0,54	31		7,0	0,28	d	
LV	Neoc.	1	<i>vaub.</i>	88685	c-pa	vj	22,8	4,1	4,5	0,92	3,1	3,4	0,93	1,34	1,33	19,0	6,5	15,0	0,79	0,34	1,44	0,35	0,67	38		4,5	0,24	c	
LV	Neoc.	1	<i>vaub.</i>	88824	c	vj	31,4	4,9	5,3	0,92	3,9	4,2	0,92	1,27	1,27	28,5	9,5	20,0	0,70	0,33	1,78	0,28	0,55	31		6,0	0,21	dc	
LV	Neoc.	1	<i>touc.</i>	88825	pp	j/sa	28,8	7,3	8,4	0,88																		d	
LV	Neoc.	1	<i>vaub.</i>	88827	pp	j	19,1	5,3	5,8	0,91											9,0		1,55	0,32	0,62	36			c
LV	Neoc.	1	<i>orb.</i>	88871	c-pa	vj	23,6	4,8	4,9	0,99	3,9	4,4	0,89	1,12	1,25	21,0	7,5	16,0	0,76	0,36	1,53	0,33	0,63	36		6,0	0,29	c	
LV	Neoc.	1	<i>vaub.</i>	88873	pmpp	mj	16,7	3,1	3,2	0,97	2,5	2,8	0,88	1,14	1,27	16,0	5,5	9,5	0,59	0,34	1,73	0,29	0,56	32		3,5	0,22	dc	
LV	Neoc.	1	<i>vaub.</i>	88938	pmpp	a	48,0	11,6	13,5	0,86	9,1	10,2	0,89	1,33	1,28	46,5	18,0	31,0	0,67	0,39	1,33	0,38	0,72	41		19,0	0,41	dc	
LV	Neoc.	1	<i>orb.</i>	88939	pp	sa	27,0	9,1	9,6	0,94											11,5		1,19	0,42	0,79	45			c
LV	Neoc.	1	<i>orb.</i>	88940	c	j	35,5	6,5	7,3	0,89	5,6	6,2	0,91	1,18	1,15	29,5	8,5	21,5	0,73	0,29	1,16	0,43	0,81	46		9,0	0,31	c	
LV	Neoc.	1	<i>vaub.</i>	88941	pmpp	j	24,9	5,6	6,0	0,94											9,5		1,59	0,32	0,61	35			dc
LV	Neoc.	1	<i>touc.</i>	88942	c	vj	24,0	3,8	4,4	0																			

12	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	ldiv	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro	
UV	Verr.	1	vaub.	90538	pmpp	j	29.1	6.8	7.2	0.94	6.5	6.8	0.96	1.07	1.05	25.5	11.5	16.5	0.65	0.45	1.60	0.31	0.61	35		10.0	0.39	dc	
UV	Verr.	1	vaub.	90539	pmpp	j	26.2	6.5	6.9	0.95	6.2	6.4	0.97	1.07	1.05	24.5	10.0	16.0	0.65	0.41	1.45	0.34	0.66	38		9.0	0.37	dc	
UV	Verr.	1	vaub.	90540	pmpp	sa	30.2	9.5	10.3	0.93						14.5					1.41	0.35	0.68	39	18			dc	
UV	Verr.	1	orb.	90541	pmpp	a	34.3	10.2	11.3	0.90							11.0				0.97	0.51	0.95	54				c	
UV	Verr.	1	orb.	90542	pp	j	23.1	8.1	8.7	0.94							10.0				1.15	0.43	0.82	47				c	
UV	Verr.	1	orb.	90543	pp	sa	24.1	9.8	10.1	0.97							10.0				0.99	0.51	0.94	54				dc	
UV	Verr.	1	orb.	90544	pp	sa	18.7	10.2	11.2	0.91							12.0				1.07	0.47	0.87	50				c	
LV	Neoc.	1	touc.	90595	pmpp	j/sa	33.8	7.6	9.5	0.80	6.5	7.5	0.87	1.28	1.18	32.5	15.0	21.0	0.65	0.46	1.58	0.32	0.61	35		14.0	0.43	dc	
LV	Neoc.	1	vaub.	90596	pmpp	j	30.4	5.8	6.2	0.94	5.1	5.4	0.95	1.14	1.13	27.0	11.0	16.5	0.61	0.41	1.78	0.28	0.55	31		8.0	0.30	dc	
UV	Verr.	1	vaub.	90615	c	vj	31.5	5.4	5.6	0.98	4.9	5.2	0.94	1.06	1.11	23.5	10.0	14.0	0.60	0.43	1.80	0.28	0.54	31		8.0	0.34	dc	
UV	Verr.	1	vaub.	90616	pmpp	vj/j	25.5	5.6	5.7	0.98	4.5	4.7	0.97	1.23	1.24	23.5	9.5	15.0	0.64	0.40	1.66	0.30	0.59	34		8.0	0.34	dc	
UV	Verr.	1	orb.	90617	pp	j	24.0	7.3	7.4	0.98							8.8				1.18	0.42	0.80	46				dc	
UV	Verr.	1	orb.	90618	pp	j	19.9	7.2	7.6	0.95							11.0				1.45	0.35	0.67	38				c	
UV	Verr.	1	vaub.	90637	pmpp	j/sa	30.8	8.2	8.9	0.92	7.6	8.4	0.90	1.05	1.07	30.0	12.5	20.0	0.67	0.42	1.41	0.35	0.68	39		10.0	0.33	dc	
UV	Verr.	1	vaub.	90648	c	j/sa	53.1	9.0	9.3	0.96	7.7	7.6	1.01	1.22	1.17	37.5	14.0	28.0	0.75	0.37	1.50	0.33	0.64	37		12.0	0.32	dc	
UV	Verr.	1	touc.	90649	c	sa	46.6	8.7	9.9	0.88	8.4	8.8	0.96	1.13	1.04	42.0	12.5	29.0	0.69	0.30	1.26	0.40	0.75	43		18.5	0.44	dc	
UV	Verr.	1	orb.	90650	pmpp	sa	34.6	8.6	9.2	0.94	8.7	9.2	0.94	0.99	0.99	30.0	10.0	18.0	0.60	0.33	1.09	0.46	0.86	49		12.0	0.40	c	
UV	Verr.	1	vaub.	90651	pmpp	sa	36.2	8.2	8.7	0.93	8.0	8.2	0.97	1.06	1.02	32.5	13.0	22.0	0.68	0.40	1.49	0.34	0.65	37		9.5	0.29	dc	
UV	Verr.	1	sp.	90707	pmpp	sa																							
UV	Verr.	1	vaub.	90712	pmpp	a	44.2	10.8	11.7	0.92	9.4	9.9	0.96	1.19	1.15	41.0	17.0	33.0	0.80	0.41	1.45	0.34	0.66	38		16.0	0.39	dc	
UV	Verr.	1	vaub.	90713	pmpp	sa	34.4	8.1	9.7	0.83	7.9	9.0	0.87	1.07	1.02	32.5	13.0	27.0	0.83	0.40	1.34	0.37	0.71	41				dc	
UV	Verr.	1	vaub.	90714	c-pa	j	37.4	7.0	6.8	1.03	5.7	5.8	0.99	1.19	1.23	33.5	10.0	25.5	0.76	0.30	1.46	0.34	0.66	38		11.0	0.33	dc	
UV	Verr.	1	touc.	90718	pp	a	27.2	9.7	11.1	0.87							15.0				1.35	0.37	0.71	41				dc	
UV	Verr.	1	orb.	90719	pp	j	28.9	8.1	8.7	0.93							12.0				1.39	0.36	0.69	40				dc	
UV	Verr.	1	vaub.	90737	c-pa	a	47.6	10.0	11.1	0.91	9.4	10.2	0.92	1.08	1.06	44.0	15.5	30.0	0.68	0.35	1.40	0.36	0.68	39		17.0	0.39	dc	
UV	Verr.	1	vaub.	90738	pp	a	28.8	10.5	11.9	0.88							16.0				1.34	0.37	0.71	41				c	
UV	Verr.	1	orb.	90739	pmpp	sa	31.5	8.5	9.2	0.93	8.2	8.6	0.95	1.07	1.04	29.0	10.5	21.0	0.72	0.36	1.14	0.44	0.82	47				c	
UV	Verr.	1	vaub.	90740	pp	a	30.1	10.9	11.5	0.94							16.5				1.43	0.35	0.67	38				dc	
UV	Verr.	1	vaub.	90741	pp	sa	29.7	8.6	9.1	0.95							28.0	14.0			1.54	0.32	0.63	36				dc	
UV	Verr.	1	orb.	90742	pp	a	29.8	10.6	11.8	0.90							28.0	13.0			1.10	0.46	0.85	49				c	
UV	Verr.	1	orb.	90743	pmpp	j	28.7	6.6	7.0	0.95	6.1	6.3	0.97	1.11	1.09	25.5	9.5	17.0	0.67	0.37	1.36	0.37	0.70	40		9.5	0.37	c	
UV	Verr.	1	vaub.	90744	pp	j	28.9	7.8	7.8	0.99							27.0	12.0			1.53	0.33	0.63	36				c	
UV	Verr.	1	orb.	90745	pp	j	24.2	6.7	6.7	0.99							9.0				1.34	0.37	0.71	41				c	
UV	Verr.	1	suborb.	90746	pmpp	sa	20.5	8.5	9.2	0.92							19.0				2.07	0.24	0.48	27				c	
UV	Verr.	1	vaub.	90747	pmpp	j	20.5																						
UV	Verr.	1	sp.	90749	pp	a	29.5																0.00						
UV	Verr.	1	vaub.	90750	pmpp	j	29.4	8.1	9.0	0.91							15.0				1.68	0.30	0.58	33				dc	
UV	Verr.	1	vaub.	90751	pp	j	21.9	5.8	6.3	0.92							10.0				1.58	0.32	0.61	35				dc	
UV	Verr.	1	vaub.	90752	pmpp	j/sa	26.7	7.9	8.5	0.94							13.0				1.53	0.33	0.63	36				dc	
UV	Verr.	1	vaub.	90753	pmpp	a	37.4	9.9	10.9	0.91	9.9	10.4	0.96	1.05	1.00	33.0	15.0	21.0	0.64	0.45	1.38	0.36	0.69	40				dc	
UV	Verr.	1	touc.	90754	pmpp	sa	33.7	8.6	9.8	0.88	7.8	8.4	0.93	1.17	1.11	32.0	13.0	23.0	0.72	0.41	1.33	0.38	0.72	41		11.0	0.34	dc	
UV	Verr.	1	vaub.	90755	pmpp	a	39.6	11.6	12.4	0.94							16.0				1.30	0.39	0.74	42				c	
UV	Verr.	1	suborb.	90756	pmpp	sa	33.8	8.4	9.1	0.92	7.8	8.8	0.88	1.03	1.07	32.0	16.5	19.0	0.59	0.52	1.82	0.28	0.54	31		12.0	0.38	c	
UV	Verr.	1	orb.	90757	c-pa	j/sa	44.7	8.8	9.0	0.98	7.4	8.3	0.90	1.08	1.18	43.0	9.0	30.0	0.70	0.21	1.00	0.50	0.92	53		17.0	0.40	c	
UV	Verr.	1	orb.	90758	pmpp	sa	30.3	9.6	10.3	0.94							12.0				1.17	0.43	0.81	46				c	
UV	Verr.	1	vaub.	90759	pp	sa	30.0	8.7	9.6	0.90							14.0				1.45	0.34	0.66	38				dc	
UV	Verr.	1	vaub.	90760	pp	sa	29.0	8.8	9.4	0.93							14.5				1.54	0.33	0.63	36				c	
UV	Verr.	1	orb.	90761	pmpp	j	26.8	7.8	7.9	0.98							11.0				1.39	0.36	0.69	40				dc	
UV	Verr.	1	touc.	90762	pmpp	j	24.8	5.6	6.2	0.90	5.3	5.9	0.91	1.07	1.05	24.0	10.0	15.0	0.63	0.42	1.60	0.31	0.60	35		8.0	0.33	d	
UV	Verr.	1	suborb.	90763	pp	j	27.8	6.9	7.7	0.89							16.0				2.07	0.24	0.47	27				c	
UV	Verr.	1	orb.	90764	pp	j	25.4	7.2	7.7	0.95							9.5				1.24	0.40	0.77	44				c	
UV	Verr.	1	orb.	90765	pp	j	24.5	7.8	8.5	0.92							11.0				1.30	0.39	0.74	42				c	
UV	Verr.	1	vaub.	90766	pp	j	25.0	7.6	8.3	0.91							13.5				1.62	0.31	0.60	34				dc	
UV	Verr.	1	vaub.	90767	pmpp	j	23.0	5.8	6.4	0.91							10.5				1.65	0.30	0.59	34				dc	
UV	Verr.	1	vaub.	90768	pmpp	j	24.3	6.4	6.7	0.96							11.0				1.64	0.30	0.59	34				dc	
UV	Verr.	1	orb.	90769	pmpp	j	22.0	6.3	6.6	0.95							9.0				1.37	0.37	0.70	40				dc	
UV	Verr.	1	orb.	90770	pmpp	j	28.2	7.0	7.5	0.93	6.2	6.7	0.92	1.12	1.14	26.5	10.5	15.0	0.57	0.40	1.39	0.36	0.69	40		10.0	0.38	c	
UV	Verr.	1	vaub.	90771	pmpp	j	24.6	5.6	6.0	0.93	5.4	5.6	0.97	1.08	1.04	23.5	10.0	16.0	0.68	0.43	1.66	0.30	0.58	33				dc	
UV	Verr.	1	vaub.	90773	pmpp	vj	19.1	5.3	5.5	0.95							10.0				1.81	0.28	0.54	31				dc	
UV	Verr.	1	touc.	90774	pmpp	sa	34.1	10.3	11.9	0.86							15.0		</										

13	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	ldev	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	micro
LV	Inos.	1	touc.	91409	pmpp	j	33.1	6.5	8.0	0.82	6.0	6.7	0.90	1.19	1.09	29.5	10.5	23.0	0.78	0.36	1.31	0.38	0.73	42		10.0	0.34	dc
LV	Inos.	1	vaub.	91410	pp	j	19.7	6.0	6.6	0.91							10.0				1.51	0.33	0.64	37				dc
LV	Inos.	1	vaub.	91411	pmpp	vj	24.6	5.1	5.3	0.97	4.4	4.7	0.93	1.14	1.18	23.5	9.0	15.0	0.64	0.38	1.69	0.30	0.57	33	7.0	0.30	dc	
UV	Verr.	1	orb.	91428	pmpp	j	23.7	6.8	6.9	0.99							9.0				1.31	0.38	0.73	42				c
UV	Verr.	1	sp.	91429	papm	sa																						
UV	Verr.	1	vaub.	91434	c	mj	25.1	4.5	4.3	1.04	3.4	3.7	0.92	1.15	1.30	21.5	8.0	14.5	0.67	0.37	1.88	0.27	0.52	30	7.0	0.33	dc	
UV	Verr.	1	vaub.	91435	pmpp	j	25.5	7.4	7.5	0.97							11.0				1.46	0.34	0.66	38				dc
UV	Verr.	1	orb.	91436	pmpp	mj	14.8	3.3	3.3	0.99							5.0				1.51	0.33	0.64	37				dc
UV	Verr.	1	vaub.	91437	pmpp	mj	15.2	4.1	4.3	0.96							7.0				1.63	0.31	0.59	34				dc
UV	Verr.	1	sp.	91438	pa	sa																						
UV	Verr.	1	sp.	91439	f																							
UV	Verr.	1	sp.	91440	f																							
UV	Verr.	1	sp.	91441	f																							
UV	Verr.	1	sp.	91442	f																							
UV	Verr.	1	orb.	91443	pp	j	20.3	6.8	7.3	0.93							9.5				1.31	0.38	0.73	42				dc
LV	Inos.	1	vaub.	91466	pmpp	j	32.4	7.2	8.0	0.90	6.8	7.1	0.96	1.13	1.06	30.0	12.0	24.0	0.80	0.40	1.49	0.33	0.65	37	7.0	0.23	c	
LV	Inos.	1	sp.	91467	pmpp	vj	17																					
UV	Verr.	1	orb.	91470	pp	a	25.9	9.7	10.2	0.95							12.0				1.18	0.42	0.80	46				c
UV	Verr.	1	suborb.	91478	c	a	49.8	10.2	11.4	0.89	9.5	10.0	0.95	1.14	1.06	45.0	19.5	33.0	0.73	0.43	1.71	0.29	0.57	33	18	19.0	0.42	c
UV	Verr.	1	vaub.	91479	pmpp	sa	28.8	9.7	10.1	0.96							15.0				1.48	0.34	0.65	37				dc
UV	Verr.	1	orb.	91480	pmpp	sa	28.2	9.5	9.6	0.99							9.5				0.99	0.51	0.94	54				c
UV	Verr.	1	sp.	91481	f																							
UV	Verr.	1	sp.	91482	f																							
UV	Verr.	1	sp.	91483	f																							
UV	Verr.	1	sp.	91484	f																							
UV	Verr.	1	orb.	91496	c	vj/j	30.9	5.5	5.9	0.94	4.9	5.1	0.95	1.14	1.13	28.0	8.8	21.0	0.75	0.31	1.49	0.34	0.65	37	10.0	0.36	dc	
UV	Verr.	1	orb.	91497	c	sa	41.3	7.4	8.0	0.92	7.1	7.3	0.98	1.10	1.04	35.5	9.5	27.0	0.76	0.27	1.18	0.42	0.80	46	14.5	0.41	c	
UV	Verr.	1	touc.	91498	pmpp	sa	27.8	7.8	9.0	0.87							13.0				1.45	0.34	0.66	38				d
UV	Verr.	1	vaub.	91499	c	sa	39.8	8.9	9.7	0.92	7.5	8.0	0.93	1.21	1.19	34.5	14.3	24.0	0.70	0.41	1.47	0.34	0.65	37	13.0	0.38	dc	
UV	Verr.	1	orb.	91502	c	j	37.5	6.8	6.9	0.99	5.8	5.9	0.98	1.17	1.18	29.5	8.5	23.0	0.78	0.29	1.24	0.40	0.77	44	18	11.5	0.39	c
UV	Verr.	1	suborb.	91503	pmpp	sa	38.9	7.8	8.9	0.87	7.9	8.5	0.93	1.05	0.99	37.0	17.0	22.0	0.59	0.46	1.91	0.26	0.51	29	16.0	0.43	c	
UV	Verr.	1	orb.	91504	pmpp	sa	39.8	9.3	10.1	0.92	8.7	9.5	0.91	1.07	1.08	37.0	11.5	26.0	0.70	0.31	1.13	0.44	0.83	48	15.0	0.41	c	
UV	Verr.	1	orb.	91505	pmpp	j	28.3	5.7	5.8	0.98	5.2	5.6	0.94	1.04	1.08	26.0	7.0	19.0	0.73	0.27	1.21	0.41	0.78	45	9.5	0.37	dc	
UV	Verr.	1	orb.	91506	c-pa	sa	36.8	9.4	9.8	0.97	7.8	8.8	0.89	1.12	1.21	34.5	9.5	25.0	0.72	0.28	0.97	0.51	0.95	54	14.0	0.41	dc	
UV	Verr.	1	sp.	91507	f																	0.00			18			
UV	Verr.	1	orb.	91508	pp	sa	13																					c
UV	Verr.	1	suborb.	91509	pmpp	sa	29.9	8.6	9.5	0.91							18.0				1.90	0.26	0.51	29				dc
UV	Verr.	1	sp.	91510	pm	a																						
UV	Verr.	1	vaub.	91511	pmpp	vj	18.9	4.6	4.7	0.97							8.0				1.69	0.30	0.57	33				dc
UV	Verr.	1	vaub.	91512	pmpp	mj	14.1	3.8	3.7	1.04							6.0				1.64	0.30	0.59	34				dc
UV	Verr.	1	vaub.	91513	pp	sa	26.3	9.7	9.9	0.98							14.5				1.46	0.34	0.66	38				dc
UV	Verr.	1	orb.	91514	pp	a	23.7	10.4	11.1	0.94							12.0				1.08	0.46	0.87	50				c
UV	Verr.	1	sp.	91515	f																							
UV	Verr.	1	sp.	91516	f																							
UV	Verr.	1	suborb.	91517	c	j/sa	46.5	7.4	8.3	0.88	7.0	7.6	0.91	1.09	1.05	38.0	17.0	29.5	0.78	0.45	2.04	0.25	0.48	28	18	13.5	0.36	dc
UV	Verr.	1	sp.	91518	pmpp	a	36																					
UV	Verr.	1	sp.	91519	pmpp	j	28.1																					
UV	Verr.	1	sp.	91520	f																							
UV	Verr.	1	sp.	91521	f																							
UV	Verr.	1	suborb.	91574	c	a	59.0	10.0	11.1	0.90	10.0	10.4	0.97	1.07	1.00	49.0	20.0	31.0	0.63	0.41	1.80	0.28	0.54	31	19.5	0.40	dc	
UV	Verr.	1	orb.	91575	c-pa	a	47.3	11.3	11.5	0.98							12.0				1.04	0.48	0.89	51				c
UV	Verr.	1	sp.	91576	c	j	39																					
UV	Verr.	1	orb.	91577	pmpp	a	42.8	10.6	11.7	0.91	9.0	9.5	0.94	1.23	1.18	37.5	13.0	34.0	0.91	0.35	1.11	0.45	0.85	49	11.5	0.31	c	
UV	Verr.	1	orb.	91578	pmpp	j	35.7	6.9	7.6	0.91	6.8	7.4	0.93	1.04	1.01	32.0	10.0	23.0	0.72	0.31	1.31	0.38	0.73	42	18	11.0	0.34	c
UV	Verr.	1	orb.	91579	pmpp	j	27.5	7.5	7.7	0.97							10.8				1.39	0.36	0.69	40				c
UV	Verr.	1	orb.	91580	f	j																						
UV	Verr.	1	suborb.	91581	f	vj/j	18.9	4.9	5.0	0.96							11.0				2.18	0.23	0.45	26				c
UV	Verr.	1	sp.	91582	f																							
UV	Verr.	1	vaub.	91583	pp	j	24.1	7.5	7.7	0.97							12.3				1.60	0.31	0.61	35				dc
UV	Verr.	1	orb.	91584	pp	j	22.4	7.9	8.5	0.93							11.5				1.36	0.37	0.70	40				dc
UV	Verr.	1	vaub.	91585	c	j	43.7	6.1	6.7	0.91	5.5	6.0	0.92	1.11	1.10	34.0	11.5	24.0	0.71	0.34	1.73	0.29	0.56	32	11.0	0.32	dc	
UV	Verr.	1	orb.	91586	c-pa	a	48.8	10.7	11.8	0.90	9.9	10.1	0.98	1.17	1.08	45.0	11.5	34.5	0.77	0.26	0.97	0.51	0.95	54	21.0	0.47	c	
UV	Verr.	1	sp.	91587	pmpp	j	30.4																					
UV	Verr.	1	orb.	91588	pmpp	mj	14.6	4.1	4.0	1.01							6.3				1.55	0.32	0.62	36				dc
UV	Verr.	1	sp.	91589	f																							
UV	Verr.	1	sp.	91590	f																							
UV	Verr.	1	sp.	91591	f																							
UV	Verr.	1	sp.	91592	pmpp	sa	32																					

14	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	ldev	ldhat	Ltp	Lpp	ls	ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro
UV	Verr.	1	sp.	92085	pm	j																						
UV	Verr.	1	sp.	92086	pp	j																						
UV	Verr.	1	sp.	92087	pm	a																						
UV	Verr.	1	orb.	92088	pp	j	19.6	6.0	6.3	0.95												1.35	0.37	0.71	41			dc
UV	Verr.	1	sp.	92089	pp																							
LV	Pert.	1	touc.	92126	pmpp	j	34.4	6.5	7.8	0.83	6.4	7.0	0.91	1.11	1.02	31.5	13.0	25.0	0.79	0.41	1.66	0.30	0.58	33		10.0	0.32	d
LV	Neoc.	1	touc.	92196	pmpp	vi	26.9	4.8	5.5	0.87												1.74	0.29	0.56	32			d
LV	Neoc.	1	touc.	92213	c	sa	48.2	8.7	9.9	0.87	7.5	8.6	0.86	1.15	1.16	42.5	14.5	32.0	0.75	0.34	1.46	0.34	0.66	38		14.0	0.33	d
LV	Inos.	1	orb.	92232	c	sa	44.0										14.0								18			c
LV	Inos.	1	vaub.	92233	pp	a	34.7	12.2	14.1	0.87							19.0					1.35	0.37	0.71	41			dc
LV	Inos.	1	orb.	92234	pp	a	32.5	10.3	12.0	0.86							15.0					1.25	0.40	0.76	44			c
LV	Inos.	1	orb.	92235	pp	a	28.3	12.0	14.6	0.82							13.0					0.89	0.56	1.02	59			c
LV	Inos.	1	orb.	92236	pp	a	25.7	11.5	13.2	0.87							14.0					1.06	0.47	0.88	50			c
LV	Inos.	1	vaub.	92237	pp	sa	29.4	9.1	10.0	0.91							16.0					1.60	0.31	0.61	35			dc
LV	Inos.	1	touc.	92238	pmpp	sa	36.3	8.1	10.2	0.79	7.8	8.5	0.91	1.20	1.04	34.0	13.0	28.0	0.82	0.38	1.27	0.39	0.75	43		13.0	0.38	d
LV	Inos.	1	vaub.	92239	pp	a	29.2	10.7	12.1	0.89							17.0					1.41	0.36	0.68	39			dc
LV	Inos.	1	orb.	92240	pp	sa	25.2	8.9	9.8	0.91							10.5					1.08	0.46	0.87	50			c
LV	Inos.	1	touc.	92241	pp	j	28.6	8.0	9.2	0.87							13.0					1.41	0.35	0.68	39			d
LV	Inos.	1	orb.	92242	pmpp	j	37.5	8.3	9.3	0.90							11.0					1.19	0.42	0.80	46	18		dc
LV	Inos.	1	touc.	92243	pp	j	21.3	6.6	7.4	0.89							11.0					1.48	0.34	0.65	37			d
LV	Inos.	1	orb.	92244	pp	j	23.3	6.9	7.7	0.89							9.0					1.17	0.43	0.81	46			c
LV	Inos.	1	orb.	92245	pp	j	22.6	9.4	10.6	0.88							10.0					0.94	0.53	0.88	56			c
LV	Inos.	1	orb.	92246	pmpp	j	24.9	6.9	7.4	0.94	6.1	6.6	0.94	1.12	1.13	24.0	8.5	16.5	0.69	0.35	1.15	0.43	0.92	47		6.0	0.25	c
LV	Inos.	1	touc.	92247	pp	j	26.5	7.4	8.3	0.89							12.0					1.45	0.35	0.67	38			d
LV	Inos.	1	touc.	92248	pmpp	j	34.5	7.4	8.3	0.89							14.0					1.69	0.30	0.57	33	18		d
LV	Inos.	1	touc.	92249	pp	j	24.5	8.5	9.4	0.90							15.0					1.60	0.31	0.61	35			d
LV	Inos.	1	orb.	92250	pmpp	j	24.3	6.4	7.1	0.91							10.0					1.42	0.35	0.68	39			dc
LV	Neoc.	1	vaub.	92251	pmpp	a	39.3	10.9	12.8	0.86							19.0					1.49	0.34	0.65	37			c
LV	Neoc.	1	vaub.	92252	pmpp	a	39.5	11.3	12.8	0.88	9.7	11.1	0.88	1.16	1.17	38.5	15.5	27.0	0.70	0.40	1.21	0.41	0.78	45		11.0	0.29	c
LV	Neoc.	1	vaub.	92253	pp	a	37.0	10.7	12.6	0.85							18.0					1.43	0.35	0.67	39			dc
LV	Neoc.	1	orb.	92254	pmpp	sa	38.2	8.8	9.8	0.90	9.1	9.9	0.91	0.98	0.97	35.0	11.5			0.33	1.18	0.42	0.80	46		16.0	0.46	dc
LV	Neoc.	1	vaub.	92255	pp	sa	29.0	9.4	10.9	0.86							15.0					1.38	0.36	0.70	40			dc
LV	Neoc.	1	orb.	92256	pp	sa	27.9	9.4	10.5	0.89							12.5					1.20	0.42	0.79	45			c
LV	Neoc.	1	touc.	92257	pmpp	sa	32.3	8.6	9.7	0.89							14.5					1.49	0.34	0.65	37			dc
LV	Neoc.	1	sp.	92258	pp	j	17.0																					
LV	Neoc.	1	touc.	92259	pp	sa	24.9	8.9	10.5	0.85							14.5					1.38	0.36	0.70	40			d
LV	Neoc.	1	touc.	92260	pmpp	vi	25.1	6.0	6.8	0.88							10.0					1.48	0.34	0.65	37			d
LV	Neoc.	1	vaub.	92261	pmpp	vi	18.9	5.0	5.4	0.93							9.0					1.66	0.30	0.58	34			dc
LV	Neoc.	1	orb.	92262	pmpp	vi	22.2	5.4	5.7	0.94	4.5	5.1	0.88	1.13	1.21	22.0	8.0	12.5	0.57	0.36	1.39	0.36	0.69	39		5.0	0.23	dc
LV	Neoc.	1	orb.	92263	pp	a	29.3	10.9	12.1	0.90							10.5					0.87	0.57	1.04	60			c
UV	Verr.	1	vaub.	92264	pmpp	sa	31.2	9.3	9.7	0.96							14.0					1.44	0.35	0.67	38			dc
UV	Verr.	1	vaub.	92265	pmpp	j	21.4	5.4	5.6	0.96							9.5					1.69	0.30	0.58	33			dc
UV	Verr.	1	orb.	92266	pmpp	j	24.2	7.8	7.9	0.99							9.0					1.14	0.44	0.83	47			c
UV	Verr.	1	suborb.	92267	pp	j/sa	22.5																					c
UV	Verr.	1	orb.	92268	pmpp	vi	17.5	4.6	4.5	1.02							6.5					1.45	0.34	0.66	38			dc
UV	Verr.	1	vaub.	92269	pmpp	j	21.5	6.5	6.7	0.97							10.5					1.56	0.32	0.62	36			dc
UV	Verr.	1	sp.	92270	f	j/sa	29.1																		18			
UV	Verr.	1	vaub.	92271	pp	j/sa	23.2	7.7	8.7	0.89							14.0					1.61	0.31	0.60	35			dc
UV	Verr.	1	suborb.	92272	pmpp	sa	31.4	8.8	9.2	0.95							17.0					1.84	0.27	0.53	30			c
UV	Verr.	1	vaub.	92273	pmpp	j	22.3	6.7	7.0	0.95							11.5					1.63	0.31	0.59	34			dc
UV	Verr.	1	vaub.	92274	pmpp	sa	37.2	8.3	8.9	0.93	8.2	8.3	0.98	1.07	1.02	37.0	13.0	29.0	0.78	0.35	1.46	0.34	0.66	38	18	15.5	0.42	dc
UV	Verr.	1	touc.	92275	pp	sa	24.0	8.7	9.9	0.87							14.0					1.41	0.35	0.68	39			d
UV	Verr.	1	vaub.	92276	pp	j	24.8	7.3	8.2	0.89							12.0					1.46	0.34	0.66	38			dc
UV	Verr.	1	vaub.	92277	pp	j	19.7	6.3	7.1	0.89							10.5					1.49	0.34	0.65	37			dc
UV	Verr.	1	orb.	92278	pmpp	sa	31.0	9.0	9.5	0.95							28.5	11.0				1.15	0.43	0.82	47			c
UV	Verr.	1	vaub.	92279	pp	j	19.8	8.5	8.8	0.96							15.0					1.70	0.29	0.57	33			dc
LV	Inos.	1	touc.	92615	c	j	42.5	7.5	8.7	0.86	6.7	7.5	0.89	1.16	1.12	38.0	13.0	31.0	0.82	0.34	1.50	0.33	0.65	37		15.5	0.41	c
LV	Inos.	1	touc.	92616	pmpp	sa	33.1	9.6	11.2	0.86							14.0					1.25	0.40	0.76	44			dc
LV	Inos.	1	orb.	92617	c	j	36.4	7.1	7.4	0.96	6.5	6.6	0.99	1.13	1.09	30.0	9.0	20.5	0.68	0.30	1.22	0.41	0.78	45	18	12.0	0.40	dc
LV	Inos.	1	suborb.	92618	c	j	31.8	5.2	5.6	0.93	4.5	4.9	0.92	1.16	1.17	28.0	12.0	20.0	0.71	0.43	2.13	0.24	0.46	26		8.0	0.29	c
LV	Inos.	1	sp.	92619	c	vi	19.3																					
LV	Inos.	1	vaub.	92620	c-pa	vi	28.1	4.8	5.1	0.93	3.9	4.2	0.92	1.21	1.22	23.5	9.0	17.0	0.72	0.38	1.76	0.28	0.55	32		5.0	0.21	dc
LV	Inos.	1	vaub.	92621	pmpp	vi	23.1	4.5	4.9	0.91	3.9	4.3	0.90	1.14	1.16	21.0	9.0	14.5	0.69	0.43	1.83	0.27	0.53	31		5.0	0.24	dc
LV	Inos.	1	suborb.	92622	c	vi	26.4	3.7	3.9	0.95	2.9	3.1	0.95	1.26	1.26	23.0	8.0	17.0	0.74	0.35	2.05	0.24	0.48	27		4.0	0.17	c</

15	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddv	ldhat	Ltp	Lpp	LS	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	micuro
UV	Verr.	1	<i>touc.?</i>	92709	c-pa	sa	45.4	8.7	9.7	0.90	8.7	9.4	0.93	1.03	1.01	39.0	14.5	31.5	0.81	0.37	1.50	0.33	0.64	37		14.0	0.36	dc
UV	Verr.	1	<i>vaub.</i>	92710	pp	a	31.4	11.2	12.2	0.92							18.0				1.48	0.34	0.65	37				c
UV	Verr.	1	<i>orb.</i>	92711	c	j	37.7	7.8	8.2	0.95	6.7	7.0	0.96	1.17	1.16	33.5	9.0	25.0	0.75	0.27	1.09	0.46	0.86	49		14.0	0.42	c
UV	Verr.	1	<i>sp.</i>	92712	pp	a	27.9																					
UV	Verr.	1	<i>vaub.</i>	92713	pp	j/sa	26.1	8.3	9.1	0.91							13.5				1.49	0.34	0.65	37				dc
LV	Neoc.	1	<i>touc.</i>	92778	pmpp	j	26.8	6.7	8.4	0.81							11.5				1.38	0.36	0.70	40				dc
LV	Neoc.	1	<i>vaub.</i>	92779	c	vi	23.7	3.6	3.7	0.98	2.5	2.7	0.91	1.33	1.44	21.0	6.0	15.0	0.71	0.29	1.64	0.30	0.59	34		3.0	0.14	dc
UV	Verr.	1	<i>orb.</i>	92791	c	sa	54.8	10.5	11.5	0.91	9.0	10.0	0.90	1.15	1.17	42.5	12.0	34.0	0.80	0.28	1.04	0.48	0.89	51		19.0	0.45	c
UV	Verr.	1	<i>vaub.</i>	92792	pmpp	mj	19.6	3.5	3.8	0.93							6.5				1.73	0.29	0.56	32				dc
UV	Verr.	1	<i>orb.</i>	92793	pp	sa		8.4	9.4	0.89							10.5				1.11	0.45	0.84	48				c
UV	Verr.	1	<i>orb.</i>	92794	pp	j		7.4	7.8	0.95							8.5				1.10	0.46	0.86	49				c
UV	Verr.	1	<i>orb.</i>	92795	pp	sa		8.4	9.4	0.89							9.5				1.01	0.50	0.92	53				c
UV	Verr.	1	<i>vaub.</i>	92796	pp	sa		9.5	10.3	0.92							15.5				1.50	0.33	0.64	37				dc
UV	Verr.	1	<i>touc.</i>	92797	pp	j		7.4	8.9	0.84							13.0				1.47	0.34	0.66	38				dc
UV	Verr.	1	<i>vaub.</i>	92798	pmpp	j	35.0	7.4	7.6	0.97	6.8	7.2	0.95	1.06	1.09	32.5	11.0	24.5	0.75	0.34	1.45	0.35	0.66	38		11.0	0.34	dc
UV	Verr.	1	<i>orb.</i>	92799	pmpp	a	30.4	10.2	11.4	0.90							12.5				1.09	0.46	0.86	49				c
UV	Verr.	1	<i>vaub.</i>	92800	pp	sa		8.4	9.4	0.89							15.0				1.59	0.31	0.61	35				dc
LV	Inos.	1	<i>vaub.</i>	92818	c	sa	50.8	8.8	9.7	0.91	7.8	8.1	0.95	1.19	1.13	44.5	15.5	31.5	0.71	0.35	1.60	0.31	0.61	35	18	15.0	0.34	c
LV	Inos.	1	<i>vaub.</i>	92819	pmpp	vi	22.3	4.5	4.7	0.96	4.1	4.5	0.92	1.05	1.09	20.0	8.5	12.0	0.60	0.43	1.80	0.28	0.54	31		5.0	0.25	dc
UV	Verr.	1	<i>orb.</i>	92870	pp	j	20.0	8.0	8.9	0.90							12.0				1.35	0.37	0.71	41				dc
UV	Verr.	1	<i>orb.</i>	92871	pp	j/sa	18.9	7.7	8.6	0.89							9.5				1.11	0.45	0.85	48				dc
UV	Verr.	1	<i>suborb.</i>	92872	pmpp	j	29.5	6.6	6.7	0.98							14.0				2.09	0.24	0.47	27				c
UV	Verr.	1	<i>vaub.</i>	92873	pp	sa	23.1	8.9	10.0	0.89							14.5				1.45	0.34	0.66	38				d
UV	Verr.	1	<i>sp.</i>	92874	pmpp	sa	26.7																0.00					
UV	Verr.	1	<i>vaub.</i>	92875	pmpp	j	40.1	7.6	8.2	0.92	7.3	7.6	0.95	1.08	1.04	38.0	13.0	27.0	0.71	0.34	1.58	0.32	0.61	35		14.0	0.37	dc
UV	Verr.	1	<i>touc.</i>	92876	c	sa	52.9	8.8	9.9	0.89	7.8	8.3	0.94	1.19	1.13	45.0	13.5	29.0	0.64	0.30	1.36	0.37	0.70	40		16.3	0.36	dc
UV	Verr.	1	<i>vaub.</i>	92877	c-pa	j	41.4	6.9	7.4	0.92	7.0	7.3	0.96	1.02	0.97	37.0	12.5			0.34	1.68	0.30	0.58	33		15.0	0.41	dc
UV	Verr.	1	<i>orb.</i>	92878	c	sa	43.0	9.1	9.6	0.94	7.6	8.0	0.96	1.21	1.19	38.5	11.5	28.0	0.73	0.30	1.19	0.42	0.79	45		15.0	0.39	dc
UV	Verr.	1	<i>orb.</i>	92879	pp	sa	22.1	10.0	11.6	0.86							11.0				0.95	0.53	0.97	56				c
UV	Verr.	1	<i>touc.</i>	92880	pmpp	j	26.7	5.9	6.7	0.87	5.4	6.1	0.89	1.11	1.09	25.5	11.0	17.5	0.69	0.43	1.63	0.31	0.59	34		8.5	0.33	dc
UV	Verr.	1	<i>touc.</i>	92881	c	vi	22.0	4.3	4.6	0.92	3.5	4.0	0.90	1.17	1.21	20.0	7.5	15.0	0.75	0.38	1.62	0.31	0.60	34		7.5	0.38	d
UV	Verr.	1	<i>orb.</i>	92882	pp	j	18.6	7.0	7.8	0.89							10.5				1.35	0.37	0.71	41				c
UV	Verr.	1	<i>vaub.</i>	92883	pp	j	17.9	5.7	6.3	0.91							9.5				1.51	0.33	0.64	37				dc
LV	Neoc.	1	<i>touc.</i>	92944	pmpp	j	24.5	5.6	6.2	0.90	5.3	6.0	0.88	1.04	1.06	23.0	9.5	17.0	0.74	0.41	1.53	0.33	0.63	36		7.0	0.30	d
LV	Neoc.	1	<i>orb.</i>	92945	pmpp	j	20.3	7.4	8.4	0.89							10.5				1.26	0.40	0.76	43				c
LV	Neoc.	1	<i>touc.</i>	92946	pmpp	j	19.4	6.5	7.3	0.88							12.5				1.71	0.29	0.57	33				d
UV	Pere.	1	<i>vaub.</i>	92969	c-pa	j	41.1	8.5	9.2	0.92	7.7	7.7	1.00	1.20	1.10	36.0	14.0	30.0	0.83	0.39	1.52	0.33	0.64	36		12.0	0.33	dc
UV	Verr.	1	<i>sp.</i>	92981	pmpp	sa	26.9																					
LV	Neoc.	1	<i>touc.</i>	92992	pmpp	j	36.7	8.5	9.3	0.92	8.4	8.8	0.95	1.05	1.01	33.0	11.5	23.0	0.70	0.35	1.24	0.40	0.76	44		12.0	0.36	d
LV	Neoc.	1	<i>touc.</i>	92993	c	vi	19.9	3.6	3.8	0.94	2.8	3.2	0.90	1.20	1.26	18.5	6.8	14.0	0.76	0.36	1.79	0.28	0.54	31		3.5	0.19	d
UV	Verr.	1	<i>vaub.</i>	92994	pmpp	sa	30.6	9.9	11.0	0.90							15.0				1.37	0.37	0.70	40				dc
UV	Furc.	1	<i>sp.</i>	93000	pp	sa	18.8																					
UV	Furc.	1	<i>vaub.</i>	93001	pmpp	j	24.0	7.6	8.3	0.91							13.0				1.57	0.32	0.62	35				c
LV	Neoc.	1	<i>touc.</i>	93021	pmpp	vi	18.8																					
UV	Verr.	1	<i>vaub.</i>	93112	pmpp	a	54.2	11.8	13.1	0.90	10.2	11.2	0.91	1.17	1.15	51.0	17.5	39.0	0.76	0.34	1.33	0.37	0.72	41	18	21.0	0.41	dc
UV	Verr.	1	<i>vaub.</i>	93113	pmpp	j	28.2	7.8	8.3	0.94							13.0				1.58	0.32	0.61	35				dc
UV	Verr.	1	<i>vaub.</i>	93114	pmpp	j	30.3	7.2	7.4	0.97	6.3	6.7	0.94	1.10	1.13	28.0	12.0	17.5	0.63	0.43	1.63	0.31	0.60	34		9.5	0.34	dc
UV	Verr.	1	<i>orb.</i>	93115	pmpp	vi	17.6	4.8	4.7	1.03							7.0				1.50	0.33	0.65	37				dc
LV	Neoc.	1	<i>touc.</i>	93139	pp	sa	25.9	8.5	9.7	0.87							12.0				1.23	0.41	0.77	44				d
LV	Neoc.	1	<i>touc.</i>	93140	pp	j	29.2	7.8	8.5	0.91							11.0				1.29	0.39	0.74	42				d
LV	Neoc.	1	<i>sp.</i>	93141	f																				18			
LV	Neoc.	1	<i>sp.</i>	93142	f																							
LV	Neoc.	1	<i>sp.</i>	93143	f																							
LV	Neoc.	1	<i>sp.</i>	93144	f																							
UV	Verr.	1	<i>vaub.</i>	93227	pp	j		4.7	4.8	0.98							8.3				1.72	0.29	0.57	32				dc
UV	Verr.	1	<i>vaub.</i>	93229	pp	j		5.3	5.5	0.96							9.0				1.62	0.31	0.60	34				dc
UV	Verr.	1	<i>vaub.</i>	93248	c	sa	45.8	8.7	9.5	0.92	7.3	7.5	0.97	1.27	1.20	41.0	14.0	31.0	0.76	0.34	1.47	0.34	0.65	37		13.0	0.32	d
UV	Verr.	1	<i>vaub.</i>	93249	c	sa	53.4	9.5	10.0	0.95	8.8	9.0	0.97	1.11	1.07	43.5	14.5	28.0	0.64	0.33	1.45	0.34	0.66	38		19.0	0.44	dc
UV	Verr.	1	<i>suborb.</i>	93250	pmpp	j	31.1	7.6	7.7	0.98	6.6	7.1	0.93	1.09	1.15	29.0	14.0	19.0	0.66	0.48	1.82	0.28	0.54	31		9.0	0.31	c
UV	Verr.	1	<i>suborb.</i>	93251	pmpp	mj	18.2	4.3	4.2	1.02							9.0				2.16	0.23	0.46	26				c
UV	Verr.	1	<i>vaub.</i>	93252	pmpp	mj	16.7	3.2	3.0	1.05	2.5	2.7																

16	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddiv	ldhat	Ltp	Lpp	LS	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro	
UV	Verr.	1	vaub.	93402	pmpp	j	22.6	6.6	7.4	0.90											1.49	0.33	0.65	37			dc		
UV	Verr.	1	vaub.	93403	pmpp	j	19.7	5.2	5.6	0.92						19.0	9.5					1.69	0.30	0.58	33			dc	
UV	Verr.	1	orb.	93404	pmpp	j	20.8	6.5	7.2	0.91							10.5					1.47	0.34	0.66	38			dc	
UV	Verr.	1	vaub.	93405	c	sa	51.5	9.5	10.3	0.92	8.6	9.0	0.95	1.14	1.10	46.5	15.5	34.0	0.73	0.33	1.50	0.33	0.64	37		19.5	0.42	c	
UV	Verr.	1	sp.	93406	c-ap	sa	51.7																						
UV	Verr.	1	sp.	93407	pmpp	sa	37.4																						
UV	Verr.	1	vaub.	93408	pmpp	j		7.7	8.4	0.92												1.60	0.31	0.61	35			dc	
UV	Verr.	1	sp.	93409	pmpp	a																							
UV	Verr.	1	sp.	93410	pmpp	j																							
UV	Verr.	1	vaub.	93411	pmpp	vi/j		5.3	5.9	0.90												1.70	0.29	0.57	33			dc	
UV	Verr.	1	suborb.	93412	pmpp	sa	46.0	7.7	8.6	0.90												1.86	0.27	0.52	30			dc	
UV	Verr.	1	vaub.	93413	pmpp	sa	28.4	9.9	10.1	0.98						42.0	16.0					1.58	0.32	0.61	35	17	17.5	0.42	dc
LV	Inos.	1	vaub.	93438	pmpp	j	28.7	5.7	5.8	0.98	5.1	5.3	0.96	1.10	1.12	25.5	11.0	18.0	0.71	0.43	1.89	0.26	0.52	30		8.0	0.31	d	
LV	Inos.	1	sp.	93439	pmpp	sa	28.0																						
LV	Inos.	1	vaub.	93440	pp	vi	15.4	4.2	4.6	0.92												1.75	0.29	0.56	32			dc	
UV	Furc.	1	sp.	93574	c	sa	48.0																						
UV	Verr.	1	orb.	93585	c-pa	sa	41.6	8.6	9.8	0.87	7.7	7.9	0.98	1.25	1.11	38.5	10.0	31.0	0.81	0.26	1.02	0.49	0.91	52		15.0	0.39	c	
UV	Verr.	1	vaub.	93586	c	a	55.6	10.3	11.8	0.88	9.0	9.5	0.94	1.24	1.16	47.0	15.5	34.0	0.72	0.33	1.32	0.38	0.72	42		19.0	0.40	dc	
UV	Verr.	1	vaub.	93587	c	j	41.0	7.8	8.0	0.97	6.5	6.5	1.00	1.23	1.20	35.5	13.0	27.5	0.77	0.37	1.63	0.31	0.60	34		12.0	0.34	dc	
UV	Verr.	1	orb.	93588	pmpp	j	25.7	6.4	6.9	0.93	5.9	6.4	0.92	1.07	1.09	23.5	8.0	16.0	0.68	0.34	1.16	0.43	0.81	47		9.0	0.38	c	
UV	Verr.	1	vaub.	93589	pp	a	27.7	10.1	11.4	0.89												1.36	0.37	0.70	40			dc	
UV	Verr.	1	vaub.	93590	pp	sa	26.7	9.0	9.4	0.95												1.49	0.34	0.65	37			c	
UV	Verr.	1	orb.	93591	pmpp	j	28.0	7.8	8.5	0.92												1.18	0.43	0.80	46			c	
UV	Verr.	1	touc.	93592	pmpp	j	26.8	7.1	7.9	0.89	6.5	7.3	0.89	1.09	1.10	26.0	12.0	18.0	0.69	0.46	1.51	0.33	0.64	37		11.0	0.42	dc	
UV	Verr.	1	orb.	93593	pp	j	22.4	7.8	8.5	0.91												1.00	0.50	0.93	53			c	
UV	Verr.	1	orb.	93594	pp	sa	22.3	9.0	10.0	0.91												1.15	0.43	0.82	47			c	
UV	Pere.	1	vaub.	93603	pmpp	sa	24.3	8.6	9.3	0.92												1.45	0.35	0.67	38			dc	
UV	Verr.	1	suborb.	93630	c-pa	sa	46.4	7.3	8.3	0.89	7.2	7.8	0.92	1.06	1.02	42.8	18.0	32.0	0.75	0.42	2.18	0.23	0.45	26		15.0	0.35	c	
LV	Neoc.	1	suborb.	93694	c	sa	49.1	8.1	9.1	0.90	8.2	8.4	0.98	1.08	0.99	40.0	17.5	27.0	0.68	0.44	1.93	0.26	0.51	29		14.5	0.36	c	
LV	Neoc.	1	vaub.	93695	pmpp	a	44.4	9.8	11.3	0.87	9.4	10.1	0.93	1.12	1.04	40.0	16.0	29.0	0.73	0.40	1.42	0.35	0.68	39	18	15.0	0.38	dc	
LV	Neoc.	1	vaub.	93696	pmpp	j	40.2	8.2	9.3	0.89	6.9	7.6	0.90	1.21	1.20	36.0	13.0	25.5	0.71	0.36	1.41	0.36	0.68	39		12.0	0.33	dc	
LV	Neoc.	1	orb.	93697	c	j	35.8	6.2	6.9	0.90	6.0	6.5	0.92	1.06	1.04	23.0	9.5	16.0	0.70	0.41	1.37	0.36	0.70	40		8.5	0.37	dc	
LV	Neoc.	1	suborb.	93698	c	vi	27.9	3.9	4.5	0.88	3.6	3.9	0.93	1.15	1.09	24.5	9.5	18.0	0.73	0.39	2.13	0.23	0.46	26		6.0	0.24	dc	
LV	Neoc.	1	vaub.	93699	pmpp	j	27.3	8.2	9.2	0.90	6.9	7.7	0.90	1.20	1.19	36.5	13.5	27.0	0.74	0.37	1.47	0.34	0.66	38		11.0	0.30	dc	
LV	Neoc.	1	orb.	93700	pmpp	vi	20.1	4.9	5.4	0.92												1.48	0.34	0.65	37			dc	
LV	Neoc.	1	touc.	93701	pp	j	20.5	7.3	8.3	0.87												1.69	0.30	0.58	33			d	
LV	Neoc.	1	suborb.	93702	pmpp	vi	20.7	3.9	4.4	0.90	3.5	3.9	0.89	1.13	1.14	19.5	9.0	13.0	0.67	0.46	2.05	0.24	0.48	27		4.0	0.21	dc	
LV	Neoc.	1	touc.	93703	pp	sa	19.8	6.9	8.0	0.86												1.31	0.38	0.73	42			dc	
LV	Neoc.	1	touc.	93704	pp	j	17.3	5.5	6.1	0.89												1.48	0.34	0.65	37			d	
LV	Neoc.	1	sp.	93705	f	sa	27.3																						
LV	Inos.	1	touc.	93706	c-pa	sa	44.4	8.0	9.2	0.87	7.5	7.9	0.95	1.17	1.07	37.0	12.5	26.5	0.72	0.34	1.36	0.37	0.70	40		11.5	0.31	dc	
LV	Inos.	1	orb.	93707	pmpp	j	29.4	6.6	7.3	0.91	6.1	6.5	0.93	1.12	1.09	26.0	10.0	17.0	0.65	0.38	1.37	0.37	0.70	40		7.5	0.29	dc	
UV	Verr.	1	touc.	93727	c	sa	45.7	8.7	9.9	0.88	7.7	7.9	0.98	1.26	1.12	39.0	13.5	27.0	0.69	0.35	1.37	0.37	0.70	40		13.0	0.33	c	
UV	Verr.	1	suborb.	93728	c-pa	sa	41.2	8.2	8.9	0.93	7.8	8.0	0.98	1.11	1.06	39.0	16.5	27.0	0.69	0.42	1.86	0.27	0.53	30		12.5	0.32	c	
UV	Verr.	1	vaub.	93729	pmpp	j	29.8	6.7	7.5	0.90	6.1	6.8	0.90	1.11	1.10	28.0	12.0	19.5	0.70	0.43	1.61	0.31	0.60	35		9.5	0.34	dc	
UV	Verr.	1	sp.	93730	pp	sa	18.3																						
LV	Inos.	1	sp.	93745	pmpp	sa	40.6																						
LV	Inos.	1	vaub.	93746	pmpp	sa	31.7																						dc
UV	Verr.	1	vaub.	93759	pmpp	a	43.4	9.5	10.4	0.91	9.4	9.7	0.96	1.07	1.01	40.0	15.0	29.0	0.73	0.38	1.45	0.35	0.67	38		17.0	0.43	dc	
UV	Verr.	1	vaub.	93760	pmpp	a	46.2	10.0	11.3	0.89	8.8	8.8	1.00	1.28	1.13	40.5	16.5	29.0	0.72	0.41	1.46	0.34	0.66	38		17.0	0.42	dc	
UV	Verr.	1	orb.	93761	pmpp	j	31.8	6.9	7.7	0.89	6.5	6.9	0.94	1.12	1.07	29.0	10.0	19.0	0.66	0.34	1.30	0.39	0.74	42		10.0	0.34	c	
UV	Verr.	1	suborb.	93762	pmpp	j	32.5	6.5	7.1	0.92	6.2	6.5	0.94	1.09	1.06	31.0	15.0	20.0	0.65	0.48	2.12	0.24	0.46	27		10.0	0.32	c	
UV	Verr.	1	suborb.	93763	c-pa	j	32.9	6.4	6.6	0.96	6.1	6.6	0.92	1.00	1.05	29.0	14.5	18.0	0.62	0.50	2.19	0.23	0.45	26		10.0	0.34	c	
UV	Verr.	1	vaub.	93764	c	j	32.9	6.0	6.2	0.96	4.6	4.7	0.98	1.33	1.31	27.5	10.0	19.5	0.71	0.36	1.61	0.31	0.60	35		7.0	0.25	dc	
UV	Verr.	1	orb.	93765	c	j	38.9	7.3	7.8	0.93	6.0	6.0	0.99	1.31	1.22	30.0	9.0	20.5	0.68	0.30	1.15	0.44	0.82	47		10.0	0.33	c	
UV	Verr.	1	orb.	93766	pmpp	j	26.2	7.1	7.5	0.95												1.33	0.38	0.72	41			c	
UV	Verr.	1	vaub.	93767	pmpp	j	30.7	7.6	7.8	0.97	6.8	7.1	0.95	1.11	1.12	30.0	13.0	21.0	0.70	0.43	1.66	0.30	0.59	34		10.0	0.33	dc	
UV	Verr.	1	orb.	93768	pmpp	j	28.8	7.8	8.0	0.97												1.00	0.50	0.93	53	18		c	
UV	Verr.	1	vaub.	93769	c-pa	vi	28.7	5.8	5.9	0.98	5.1	5.5	0.94	1.08	1.13	24.5	10.0	11.0	0.45	0.41	1.69	0.30	0.57	33		9.0	0.37	dc	
UV	Verr.	1	vaub.	93770	pmpp	j	22.6	5.9	5.9	0.99												1.60	0.31	0.61	35			dc	
UV	Verr.																												

17	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddiv	ldhat	Ltp	Lpp	LS	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(NVTAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	muero	
UV	Verr.	1	vaub.	95833	c-pa	sa	40.6	9.5	9.8	0.97	8.4	9.0	0.93	1.09	1.14	32.0	15.0	24.5	0.77	0.47	1.53	0.33	0.63	36		12.0	0.38	c	
UV	Verr.	1	sp.	95834	c-pa	sa	40.5																						
UV	Verr.	1	sp.	95835	pmpp	sa/a	33.7																						
UV	Verr.	1	vaub.	95836	pmpp	j	26.3	6.4	6.7	0.96											1.64	0.31	0.59	34				c	
UV	Verr.	1	orb.	95837	pmpp	sa	28.9																					c	
UV	Verr.	1	vaub.	95838	c	j	28.6	5.7	5.8	1.00	4.4	4.8	0.92	1.19	1.29	26.0	9.5	17.0	0.65	0.37	1.65	0.30	0.59	34		7.0	0.27	dc	
UV	Verr.	1	vaub.	95839	pmpp	j	20.3	6.1	6.5	0.93												1.61	0.31	0.60	35				c
UV	Verr.	1	vaub.	95840	pmpp	vi	16.2	4.4	4.4	1.00												1.66	0.30	0.58	33				dc
UV	Verr.	1	orb.	95841	pmpp	mj	14.2	3.9	4.0	0.98												1.38	0.36	0.69	40				dc
UV	Verr.	1	vaub.	95883	c-pa	sa	47.2	8.8	9.8	0.90	8.2	8.5	0.96	1.15	1.08	43.5	14.0	30.0	0.69	0.32	1.43	0.35	0.67	38		19.0	0.44	dc	
UV	Verr.	1	vaub.	95884	pmpp	a	34.1	9.8	10.7	0.91	9.4	9.7	0.98	1.11	1.04	32.0	14.0	19.0	0.59	0.44	1.30	0.38	0.73	42		10.0	0.31	dc	
UV	Verr.	1	sp.	95885	pp	sa	24.6																						
UV	Verr.	1	vaub.	95886	pmpp	vi/j	22.3	5.8	5.8	1.01												1.65	0.30	0.59	34				d
UV	Verr.	1	orb.	95887	pp	a	25.9	9.7	10.0	0.97												1.05	0.48	0.89	51				c
UV	Verr.	1	suborb.	95888	pp	sa	25.3	8.6	9.6	0.89												1.82	0.28	0.54	31				c
UV	Verr.	1	sp.	95889	pp	j	16.3																						
LV	Neoc.	1	orb.	95896	pp	j/sa	17.3	9.0	9.5	0.95												1.00	0.50	0.93	53				dc
LV	Neoc.	1	vaub.	95897	pp	vi	14.5	4.6	4.8	0.96												1.78	0.28	0.55	31				dc
UV	Verr.	1	orb.	95906	pmpp	sa	40.5	8.3	9.4	0.89	9.1	9.1	0.99	1.03	0.92	37.0	10.0	30.0	0.81	0.27	1.06	0.47	0.88	50		17.0	0.46	c	
LV	Inos.	1	vaub.	95909	c	j	41.1	6.5	6.7	0.97	6.1	6.2	0.98	1.08	1.07	32.0	11.0	24.0	0.75	0.34	1.65	0.30	0.59	34	18	12.5	0.39	dc	
UV	Verr.	1	orb.	95910	c-pa	sa	41.2	9.8	10.6	0.93	7.4	8.0	0.92	1.33	1.34	35.0	11.5	30.0	0.86	0.33	1.30	0.38	0.73	42				dc	
UV	Verr.	1	sp.	95920	pmpp	sa	30.1																						
UV	Verr.	1	touc.	95947	pmpp	j	32.0	6.9	8.3	0.83	6.4	7.0	0.91	1.18	1.08	30.0	14.0	18.0	0.60	0.47	1.69	0.30	0.57	33		10.0	0.33	d	
UV	Verr.	1	orb.	95948	pmpp	j/sa	29.2	9.3	10.0	0.93												1.11	0.45	0.85	49				c
UV	Verr.	1	suborb.	95949	pp	j/sa	25.3	8.3	9.3	0.90												2.11	0.24	0.47	27				c
UV	Verr.	1	sp.	95950	pmpp	j	24.7																						
UV	Verr.	1	orb.	95951	pmpp	vi	21.2	5.4	5.8	0.92												1.46	0.34	0.66	38				c
UV	Verr.	1	orb.	95952	pmpp	vi	17.9	4.8	5.0	0.95												1.50	0.33	0.64	37				dc
UV	Verr.	1	touc.	95953	pmpp	vi	16.3	4.5	5.0	0.89												1.59	0.31	0.61	35				d
LV	Neoc.	1	touc.	95954	pmpp	sa/a	9.5	11.7	0.81													1.11	0.45	0.85	48				d
LV	Neoc.	1	touc.	95955	pp	j/sa	23.0	7.5	9.2	0.82												1.36	0.37	0.70	40				dc
LV	Inos.	1	touc.	95956	pmpp	vi	17.2	5.2	5.7	0.91												1.40	0.36	0.68	39				dc
LV	Inos.	1	vaub.	95957	pmpp	j/sa	24.2	8.3	9.1	0.91												1.43	0.35	0.67	39				dc
LV	Inos.	1	touc.	95958	pp	j/sa	20.5	7.8	9.0	0.87												1.56	0.32	0.62	36				d
UV	Verr.	1	orb.	95959	pp	j	18.1	7.3	7.8	0.94												1.16	0.43	0.81	47				c
UV	Verr.	1	vaub.	95960	pp	j	17.0	5.5	5.8	0.94												1.71	0.29	0.57	33				dc
UV	Verr.	1	suborb.	95961	pmpp	j	23.5	6.5	7.0	0.93												2.07	0.24	0.47	27				c
UV	Verr.	1	vaub.	95962	pp	vi	16.9	5.9	6.1	0.97												1.74	0.29	0.56	32				c
UV	Verr.	1	vaub.	95963	pp	j	22.5	7.4	7.9	0.94												1.65	0.30	0.59	34				dc
LV	Neoc.	1	vaub.	95964	pmpp	vi	18.3	4.2	4.5	0.93	3.7	3.8	0.98	1.19	1.12	16.5	7.5	10.0	0.61	0.45	1.67	0.30	0.58	33				dc	
UV	Verr.	1	vaub.	95965	pmpp	j	24.0	5.3	5.7	0.94	5.1	5.5	0.93	1.03	1.04	22.5	10.0	14.0	0.62	0.44	1.76	0.28	0.55	32		7.0	0.31	c	
UV	Verr.	1	vaub.	95966	pmpp	mj	15.1	3.1	3.1	1.01	2.6	2.7	0.96	1.12	1.17	14.5	5.5	10.0	0.69	0.38	1.80	0.28	0.54	31				dc	
UV	Verr.	1	orb.	95967	pmpp	j	21.2	6.8	7.2	0.96												1.12	0.45	0.84	48				c
UV	Verr.	1	orb.	95968	pmpp	vi	19.7	6.0	6.2	0.98												1.21	0.41	0.78	45				c
UV	Verr.	1	vaub.	95969	pmpp	j	17.2	5.7	5.9	0.97	5.0	5.7	0.88	1.03	1.14	23.0	9.5	13.0	0.57	0.41	1.61	0.31	0.60	34		6.0	0.26	dc	
UV	Verr.	1	orb.	95970	pmpp	j	23.2	7.6	8.1	0.94												1.30	0.38	0.73	42				c
UV	Verr.	1	touc.	95971	pp	j	16.7	6.6	7.7	0.86												1.44	0.35	0.67	38				d
UV	Verr.	1	vaub.	95972	pp	j	21.6	6.9	7.6	0.90												1.71	0.29	0.57	33				dc
UV	Verr.	1	sp.	95973	pmpp	j	21.2																						
UV	Verr.	1	orb.	95974	pmpp	j	24.3	7.2	7.6	0.94												1.25	0.40	0.76	44				c
UV	Verr.	1	vaub.	95975	pmpp	j	24.7	7.5	7.7	0.97												1.55	0.32	0.62	36				dc
UV	Verr.	1	sp.	95976	pp		23.2																						
UV	Verr.	1	orb.	95977	pmpp	j	26.7	8.1	8.3	0.98	6.9	7.1	0.98	1.17	1.17	25.5	10.5	16.0	0.63	0.41	1.27	0.39	0.75	43		8.0	0.31	c	
LV	Pert.	1	vaub.	95978	pmpp	j	25.2	7.0	7.6	0.92												1.45	0.34	0.66	38				dc
LV	Pert.	1	vaub.	95979	pmpp	j	22.9	7.3	8.3	0.88												1.68	0.30	0.58	33				dc
UV	Verr.	1	orb.	95989	c	sa	45.1	8.8	9.7	0.91	8.1	8.2	0.99	1.19	1.09	37.5	11.0	27.0	0.72	0.29	1.13	0.44	0.83	48		12.0	0.32	dc	
UV	Verr.	1	vaub.	95990	c-pa	j	36.6	7.5	8.2	0.91	7.0	7.5	0.93	1.09	1.07	32.0	13.0	23.0	0.72	0.41	1.59	0.32	0.61	35		12.0	0.38	dc	
UV	Verr.	1	suborb.	96034	c	vi/j	28.8	5.0	5.8	0.85	4.1	4.2	0.98	1.39	1.21	24.0	12.0	17.0	0.71	0.50	2.06	0.24	0.48	27		7.0	0.29	dc	
UV	Verr.	1	vaub.	96253	c-pa	sa	43.2	8.3	9.1	0.91	8.3	9.0	0.93	1.02	1.00	38.0	14.0	28.0	0.74	0.37	1.53	0.33	0.63	36		14.0	0.37	dc	
UV	Verr.	1	orb.	96254	pmpp	sa	34.2	8.4	9.2	0.91	7.5	8.0	0.93	1.16	1.12	33.0	11.0	23.0	0.70	0.33	1.19	0.42	0.79	45		13.5	0.41	c	
UV	Verr.	1	sp.	96255	pp	sa	29.4																						
UV	Verr.	1	orb.	96256	pmpp	j	23.8	6.8	7.5	0.91	6.6	7.1	0.93	1.06	1.04	23.0	8.5	18.0	0.78	0.37	1.13	0.44	0.83	48		9.0	0.39	c	
UV	Verr.	1	suborb.	96257	pp	sa	24.7	10.3	10.6	0.97												1.89	0.27	0.52	30				

18	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddv	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro	
LV	Neoc.	1	vaub.	96421	pmpp	j/sa	37.0	8.8	10.1	0.87	8.6	9.4	0.92	1.08	1.02	35.0	14.0	23.0	0.66	0.40	1.39	0.36	0.69	40		15.0	0.43	dc	
LV	Neoc.	1	touc.	96422	pmpp	j/sa	33.3	8.5	9.9	0.87																	5.0	0.19	d
LV	Neoc.	1	vaub.	96423	c-pa	j	30.7	5.8	6.4	0.91	5.0	5.7	0.87	1.12	1.17	27.0	11.5	18.0	0.67	0.43	1.81	0.28	0.54	31		5.0	0.19	d	
LV	Neoc.	1	vaub.	96424	c	j	32.1	5.3	5.8	0.91	4.8	5.1	0.95	1.15	1.10	25.0	10.0	16.0	0.64	0.40	1.72	0.29	0.57	32		5.5	0.22	dc	
LV	Neoc.	1	touc.	96425	c-pa	mj	17.4	3.3	3.5	0.95	2.9	3.1	0.93	1.13	1.16	15.0	6.0	7.5	0.50	0.40	1.72	0.29	0.57	32		4.0	0.27	d	
LV	Neoc.	1	vaub.	96426	pp	sa	19.6	8.7	9.8	0.89						15.0					1.54	0.33	0.63	36				dc	
LV	Neoc.	1	touc.	96427	pp	j	18.1	7.7	9.1	0.85						12.0					1.32	0.38	0.72	41				d	
UV	Verr.	1	suborb.	96445	c	j	34.4	5.5	5.8	0.96	4.9	5.1	0.96	1.13	1.13	28.0	12.5	18.0	0.64	0.45	2.17	0.23	0.45	26		10.0	0.36	c	
UV	Verr.	1	vaub.	96446	pp	j	20.2	6.0	6.5	0.93						10.5					1.62	0.31	0.60	34				dc	
LV	Neoc.	1	suborb.	96460	c	j	37.8	6.8	8.3	0.82	6.7	7.6	0.88	1.09	1.02	31.0	17.5	24.0	0.77	0.56	2.11	0.24	0.46	27		12.0	0.39	c	
LV	Neoc.	1	touc.	96461	pp	sa	23.7	7.4	8.7	0.86						14.0					1.62	0.31	0.60	34				d	
LV	Neoc.	1	touc.	96523	c	sa	50.2	9.6	11.0	0.88	9.3	10.0	0.93	1.10	1.04	41.0	13.5	29.0	0.71	0.33	1.23	0.41	0.77	44		17.0	0.41	dc	
LV	Neoc.	1	orb.	96524	c-pa	a	51.2	10.3	11.8	0.87	10.3	11.1	0.92	1.06	1.00	39.0	12.0	31.5	0.81	0.31	1.01	0.49	0.92	52		17.5	0.45	c	
LV	Neoc.	1	touc.	96525	c	sa/a	51.1	9.5	11.2	0.85	8.5	10.0	0.84	1.11	1.13	39.5	12.0	28.0	0.71	0.30	1.07	0.47	0.87	50		15.5	0.39	dc	
LV	Neoc.	1	touc.	96526	c-pa	sa	47.2	9.2	10.6	0.86	9.3	10.1	0.92	1.06	0.99	38.5	15.5	29.0	0.75	0.40	1.46	0.34	0.66	38		17.0	0.44	dc	
LV	Neoc.	1	touc.	96527	c-pa	sa	45.6	9.4	10.5	0.89	9.6	10.2	0.93	1.03	0.98	36.5	16.5	25.0	0.68	0.45	1.57	0.32	0.62	35		16.5	0.45	d	
LV	Neoc.	1	touc.	96528	c	a	62.7	10.8	13.3	0.81	10.9	11.8	0.92	1.13	1.00	43.0	16.0	31.0	0.72	0.37	1.20	0.42	0.79	45		16.0	0.37	dc	
LV	Neoc.	1	sp.	96529	f	a																		18					
LV	Neoc.	1	sp.	96530	f	j																		18					
LV	Neoc.	1	sp.	96531	pmpp	sa	27.1																						
LV	Neoc.	1	suborb.	96532	c-pa	mj	20.9	3.8	3.7	1.03	2.8	3.1	0.88	1.19	1.40	18.0	7.5	11.0	0.61	0.42	2.01	0.25	0.49	28		2.5	0.14	dc	
LV	Neoc.	1	touc.	96533	pmpp	vi	14.1	4.4	4.8	0.91						7.0					1.45	0.34	0.66	38				dc	
LV	Neoc.	1	suborb.	96534	c-pa	sa	48.3	9.0	10.1	0.89	8.9	9.6	0.92	1.05	1.01	40.5	18.0	30.0	0.74	0.44	1.79	0.28	0.55	31		16.5	0.41	c	
LV	Neoc.	1	suborb.	96535	pmpp	j/sa	32.3	7.5	8.1	0.92	7.7	8.4	0.92	0.97	0.97	30.5	18.0	20.0	0.66	0.59	2.22	0.23	0.44	25		9.5	0.31	dc	
LV	Neoc.	1	touc.	96536	c	j	36.0	6.4	7.3	0.89	5.7	6.6	0.86	1.11	1.14	29.0	12.0	19.0	0.66	0.41	1.65	0.30	0.59	34		7.0	0.24	dc	
LV	Neoc.	1	touc.	96537	pmpp	j/sa	35.5	7.7	8.9	0.87	7.5	7.9	0.94	1.12	1.03	31.0	13.0	21.0	0.68	0.42	1.47	0.34	0.66	38		13.0	0.42	d	
LV	Neoc.	1	touc.	96538	pmpp	a	32.9	11.1	13.1	0.85						20.0					1.52	0.33	0.63	36					
LV	Neoc.	1	touc.	96539	pp	a	22.5	10.1	12.1	0.83						17.0					1.40	0.36	0.68	39				d	
LV	Neoc.	1	touc.	96540	pmpp	j	26.2	5.7	6.2	0.92	5.5	6.0	0.91	1.03	1.04	23.0	10.0	16.0	0.70	0.43	1.61	0.31	0.60	34		6.0	0.26	d	
LV	Neoc.	1	suborb.	96541	pmpp	vi	20.5	4.5	4.8	0.95						10.0					2.11	0.24	0.47	27				c	
LV	Neoc.	1	touc.	96542	pmpp	mj	17.2	3.3	3.5	0.95						5.5					1.56	0.32	0.62	35				d	
UV	Verr.	1	suborb.	96585	c-pa	j/sa	42.7	7.9	8.4	0.94	7.1	6.9	1.03	1.21	1.11	36.0	15.0	21.0	0.58	0.42	1.80	0.28	0.54	31		10.5	0.29	dc	
UV	Verr.	1	orb.	96586	c-pa	j	40.0	7.6	8.1	0.94	7.5	8.3	0.90	0.98	1.01	32.0	11.5	21.0	0.66	0.36	1.42	0.35	0.68	39		12.5	0.39	c	
UV	Verr.	1	touc.	96587	pmpp	sa	31.9	8.3	9.5	0.87	8.2	8.3	0.98	1.14	1.02	31.0	14.0	20.0	0.65	0.45	1.47	0.34	0.65	37		13.5	0.44	dc	
UV	Verr.	1	vaub.	96588	c	vi/j	31.1	5.4	5.8	0.94	4.8	5.3	0.91	1.09	1.12	23.0	10.0	15.0	0.65	0.43	1.73	0.29	0.56	32		9.0	0.39	dc	
UV	Verr.	1	orb.	96589	pmpp	j	25.5	7.7	8.1	0.95						11.5					1.42	0.35	0.68	39				c	
UV	Verr.	1	vaub.	96590	pp	j/sa	23.7	8.2	9.2	0.89						15.0					1.64	0.31	0.59	34				dc	
UV	Verr.	1	orb.	96591	pp	j	25.2	7.8	8.4	0.93						10.5					1.25	0.40	0.76	44				c	
UV	Verr.	1	vaub.	96592	pp	j	22.9	7.7	8.0	0.97						13.0					1.63	0.31	0.59	34				dc	
UV	Verr.	1	orb.	96593	pp	j																							dc
UV	Verr.	1	orb.	96621	c	j/sa	45.5	8.1	8.7	0.94	8.2	8.3	0.98	1.04	1.00	35.0	12.0	25.0	0.71	0.34	1.38	0.36	0.69	40		14.0	0.40	dc	
UV	Verr.	1	vaub.	96622	pmpp	a	41.0	11.9	13.0	0.91	10.6	11.3	0.94	1.16	1.12	38.0	17.0	27.0	0.71	0.45	1.31	0.38	0.73	42				dc	
UV	Verr.	1	suborb.	96623	pmpp	sa	40.2	9.6	10.6	0.90	9.1	9.9	0.92	1.08	1.05	40.0	21.0	28.0	0.70	0.53	1.98	0.25	0.50	28				c	
UV	Verr.	1	vaub.	96624	c	j	38.9	6.7	7.0	0.95	5.9	6.2	0.95	1.14	1.14	29.5	12.0	22.0	0.75	0.41	1.71	0.29	0.57	33		10.0	0.34	dc	
UV	Verr.	1	suborb.	96625	c-pa	j	32.4	5.9	6.1	0.96	5.1	5.5	0.93	1.11	1.15	26.0	13.0	21.0	0.81	0.50	2.13	0.23	0.46	26		8.0	0.31	c	
UV	Verr.	1	suborb.	96626	pmpp	j	27.1	5.5	5.6	0.97	5.0	5.2	0.95	1.08	1.10	26.0	11.5	18.0	0.69	0.44	2.04	0.25	0.48	28		9.0	0.35	c	
UV	Verr.	1	vaub.	96627	pmpp	j	24.2	6.8	7.1	0.96						11.0					1.54	0.32	0.63	36				dc	
UV	Verr.	1	vaub.	96628	pmpp	j/sa	36.3	9.1	9.8	0.92	8.4	8.5	1.00	1.16	1.07	35.0	14.0	23.0	0.66	0.40	1.42	0.35	0.68	39		13.0	0.37	c	
UV	Verr.	1	vaub.	96629	pmpp	sa	32.6	8.5	8.9	0.96						14.0					1.58	0.32	0.61	35	18			dc	
UV	Verr.	1	touc.	96630	pmpp	j	26.1	7.3	8.3	0.88						12.5					1.51	0.33	0.64	37				d	
UV	Verr.	1	vaub.	96631	pmpp	j	22.0	6.1	6.1	1.00						10.0					1.63	0.31	0.60	34				dc	
UV	Verr.	1	vaub.	96632	pp	sa	21.2	9.0	9.8	0.91						15.3					1.55	0.32	0.62	36				dc	
UV	Verr.	1	vaub.	96633	pp	sa	22.0	8.3	8.9	0.93						13.5					1.52	0.33	0.64	36				dc	
UV	Verr.	1	sp.	96634	f	j																							
UV	Verr.	1	sp.	96635	f	j																							
UV	Verr.	1	sp.	96636	f	j																							
UV	Verr.	1	sp.	96637	f	j																							
UV	Verr.	1	vaub.	96669	c-pa	j/sa	37.0	8.1	8.6	0.94	7.5	8.0	0.93	1.07	1.08	30.0	13.5	22.0	0.73	0.45	1.56	0.32	0.62	35		9.0	0.30	dc	
UV	Verr.	1	vaub.	96670	pmpp	sa	28.7	9.3	9.7	0.96						15.0					1.55	0.32	0.62	36				dc	
UV	Verr.	1																											

20	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	ldiv	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(NVTAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro	
UV	Verr.	1	orb.	98820	pmpp	j	25.5	5.5	5.8	0.95	4.9	5.4	0.90	1.07	1.13	20.5	7.8	14.5	0.71	0.38	1.35	0.37	0.71	41		6.0	0.29	c	
UV	Verr.	1	orb.	98821	pmpp	j	26.1	7.3	7.9	0.92												1.39	0.36	0.69	40			dc	
UV	Verr.	1	vaub.	98822	pmpp	vi/j	19.3	5.5	5.7	0.96												1.75	0.29	0.56	32			dc	
UV	Verr.	1	suborb.	98823	c-pa	mj	20.2	3.1	3.1	1.01	2.7	3.0	0.92	1.06	1.15	16.0	6.5	9.0	0.56	0.41	2.08	0.24	0.47	27	3.0	0.19	dc		
UV	Verr.	1	suborb.	98824	c-pa	vj	23.4	4.5	4.9	0.92	3.8	4.4	0.86	1.11	1.18	21.0	10.0	14.0	0.67	0.48	2.04	0.25	0.48	28	4.5	0.21	c		
UV	Verr.	1	orb.	98825	pmpp	vj	24.8	5.4	5.8	0.93	4.9	5.3	0.94	1.10	1.09	21.0	8.5	14.5	0.69	0.40	1.47	0.34	0.66	38	6.5	0.31	c		
UV	Verr.	1	sp.	98826	pmpp	j	21.4																						
UV	Verr.	1	sp.	98827	f																								
UV	Verr.	1	sp.	98828	f																								
UV	Verr.	1	sp.	98829	f																								
UV	Verr.	1	vaub.	98875	pmpp	sa	45.6	9.6	10.2	0.94	9.3	9.8	0.95	1.04	1.03	41.0	15.5	30.0	0.73	0.38	1.52	0.33	0.63	36	16.0	0.39	dc		
UV	Verr.	1	touc.	98876	pmpp	j	28.6	8.3	9.5	0.87												1.14	0.44	0.83	47			c	
UV	Verr.	1	orb.	98877	pmpp	j	25.4	8.2	9.1	0.90												1.10	0.45	0.85	49			c	
UV	Verr.	1	orb.	98878	pmpp	j	19.6	6.0	6.6	0.92												1.07	0.47	0.88	50			c	
UV	Verr.	1	vaub.	98879	pp	j	18.8	7.4	8.0	0.92												1.74	0.29	0.56	32			dc	
UV	Verr.	1	sp.	98880	pa																								
LV	Inos.	1	vaub.	98906	c-pa	j	34.4	6.9	7.6	0.91	6.1	6.7	0.90	1.13	1.14	30.0	12.0	17.0	0.57	0.40	1.59	0.31	0.61	35	13.0	0.43	d		
LV	Inos.	1	suborb.	98907	pp	j/sa	25.5	8.1	8.7	0.93												1.73	0.29	0.56	32			dc	
LV	Inos.	1	suborb.	98908	c-pa	j	34.9	6.9	7.3	0.95	6.1	7.0	0.88	1.05	1.13	29.5	14.0	19.0	0.64	0.47	1.92	0.26	0.51	29	10.0	0.34	dc		
LV	Inos.	1	touc.	98909	pmpp	j	24.7	6.3	7.1	0.90												1.91	0.26	0.51	29			d	
LV	Inos.	1	vaub.	98910	f	j/sa	42.4																		17				
UV	Verr.	1	vaub.	98961	c-pa	j	30.7	6.0	6.4	0.93	5.8	6.0	0.98	1.08	1.03	26.5	9.8	20.0	0.75	0.37	1.51	0.33	0.64	37	10.0	0.38	dc		
UV	Verr.	1	vaub.	98962	c-pa	j	30.1	6.1	6.1	1.00	4.8	5.1	0.95	1.19	1.26	25.5	10.0	17.0	0.67	0.39	1.65	0.30	0.59	34	8.0	0.31	dc		
UV	Verr.	1	vaub.	98963	c	j	42.9	6.7	7.1	0.95	6.2	6.7	0.92	1.06	1.09	33.5	12.0	24.0	0.72	0.36	1.69	0.30	0.57	33	12.5	0.37	dc		
UV	Verr.	1	vaub.	98964	c	vj	26.0	4.7	4.7	1.00	4.3	4.4	0.98	1.05	1.08	22.5	8.5	16.5	0.73	0.38	1.83	0.27	0.53	31	7.0	0.31	dc		
UV	Verr.	1	vaub.	98965	pmpp	j	27.1	6.0	5.9	1.02	5.5	5.5	0.99	1.07	1.10	25.0	10.0	16.0	0.64	0.40	1.69	0.30	0.57	33	7.0	0.28	dc		
UV	Verr.	1	vaub.	98966	pmpp	j	27.8	5.9	6.4	0.92	5.3	5.6	0.95	1.14	1.11	26.5	10.5	18.0	0.68	0.40	1.65	0.30	0.59	34	8.5	0.32	dc		
UV	Verr.	1	suborb.	98967	c-pa	j	31.4	5.8	6.2	0.94	5.4	5.8	0.94	1.07	1.07	27.5	13.0	20.0	0.73	0.47	2.11	0.24	0.47	27	9.0	0.33	dc		
UV	Verr.	1	vaub.	98968	c	j	31.2	6.4	6.7	0.97	5.1	5.7	0.88	1.16	1.27	27.0	10.0	18.5	0.69	0.37	1.50	0.33	0.64	37	9.5	0.35	dc		
UV	Verr.	1	vaub.	98969	pmpp	mj	17.2	3.6	3.6	1.02	2.8	2.9	0.96	1.21	1.29	16.0	6.5	8.0	0.50	0.41	1.83	0.27	0.53	31			dc		
UV	Verr.	1	vaub.	98970	pmpp	mj	15.7	3.8	3.8	1.02												1.73	0.29	0.56	32			dc	
UV	Verr.	1	orb.	98971	pmpp	j	35.6	6.9	7.1	0.97												1.41	0.35	0.68	39	18	12.0	0.38	c
UV	Verr.	1	vaub.	98972	pmpp	j	23.1	5.4	5.5	0.99	5.0	5.4	0.93	1.03	1.09	22.0	9.5	13.0	0.59	0.43	1.72	0.29	0.56	32	7.5	0.34	dc		
UV	Verr.	1	sp.	98973	f																								
UV	Verr.	1	sp.	98974	f																								
UV	Verr.	1	suborb.	99016	pmpp	vj	17.3	4.3	4.4	0.97												2.05	0.24	0.48	27			dc	
UV	Verr.	1	vaub.	99017	pmpp	j	18.9	5.9	6.2	0.96												1.79	0.28	0.55	31			dc	
UV	Verr.	1	sp.	99018	pa																								
UV	Verr.	1	vaub.	99019	pmpp	sa	42.7	9.2	10.1	0.91	8.8	9.5	0.92	1.06	1.05	35.5	15.0	25.0	0.70	0.42	1.48	0.34	0.65	37	9.0	0.25	dc		
UV	Verr.	1	suborb.	99089	pmpp	j/sa	31.1	8.9	8.9	0.99												2.01	0.25	0.49	28			c	
UV	Verr.	1	orb.	99090	pp	sa	24.5	10.4	11.3	0.92												1.10	0.45	0.85	49			c	
UV	Verr.	1	sp.	99091	pp	vj	11.5																						
UV	Verr.	1	vaub.	99100	c	vj	30.2	5.1	5.0	1.01	5.0	5.2	0.96	0.97	1.02	24.0	9.0	16.0	0.67	0.38	1.80	0.28	0.54	31	9.0	0.38	dc		
UV	Verr.	1	vaub.	99101	c-pa	j	35.4	7.5	8.1	0.93	7.7	8.1	0.95	1.00	0.97	32.0	13.5	21.0	0.66	0.42	1.66	0.30	0.58	33	11.5	0.36	dc		
UV	Verr.	1	vaub.	99102	pmpp	a	36.3	10.2	11.8	0.87												1.53	0.33	0.63	36			dc	
UV	Verr.	1	vaub.	99103	pmpp	vj	16.4	4.4	4.5	0.98												1.99	0.25	0.49	28			dc	
UV	Verr.	1	orb.	99104	pmpp	j	24.8	7.3	8.0	0.92												1.32	0.38	0.72	41			c	
UV	Verr.	1	vaub.	99105	pmpp	vj	19.6	5.5	5.1	1.08												1.96	0.25	0.50	29			dc	
UV	Verr.	1	suborb.	99106	pp	vj	14.0	4.3	4.5	0.95												2.21	0.23	0.44	25			c	
UV	Verr.	1	sp.	99107	pp	j	17.7																						
LV	Inos.	1	orb.	99131	pmpp	j	24.2	6.8	7.2	0.94	5.9	6.4	0.92	1.13	1.15	24.0	8.5	16.0	0.67	0.35	1.17	0.43	0.81	46			c		
UV	Verr.	1	vaub.	99186	pmpp	a	46.3	10.6	11.2	0.94	10.5	10.5	1.00	1.07	1.01	43.5	16.5	34.5	0.79	0.38	1.47	0.34	0.66	38	16.0	0.37	d		
UV	Verr.	1	suborb.	99187	pmpp	j/sa	42.5	8.2	9.3	0.87	8.5	8.9	0.95	1.05	0.96	37.5	19.0	28.5	0.76	0.51	2.03	0.25	0.48	28	16.0	0.43	c		
UV	Verr.	1	vaub.	99188	pp	vj	13.2	4.8	4.8	1.00												1.89	0.26	0.52	30			dc	
UV	Verr.	1	touc.	99189	pmpp	sa	40.5	8.7	10.1	0.87	8.7	9.2	0.95	1.10	1.00	36.5	14.5	25.0	0.68	0.40	1.44	0.35	0.67	38	12.5	0.34	dc		
UV	Verr.	1	orb.	99190	pmpp	sa	34.8	9.2	10.7	0.86	8.8	9.3	0.94	1.15	1.05	32.0	12.0	22.0	0.69	0.38	1.12	0.45	0.84	48	11.5	0.36	c		
UV	Verr.	1	vaub.	99191	pmpp	j/sa	28.2	7.8	8.3	0.95												1.64	0.31	0.59	34			dc	
UV	Verr.	1	suborb.	99192	pmpp	vj	24.5	5.1	5.4	0.95												2.05	0.24	0.48	27			c	
UV	Verr.	1	suborb.	99193	pmpp	j	23.1	6.4	7.2	0.88												2.08	0.24	0.47	27			c	
UV	Verr.	1	vaub.	99194	pp	vj	16.6	5.7	5.7	0.99												1.74	0.29	0.56	32			dc	
UV	Verr.	1	suborb.	99195	pmpp	mj	14.6	3.7	3.7	0.99												2.18	0.23	0.45	26			c	
LV	Inos.	1	touc.	99247	pmpp	j/sa	27.3	8.7	10.1	0.86												1.58	0.32	0.61	35			dc	
LV	Neoc.	1	vaub.	99258	c	sa	56.3	10.4	11.7	0.89	9.3	10.0</																	

21	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	lddv	ldhat	Ltp	Lpp	ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex	(INV/TAN apex)*2	ap. agl.	alv. agl.	Lad	Lal	nuclro
UV	Verr.	1	orb.	99567	pmpp	j	31.6	8.5	9.4	0.90	8.4	9.1	0.92	1.04	1.01	30.0	12.0	20.0	0.67	0.40	1.27	0.39	0.75	43		10.0	0.33	dc
UV	Verr.	1	vaub.	99586	c	a	64.4	11.7	12.6	0.93	11.0	11.3	0.97	1.11	1.07	50.0	17.0	38.0	0.76	0.34	1.35	0.37	0.71	41		21.0	0.42	dc
UV	Verr.	1	vaub.	99587	c	sa	55.2	10.5	12.0	0.88	10.1	10.7	0.95	1.12	1.04	41.0	18.0	23.0	0.56	0.44	1.50	0.33	0.64	37		14.5	0.35	dc
UV	Verr.	1	vaub.	99588	pmpp	j/sa	32.8	8.1	9.0	0.90	7.8	8.6	0.92	1.05	1.03	31.0	13.5	22.5	0.73	0.44	1.51	0.33	0.64	37		11.0	0.35	dc
UV	Verr.	1	vaub.	99589	pmpp	sa	43.0	10.0	10.4	0.97	8.9	9.2	0.97	1.13	1.13	42.0	15.5	33.0	0.79	0.37	1.49	0.33	0.65	37		17.0	0.40	dc
UV	Verr.	1	suborb.	99590	c	sa	50.8	10.0	10.9	0.91	9.7	10.1	0.95	1.08	1.03	40.5	19.0	26.0	0.64	0.47	1.74	0.29	0.56	32		18.0	0.44	dc
UV	Verr.	1	vaub.	99591	c	j	37.3	6.8	7.2	0.95	6.3	6.9	0.91	1.05	1.09	27.0	12.0	19.0	0.70	0.44	1.66	0.30	0.58	33		10.0	0.37	dc
UV	Verr.	1	vaub.	99592	pmpp	j	36.5	7.5	7.8	0.95						32.0	12.0	23.0	0.72	0.38	1.53	0.33	0.63	36		12.0	0.38	dc
UV	Verr.	1	vaub.	99593	pmpp	a	33.2	11.3	12.1	0.94							16.5				1.37	0.37	0.70	40				c
UV	Verr.	1	vaub.	99594	pmpp	j	26.8	6.9	7.0	0.98	6.3	6.5	0.96	1.07	1.09	21.0	12.0	15.0	0.71	0.57	1.71	0.29	0.57	33		8.5	0.40	dc
UV	Verr.	1	vaub.	99595	pmpp	j	26.9	5.9	6.2	0.96							10.5				1.71	0.29	0.57	33				dc
UV	Verr.	1	orb.	99596	pmpp	sa	28.0	9.5	10.2	0.94							12.0				1.18	0.42	0.80	46				c
UV	Verr.	1	vaub.	99597	pp	sa	25.0	9.4	10.0	0.94							15.5				1.55	0.32	0.62	36				dc
UV	Verr.	1	vaub.	99598	pp	j	18.6	6.1	6.6	0.93							11.0				1.67	0.30	0.58	33				dc
UV	Verr.	1	vaub.	99599	pmpp	vi	18.7	4.7	4.9	0.95							9.0				1.83	0.27	0.53	31				dc
UV	Verr.	1	sp.	99600	pp	j	14.9																					
UV	Verr.	1	sp.	99601	pp	j	15.5																					
UV	Verr.	1	sp.	99602	f																							
UV	Verr.	1	sp.	99603	f																							
UV	Verr.	1	sp.	99604	f																							
UV	Verr.	1	sp.	99605	f																							
UV	Verr.	1	sp.	99606	f																							
LV	Inos.	1	touc.	99649	c	j	43.4	7.0	7.9	0.89	6.7	7.1	0.95	1.12	1.05	33.5	10.5	25.5	0.76	0.31	1.33	0.38	0.72	41		12.5	0.37	d
LV	Neoc.	1	touc.	99760	pp	j	22.9	7.6	8.5	0.90							11.0				1.30	0.39	0.74	42				dc
LV	Inos.	1	suborb.	99763	c	vi	28.6	4.7	4.9	0.97	4.3	4.7	0.91	1.04	1.11	20.0	10.0	11.5	0.58	0.50	2.05	0.24	0.48	27		4.0	0.20	dc
LV	Inos.	1	sp.	99764	pmpp	j/sa	28.8																					
LV	Inos.	1	sp.	99765	pp	j	18.5																					
UV	Verr.	1	orb.	99770	c	sa	52.8	9.3	10.5	0.89	9.6	9.8	0.98	1.07	0.97	38.5	12.5	27.0	0.70	0.32	1.19	0.42	0.79	45		14.5	0.38	c
UV	Verr.	1	orb.	99771	pmpp	j/sa	33.9	9.2	10.1	0.91	7.2	7.8	0.93	1.30	1.28	32.5	11.0	27.0	0.83	0.34	1.09	0.46	0.86	49		12.0	0.37	c
UV	Verr.	1	orb.	99772	pmpp	j	23.4	6.4	6.4	0.99							9.0				1.41	0.36	0.68	39				c
UV	Verr.	1	suborb.	99773	pmpp	vi	24.8	4.8	5.0	0.96	3.9	4.4	0.90	1.15	1.23	22.0	11.0	13.0	0.59	0.50	2.19	0.23	0.45	26		5.0	0.23	dc
UV	Verr.	1	suborb.	99774	c	vi	29.9	5.1	5.2	0.98	4.6	4.9	0.94	1.07	1.12	25.5	10.5	13.0	0.51	0.41	2.01	0.25	0.49	28		9.0	0.35	dc
UV	Verr.	1	vaub.	99775	pmpp	mj	14.7	3.5	3.4	1.03	2.9	3.0	0.97	1.13	1.20	14.7	5.8	7.0	0.48	0.39	1.71	0.29	0.57	33				dc
LV	Inos.	1	sp.	99798	pmpp	j/sa	43.0																					
LV	Inos.	1	vaub.	99799	pmpp	j/sa	28.3	8.8	9.7	0.91							14.5				1.50	0.33	0.64	37				c
UV	Verr.	1	vaub.	99800	c-pa	j	29.6	6.4	7.2	0.90	6.1	6.7	0.91	1.08	1.05	25.0	11.0	18.0	0.72	0.44	1.53	0.33	0.63	36		8.0	0.32	dc
UV	Verr.	1	orb.	99801	pmpp	j/sa	26.5	8.4	9.1	0.92							11.0				1.21	0.41	0.79	45				c
UV	Verr.	1	vaub.	99802	pmpp	j	22.4	5.6	6.0	0.93							10.0				1.66	0.30	0.59	34				dc
UV	Perse.	1	sp.	99804	pmpp	j	24.7																					
LV	Neoc.	1	suborb.	99826	pmpp	a	50.7	12.5	13.8	0.90	12.1	12.9	0.94	1.07	1.03	44.0	22.5	30.0	0.68	0.51	1.63	0.31	0.59	34		16.0	0.36	c
LV	Neoc.	1	touc.	99827	c-pa	j	48.1	8.3	9.5	0.87	7.9	8.4	0.95	1.14	1.04	41.0	15.0	33.0	0.80	0.37	1.58	0.32	0.61	35		14.5	0.35	d
LV	Neoc.	1	touc.	99828	pmpp	sa	37.5	9.8	11.6	0.85							16.5				1.43	0.35	0.67	39				dc
LV	Neoc.	1	touc.	99829	pmpp	j/sa	42.0	9.6	11.1	0.86	8.5	10.4	0.82	1.08	1.13	39.0	15.5	27.0	0.69	0.40	1.39	0.36	0.69	40		9.0	0.23	dc
LV	Neoc.	1	sp.	99830	c	j	38.6																					
LV	Neoc.	1	touc.	99831	c-pa	j	37.6	6.6	7.7	0.86	5.8	6.5	0.90	1.19	1.13	32.0	10.5	23.0	0.72	0.33	1.37	0.37	0.70	40		11.0	0.34	d
LV	Neoc.	1	touc.	99832	pmpp	j/sa	37.8	8.1	9.4	0.86	7.4	8.2	0.90	1.15	1.11	34.0	15.0	22.0	0.65	0.44	1.59	0.31	0.61	35				dc
LV	Neoc.	1	sp.	99833	pmpp	sa	37.7																					
LV	Neoc.	1	vaub.	99834	c-pa	sa	53.7	10.6	11.9	0.89	9.4	10.1	0.92	1.17	1.13	45.0	15.0	34.0	0.76	0.33	1.26	0.40	0.75	43		19.5	0.43	dc
LV	Neoc.	1	suborb.	99835	pmpp	a	40.2	11.4	13.2	0.86							21.5				1.63	0.31	0.59	34				c
LV	Neoc.	1	touc.	99836	c-pa	j/sa	46.8	9.0	10.9	0.82	8.1	8.8	0.91	1.24	1.11	39.0	13.5	34.0	0.87	0.35	1.24	0.40	0.77	44		14.0	0.36	dc
LV	Neoc.	1	suborb.	99837	c-pa	j/sa	52.4	9.4	10.3	0.91	9.0	9.7	0.92	1.06	1.05	46.0	19.0	30.0	0.65	0.41	1.84	0.27	0.53	30		20.5	0.45	dc
LV	Neoc.	1	touc.	99838	c	sa	51.3	8.7	10.2	0.85	7.4	8.2	0.90	1.25	1.18	38.0	15.0	30.5	0.80	0.39	1.47	0.34	0.65	37		9.5	0.25	dc
LV	Neoc.	1	touc.	99839	pmpp	j/sa	35.8	8.2	10.1	0.82	9.0	9.6	0.94	1.05	0.91	33.5	14.0	23.0	0.69	0.42	1.39	0.36	0.69	40		10.5	0.31	dc
LV	Neoc.	1	touc.	99840	c	j	44.5	7.6	8.6	0.88	6.2	7.4	0.84	1.17	1.23	32.5	12.5	24.0	0.74	0.38	1.45	0.34	0.66	38		9.5	0.29	d
LV	Neoc.	1	touc.	99841	c	j	32.3	5.6	6.1	0.92	4.9	5.7	0.86	1.07	1.13	26.0	10.5	18.0	0.69	0.40	1.73	0.29	0.56	32		7.5	0.29	dc
LV	Neoc.	1	touc.	99842	c-pa	j	33.7	6.3	7.6	0.84	5.5	6.3	0.87	1.20	1.16	30.0	12.0	21.0	0.70	0.40	1.59	0.31	0.61	35		9.0	0.30	dc
LV	Neoc.	1	vaub.	99843	pmpp	j/sa	32.9	8.4	9.1	0.92	7.6	8.6	0.89	1.06	1.10	31.0	13.0	21.0	0.68	0.42	1.43	0.35	0.67	39				c
LV	Neoc.	1	orb.	99844	pmpp	sa	34.1	10.7	12.1	0.89							10.0				0.83	0.61	1.09	62				c
LV	Neoc.	1	vaub.	99845	pmpp	j	21.8	5.6	6.5	0.86							10.5				1.62	0.31	0.60	34				dc
LV	Neoc.	1	touc.	99846	pmpp	j	29.1	6.9	7.8	0.89	6.0	7.3	0.83	1.07	1.15	27.5	12.5	16.5	0.60	0.45	1.6							

22	Azs	nbr	sp.	no.	st.	ont.	Lrc	hp	lp	icp	ha	la	ica	iddv	ldiat	Ltp	Lpp	Ls	Ls/Ltp	Lpp/Ltp	Psr	TAN apex (INTAN apex)/2	ap.agl.	alv.agl.	Lad	Lal	muco	
LV	Neoc.	1	<i>touc.</i>	99956	pp	j	16.8	4.9	5.6	0.87							9.0				1.60	0.31	0.60	35			d	
UV	Verr.	1	<i>suborb.</i>	99957	pmpp	sa	31.1	8.3	8.4	0.99	8.1	8.3	0.98	1.01	1.02	30.0	17.0	18.0	0.60	0.57	2.02	0.25	0.49	28			c	
UV	Verr.	1	<i>vaub.</i>	99958	pmpp	vj	15.8	4.5	4.1	1.10											1.85	0.27	0.53	30			dc	
UV	Verr.	1	sp.	99959	section	j/sa																		18				
LV	Neoc.	1	sp.	99960	pa	a																		17				
UV	Verr.	2	sp.		f																							
UV	Verr.	4	sp.		f																							
UV	Verr.	6	sp.		f																							
UV	Verr.	7	sp.		f																							
UV	Verr.	4	sp.		f																							
UV	Verr.	7	sp.		f																							
UV	Verr.	6	sp.		f																							
UV	Verr.	9	sp.		f																							
UV	Verr.	2	sp.		f																							
UV	Verr.	3	sp.		f																							
UV	Verr.	2	sp.		f																							
LV	Inos.	15	sp.		f																							
LV	Neoc.	4	sp.		f																							
LV	Neoc.	7	sp.		f																							
LV	Pert.	3	sp.		f																							
UV	Verr.	2	sp.		pa																							

3. Plates

All the rostra presented belong to the genus *Castellanibelus*. They were collected in the Vocontian Basin (south-east France). They are shown in ventral and

right lateral views, unless otherwise indicated. The pathological forms are described using the terminology of Keupp [2012]. Scale bar = 1 cm.

Plate 1. *Castellanibelus orbignyanus* [Duval-Jouve, 1841]

References	strat. position	ont.	L_{rc}	icp	Psr	ap. agl.		
Figure 1	52740 UV	Verr. Az	sa	44	0.87	0.97	54°	
Figure 2	39445 UV	Verr. Az	j	40	0.92	1.32	41°	
Figure 3	92234 LV	Inos. Az	a	33	0.86	1.25	44°	
Figure 4	93585 UV	Verr. Az	sa	42	0.87	1.02	52°	
Figure 5	3257 UV	Verr. Az	sa	37	0.92	1.05	51°	
Figure 6	78319 UV	Verr. Az	j	43	1.00	1.21	45°	
Figure 7	38558 UV	Verr. Az	sa	46	0.89	1.00	53°	
Figure 8	22150 UV	Verr. Az	sa	48	0.93	1.15	47°	
Figure 9	89630 LV	Pert. Az	j	33	0.90	1.06	50°	
Figure 10	39086 UV	Verr. Az	vj	28	0.98	1.57	35°	
Figure 11	77950 UV	Verr. Az	j	28	0.89	0.84	61°	
		Atypical for its strong posterior bulging in a juvenile stage.						
Figure 12	3175 LV	Neoc. Az	j	41	0.94	1.21	45°	
Figure 13	3202 UV	Verr. Az	a	53	0.90	1.01	53°	
Figure 14	38951 UV	Verr. Az	j/sa	49	0.93	1.27	43°	
Figure 15	22158 UV	Verr. Az	a	56	0.89	1.08	50°	
Figure 16	41167 LV	Neoc. Az	a	48	0.90	0.73	68°	
		Close to Bayle (1878), Plate 31, Figures 9–12.						
Figure 17	93276 UV	Verr. Az	j	30	0.93	1.47	37°	
Figure 18	43590 LV	Neoc. Az	mj	16	0.93	1.39	39°	
Figure 19	54182 LV	Inos. Az	a	42	0.91	0.96	55°	
Figure 20	54301 UV	Verr. Az	j/sa	51	0.90	0.99	53°	
Figure 21	3226 UV	Verr. Az	sa	47	0.95	1.08	50°	
Figure 22	5868 UV	Verr. Az	a	54	0.90	1.07	50°	



Plate 1. *Castellanelus orbignyana* [Duval-Jouve, 1841].

Plate 2. *Castellanibelus suborbignyanus* [Toucas, 1890]

References	strat. position	ont.	L _{rc}	icp	Psr	ap. agl.	
Figure 1	35283	UV Verr. Az	vj	26	0.96	2.76	21°
Figure 2	65078	LV Neoc. Az	vj	25	0.99	2.33	24°
Figure 3	43586	LV Neoc. Az	j	33	0.89	2.20	26°
Figure 4	78793	UV Verr. Az	j	37	0.94	2.10	27°
Figure 5	91517	UV Verr. Az	j/sa	46	0.88	2.04	28°
		(5-c) dorsal view, showing the septal necks of the siphuncle.					
Figure 6	53773	LV Neoc. Az	a	47	0.84	1.82	31°
Figure 7	78317	UV Verr. Az	sa	48	0.94	1.85	30°
Figure 8	96460	LV Neoc. Az	j	38	0.82	2.11	27°
		Strong posterior depression, inducing a long groove, atypical.					
Figure 9	98823	UV Verr. Az	mj	20	1.01	2.08	27°
Figure 10	54294	LV Neoc. Az	vj	25	0.93	2.03	28°
Figure 11	38561	UV Verr. Az	j	39	0.97	2.00	28°
Figure 12	31406	LV Pert. Az	j	41	0.92	1.92	29°
Figure 13	38667	UV Verr. Az	a	39	0.99	1.89	30°
Figure 14	38403	UV Verr. Az	sa	51	0.94	1.98	28°
Figure 15	91574	UV Verr. Az	a	59	0.90	1.80	31°
Figure 16	31027	UV Verr. Az	sa	41	0.91	2.19	26°
Figure 17	54127	UV Verr. Az	sa	43	0.89	1.88	30°
Figure 18	43589	LV Neoc. Az	sa	40	0.88	1.88	30°
Figure 19	89974	LV Neoc. Az	sa	42	0.89	2.16	26°
		Reminiscent Gilliéron (1873), Plate 8, Figure 11, although more depressed.					
Figure 20	92683	LV Pert. Az	j/sa	42	0.88	2.28	25°
Figure 21	41177	LV Neoc. Az	sa	44	0.92	1.98	28°
Figure 22	31086	UV Verr. Az	sa	49	0.96	1.91	29°
Figure 23	39059	LV Inos. Az	sa	46	0.93	2.01	28°



Plate 2. *Castellanibelus suborbignyana* [Toucas, 1890].

Plate 3. *Castellanibelus vaubellensis* [Janssen, 2018]

	References	strat. position		ont.	L_{rc}	icp	Psr	ap. agl.
Figure 1	4924	LV	Neoc. az	mj	19	1.03	1.58	35°
Figure 2	92779	LV	Neoc. az	vj	24	0.98	1.64	34°
Figure 3	93699	LV	Neoc. az	j	44	0.90	1.47	38°
Figure 4	58076	LV	Inos. az	j	39	0.96	1.66	34°
Figure 5	30847	UV	Verr. az	a	60	0.91	1.27	43°
Figure 6	43558	LV	Neoc. az	a	59	0.86	1.24	44°
Figure 7	3211	UV	Verr. az	a	53	0.97	1.22	45°
Figure 8	35134	UV	Verr. az	vj	34	0.96	1.87	30°
Figure 9	95738	LV	Inos. az	a	44	0.90	1.30	42°
Figure 10	84740	LV	Inos. az	a	52	0.86	1.29	42°
Figure 11	84742	LV	Inos. az	vj	24	0.98	1.66	33°
Figure 12	84736	LV	Inos. az	vj	28	0.90	1.87	30°
Figure 13	88938	LV	Neoc. az	a	48	0.86	1.33	41°
Figure 14	90872	UV	Verr. az	a	59	0.94	1.21	45°
Figure 15	31028	UV	Verr. az	sa	55	0.91	1.58	35°
		(15-a) dorsal view, (15-b) left lateral view						
Figure 16	95909	LV	Inos. az	j	41	0.97	1.65	34°
Figure 17	89639	LV	Pert. az	a	44	0.90	1.21	45°
Figure 18	54055	UV	Verr. az	sa	46	0.91	1.39	40°
Figure 19	43560	LV	Neoc. az	sa	54	0.89	1.44	38°
Figure 20	99586	UV	Verr. az	4	64	0.93	1.35	41°
		(20-a) dorsal view, (20-b) left lateral view						



Plate 3. *Castellanibelus vaubellensis* [Janssen, 2018].

Plate 4. *Castellanibelus toucasi* sp. nv.

	References	strat. position	ont.	L_{rc}	icp	Psr	ap. agl.	
Figure 1	57464	UV	Verr. az	mj	21	0.89	1.58	35°
Figure 2	89650	LV	Pert. az	vj	29	0.98	1.90	29°
Figure 3	31412	LV	Pert. az	j	47	0.89	1.54	36°
Figure 4	96354	LV	Pert. az	j/sa	54	0.82	1.77	32°
Figure 5	41175	LV	Neoc. az	sa	49	0.88	1.49	37°
Figure 6	96526	LV	Neoc. az	sa/a	47	0.86	1.46	38°
Figure 7	31414	LV	Pert. az	sa/a	44	0.84	1.45	38°
Figure 8	78848	LV	Neoc. az	sa	44	0.80	1.40	39°
Figure 9	48583	LV	Pert. az	sa	37	0.90	1.61	35°
Figure 10	3019	LV	Neoc. az	j	42	0.81	1.39	40°
Figure 11	89632	LV	Pert. az	vj	21	0.92	1.72	32°
Figure 12	88942	LV	Neoc. az	vj	24	0.86	1.81	31°
Figure 13	30282	LV	Pert. az	sa/a	50	0.82	1.19	46°
Figure 14	90804	LV	Pert. az	j	44	0.86	1.61	35°
Figure 15	53780	LV	Neoc. az	j	44	0.89	1.33	41°
Figure 16	54105	LV	Neoc. az	a	35	0.81	1.21	45°
		Posterior part of a very depressed adult, mucro recentred with age.						
Figure 17	96419	LV	Neoc. az	sa	50	0.81	1.10	49°
Figure 18	92680	LV	Pert. az	sa	49	0.84	1.20	45°
Figure 19	61474	LV	Pert. az	sa	48	0.91	1.32	42°
Figure 20	89637	LV	Pert. az	sa	46	0.89	1.54	36°
Figure 21	39875	LV	Neoc. az	a	53	0.89	1.11	49°
Figure 22	96353	LV	Pert. az	a	62	0.89	1.07	50°



Plate 4. *Castellanibelus toucasi* sp. nv.

Plate 5. *Castellanibelus* sp., details and malformations

References	strat. position	ont.	L _{rc}	Description (details, forma aegra)
Figures 1–3	90540	UV Verr. Az	ja 30	Longitudinal section
	Figure 1: Enlarged section showing: (a) primordial rostrum, (b) protoconch, (c) alveolar cavity and septa, (d) siphuncle.			
	Figure 2: Enlarged detail showing the disjointed septal necks at the siphuncle passage.			
	Figure 3: Left side view of the specimen, enlarged $\times 1.5$.			
Figures 4–6	92617	LV Inos. Az	j 36	Transversal section
	Figure 4: <i>Castellanibelus orbignyanus</i> , icp = 0.96; Psr = 1.22, ap. angle = 45°			
	Figure 5: Opening of the alveolar cavity showing the siphuncle opposite the groove.			
	Figure 6: Enlarged detail: (a) ventral siphuncle; (b) dorsal groove.			
Figure 7	3024	LV Pert. Az	j/ja 37	forma aegra <i>hamata</i> Lateral right view: deviation of the apex on the ventral side, hook-shaped.
Figure 8	38941	UV Verr. Az	— 31	forma aegra <i>clavata</i> Shortened rostrum in the shape of a stick.
Figure 9	30660	UV Verr. Az	ja 28	forma aegra <i>bullata</i> Bubble-like protuberance; (c): 3/4 view.
Figure 10	77951	UV Verr. Az	a 65	forma aegra <i>dissulcata</i> Ventrally deviated alveolar groove: (a) dorsal view; (b) right lateral view; (c) ventral view showing the groove; (d) ventral view from 3/4.
Figures 11–12	35064	UV Verr. Az	a 27	f. a. <i>clavata-collata?</i>
		Figure 11: Atypical rod-shaped shape, possible exit channel under the mucro Figure 12: Enlarge detail		
Figures 13–14	53779	LV Neoc. Az	j 33	Ventral granulation
		Figure 13: (a–b) <i>Castellanibelus suborbignyanus</i> icp = 0.89; Psr = 2.13; ap. angle = 26°; (c) ventral side showing granular zone in protoconch area.		
		Figure 14: Enlarged detail of the granulations.		
Figure 15	78040	LV Neoc. Az	j 26	forma aegra <i>angulata</i> Forms an angle following a fracture.
Figure 16	79696	LV Inos. Az	ja 28	forma aegra <i>saepia</i> Doubled apex; (a) dorsal view; (b) 3/4 right lateral view.
Figures 17–18	39093	UV Verr. Az	j 30	f. aegra <i>angulata-manca</i>
		Figure 17: <i>Castellanibelus suborbignyanus</i> (a–b) dorsal and right lateral views; (c–d) ventral and left lateral views.		
		Figure 18: Enlarged detail of the apical part, showing the partial deposition.		
Figure 19	5214	UV Verr. Az	a 54	oldest form <i>Castellanibelus orbignyanus</i> (icp = 0.91; Psr = 1.07; ap. angle = 50°); very old adult, conical shape: the anterior growth continued while the posterior growth slowed down strongly.



Plate 5. *Castellanibelus* sp., details and malformations.