

**MARGARET HALEY**

**Tau 1 Gruis**

for solo alto flute

2005



**HALEY EDITION**  
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## Tau 1 Gruis for solo alto flute (2005)

The first performance was given by Richard Craig at St. Paul's Hall, Huddersfield (UK), on the 12th of March 2009.

Duration: c. 9 minutes

### Performance Note

#### General

The music should convey a sense of fluency and controlled articulation throughout. Bar lines serve mostly as points of reference (bar lines and beats never mean accentuation).

#### Special Symbols

- - gradual and continuous transition
- ⊖ - flute aperture in normal playing position
- ▷ - flute aperture as closed as possible
- ◁ - flute aperture as open as possible
- - mouth and flute aperture in normal playing position
- - flute aperture blocked by lips
- 鼓 - pizzicato note, tongue the palette without blowing air
- ◎ - pitch with a high breath element
- - a violent percussive sound, by closing off the flute aperture with the tongue
- - sung pitch (hum)
- (flz) - flutter tongue
- / - cancels previous instruction
- - crescendo from nothing
- - diminuendo to nothing
- s.v. - senza vibrato
- v.n. - vibrato normale
- v.m. - vibrato molto
- # - quarter-tone sharp
- ## - three quarter-tones sharp
- ♭ - quarter-tone flat
- 𝄪 - three quarter-tones flat

## Programme Note

Astronomical data provides a source of inspiration for this work. My approach relates to a report by the Anglo-Australian Planet Search Team claiming: 'Detection of a new candidate exoplanet around the metal-rich star  $\tau^1$  Gruis'.<sup>1</sup> The search team refer to the curiously named star Tau 1 Gruis found in the southern constellation of Grus (the crane). The unseen planet exerts a gravitational pull on its parent star causing the star to wobble. Chris Tinney explains this type of behaviour:

[...] Its velocity will be continually varying as it repeatedly moves away from, and back towards, the Earth. Such velocity changes can be detected via the Doppler Effect.

When the unseen planet is moving away from the Earth, the star will move towards the Earth. The light emitted by a star when it is doing this is Doppler shifted to shorter (bluer) wavelengths. The reverse happens when the unseen planet is moving towards the Earth – the star moves away, and the light it emits is shifted to longer (redder) wavelengths.<sup>2</sup>

The 'wobble' phenomenon described above is of interest to me, as that implied a number of musical possibilities that I intended to explore thoroughly, for instance, reciprocal motion. Dynamic flux facilitates oscillation by pulling the musical material towards and away from the listener. Varying rhythmic duration, through changing ratios, enables acceleration and deceleration over time and suggests shifting wavelengths. The listener is not aware of a regular pulse as the flow of space and time is distorted.

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<sup>1</sup> Jones Hugh R. A.; Butler, R. Paul; Tinney, Chris G.; Marcy, Geoff W.; Penny, Alan J.; McCarthy, Chris; Carter, Brad D. (Anglo-Australian Planet Search Team), 'An exoplanet in orbit around tau 1 Gruis' (16/09/2002) <<http://arxiv.org/abs/astroph/0209302>> accessed 12/03/05. The actual paper appeared in *The Monthly Notice of the Royal Astronomical Society*, (2003) Vol. 341, Issue 3, 948-952.

<sup>2</sup> Tinney, Chris G, The Anglo-Australian Planet Search 'How our planet search works' (n.d.) <[http://www.phys.unsw.edu.au/~cgt/planets/AAP\\_Home.html](http://www.phys.unsw.edu.au/~cgt/planets/AAP_Home.html)> accessed 12/03/05.

# Tau 1 Gruis

for solo alto flute

MARGARET HALEY

**1**  $\text{♩} = 72$

1.\*  $\bigcirc \rightarrow \square \rightarrow \bigcirc /$   
v.m.  $\xrightarrow{\hspace{1cm}} 5:4\text{♩}$   
Measure 1.1: Treble clef, 4/8 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $p < mp > pp < p > pp < mp > p <= mf > p > pp$ . Measure 1.2: Time signature changes to 5/8. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $= pp$ .

1. \*transition from normal aperture to open as possible.

2. \*transition from open aperture to normal aperture.

v.m.  $\xrightarrow{\hspace{1cm}} 3:2\text{♩}$  v.n. s.v.  
Measure 2.1: Treble clef, 4/8 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $mf > p <= mf > mp < pp > p$ . Measure 2.2: Measures 2.2-2.3: 3:2 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $pp < p == pp$ . Measure 2.4: Measures 2.4-2.5: 3:2 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $sfp \quad mf == f >$

3. \*the note should be distorted.

3:2 (flz)  $\xrightarrow{\hspace{1cm}}$  (flz)  $\xrightarrow{\hspace{1cm}}$  (flz)  $\xrightarrow{\hspace{1cm}}$  (flz)  $\xrightarrow{\hspace{1cm}}$  3:2  
Measure 3.1: Measures 3.1-3.2: 3:2 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $pp \quad mf < f == mf$ . Measure 3.2: Measures 3.2-3.3: 3:2 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $ff \quad f < ff \quad rfz$ .

3:2 (flz)  $\xrightarrow{\hspace{1cm}}$  4:3 (flz)  $\xrightarrow{\hspace{1cm}}$  3:2 (flz)  $\xrightarrow{\hspace{1cm}}$  3:2 (flz)  $\xrightarrow{\hspace{1cm}}$  4:3 (flz)  
Measure 4.1: Measures 4.1-4.2: 3:2 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $pp \quad mp \quad p$ . Measure 4.2: Measures 4.2-4.3: 4:3 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $pp \quad mp \quad p$ . Measure 4.3: Measures 4.3-4.4: 3:2 time. Notes:  $\text{A}^{\#}, \text{B}^{\#}, \text{C}^{\#}, \text{D}^{\#}, \text{E}^{\#}, \text{F}^{\#}, \text{G}^{\#}$ . Dynamics:  $ppp$ .

## Tau 1 Gruis for solo alto flute

13

*(flz)*

*gliss.*

*3:2*

*6:4*

*5:4*

*3:2*

*ppp*

*p*

*pp*

*mp*

*p*

*mf*

*mp*

*f*

15

*(flz)*

*(flz)*

*5:4*

*(flz)*

*(flz)*

*3:2*

*(flz)*

*4:3*

*(flz)*

*3:2*

*pp*

*mp*

*p*

*mf*

*p*

*mf*

*mp*

*p*

*mf*

*f*

*mf*

*ff*

**rall.**

4.\*

v.m. tremolo (rapido)

(moderato)

(lento)

a tempo

v.n. (flz)

(flz)

(flz)

19

*mp*

*mf*

*p*

*mp*

*p*

*mp*

*p*

*mp*

*pp*

*ff*

*f*

*ff*

4. \*the speed of the tremolo should be a gradual rallentando.

23

*5:4*

*(flz)*

*(flz)*

*3:2*

*(flz)*

*(flz)*

*3:2*

*(flz)*

*ff*

*f*

*ffff*

*ff*

*mf*

*f*

*mp*

*mf*

*ff*

26

*4:3*

*(flz)*

*(flz)*

*3:2*

*(flz)*

*(flz)*

*3:2*

*(flz)*

*p*

*mp*

*pp*

*mp*

*mf*

*p*

*mp*

*pp*

*p*

*ppp*

*sfz*

5.\*

v.m. → s.v. /

*tr*

5. \*gradually increase the trill speed.

Tau 1 Gruis for solo alto flute

3

**2**  $\text{♪} = 96$

6.\*

30

*s.v.* → *v.n.*  $7:4\text{♪}$  (flz)  $5:4\text{♪}$  (flz)

*f*      *pp*      *mf*      *p*      *sfz*

6/7.\* transition from a normal to a high breath element.

7.\*

34

*s.v.* → *v.n.*  $3:2\text{♪}$   $6:5\text{♪}$  (flz)

*f* > *mf*      *mp*      *pp* < *mp* = *p* < *mp* > *pp* < *mp*      *sf*

8.\*

39

*s.v.* → *v.n.* (flz)  $5:4\text{♪}$   $4:3\text{♪}$

*f*      *mf*      *pp*      *mp*      *sf*

8.\* transition from a high breath element to a normal tone.

**3**  $\text{♪} = 84$

tremolo (rapido)  
*v.m.*

43

*pp semper*

*f*

tremolo (rapido)  
*v.m.*

47

*ppp semper*

*p*      *sf* > *mf*

## Tau 1 Gruis for solo alto flute

51

v.n. (flz) (flz) (flz)

*pp sempre* *sf* *mf* *p* *mp*

5:4♪

tremolo (rapido)  
v.m.

54

v.n.

*pp sempre* *mp* *f* *pp sempre*

tremolo (rapido)  
v.m.

9.\*

7:4♪

v.n. s.v. (flz)

*mp* *f* *ppp* *pp sempre*

molto. rall.

9.\* transition from a normal tone to a high breath element.

4 ♩ = 60

61

s.v.

*sf* *ppp* *f* *p*

64

v.n.

*pp* < *p* < *mp* < *mf* < *mp* *f* *p* *mf* *pp* *mp* *ppp* *p*

3 16

## Tau 1 Gruis for solo alto flute

5

67

S.V. → v.n.

*p*

72

S.V. 5:4

*p* < *mp* = *pp* *f*      *p* *ff* *f*

*mf* = *p* = *f*

v.n. 7:4

75

*p*

*f*

*p*

*f*

*p* < *mp*

s.v. 7:4

*mf*

*pp*

*p*

*f*

v.n. 5:4

*p*

*f*

*p*

*mp*

*p*

*f*

78

*mf*

*pp*

*p*

*mp*

*p*

*f*

v.n. 7:6

*pp*

*p*

*f* > *mf*

*pp*

*p*

(*fz*)

*ppp*

82

*mp*

*pp*

*f* > *mf*

*pp*

*p*

*ppp*

## Tau 1 Gruis for solo alto flute

86

89

**5**  $\text{♪} = 72$

95

10.\* gradually decrease the trill speed.

**molto. rit.** →  $\square$  →  $\odot$  →  $\square /$  → **a tempo**

## Tau 1 Gruis for solo alto flute

7

100

103

rall.

**6** $\text{♪} = 108$ 

tremolo (moderate)

v.m.

107

111

115

13:8

11:8

tremolo (rapido)  
v.m.

## Tau 1 Gruis for solo alto flute

118

v.n.

*11:8*

*9:8*

*7:8*

*5:8*

*tr* (b)

*9:8*

*11:8*

*13:8*

*tr* (b)

*15:8*

*13:8*

*tr* (b)

*11:8*

*9:8*

Tau 1 Gruis for solo alto flute

9

134

*rall.*

7 = 84

137

11.\* transition of normal aperture to closed as possible, transition from a normal tone to a high breath element.

12.\* transition from normal aperture to open as possible & back to normal aperture.

144

13.\* transition of aperture as open as possible & back to normal aperture.

147

14.\* transition from a normal tone to a high breath element.

## Tau 1 Gruis for solo alto flute

**8** $\text{♪} = 120$ 

151

155

158

15.\*

15.\* transition from a normal tone  
to a high breath element.

16.\*

16.\* transition from a high breath element to a normal tone.

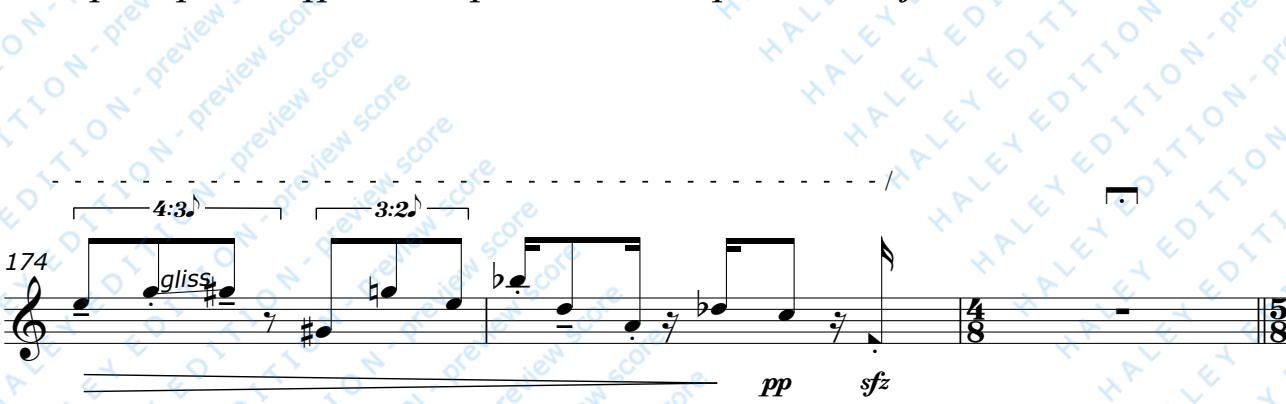
17.\* transition from a normal tone to a high breath element.

## Tau 1 Gruis for solo alto flute

11

168 

poco rall.

171 

**9**  $\text{♩} = 144$

177 

181 

## Tau 1 Gruis for solo alto flute

185

*ff*

*f**mf*

189

tremolo (rapido)  
v.m.

*f*

18.\*

S.V.

19.\*

S.V.

20.\*

S.V.

ff

mp

18.\* transition from normal aperture to open as possible.

19.\* transition from open aperture to closed as possible.

20.\* the added vocal part inclusive of measures 190-202, notes (■) indicated at sounding pitch, performer should hum at the octave most comfortable to their vocal range.

193

tremolo (rapido)  
v.m.

*mf*

*f*

*mp*

S.V.

gliss.

tremolo (rapido)  
v.m.

197

S.V.

*mf*

*f*

*ff*

*accel.*tremolo (rapido)  
v.m.

200

S.V.

tremolo (rapido)  
v.m.

*f*

*fff*

21.\*

S.V.

S.V.

gliss.

S.V.

gliss.



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